

U. S. DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

ROYAL MEEKER, Commissioner

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SPECIAL FEATURES IN THIS ISSUE

Quantity and cost budget necessary to maintain family of five in Washington, D. C.

Cost of living in the United States—Family incomes

Wages and hours of labor in the coal mining industry in 1919

Tests of efficiency in workmen's compensation administration

Organization of new international federation of trade-unions

Recent strikes: Bituminous coal; Steel industry; Longshoremens at port of New York

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# MONTHLY LABOR REVIEW

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## Hygienic Control of the Anilin Dye Industry in Europe.

BY ALICE HAMILTON, M. D.

**D**URING the spring and summer of this year (1919) the author was sent by the Commissioner of Labor Statistics to Europe to visit the factories in which anilin dyes and dye intermediates are manufactured. The purpose was to see what measures are taken in those countries to protect the workers against the danger of industrial poisoning, for the manufacture of dyes is of quite recent development in the United States and we are still unfamiliar with some of the complicated compounds which are used or produced and do not know just where danger from poisoning should be looked for. A dye works in St. Denis, near Paris, one in Basel, Switzerland, one in the neighborhood of Frankfort on the Main, several in Manchester, and one each in Huddersfield and Liverpool were visited. The industry is very new in France, but both the Swiss and the English have had a longer experience than have Americans, and the Germans, of course, have been making anilin dyes for some 50 years.

### Foreign Experience With Poisonous Compounds in the Dye Industry.

One of our difficulties in controlling occupational poisoning in American dye works has been our ignorance of the effects on the human body of the many substances which are encountered and we have had to depend on published reports from Germany and England to tell us where to look for danger and how to provide against it, but these reports do not cover all the substances used and therefore every opportunity was used to discuss this subject with the men who have had practical experience in the industry for many years. Sometimes the statements they made were puzzling and confusing, for while one man would tell me that a certain compound was very bad to handle, was a constant source of dermatitis among the men, or of even more serious symptoms of general poisoning, another man would tell me that his factory had used the same compound for years and had had practically no trouble. The only way to explain these contradictory experiences was to visit the two factories and note the way in which the compound in question was handled. For instance, if dinitrobenzene in dry form is shoveled up,

pushed in an open truck and charged into a reducer, without any precautions against dust or contact, dinitrobenzene will be responsible for industrial poisoning in that plant, while in one where the same substance is melted and blown through pipes it will give no trouble at all.

The Germans are in position to give the most valuable information on the toxicity of these substances because even though they may no longer have any cases of poisoning, they can tell of their experience in earlier years when little was known about the effects of the new compounds till some workman or chemist had developed poisoning from them. The precautions taken in German plants are very elaborate, but they are based on accidents which have actually occurred among workmen, or on careful animal experiments to determine the effects of a new substance. For instance, in the plant I visited, several workmen, some years ago, became ill with symptoms resembling arsenical poisoning. Careful examination failed to show any possibility of arsenical poisoning and so all the compounds used in that department were tested on animals, and it was discovered that pyrogallic acid (trihydroxybenzene  $C_6H_3(OH)_3$ ) was responsible for the trouble. It is much more poisonous than the closely related phenol (monohydroxybenzene  $C_6H_5HO$ ) and produces quite different symptoms, in fact, it resembles closely arsenic in its action. As a result, the management decided to discontinue the manufacture of the yellow dye which was made from this compound.

It is not possible in this article to describe in detail the effects on the workers of the poisonous compounds that are used for making dyes or are accidentally evolved in the course of certain reactions. An article containing the essential features of these forms of industrial poisoning has already been published in the MONTHLY LABOR REVIEW for February, 1919, and it will be sufficient to say here that these compounds belong chiefly to three classes of substances. First, there is benzene or coal tar and its derivatives, making up what is known as the aromatic series. These are the nitrobenzenes, nitrochlorbenzenes, anilin ( $C_6H_5(NH_2)$ ), nitranilins, phenol, nitro and amido phenols and the similar derivatives of toluene  $C_6H_5(CH_3)$ , which is simply benzene with a  $CH_3$  added. The second group belongs to the so-called aliphatic series, of which alcohol is a member. Both grain alcohol and wood alcohol are used, but especially the latter. Acetic acid, the acetates, acetone, and other ketones, formaldehyde, and other aldehydes belong to this group. Finally, in the third group are the inorganic compounds, the heavy acids, nitric, hydrochloric and sulphuric; the caustic alkalis, especially caustic soda; lime; and certain oxidizing agents, of which bichromate of potash and peroxide of lead are the most important.



Benzene ( $C_6H_6$ ).

There have been many cases of acute benzene poisoning in the United States in recent years. When the supply of this compound from Germany was cut off by the war, Americans began to produce it at gas works and coke ovens. As a result, benzene became available for a large number of processes in which formerly the petroleum distillates were used, since it is a much more powerful solvent than naphtha or benzine, but up to this time had been too expensive for general use. It also found extensive use in the making of phenol for the explosive picric acid (trinitrophenol  $C_6H_3(NO_2)_3$ ). Cases of sudden and very serious poisoning have occurred in connection with the distilling and use of benzene in this country, and not a few deaths. The effects of inhaling benzene fumes are very rapid and men have been known to die after only a few minutes' exposure, for it attacks the centers in the central nervous system which control respiration and the heart beat and heat production. Chronic poisoning shows itself in nervous symptoms such as headache, weakness, dizziness, and in profound changes in the blood and blood vessels. The red corpuscles may be reduced, in chronic benzene poisoning, from the normal 5,000,000 per cubic centimeter to less than 1,000,000 and the white corpuscles from 7,000 or 8,000 to a few hundred. At the same time, there may be rupture of the small blood vessels with hemorrhage from nose and mouth and the appearance of purple spots on the skin, so that the man looks as if he were badly bruised. These cases of chronic poisoning also may end in death.

The German factory inspection reports have always had a few cases each year of severe benzene poisoning and some of these have occurred in dye works, usually in the course of repairing or cleaning a benzene storage tank. In England, so far as I could ascertain, there have been no serious cases in connection with dye manufacture. As we shall see later the English use extraordinary precautions in cleaning and repairing stills and tanks.

Anilin ( $C_6H_5NH_2$ ).

This is the picture of mild anilin poisoning as given by the physician in chief of one of the largest German factories, the one at Hoechst:

The workman experiences a sense of fatigue and lassitude, his head aches, his eyes are dull, his gait lagging, his movements have lost all elasticity, his speech is slow, hesitating, he has the appearance of a man slightly drunk. His face is gray, his lips bluish, his appetite is completely lost. This is the typical picture. Some men may complain of disturbance of vision, or of increased urination and the urine is likely to be dark-colored. Or the man may not feel ill at all, but his fellow workmen notice that his lips are blue. If then he is sent away from contact with anilin

he recovers his normal condition quickly, unless he indulges in alcohol, in which case all his symptoms are exaggerated and he becomes really ill.

Such cases occur when there is only a slight exposure, as to the fumes of anilin on a hot day. But if the exposure is greater, if anilin is spilled on the clothes or hands and face, the symptoms are much more serious. The color of the lips, at first livid, becomes dark blue, almost black; there is increasing difficulty in walking, till the man falls down; there is alteration in the pulse, though not in the temperature; the pupils dilate but still react to light; the expired air carries the odor of anilin; consciousness may be lost and when the man comes to, he is likely to vomit and to complain of intense headache; he passes thick, dark urine. Difficult urination may persist for several days and a constant desire to urinate may last still longer.

The symptoms above described are not peculiar to anilin poisoning, they are set up also by the other amido ( $\text{NH}_2$ ) and nitro ( $\text{NO}_2$ ) derivatives of benzene, indeed some of these compounds act more rapidly and severely than does anilin. The nitrobenzenes, especially mononitrobenzene ( $\text{C}_6\text{H}_5\text{NO}_2$ ), which is a liquid, is a more dangerous poison than anilin and so is dinitrobenzene ( $\text{C}_6\text{H}_4(\text{NO}_2)_2$ ), although since it is solid, it does not produce its effect so quickly. All these are blood poisons, causing destruction of the red blood corpuscles, as shown by the appearance of blood coloring matter in the urine and by a more or less profound anemia. They also change the hemoglobin of the blood in such a way as to diminish its oxygen-carrying power, and thus the victim of poisoning suffers from more or less severe air hunger, as shown by breathlessness, blue lips, rapid heart, dizziness, and fainting. The methemoglobin which is formed in the place of normal hemoglobin gives to the blood a brownish color which is quite recognizable if a drop of blood is drawn from the tip of the finger.

Jaundice may appear as a later symptom of severe poisoning by one of these compounds. The symptoms of chronic poisoning have not been so well studied as the acute symptoms. There is one important result of chronic anilin poisoning which has aroused much attention in Germany. Some years ago, German surgeons began to notice that a surprisingly large proportion of the cases of bladder tumor that came to the hospitals were in anilin dye workers. These cases were rare, of course, but so much more frequent than among workmen in other industries as to show that the condition is occupational in character. In all the factories I visited, I made inquiry as to bladder tumors, but the only places where men were found who had any experience with this very slowly developing form of chronic anilin poisoning were the German factory and the oldest of the English. In the latter they have had only two or three known cases in the past 20 years, but the physician in charge has heard of others and is of the opinion that examination of the force in any of the older plants in England would reveal some cases. Whatever the substance is that reaches the bladder and sets up this chronic

irritation, eventuating in tumor formation and sometimes in cancer, it is an amido, not a nitro compound. Nitrobenzene workers do not have more than their proportion of bladder tumors; anilin workers do.

In all these countries special precautions are taken against industrial poisoning in the department where benzene is nitrated to mononitrobenzene and then reduced to anilin by the action of hydrochloric acid and iron filings (a process known as acid reduction) and in those departments where anilin is transformed into various compounds for use as dye intermediates. The Europeans agree with us in regarding nitrobenzene as more poisonous than anilin, although cases of nitrobenzene poisoning are rarer than anilin poisoning because there is not nearly so much exposure to the former. However, when a case does occur, it is agreed that the symptoms are likely to be more serious and the disability to last longer than in anilin poisoning. The French tell of serious cases, sometimes fatal, from accidents with nitrobenzene.

Anilin salt, which is anilin hydrochloride made by the action of hydrochloric acid on anilin, is a solid compound not volatile, and is not considered dangerous by practical men. Whatever illness arises in the anilin salt department is thought to come from the exposure to anilin itself, not to the hydrochloride. However, it must not be forgotten that two English experimenters, Price-Jones and Boycott<sup>1</sup> succeeded in producing all the symptoms typical of anilin poisoning by administering anilin salt to animals. It is really to all intents and purposes only anilin dissolved in hydrochloric acid, but since it is a solid, it does not fume as anilin does nor is it so readily absorbed through the skin. In the Manchester works local factory inspectors had insisted on special precautions in this department, covered pans, and forced ventilation, as a result of some cases of poisoning that had occurred, but the managers said that the cases were caused by anilin, not by the salt. One of the physicians told of a very severe case with blood in the urine in a man who spilt anilin on the floor and undertook to sweep it up, walking in it as he did so, and getting the soles of his shoes soaked. In another English plant, it was stated that this was the only department where they had ever had anilin poisoning take place through soaked shoes, a statement which was an unconscious indictment of their methods of manufacture, because nothing is much more reprehensible than to allow pools of anilin water to lie on the floor.

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<sup>1</sup> Guy's Hospital Reports, London, 1909, vol. 43, p. 309.

Dinitrobenzene ( $C_6H_4(NO_2)_2$ ) and Dinitrotoluene ( $C_6H_3(CH_3)(NO_2)_2$ ).

The English and Germans know far more about these two compounds than we do, especially about dinitrobenzene, commonly called DNB, which was for years before the World War a favorite explosive in both countries. It has a very bad reputation in both, having been the cause of much troublesome dermatitis and not a little systemic poisoning. In France also serious poisoning has accompanied the manufacture and use of DNB. Mention may be made here of the fact that during the latter part of the war our Ordnance Department was manufacturing DNB for use as an explosive and that the workmen suffered from the usual symptoms typical of this group of poisons. Dinitrotoluene, called DNT, which was produced as a step in the making of TNT, resembles DNB very closely, but is not as toxic.

In most English plants great care is taken in the handling of DNB for reduction to phenyldiamine ( $C_6H_4(NH_2)_2$ ), and of DNT for reduction to toluylendiamine ( $C_6H_3(CH_3)(NH_2)_2$ ). Of course there is not nearly so much opportunity for poisoning from these two compounds in dye works as in the manufacture of explosives, but the experience gained in the latter industry has influenced the attitude toward them in the dye industry. One English physician in discussing DNB poisoning told of an unusual symptom he had observed in two men. They had recurrent attacks of staggering gait, just as if they were drunk, the condition persisting about a week. Another physician, Dr. Lewis Cairns, of Huddersfield, has found that there is a loss of specific gravity in the blood of men poisoned by DNB and that it is possible to get warning of an acute attack of toxemia by testing the blood for this change. The test is simple; one has only to let a drop of normal blood fall into a test tube of chloroform and then a drop of the suspected blood and compare the gravity of the two.

In Germany DNB is not handled in solid form, but melted and blown through pipes into closed receptacles. Packing the solid DNB in barrels is done by the use of a false cover which is made with two openings, one connected with the hopper of DNB, the other with the dust collecting system. In this way all dusty shoveling and scooping is prevented. However, even after the barrels are packed and closed, they must be stored in an open shed, for the Germans have found that in warm weather enough fumes may be given off from these barrels to affect the men working near them.

#### Chlorbenzenes.

Dinitrochlorbenzene ( $C_6H_3Cl(NO_2)_2$ ) is generally thought to cause more troublesome skin eruptions than DNB, but not such serious general symptoms. It causes a great deal of skin disease, even the

men who load closed barrels into freight cars may get enough on their hands and arms to set up a dermatitis. In the German factory the same precautions are taken with dinitrochlorbenzene as with DNB. The barrels are stored in an open shed, for here also there may be an escape of fumes in hot weather.

When general poisoning from dinitrochlorbenzene occurs, it is said that the men do not show symptoms while at work; they go home apparently quite well, not even blue-lipped, but then they gradually grow drowsy, their lips turn blue, and they collapse. In Germany several cases are on record of men who worked in chlorbenzene or nitrochlorbenzene who did not appear to be affected, but when, after leaving for home, they took a couple of drinks of beer or perhaps only one drink of "schnaps" suddenly became dizzy and confused, the face becoming first suffused then livid, the breathing rapid, and the pulse weak; in some instances there was loss of consciousness.

Both these features—slow onset of symptoms and rapid development of poisoning under the influence of alcohol—are common to all the nitro and amido compounds, not only to those with the chlor atom.

In studies made in our munition works during the war we found that the men working with trinitrotoluene could not stand alcohol; that they knew quite well the danger of drinking while on the job and would sometimes lay off for a few days to get rid of the TNT and then go on a spree, but not return to TNT till they were thoroughly over the effects of the drink. In at least three deaths from TNT poisoning, alcohol seemed to have played an important part.<sup>1</sup> In England, a boy who spilled some mononitrochlorbenzene on his clothes died in less than 24 hours.

#### Miscellaneous Compounds of the Benzene Ring.

All nitro and amido derivatives of benzene are capable of setting up a dermatitis and symptoms of general poisoning which usually resemble those of anilin poisoning. Paranitranilin ( $C_6H_4NO_2NH_2$ ), dinitrochlorbenzene, meta- and para-phenyldiamine, are the ones usually said to give trouble from skin disease. There is more complaint of this kind of poisoning than of the systemic, not because it is really as serious as systemic, but because it causes a longer disability as a usual thing and it is a greater cause of dissatisfaction among workers and consequent labor turnover. Certainly it is true in our dye works that men quit work more on account of dermatitis than for any other reason. They will endure fairly serious symptoms of general poisoning longer than they will endure a burning, itching eczema.

<sup>1</sup>MONTHLY LABOR REVIEW, January, 1919, p. 248.

The two phenylendiamines, para-, which is used as a sulphur dye intermediate and as a dye for fur, and meta-, which is used as an intermediate for Bismarck brown, Manchester brown, and many azo dyes, are made and used in large quantities in English factories, but opinions differ much as to their danger, so much so that one is forced to conclude that the difference depends on methods of handling. One plant claims to have used quantities of metaphenylendiamine for 10 years and never had a case of poisoning; in another this is looked on as more troublesome than the para isomer.

#### Dinitrophenol ( $C_6H_3HO(NO_2)_2$ ).

This is not so important a compound in dye manufacture as many others, but it deserves special mention because of the French experience during the war. The favorite explosive of the French is melinite, a mixture of picric acid (trinitrophenol) and dinitrophenol. Their favorite method of manufacture is not by nitration of phenol, as is ours, but by hydrolysis of dinitrochlorbenzene to dinitrophenol and then by nitration to trinitrophenol. It was in the handling of the dinitrophenol that the French had most of their cases of munition poisoning. TNT, which caused so much trouble in England, hardly gave any at all in France, but they had more than 40 deaths from dinitrophenol poisoning. The research into the action of this substance, which was carried on by Government experts, was very admirably done and it is to be hoped that the French Government will soon publish it.<sup>1</sup> Only the essential features are given here.

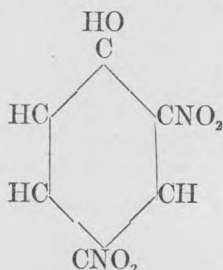
This poison does not give much warning of its action; usually there is only a short premonitory stage during which the workman feels tired and has some pain in the abdomen, or perhaps vomits. Then, it may be after he has left work and is on his way home, he begins to suffer from intense thirst and a feeling of constriction in the chest; suddenly he grows very weak, so that he can not go on. By the time he is brought home he is bathed in perspiration; he has increasing difficulty in breathing and is full of anxiety and fear. His temperature rises to 103°, then 105°, or even higher. In very severe cases the temperature before death has been as high as 107° or 108°, and in one, just after death, the temperature taken under the arm was 109°. Absolutely nothing characteristic is found in the organs or blood after death.

During the war, a great deal of picric acid was made in the United States, but not by the French method. Two American plants did for a short time use the French method and in both dinitrophenol poisoning occurred, one plant having three cases, the other a single case. In

<sup>1</sup> The Public Health Reports for Oct. 24, 1919, contain an article by Roger G. Perkins in which the French experience and researches are fully set forth.

the latter, the course of the poisoning was not typical. The man died after an illness lasting several days and autopsy showed that he was suffering from a toxic jaundice, such as occurred in men working with trinitrotoluene, or TNT. But in the other plant, the three men who were affected died within a few hours after the symptoms came on, and their histories were just like the histories of dinitrophenol cases in France.

Compounds of the benzene ring may contain the same chemical atoms, but if the grouping of those atoms is different their chemical action and their effect on human beings may be quite different. Thus if the nitro group  $\text{NO}_2$  attaches itself to a certain position on the benzene ring, a compound will be formed which differs in some respects from a compound which is like it in every way except that the nitro group is joined to another position on the ring. In the case of dinitrophenol there is only one grouping which is capable of setting up the peculiar form of poisoning just described. This is the 1-2-4 isomer, as it is called, and is illustrated in the accompanying diagram.



That is, the HO group which changes benzene ( $\text{C}_6\text{H}_6$ ) to phenol ( $\text{C}_6\text{H}_5\text{HO}$ ) occupies position 1 in the ring. The two  $\text{NO}_2$  groups, which change phenol to dinitrophenol, occupy positions 2 and 4. It is easy to see that other isomers could be formed, such as 1-2-6 or 1-3-5, etc., and as a matter of fact six isomers are known, but none possesses the peculiar characteristics of the 1-2-4 isomer. So far as the writer knows the form used in dye manufacture is this 1-2-4 isomer, and although no cases of poisoning of this kind have been reported from dye works it is well to bear in mind the possibility of their occurrence. It is also quite possible that as new compounds are introduced into this industry some one that is not yet known to have these characteristics may suddenly give rise to accidents as unexpected as were these dinitrophenol cases in the French munition works.

#### Dimethyl Sulphate ( $(\text{CH}_3)_2\text{SO}_4$ ).

There is a famous case of poisoning from dimethyl sulphate in the German literature, a chemist who spilled some on his person, sustained severe burns and died soon after of pneumonia. That is

the only case the writer has ever been able to discover, but so well were the poisonous qualities of this body known that it was one of those selected for experimental use as a war gas, though it did not prove to be practically serviceable. Experiments are now being carried on in the Rockefeller Institute for Medical Research and it has been found that animals made to inhale dimethyl sulphate develop a widespread affection of the nerves of sensation. The fumes also cause inflammation of the air tubes, with the formation of a diphtheritic membrane, and pulmonary edema.<sup>1</sup>

The well known industrial case mentioned above occurred in the Mannheim factory in Germany and while no other serious cases seem to have arisen since then, there are occasional references in the German factory inspection reports to men suffering from respiratory troubles while working with dimethyl sulphate. On the other hand, the English users of this compound laid more stress on the caustic action on the skin and eyes.

The use of dimethyl sulphate to methylate anilin and to methylate nitrophenol to nitranisol is not necessary, for the same reactions can be brought about by means of methyl alcohol or methyl chloride under heat and pressure. In the German plant visited, the latter method is used, because they consider dimethyl sulphate decidedly dangerous. This same opinion was expressed in some of the English factories, but in others it was used and the course defended by the assertion that the dangers had been greatly exaggerated. In one English factory the men were provided with goggles and rubber gloves by the management but were not using them and were handling the dimethyl sulphate with a little less care than they gave to caustic soda. Here it was said that only one really bad case of blistering had occurred, that burns on the skin or inflammation of the eyes were the worst accident to be anticipated. On the other hand, the men in charge of another English plant said very emphatically that it was bad stuff and they would not have it about.

#### Phosgene or Carbonyl Chloride ( $\text{COCl}_2$ ).

This gas has become very widely known through its extended use in gas warfare during the last period of the war. In dye manufacture it is used to produce Michler's ketone and has therefore been known in Germany for some years and the dangers involved in its manufacture and use are familiar to the Germans. So far, no cases of poisoning from phosgene have been reported from English dye works, although several have occurred in the United States. The English had a good deal of poisoning among the men making gas

<sup>1</sup> Auer J. Generalized Analgesia and Localized Pulmonary Edema in Cats after Exposure to a War Gas ( $(\text{CH}_3)_2\text{SO}_4$ ).

Proc. Soc. Exper. Biol. & Med. 1918, vol. 15, pp. 104, 106.



shells, 27 in the first year and 60 the following year. A special mask containing charcoal and caustic potash is said to be an efficient protection for workmen exposed for a short time to phosgene gas.

### Chromates.

The occurrence of chrome ulcers in the making and application of anilin dyes is frequently mentioned in German and English reports. It is especially in oxidizing anthracene to anthraquinone that the trouble comes. The chrome ulcers may form around the lips, or nostrils, or eyelids, or on the fingers, or if there are pools of chromate solution on the floor, ulcers may form on the feet. Very strict cleanliness of the premises and ample provision for personal cleanliness are necessary to avert such accidents.

### Hydrogen Arsenide ( $\text{AsH}_3$ ).

This poison is the one about which I heard most in England. They have recently had a startling experience with cases of hydrogen arsenide (arseniureted hydrogen) poisoning in their dye works and the factory inspection department will soon issue a report of a careful investigation into the causation and history of these cases. The older books on anilin dye manufacture always speak of the possibility of poisoning from arsenic used in the production of dyes, notably fuchsin, but that method of manufacture was abandoned long since. These English cases came, as do the majority of industrial cases of arsenical poisoning, from the accidental evolution of fumes of hydrogen arsenide as a result of the action of a heavy acid on a metal when one or the other carries arsenic as an impurity.

There are several processes in dye manufacture in which such an accident may take place. One of the English cases was a plumber who went into an empty sulphuric acid tank to repair it. That is, the tank was technically empty, it had been washed out and there was only about a bucketful of fluid left at the bottom. Nevertheless the arsenic content of the acid was great enough to cause fatal poisoning in the man, who died of hemorrhagic nephritis two days later. A similar, but still more disastrous accident, took place not long ago in New Jersey. Here three men went into an iron tank that had contained chamber acid but was supposed to be empty and clean. All were quickly overcome by fumes of  $\text{AsH}_3$  and two died from its effects. It does not take much arsenic in this form to cause severe poisoning. According to Rambousek<sup>1</sup> an amount corresponding to about one hundredth of a milligram of arsenic is sufficient.

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<sup>1</sup> Industrial Poisoning. J. Rambousek. Trans. by T. M. Legge, London, 1913, p. 197.

The other sources of hydrogen arsenide in the dye industry are reduction processes, both acid and alkaline. In reducing nitrobenzene to anilin, nitrotoluene to toluidin, and so forth, this gas may be given off and therefore it is dangerous to send cleaners or pipefitters into the reducer, aside from the danger of the nitro and amido bodies. The arsenic may be contained in the iron but is more likely to be in the acid. One English manager told me that he had had four men on sick leave at once as a result of such an accident as this. The same risk must be thought of in connection with the reduction of nitro- to amido-naphthosulphonic acid.

But it is especially in the making of benzidin ( $C_6H_4NH_2$ ) ( $C_6H_4NH_2$ ), as this is done in English plants and in some American plants, that precautions against arsenic poisoning must be taken,<sup>1</sup> for it is here that a large number of English workmen have recently been found to be suffering from mild or severe poisoning. As I understand it, the method of making benzidin in these English plants is as follows: Nitrobenzene is reduced to hydrazobenzene by means of zinc dust and caustic soda. One of the Home Office experts believes that at this point hydrogen arsenide may be given off, but the industrial chemists are sceptical. There is no doubt, however, as to the danger of the next stage, when hydrochloric acid is used to dissolve out the zinc dust and leave hydrazobenzene. This process must be carried out in the cold, for otherwise some of the hydrazobenzene might be converted to benzidin, pass into solution and be lost, and therefore it is customary in these factories to open up the acidifying tub and drop chunks of ice into the acid. This is the point at which the accidents have usually arisen, for if arsenic is present in the zinc dust, or in the acid, there may be a sudden evolution of  $AsH_3$  when they meet and the liquid may "boil over," as the men say. Usually the zinc is the substance at fault in the most serious accidents, for the acid seldom carries as much arsenic as may be carried by the zinc. Since the latter is in powder form, the conditions are ideal for the production of the gas and since the tub must be opened to admit the ice, its escape is easy.

The next stage is also attended with some danger, and here, too, cases of poisoning have developed. The contents of the tub with the zinc chloride in solution and the crystals of hydrazobenzene are sent into a filter press and if  $AsH_3$  is present, bubbles may be given off from the liquid and from the paste. In one of these English plants it was evident that just this had happened and the chemist in charge spoke with much emphasis of the necessity of providing good drains under the filter press and thoroughly flushing the floor from time to time, never letting any of the fluid lie about in pools. He said that

<sup>1</sup> Exactly the same process is used in reducing nitrotoluene to toluidin and orthonitranisol to dianisidin.

the use of compressed air to blow out the filter press was an advantage also because this served to carry off whatever fumes might be left. In the last stage, when the hydrazobenzene is heated to boiling by steam to convert it to benzidin it is possible that some unchanged azobenzene may be given off with the steam and this compound is decidedly poisonous.

In consequence of the accidents which have occurred, the English factory inspectors are insisting on changes in the equipment of benzidin departments, provision of fume pipes for the reduction, acidifying, and final conversion pans, proper drains for the filter presses, and so on. In one, the management has put in a long sluiceway to the manhole of the acidifying pan, with a valve at the end and the ice is sent down this sluice by the workmen who can thus stand at a distance from the manhole, too far to inhale whatever fumes might escape. This was the plant that had the most trouble in its benzidin department. In another, the cases of hydrogen arsenide poisoning had occurred in connection with the reduction of nitro- to amidonaphthosulphonic acid and since then they have used arsenic-free acid (contact acid) only for this reaction, but even so the iron may contain arsenic, so they test the fumes from time to time with mercuric chloride paper.

This way of making benzidin is rather crude and is not used in our largest plants. It is perfectly possible to produce the proper degree of cold by means of brine coils and so avoid the opening of the acidifier for ice. This does not, however, do away with the risk of escaping fumes if for any other reason the manhole is opened, or if there is a leak, nor does it prevent fumes at the filter press, nor the risk of poisoning the men who repair or clean the acidifying kettle. There is a process in use in at least one American plant which does not involve the use of acid and is quite free from any danger of arsenic at any stage. By this method the zinc dust is not changed to the chloride and dissolved out, but is separated by passage through a very fine screen which catches the crystals of hydrazobenzene and lets the dust through.

In smaller American plants the procedure may be the same as that in England, and carried on without any precautions. I came rather accidentally upon the history of an occurrence in one of our smaller plants which was quite like those described to me in England. In going through the records of a hospital in a New Jersey town I found histories of two men poisoned while on a night shift, both made very ill and one of them dying some three weeks later. They had been employed in a plant which I visited and which I found was making naphthionic acid from alpha-naphthylamine and sulphuric acid, and also benzidin base and sulphate by the process just described.

The company had installed a fume pipe but had never completed it and it was never used. According to information obtained from a physician the men in the hospital were two out of five affected on the same night shift by some gases of unknown nature. The diagnosis given was, very naturally, "anilin or alpha-naphthylamine poisoning."

Fortunately I was able to run down one of the four survivors of the accident and he gave me an intelligent account of it. He worked at the benzidin end and his job entailed watching the process till a change in color from red to white came and then putting in acid. I suppose this means the change from red oxyazobenzene to white hydrazobenzene. On the night of the accident he and four others were at work and, as the chemist was not there, they guessed at the amount of acid. He thought this the reason why, when it was added, the stuff "boiled over." The fumes knocked them all out and this man, C, went home and lay down on the floor, feeling very ill, but not more so than he had at other times, for he often had suffered from fumes in this department during the 18 months he had been at work there. When, however, he saw that his urine was the color of blood, he realized that he was more seriously affected than ever before, and as a matter of fact he was ill for about three months, during which time his wife said he "looked like a yellow corpse." He had had several attacks of illness before, severe headache, dark urine, a bandlike feeling about the body, vomiting, loss of appetite, and great depression of spirits. He had not recovered his normal health although it was more than 18 months since the accident.

The second man, D, was treated at home for about two weeks for supposed typhoid fever, and no details as to this part of his history can be obtained, but probably, judging from the diagnosis, he had symptoms of abdominal distress of an aggravated kind. When he was finally brought to the hospital the Widal test disposed of the typhoid fever theory. He was then, on the 15th day after the accident, in a semiconscious condition, there were ulcers in mouth, throat, and tongue, he had diarrhea and vomiting, and his body was shaken with tremors of the muscles. Albumen was found in the urine, but no blood. There was a very marked anemia, the red blood corpuscles being reduced to 1,780,000. Both spleen and liver were enlarged. In spite of his partial delirium he showed great pain and difficulty on urination and this symptom increased, together with retention of urine, diarrhea, and frequent vomiting during the two days in the hospital. He died on the third day but no autopsy was made.

E went to the hospital 48 hours after the accident. He was then jaundiced, complaining of great pain in the lower chest and over the bladder, vomiting greenish fluid, voiding blood-red urine. There was

also pain and difficulty in urination. These symptoms persisted for two days, then slowly improved and he was discharged on the sixth day, "cured" according to the hospital record, but according to C he has never recovered his health since then nor been able to do a full day's work. No blood count was made in this case, but hemoglobin was found in the urine.

As for the other two, one never reported back to the plant and C knew nothing of his history. The fifth, a cousin of C, recovered completely.

There seems little doubt that these were cases of poisoning from the escape of hydrogen arsenide when acid and zinc dust, one or the other containing arsenic, came together in the process of making benzidin. That the diagnosis of anilin poisoning should have been made is natural, for anilin also is a blood poison, one that destroys the red corpuscles thus causing the appearance of hemoglobin in the urine and later possibly jaundice. Anilin poisoning is also accompanied by more or less pain in the abdomen and by vomiting, but all these symptoms were more accentuated and lasting in the cases in question than they are in anilin poisoning. No case of the latter is on record in which the victim passed into a typhoidlike condition lasting for days and terminating in death. On the other hand the histories of both these cases are very typical of arseniureted hydrogen poisoning.

According to the English physicians with whom I talked, any case of supposed anilin or nitrobenzene poisoning which does not clear up but progresses to profound anemia or jaundice, should be looked on as possibly a case of arsenic poisoning and the urine examined for arsenic. One of these doctors showed me records of 16 such examinations he had recently made. He had found traces of arsenic in the urine of almost all, but in only five was the amount significant. These five were with one exception in the benzidin department, the fifth was making amidodiphenylamine by a reduction process in which he used zinc dust, iron filings, hydrochloric acid and sodium bichromate. In two cases there were no symptoms complained of by the men, but their color was livid and their urine dark; in the other three the symptoms might have passed for anilin poisoning—jaundiced skin, dark urine, headache, and abdominal pains.

In the light of this English experience it seems necessary for us to revise our views as to the dangers that may be encountered in the dye industry and as to the departments in which special precautions should be taken. We must also bear in mind a possible error in diagnosis when a case of supposed anilin poisoning proves to be of unusual obstinacy or severity. A man who came under the observation of Dr. Alfred Stengel of Philadelphia, at the Occupational

Disease Clinic of the Pennsylvania University Hospital said he had been at work some weeks before in a plant making paranitranilin, had been poisoned and quit, but instead of recovering after he left work he had kept on losing strength. It was found that his red blood corpuscles were greatly diminished; his hemoglobin was only 20 per cent. He was sent to the hospital and blood transfusion was practiced three times, but without avail and he died. Now I do not know that this was not simply a case of pernicious anemia with no relation to the man's work, but if it was occupational in character, I believe it is much more likely that it was caused by accidental exposure to hydrogen arsenide gas than to anilin or one of its derivatives.

#### Methods of Prevention of Occupational Poisoning.

In considering the methods that must be adopted to protect workers in dye manufacture against the dangers that may arise from their work the first to be taken up should be those that have to do with the working conditions themselves, the removal or prevention of fumes and dust, the ventilation and cleanliness of the workrooms. Of all the plants visited in Europe the German plant stands out as much the most carefully managed, the cleanest, and the most lavishly supplied. It is not extravagant to say that the passages between buildings and the roadways through the grounds of this German factory were as scrupulously clean as are our cleaner factories, far cleaner than some American plants. Next to it would come the Swiss plant, and then two of the English. The French and the other English plants were about like our usual plants, not so good as our best, not so bad as our worst. I never saw floors as dirty or as sloppy over there as I have seen quite recently in our own country.

In the German plant there was no odor anywhere, one could not have guessed what was being manufactured. They explained to me that it was never permitted to lay a wet piece of machinery or apparatus on the floor, for then the floor would gradually become impregnated with fluids. I was shown a smooth metal shelf placed near the opening of a manhole. When the lid must be removed it is laid on the shelf and the chemist in charge, who must inspect his departments daily, is responsible for the cleanliness of that shelf. No fluid is ever allowed to drip or spill on the floor. That would be a disgraceful disaster for which the chemist would have to answer, and if it resulted in a case of anilin poisoning the chemist would be called up before a committee of the associated anilin industries, the "Berufsgenossenschaft," for it is they who pay the sickness compensation and they make a strict inquiry into all cases of occupational disease.

This system seems to result in a more rigid control of the sources of industrial accident and disease than is obtained when each establishment carries its own insurance and is alone responsible for the cases which occur in it. Naturally an association of all the members of a branch of industry can exert pressure upon one member which will result in a more careful supervision on the part of chemists and physicians than is to be expected when what happens in the plant is known only to that one plant and the loss falls only on it. Merely to save his face and avoid the disagreeable experience of examination at the hands of his colleagues the man in charge will do all he can to keep off accidents and accidental poisoning. After all, the criticism of one's own class is the criticism most to be dreaded and it seems probable that the influence of the "Berufsgenossenschaft" is more potent than the authority of the factory inspection department.

As for fumes, there is in this German plant a rule that all vapors and gases, even plain steam, must be carried off by a fume pipe which can be connected up with the air exhaust system. Always before opening an autoclave or kettle the rule is to turn on the draft and leave it on while the lid is open. They made this rule because they realized that all vapors and gases were potentially dangerous, at least almost all; and that it was impossible in any other way to guard against the occasional escape of hydrogen arsenide and hydrogen sulphide.

Dust prevention in the German factory was excellent. I have never seen men in color work so free from color dust on their clothes and faces. Barrel packing is done in the open room, with the same sort of a false barrel top connected with a dust chamber as described under dinitrobenzene. Small packages are filled under glass and an exhaust provided at that point also. The sulphur black department is a marvel of cleanliness.

The Swiss plant was exquisitely clean but no special devices were seen there. In one of the English plants they had had a good deal of trouble with DNB and in consequence they were taking special precautions there, such as doing as little work as possible in warm weather, testing out new men carefully and removing them to other work as soon as they showed bluish lips, then putting them back again, on the theory that a man might gradually acquire immunity to DNB if given time; but though they tried to handle it without making the man come in contact with it, still it was charged by hand into the pan, while in Germany it is melted and blown. The English do excel us in a more careful attention to detail but there are not many devices in an English plant which are new to us. One valuable suggestion was made to me by an experienced Englishman. He said he never allowed a pipefitter or plumber to enter a benzene still or tank till

fully two days after it had been cleaned and emptied, because he had seen too many accidents follow when the man went in at once. His theory is that the metal absorbs benzene and this must be allowed to evaporate before it is safe to enter the tank. I need hardly refer to the accidents, much more numerous and disastrous in this country than in England, which have attended the attempts to repair receptacles supposedly quite clean and free from benzene.

Fumes of sulphuretted hydrogen in the sulphur dye departments are prevented by sending this gas down into the furnace and burning it to  $\text{SO}_2$ . This seems to be the usual procedure in England. One English plant and one German plant burn also the fumes from alpha-naphthylamine distillation, which are so very disagreeable. The fumes from caustic fusion of nitracetanilid are considered decidedly dangerous and are carried off by exhaust in the English plants.

### Wash Rooms and Working Clothes.

The French, the Swiss, and two of the English factories had washing facilities which would match up with our best plants; the other English ones were not up to our highest standard. Soap is provided in all these plants, and towels, but some of the English still cling to the roller towel of unsanitary fame. All have shower baths and in addition the English usually have at least one tub. This is partly because some men object to a shower bath and partly for use in case of accident. One manager told me that he had once tried to hold under a shower a man who was overcome after spilling anilin on himself and that after this experience he had insisted on having a tub put in. The German plant had the most lavish supply of basins and showers, 1,200 for 3,000 men and also several bathtubs. The Swiss lavatories were beautifully clean and so were the French. They told me in the French factory of an amusing device resorted to during the war to make the dinitrophenol men bathe. They were made to strip off their working clothes at one side of the room and between them and their street clothes at the other side of the room was a shallow wide gutter with running warm water. They simply had to get into it to reach their clothes.

The provision of overalls for men in this sort of work does not seem to be compulsory in Germany. Some plants do it, others do not. In the one visited good suits, two-piece, of blue jeans are provided, mended and laundered. At the end of three to six months, according to the process, a new suit is provided and the old one given to the man. They say that this makes him take good care of it, since he knows that it is to be his own in a few months. The men employed there are decidedly high-grade workmen, as is shown by one little significant item, the absence of doors to the lockers. The locker room has space



for all the street clothing and it hangs in the compartments quite accessible to anyone. I was told that it was much more healthful to let the clothing air and dry than to shut it up behind doors and when I asked if there were no danger of its being stolen, the answer was, "Certainly not. Our men do not rob each other."

Overalls in two of the English plants were good and very fairly clean; not so in the others or in the French plant. Here the men evidently wear what is provided without washing or repair till it falls to pieces. One English company does not provide any clothes, only rubber gloves and goggles for men in caustic soda and dimethyl sulphate. In all these countries it is the rule that if any dangerous compound is spilled or splashed on the clothes the man must at once strip and take a bath. In England he is also made to drink as much milk as he can hold. Bathing is compulsory for process men in Germany.

### Attention to Feeding Employees.

Much more attention is paid in Europe to the proper feeding of men in all the dangerous trades than is true over here, and in the dye industry it is recognized that a poor dinner and an inadequate breakfast may have an important influence on industrial poisoning among those employed. The English have long laid stress on the necessity for proper feeding in the lead trades and they have now applied the same principles to the coal-tar industries. They look on the dinner pail, so common in our factories, as distinctly bad, with its cold, soggy sandwiches and pie. A hot digestible meal in the middle of the day or night is considered essential and therefore all these plants are provided with kitchens, simply but sufficiently equipped with a stove for boiling water for tea and an oven to keep food hot. Opening one of these ovens one finds them filled with bowls of meat and vegetable stew, or the meat pie the English are so fond of. If they wish, the men may bring a rasher of ham or bacon and a couple of eggs and have them cooked at noon. All day long tea may be brewed and it is customary to allow 10 or 15 minutes in the middle of the afternoon for this, sometimes also in the middle of the morning. Nobody can deny the refreshing and restful effect of a cup of hot tea with milk and sugar in the course of the afternoon. I wish very much that American employers were more alive to the importance of hot food for their workmen. Aside from the other effects of indigestion one must not forget that it lessens elimination of a poison, makes it harder for the system to rid itself of what has been absorbed.

The conviction that industrial poisoning is greatly facilitated by poor and insufficient breakfasts has made these English employers provide milk for their workers in the morning as soon as they go on.

A pint apiece is the allowance and it is given free. The Germans are not so liberal, but they provide hot coffee in the morning and afternoon, coffee and soup at noon, for one-tenth the usual price. Hot milk as an antidote for anilin poisoning holds a high place in English estimation. One manager told me how he had treated a man overcome from having his hands in anilin water—he was a bricklayer and had mixed his mortar with wash water that had a little anilin in it—by pouring hot milk and porridge down his throat till the man could hold no more. Hot coffee with milk is also used and is doubtless a good stimulant in such cases.

### Medical Supervision.

This is much more emphasized in England than in the other countries. In Germany and France all applicants for employment are examined by a physician and doubtful cases rejected, but there seems to be no regular inspection after that, only on complaint. In England, in the best managed plants, the physicians not only see all process men once in a fortnight, but also try to see them at work; they make trips through the process departments from time to time and come on the men unexpectedly. It is, they say, much better to see a man in this way than to send for him or to come at some regular time, for then he is prepared to meet the doctor and either to convince him that he is sick or that he is not sick, as the case may be. They make more of an ordinary poisoning than most American industrial physicians do. A man accosted the physician of one plant while I was there and said he was reporting back for work after four days' absence on account of anilin poisoning. His lips were pale, but not blue, and he did not look particularly ill and said he felt pretty well, but the physician looked at his gums and finding them bluish told him to go off and visit his father on the farm for 10 days and then come back for examination.

These English physicians were thoroughly conversant with the processes in all the departments and knew just what gases and dusts the different men were exposed to, knew also the extent to which heat or heavy work entered into the process. In this way they were able to decide intelligently the question whether or not a man's illness was attributable to his work.

The British Factory Inspection Department of the Home Office is preparing new rules for the control of these industries. At present the rules in force are those passed in 1908 and cover only the "manufacture of nitro and amido derivatives of benzene, and the manufacture of explosives with use of dinitrobenzol and dinitrotoluol." They are not only insufficiently comprehensive but they are recognized to be inadequate, and indeed have already been supplemented

by orders issued by local inspectors. The codes formulated by the States of New Jersey and Pennsylvania are in some respects much better. Yet even these inadequate rules promulgated in 1908 prescribe the furnishing, repairing, and laundering of working suits for process men, rubber gloves or other suitable protection for the hands, to be collected at the end of each day and repaired or renewed as necessary. They also insist on generous provision for personal cleanliness, soap and towels, nail brushes, running hot or warm water, one basin or two feet of space at a trough for each man, and sufficient baths. All this is more than can be found in some of our American plants, though our best are quite as well equipped as any in Europe.

# Tentative Quantity-Cost Budget Necessary to Maintain Family of Five in Washington, D. C.

## Introductory Note.

### Price Changes Since August, 1919.

THE cost data cited in this budget were obtained in August. Since that time prices of most commodities have changed. The information regarding such changes is not complete, as no complete survey has been made since August. In certain cases, however, the changes are known.

*Street car fares.*—Street car fares have been increased from a flat 5-cent rate, with a 2-cent charge for transfers, to a minimum of 6¼-cent rate, when tickets are purchased, or a 7-cent rate for a single fare, with free transfers on company lines and a charge of 2 cents for transfers on intercompany lines. This budget was computed on the basis of a 5-cent fare, disregarding transfers. The increase to 6¼ cents as a minimum fare would increase the necessary allowance for street car fare from \$45 to \$56.25 per year.

*Rents.*—The indications are that rents have increased from 10 per cent to 25 per cent since August, 1919. The data on this point are incomplete, but assuming a minimum increase of 10 per cent, the rent allowance in this budget would be increased from \$300 to \$330.

*Food.*—Retail prices of food in Washington, according to the figures of the Bureau of Labor Statistics (see MONTHLY LABOR REVIEW, October and November, 1919), were 2 per cent lower in October than in August. This would decrease the food allowance in the budget from \$773.93 to \$758.46.

The result of these price changes (disregarding for lack of data other possible changes) would make the October, 1919, cost of this budget \$2,288.25 as against \$2,262.47 in August, an increase of \$25.78.

NOVEMBER 12, 1919.

## Summary.

This report presents the results of a study made by the United States Bureau of Labor Statistics to determine the cost of maintaining the family of a Government employee in Washington at a level of health and decency. This involved two inquiries: (1) The establishing of "a quantity budget," i. e., the number or quantity of

the various things necessary to maintain the living level referred to; and (2) the ascertaining of the total cost of such a budget at the prices prevailing in Washington at the present time (August, 1919).

### Difficulty of Establishing a Proper Budget Level.

Previous studies of the subject have analyzed the conception of a budget level and have distinguished several levels. Some of the more important of these are as follows:

(a) *The pauper or poverty level.*—This represents roughly a standard of living just above where families receive aid from charity or where they run into serious debt.

(b) *The minimum of subsistence level.*—This is based essentially on mere animal existence and allows little or nothing for the needs of men as social creatures.

(c) *The minimum of health and comfort level.*—This represents a slightly higher level than that of subsistence, providing not only for the material needs of food, shelter, and body covering, but also for certain comforts, such as clothing sufficient for bodily comfort and to maintain the wearer's instinct of self-respect and decency, some insurance against the more important misfortunes—death, disability, and fire—good education for the children, some amusement, and some expenditures for self-development.

Inasmuch as the primary aim of this study was to furnish information for use by the Joint Commission of Congress on Reclassification of Salaries, the minimum of health, decency, and comfort was kept in mind in determining the quantity budget and in selecting qualities and ascertaining prices of articles of the budget. Clearly neither a pauper budget level nor a mere subsistence level should or could be submitted. But, when the effort was made to go further than this, to determine a level above mere subsistence but not so high as to be unreasonable for the purpose for which it was to be used, serious difficulties arose. Part of the difficulty was a matter of terminology. Phrases such as "a comfort level" or a "level of reasonable comfort" are by no means clear cut, and much discussion can arise as to just what particular "comforts" should be included.

### Budget Level Used in this Study.

Finally, after long consideration, it was decided to use as a working basis a budget level which can be best expressed perhaps by the phrase "a standard of health and decency." This phrase is not entirely precise in meaning. No phrase of the kind can very well be wholly satisfactory. The budget herewith suggested is intended to give to the average family, consisting of husband, wife, and three children below the age of 14 years—

(1) A sufficiency of nourishing food for the maintenance of health, particularly the children's health;

(2) Housing in low-rent neighborhoods and within the smallest possible number of rooms consistent with decency, but with sufficient light, heat, and toilet facilities for the maintenance of health and decency;

(3) The upkeep of household equipment, such as kitchen utensils, bedding, and linen, necessary for health, but with no provision for the purchase of additional furniture;

(4) Clothing sufficient for warmth, of a sufficiently good quality to be economical, but with no further regard for appearance and style than is necessary to permit the family members to appear in public and within their rather narrow social circle without slovenliness or loss of self-respect.

(5) A surplus over the above expenditures which would permit of only a minimum outlay for such necessary demands as—

(a) Street car fares to and from work and necessary rides to stores and markets;

(b) The keeping up of a modest amount of insurance;

(c) Medical and dental care;

(d) Contributions to churches and labor or beneficial organizations;

(e) Simple amusements, such as the moving pictures once in a while, occasional street car rides for pleasure, some Christmas gifts for the children, etc.;

(f) Daily newspaper.

### The Standard Family.

This budget has been worked out for a family consisting of husband, wife, and three dependent children—a boy of 11, a girl of 5, and a boy of 2 years of age. The number in the family and the ages of the children conform closely to the standards used by the Bureau of Labor Statistics and other investigators in the past. The determining factor in selecting the standard family, however, was the fact that a family of this particular size and composition represents actual existing families in the United States. The average number in the white families scheduled by the Bureau of Labor Statistics was 4.9 individuals (equivalent to 3.33 adult males), which corresponds very closely with the standard family of 5 individuals (equivalent to 3.35 adult males). The assumption that the three children of the family are, respectively, a boy aged 2 years, a girl aged 5 years, and a boy aged 11 years, is, of course, arbitrary and is solely for the purpose of making precise calculations as to food and clothing consumption. The children in this standard family are growing children, not yet able to add anything to the family income, and not so expensive to

maintain as they will become a few years later. This standard family is about half way between the family with no children and the family with grown children capable of self-support.

#### Budget of Health and Decency Not Intended as an Ideal.

It needs to be emphasized that the budget level adopted in the present study is in no way intended as an ideal budget. It was intended to establish a bottom level of health and decency below which a family can not go without danger of physical and moral deterioration. This budget does not include many comforts which should be included in a proper "American standard of living." Thus no provision is directly made for savings other than insurance, nor for vacations, nor for books and other educational purposes.

On the other hand, a family with the items listed in this budget should be able to maintain itself in health and modest comfort. It would have a sufficiency of food, respectable clothing, sanitary housing, and a minimum of the essential "sundries."

#### The Cost of a Budget Level not Necessarily a Fixed Money Cost.

The annual expense of maintaining the budget level above described may be arrived at by obtaining and totaling the current prices on each of the individual items entering into the budget. This has been done as part of the present study and a total figure arrived at which measures the annual money cost of all the budgetary items at the prices now prevailing in Washington, D. C.

It is highly important to note, however, that the maintenance of living on the level indicated does not necessarily require the receipt of an annual income of precisely this amount. This is so for several reasons. Thus, the family here used as a basis of computation is one consisting of husband, wife, and three dependent children, 11, 5, and 2 years old. A newly married couple does not start house-keeping with a family of 3 children. It is assumed that before marriage and in the early years of marriage savings will have been accumulated either in the form of money savings, household equipment, or partial ownership of a home. These accumulations must be depended upon to tide the family over the period when the children become the greatest burden, just before the oldest one is able to earn his own support in whole or in large part. This budget assumes the existence of an equipment of household furniture, as it is generally true that married couples do purchase the major part of their household furniture either at marriage or shortly thereafter. If the family has savings invested, the family income is supplemented by the amount of interest received; if the house is owned the cost of the

budget level here provided for would be reduced by the saving in the expenditure for rent. Another factor tending to reduce the cost of the budget below the market cost of the individual items is the extraordinary ingenuity of most families in economizing, particularly when the need for the closest economy is regarded as only of temporary duration. This ingenuity expresses itself in many ways, and, for the most part, ways which a budget study such as the present one can not specify or estimate. The average housewife is not a perfect cook, a perfect seamstress, or a perfect "shopper," nor does she have time, even if she has the ability, to attain 100 per cent efficiency in cooking, tailoring, shopping, and the many other skilled trades which she must practice as time and capacity permit. On the other hand, almost every housewife does possess certain abilities along one or more lines and by the exercise thereof is able to reduce expenditures along these lines to below the average. However, no housewife can reasonably be expected to perform more than one miracle of domestic economy each day.

In many families the husband and even the children are able to contribute certain services—such as marketing, housework, repairs of household—which may reduce the need for actual money expenditure or may permit the housewife to do a greater amount of sewing, such as the making over of garments.

In these and many other ways, families are often—it might even be said usually—able to maintain a decent standard of living at a somewhat lesser cost than the market prices of the budgetary items. Clearly these economies can be effected only at considerable sacrifice of time and convenience and the possibilities of such economies are often greatly overestimated. The not infrequent criticism of standards of living studies that families do actually live on smaller incomes than those indicated is, in itself, not a valid criticism. Families may and do live, although underfed, underclothed, unhealthfully housed, overworked, especially the wife and mother, and deprived, particularly the children, of many things essential to the development of healthy and useful citizens.

#### Possible Economies.

Recognizing, for the reasons just mentioned, that a family may obtain certain items of the quantity budget here submitted at a less expense than indicated by the total cost of the items at current market prices, the very pertinent question then arises as to the possible extent of the saving which may be thereby effected. This of course can not be determined with precision. But it can be determined with sufficient accuracy to indicate the extent to which the cost of the budget at market prices may be cut by a family which is thrifty as well as economical, which is fortunate in escaping unexpected

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expenses and avoiding bad bargains, and in which the housewife is physically strong and is highly intelligent in purchasing supplies and in the management of the home. The most satisfactory method of arriving at such an estimate is to take up each item of the budget in order and consider the possible ways in which economies may be effected. The conclusions reached are here presented in summary form.

*Food.*—The food prices used in this budget are average prices of a large number of stores in what are commonly regarded as low-priced neighborhoods and represent quite accurately the prices paid by the average family living in such neighborhoods. The only practicable methods of “cutting” these prices are: (1) To be able to purchase each commodity at its lowest price; (2) to buy in bulk—such as canned vegetables by the dozen cans; (3) to buy seasonal foodstuffs only during the period when their prices are lowest. There are obvious difficulties in the practical application of these methods, but if carried out to their extreme food might be purchased at a saving of possibly 7½ per cent on average market prices.

*Clothing.*—The clothing prices listed in the budget are the lowest price quotations prevailing in the stores in August–September, 1919. Special sales were taken into consideration, but obviously the investigation could not cover a sufficiently long period to take in all the bargain and special sales of the year. By consistently following such sales a family might effect an appreciable saving in the course of a year. Also, by consistently “making over” the outgrown or outworn garments of one member of the family for the use of another member, a further saving in the clothing cost might be effected. The present budget allows for considerable “making over” of clothes, but not for carrying the practice to the extreme length to which it might conceivably be carried, for the reason that this would place heavy additional labor upon a housewife who is already very seriously burdened with duties.

By these two methods—buying consistently at bargain sales and by “making over” all garments physically capable of being made over—a family might effect a total saving on the clothing bill of perhaps 10 per cent, without lowering the clothing standards allowed for in the budget.

*Housing.*—House rents are not completely standardized. Rents vary considerably for houses of identical character. This budget has used as a minimum the approximate average rent of a large group of small houses in low-rent neighborhoods. With exceptional good fortune, a family might obtain a house at a 10 per cent lower rent than that allowed in the budget, although the chances would be equally strong that it would have to pay more than the amount

allowed in the budget. In any case, the maximum saving on this item could not well exceed 10 per cent.

*Sundries.*—The amounts allowed for sundries in the budget can not well be cut by the average family without lowering its level of living below the standard of health and decency. In a few items, however, an exceptionally fortunate or well-situated family might be able to effect certain savings. Thus, this budget allows for car fare to and from work, on the theory that a considerable number of employees must, of necessity, under the housing conditions now existing, live at a distance from their place of work. If, however, a family lives, or is able to obtain a home, within walking distance of the husband's place of work, this item of expense would of course be eliminated. In this and other ways it is estimated that a family favored by circumstances may be able to obtain the essential "sundries" at a saving of possibly \$107.50 in this budget.

### Summary of Budget.

#### *Cost of quantity budget at market prices.*

I. Food.....		\$773.93
II. Clothing:		
Husband.....	\$121.16	
Wife.....	166.46	
Boy (11 years).....	96.60	
Girl (5 years).....	82.50	
Boy (2 years).....	47.00	
		513.72
III. Housing, fuel, and light.....		428.00
IV. Miscellaneous.....		546.82
		<hr/>
Total budget at market prices.....		2,262.47

*Possible saving upon market cost by a family of extreme thrift, of high intelligence, great industry in shopping, good fortune in purchasing at lowest prices, and in which the wife is able to do a maximum amount of home work:*

I. Food (7½ per cent).....	\$58.04
II. Clothing (10 per cent).....	51.37
III. Housing.....	30.00
IV. Miscellaneous.....	107.50
	<hr/>
Total economies.....	246.91
	<hr/>
Total budget minus economies.....	2,015.56

*Savings.*—No provision is made in this budget for savings, other than the original cost of household furniture and equipment, which would average about \$1,000 in value. No definite estimate, of course, can be made as to the amount which a low-salaried Government employee should be expected to save. But an average saving of 12½ per cent of yearly salary during an employee's single and early married life would seem to be the maximum which could be

expected. Over a period of, say, 15 years this would result in a total accumulation of about \$2,000. Assuming \$1,000 of this to be invested in household equipment, there would be a net sum of \$1,000 available for investment in a home or in other direct income-producing form. In any case, it would represent an annual income of approximately \$50 per year.

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## Cost of Living in the United States—Family Incomes.

**I**N THE cost-of-living survey recently made by the Bureau of Labor Statistics, one of the factors to which particular attention was paid was the family income. Not only is the amount of income which a family receives important, but the sources of that income call for serious consideration.

Two families may have equal total incomes. In one case the income may be derived wholly from the wages or salary of the husband. The wife's time may be devoted to her domestic and social duties—care of the home and children, and such neighborhood or other work as she may be interested in. The children are in school. In the case of the second family, the husband's earnings may be insufficient to support the family and it becomes necessary for the wife to devote more or less of her time to working for pay to the neglect of her family, or for the children to stop school and go to work to supplement the income of the husband and father. With the same amount of money to spend it is easy to say which family will be able to make the best use of its money and derive the most benefit from it.

A well tended vegetable garden, or a poultry yard, may not only add to a family's income, but may be a source of profit in the pleasure derived from caring for it. On the other hand, the presence of lodgers in a family is very apt, by crowding and otherwise, to have a deleterious effect.

The schedules used in the cost-of-living survey show the earnings of the husband; the earnings, if any, of the wife, children, or dependents; the income from lodgers, garden and poultry, rents, or investments; and receipts from gifts and from other sources.

It has been found that in one of the 92 localities included in the survey the average earnings of the husbands were more than 95 per cent of the total average income; in 49 localities they constituted 90 and under 95 per cent of the total income; in 29 localities, 85 and under 90 per cent; in 10 localities, 80 and under 85 per cent; and in three localities 75 and under 80 per cent. The average total earnings per family were 95 per cent or more of the total income in 76 localities; and 90 and under 95 per cent in 16 localities.

In studying the sources of income and the importance of each source with relation to the total income of a family the following limitations to the type of family scheduled should be kept in mind. No families were scheduled in which there were children who lived as boarders, that is, paid a certain sum per week or per month for board and spent the remainder of their earnings or salary as they saw fit. No families were scheduled which kept any boarders. The number of lodgers to be kept by a family was limited to three at any one time. No families were scheduled in which the total earnings of the family did not equal 75 per cent or more of the total income. It will be seen that these limitations excluded a large number of families and this materially affects the percentage of families having earnings from children and income from lodgers, and also results in showing a larger percentage of the total income as coming from the earnings of the husband than would be the case if the type of families named had not been excluded from the study. It also reduces the actual amount per family earned by children and received from boarders or lodgers that would be shown in case a cross section of a community including all the types mentioned were used. The object in making the exclusions named was to secure families dependent for support, as largely as possible, upon the earnings of the husband. Of course, it was impracticable to secure a sufficient number of families in which the only source of income was the earnings of the husband, but in following the course named the percentage of families having an income from other sources has been very largely reduced.

Table 1, which follows, shows, for each of the 92 localities included in the study, the per cent of families having income from the several sources mentioned above. As schedules were secured only from families in which the husband was at work, it was not necessary to include a column for husbands in this table.

TABLE 1.—PER CENT OF FAMILIES HAVING INCOME FROM CERTAIN SPECIFIED SOURCES, BY CITIES, ALL INCOMES.

*White families.*

Locality.	Per cent of families having income from—							
	Earnings of wife.	Earnings of children.	Earnings of dependents.	Lodgers.	Garden and poultry.	Gifts.	Rents and other investments.	Other sources.
Astoria, Oreg.....	10.7	21.3	.....	12.0	37.3	81.3	8.0	41.3
Atlanta, Ga.....	8.1	24.4	1.3	2.5	45.6	65.6	6.9	15.1
Bakersfield, Calif.....	16.9	22.1	.....	1.3	64.9	66.2	15.6	15.6
Baltimore, Md.....	10.3	19.5	1.0	6.7	15.4	83.6	2.6	23.6
Birmingham, Ala.....	6.0	15.9	1.3	6.6	80.1	72.2	2.5	31.1
Bisbee, Ariz.....	3.8	15.0	.....	10.0	17.5	50.0	18.8	57.5
Boston, Mass.....	10.3	19.7	.2	4.4	7.9	83.0	11.5	33.4
Brazil, Ind.....	9.2	22.4	.....	.....	77.6	68.4	5.3	27.6
Bridgeport, Conn.....	6.3	20.3	.....	12.6	18.9	79.0	2.8	21.7
Buffalo, N. Y.....	3.5	12.9	.....	4.3	20.3	63.7	7.8	16.8
Butte, Mont.....	5.9	11.8	.....	2.9	31.4	82.4	9.8	31.4
Calumet, Mich.....	2.7	12.3	.....	.....	89.0	65.8	17.8	89.0
Chambersburg, Pa.....	11.7	18.2	1.3	2.6	62.3	83.1	2.6	29.9
Charleston, S. C.....	1.0	19.0	.....	11.0	32.0	68.0	15.0	16.0
Charleston, W. Va.....	3.9	29.1	2.9	5.8	55.3	65.0	5.8	22.3
Charlotte, N. C.....	12.3	30.9	1.2	7.4	80.2	87.7	7.4	38.3
Chicago, Ill.....	7.8	16.1	.....	6.3	27.3	75.9	17.5	18.7
Chippewa Falls, Wis.....	13.5	17.6	.....	5.4	75.7	70.3	9.5	33.8
Cincinnati, Ohio.....	13.3	12.9	.8	2.8	40.6	71.1	6.8	43.0
Cleveland, Ohio.....	6.5	20.4	.4	4.5	38.8	93.1	25.7	27.8
Columbus, Ohio.....	8.9	10.1	.6	8.3	77.5	89.3	8.9	34.9
Coriscana, Tex.....	8.0	21.3	.....	2.7	92.0	66.7	2.7	24.0
Cripple Creek district, Colo.....	6.3	22.5	.....	.....	48.8	81.3	18.8	42.5
Dallas, Tex.....	9.3	16.0	2.7	2.7	73.3	68.0	2.7	13.3
Danville, Ill.....	10.8	16.2	.....	1.4	86.5	87.8	9.5	23.0
Denver, Colo.....	3.9	24.0	.6	4.5	55.2	79.9	22.1	41.6
Des Moines, Iowa.....	11.8	17.6	1.0	5.9	71.6	71.6	5.9	32.4
Detroit, Mich.....	4.5	10.8	.....	12.5	19.4	61.5	14.9	19.8
Dover, N. J.....	2.7	25.7	.....	13.5	77.0	83.8	4.1	54.1
Duluth, Minn.....	4.1	14.3	1.0	6.1	46.9	81.6	9.2	53.1
El Paso, Tex.....	10.1	19.0	1.3	6.3	40.5	75.9	13.9	21.5
Eureka, Calif.....	3.9	15.8	.....	2.6	84.2	86.8	31.6	35.5
Evansville, Ind.....	12.3	26.4	.....	1.9	60.4	69.8	.9	26.4
Everett, Wash.....	11.5	25.0	.....	.....	80.8	94.2	3.8	19.2
Fall River, Mass.....	15.8	27.2	.6	.6	22.2	77.8	2.5	26.6
Fort Wayne, Ind.....	7.2	14.4	.....	4.1	82.5	87.6	23.7	20.6
Fredericksburg, Va.....	13.3	31.7	1.7	6.7	71.7	91.7	15.0	31.7
Grand Island, Nebr.....	11.7	14.3	1.3	2.6	61.0	74.0	13.0	10.4
Grand Rapids, Mich.....	11.0	11.0	1.0	8.0	38.0	79.0	30.0	20.0
Green Bay, Wis.....	4.0	22.7	1.3	1.3	73.3	69.3	9.3	20.0
Houston, Tex.....	5.1	10.2	.....	10.2	62.2	66.3	4.1	20.4
Huntsville, Ala.....	16.0	25.9	.....	1.2	81.5	71.6	3.7	25.9
Indianapolis, Ind.....	4.1	14.5	.7	.7	57.9	72.4	10.3	35.9
Jacksonville, Fla.....	3.7	11.1	.....	11.1	22.2	30.9	3.7	7.4
Johnstown, N. Y.....	76.9	11.5	1.3	2.6	75.6	71.8	12.8	46.2
Kansas City, Kans., and Kansas City, Mo.....	10.7	18.8	.9	3.1	46.4	74.1	4.0	18.3
Knoxville, Tenn.....	15.6	24.7	3.9	1.3	54.5	72.7	6.5	27.3
Lawrence, Mass.....	11.0	23.9	2.8	5.5	28.4	67.9	6.4	36.7
Little Rock, Ark.....	2.8	22.5	.....	8.5	56.3	60.6	40.8	18.3
Los Angeles, Calif.....	6.4	16.3	.5	1.5	61.9	77.2	15.3	21.3
Louisville, Ky.....	17.1	20.0	1.9	1.0	44.8	67.6	2.9	30.5
Manchester, N. H.....	24.1	23.2	2.7	8.0	68.8	69.6	17.9	33.9
Memphis, Tenn.....	3.9	25.2	1.9	.....	62.1	73.8	3.9	32.0
Meridian, Miss.....	6.4	17.9	.....	3.8	69.2	73.1	12.8	23.1
Milwaukee, Wis.....	7.1	22.7	.....	3.0	41.4	71.2	20.7	24.7
Minneapolis and St. Paul, Minn.....	6.3	16.3	.4	4.2	58.8	74.2	11.3	18.8
Mobile, Ala.....	2.8	15.7	1.9	3.7	44.4	57.4	2.8	14.8
Newark, N. J.....	7.5	21.8	1.4	3.4	11.6	72.1	8.8	19.0
New Bern, N. C.....	6.7	21.3	1.3	2.7	49.3	52.0	12.0	18.7
New Orleans, La.....	4.8	12.2	2.0	.....	23.1	73.2	6.8	53.1
New York, N. Y.....	15.1	23.4	1.4	9.3	3.3	68.0	4.8	21.0
Norfolk, Va.....	6.0	21.0	1.0	13.0	23.0	41.0	13.0	20.0
Oklahoma City, Okla.....	10.0	15.0	.....	10.0	61.0	67.0	28.0	15.0
Omaha, Nebr.....	8.8	11.8	1.0	3.9	64.7	74.5	11.8	24.5
Pana, Ill.....	6.7	12.0	.....	4.0	94.7	73.3	5.3	64.0
Philadelphia, Pa., and Camden, N. J.....	10.6	24.6	1.3	6.0	4.7	68.4	3.0	26.9
Pittsburgh, Pa.....	2.0	11.8	.....	5.9	16.1	53.5	4.3	15.0
Portland, Me.....	10.3	25.8	.....	10.3	25.8	85.6	13.4	42.3
Portland, Oreg.....	11.2	15.1	.7	5.9	75.0	81.6	15.8	27.0
Providence, R. I.....	12.0	30.4	.....	1.3	25.3	88.0	19.6	38.0

TABLE 1.—PER CENT OF FAMILIES HAVING INCOME FROM CERTAIN SPECIFIED SOURCES, BY CITIES, ALL INCOMES—Concluded.

*White families—Concluded.*

Locality.	Per cent of families having income from—							Other sources.
	Earnings of wife.	Earnings of children.	Earnings of dependents.	Lodgers.	Garden and poultry.	Gifts.	Rents and other investments.	
Pueblo, Colo. ....	1.3	13.9	1.3	5.1	58.2	75.9	12.7	34.2
Richmond, Va. ....	20.9	19.0	.7	3.3	34.0	71.2	7.2	27.5
Roanoke, Va. ....	1.2	26.8	2.4	6.1	70.7	87.8	22.0	29.3
Rock Island, and Moline, Ill., and Davenport, Iowa. ....	8.2	13.7	.7	11.6	73.3	84.2	9.6	22.6
Rutland, Vt. ....	3.8	22.5	.....	1.3	88.8	82.5	15.0	55.0
Sacramento, Calif. ....	15.9	24.3	1.9	.9	68.2	79.4	25.2	24.3
Salt Lake City, Utah. ....	5.8	12.6	.....	1.9	44.7	90.3	8.7	39.3
San Francisco and Oakland, Calif. ....	4.3	10.6	.....	5.0	38.5	74.4	19.9	29.2
Savannah, Ga. ....	3.8	11.3	.....	6.3	15.0	28.8	7.5	8.8
Scranton, Pa. ....	4.6	26.5	1.3	4.0	53.6	66.9	11.3	45.0
Seattle, Wash. ....	7.1	13.2	.....	4.6	57.9	84.3	11.2	26.0
Spokane, Wash. ....	15.5	22.3	.....	1.9	80.6	85.4	11.7	20.4
Steubenville, Ohio. ....	4.1	14.9	.....	4.1	43.2	91.9	10.8	32.4
St. Louis, Mo., and East St. Louis, Ill. ....	4.0	15.9	.9	.9	36.6	66.1	7.0	23.3
Syracuse, N. Y. ....	10.8	28.5	.6	6.3	51.3	81.6	13.9	39.9
Trenton, N. J. ....	7.0	19.0	.....	3.0	32.0	45.0	2.0	40.0
Trinidad, Colo. ....	11.5	17.9	1.3	2.6	50.0	92.3	15.4	29.5
Virginia, Minn. ....	2.8	11.3	.....	9.9	62.0	73.2	12.7	74.6
Westfield, Mass. ....	13.5	21.6	1.4	4.1	64.9	85.1	6.8	50.0
Wichita, Kans. ....	9.2	18.7	.....	5.3	73.3	66.7	18.7	14.7
Wilmington, Del. ....	5.1	20.4	.....	15.3	15.3	50.0	6.1	28.6
Winston-Salem, N. C. ....	8.5	24.4	1.2	3.7	69.5	74.4	7.3	30.5
Total. ....	8.9	18.6	.7	5.1	44.3	73.3	11.2	28.4

*Colored families.*

Atlanta, Ga. ....	56.4	27.3	.....	9.1	41.8	65.5	5.5	21.8
Baltimore, Md. ....	53.3	29.9	2.8	28.0	4.7	70.1	.....	34.6
Birmingham, Ala. ....	50.9	29.1	1.8	1.8	74.5	78.2	1.8	61.8
Columbus, Ohio. ....	29.4	9.8	.....	11.8	70.6	84.3	7.8	45.1
Houston, Tex. ....	40.8	18.4	2.0	8.2	51.0	53.1	2.0	10.2
Jacksonville, Fla. ....	48.8	23.3	2.3	20.9	11.6	27.9	2.3	16.3
Memphis, Tenn. ....	55.1	28.6	4.1	4.1	42.9	67.3	.....	34.7
Mobile, Ala. ....	34.6	26.9	1.9	7.7	57.7	63.5	3.8	30.8
New Orleans, La. ....	36.3	19.6	2.0	4.9	21.6	63.7	2.0	76.5
Pittsburgh, Pa. ....	10.2	12.2	.....	18.4	16.3	57.1	4.1	22.4
Savannah, Ga. ....	62.0	26.0	4.0	2.0	22.0	62.0	4.0	22.0
St. Louis, Mo. ....	43.0	35.4	3.8	22.8	20.3	82.3	3.8	44.3
Total. ....	43.7	24.6	2.2	12.7	32.8	63.1	2.8	38.6

The percentage of families having incomes from the earnings of the wife varies widely in the different cities. The highest percentage is found in Johnstown, N. Y. This high percentage is accounted for by the fact that glove making is a leading industry of the town, and furnishes work which women can do at home. Many women, who would not leave home to work in factories, will take advantage of work which can be performed in the home and at odd times.

When studying the percentage of families having income from earnings of children, it should be borne in mind that only families were scheduled whose children at work, if any, turned all their earn-

ings into the common family funds. Families having children at work who simply paid board or board and lodging, and retained the rest of their money, spending it for themselves, were omitted from the study.

The small proportion of families having income from the earnings of dependents is due, of course, to the small number of families having dependents. In this study, a "dependent" is construed to be a person, other than husband, wife, or child, who is dependent upon the family purse for support, even though he contributes to the purse as much or more than the cost of his support.

The number of families having income from a vegetable garden or from poultry, or both, depends largely on the amount of land available, which, as a rule, will naturally be larger in small towns, where land is relatively cheap, than in the larger cities, where the price is higher. The income from garden products and poultry, as well as that from rents and other investments, is net, all expenses having been deducted from the gross receipts. The value of garden products and poultry produced and consumed by the family, as well as that which was sold, was estimated and included in income.

Under income from gifts have been reported all gifts of money and the estimated value of all clothing, jewelry, produce, or other articles received by the family. These gifts do not imply poverty or need but are things that are given by relatives and friends. Such items have been included under both income and expenses.

Income from rents and other investments is dependent in part upon the size of the total income, and in part upon the thrift of the family. Aside from opportunities for investing small amounts which may be more favorable in one city than another, the size or location of the city seems to have little effect upon this item. Possibly there is more of a tendency to save in small communities, where the opportunities and temptations for spending money in unnecessary ways are fewer than in large cities.

Income from "other sources," also, is dependent more upon the surroundings and circumstances of the family than upon the size of the city in which the family lives.

Table 2 shows similar facts to Table 1, the figures being given for all cities combined, by income groups.

TABLE 2.—PER CENT OF FAMILIES HAVING INCOME FROM CERTAIN SPECIFIED SOURCES, BY INCOME GROUPS, ALL CITIES.

*White families.*

Income group.	Per cent of families having income from—							
	Earnings of wife.	Earnings of children.	Earnings of dependents.	Lodgers.	Garden and poultry.	Gifts.	Rents and other investments.	Other sources.
Under \$900.....	13.3	7.8	.....	2.4	41.6	75.0	3.0	33.1
\$900 and under \$1,200.....	11.3	8.5	0.5	3.7	41.1	73.5	4.9	30.3
\$1,200 and under \$1,500.....	8.7	12.2	.5	4.6	44.9	74.7	9.1	28.6
\$1,500 and under \$1,800.....	8.1	19.2	.6	6.0	45.3	72.6	13.6	27.5
\$1,800 and under \$2,100.....	6.8	27.3	1.1	6.0	47.6	71.6	16.5	25.3
\$2,100 and under \$2,500.....	8.9	46.2	1.8	7.7	42.8	71.8	21.6	28.5
\$2,500 and over.....	5.4	71.1	1.7	6.5	41.6	70.8	23.5	29.7
Total.....	8.9	18.6	.7	5.1	44.3	73.3	11.2	28.4

*Colored families.*

Under \$900.....	43.4	11.8	.....	3.7	26.5	64.0	0.7	42.6
\$900 and under \$1,200.....	45.8	22.2	2.6	9.5	33.7	65.1	2.0	38.6
\$1,200 and under \$1,500.....	41.5	30.6	2.6	23.3	34.2	69.9	3.1	34.7
\$1,500 and under \$1,800.....	37.2	44.2	2.3	16.3	32.6	53.5	11.6	34.9
\$1,800 and under \$2,100.....	44.4	38.9	5.6	22.2	50.0	33.3	5.6	55.6
\$2,100 and under \$2,500.....	66.7	100.0	.....	.....	33.3	100.0	.....	33.3
\$2,500 and over.....	.....	100.0	.....	.....	.....	100.0	100.0	100.0
Total.....	43.7	24.6	2.2	12.7	32.3	66.1	2.8	38.6



The preceding tables show only the percentage of families having income from the several sources named. Table 3 shows for all the families in each city, the number of families having income from these various sources, and also the average amount of income from each source. This average amount is based, in each case, upon the number of families having income from the specified source. Of course the number of families having income from the husband is the same as the total number of families. The total average earnings, the total average income other than from earnings, and the total average income are based upon the total number of families in each city.

The totals of this table show that the average earnings of the husband constituted 92.7 per cent of all earnings and 89.2 per cent of the total income of the family; that the total earnings constituted 96.1 per cent of the total income; and that income other than earnings constituted 3.9 per cent of the income of the families.

TABLE 3.—NUMBER OF FAMILIES HAVING INCOME FROM CERTAIN SPECIFIED

*White families.*

Locality.	Number of families.	Average persons in family.		Average income from earnings of—							Total average earnings.
		Total.	Equivalent adult males.	Husband.	Wife.		Children.		Dependents.		
					Families having.	Average amt.	Families having.	Average amt.	Families having.	Average amt.	
Astoria, Oreg.	75	4.9	3.15	\$1,527.23	8	\$115.75	16	\$176.63			\$1,577.26
Atlanta, Ga.	160	5.1	3.34	1,245.53	13	158.31	39	410.89	2	\$575.00	1,365.73
Bakersfield, Calif.	77	4.6	3.19	1,463.53	13	195.85	17	222.83			1,545.79
Baltimore, Md.	195	4.8	3.32	1,192.47	20	53.06	38	297.43	2	279.00	1,258.73
Birmingham, Ala.	151	5.1	3.34	1,568.95	9	174.33	24	470.16	2	110.00	1,655.53
Bisbee, Ariz.	80	5.0	3.33	1,956.05	3	337.95	12	524.92			2,047.46
Boston, Mass.	407	5.3	3.54	1,277.21	42	186.98	80	644.93	1	76.50	1,423.46
Brazil, Ind.	76	4.5	3.16	1,235.09	7	80.74	17	331.44			1,316.58
Bridgeport, Conn.	143	4.6	3.09	1,377.59	9	134.72	29	763.77			1,540.96
Buffalo, N. Y.	256	4.6	3.15	1,417.70	9	187.72	33	695.10			1,513.90
Butte, Mont.	102	4.6	3.10	1,809.28	6	145.43	12	416.68			1,866.86
Calumet, Mich.	73	5.3	3.57	1,259.02	2	75.00	9	542.42			1,327.94
Chambersburg, Pa.	77	4.9	3.29	1,211.51	9	61.56	14	455.62	1	10.00	1,301.67
Charleston, S. C.	100	5.2	3.45	1,541.07	1	24.50	19	507.96			1,637.83
Charleston, W. Va.	103	5.3	3.51	1,422.47	4	138.00	30	520.63	3	490.22	1,593.75
Charlotte, N. C.	81	5.7	3.63	1,201.98	10	128.60	25	391.37	1	20.00	1,338.90
Chicago, Ill.	348	5.0	3.39	1,351.12	27	113.48	56	605.73			1,457.40
Chippewa Falls, Wis.	74	4.9	3.27	1,101.02	10	119.49	13	156.66			1,144.69
Cincinnati, Ohio.	249	4.7	3.23	1,137.18	33	168.33	32	274.43	2	402.00	1,197.99
Cleveland, Ohio.	245	4.8	3.31	1,464.96	16	124.86	50	367.27	1	200.00	1,548.88
Columbus, Ohio.	169	4.8	3.14	1,295.13	15	144.83	17	194.87	1	15.00	1,327.68
Corsicana, Texas.	75	5.5	3.44	1,181.08	6	102.67	16	355.67			1,265.17
Cripple Creek district, Colo.	80	4.4	3.30	1,368.27	5	209.20	18	204.64			1,427.39
Dallas, Tex.	75	5.1	3.32	1,218.91	7	274.71	12	607.15	2	390.00	1,352.09
Denver, Colo.	74	4.7	3.18	1,377.72	8	106.38	12	260.90			1,431.53
Denver, Colo.	154	4.5	3.11	1,252.57	6	41.83	37	384.88	1	39.00	1,346.93
Des Moines, Iowa	102	4.9	3.23	1,295.29	12	221.11	18	543.04	1	84.00	1,417.96
Detroit, Mich.	288	4.8	3.11	1,477.17	13	101.62	81	549.21			1,540.87
Dover, N. J.	74	5.3	3.44	1,404.07	2	195.00	19	812.26			1,617.89
Duluth, Minn.	98	5.0	3.20	1,421.22	4	94.80	14	242.26	1	100.00	1,460.72
El Paso, Tex.	79	5.1	3.42	1,582.65	8	159.96	15	373.91	1	30.00	1,670.22
Eureka, Calif.	76	4.5	3.20	1,385.46	3	108.00	12	215.54			1,423.76
Evansville, Ind.	106	4.6	3.37	1,057.42	13	140.08	23	536.31			1,216.26
Everett, Wash.	52	4.6	3.36	1,303.28	6	80.67	13	140.85			1,347.80
Fort River, Mass.	158	5.4	3.73	1,073.26	25	228.26	43	725.60	1	1,328.00	1,314.94
Fort Wayne, Ind.	97	4.6	3.09	1,360.53	7	59.71	14	651.28			1,458.84
Fredericksburg, Va.	60	5.2	3.44	1,139.88	8	275.63	19	238.43	1	25.00	1,262.55
Grand Island, Nebr.	77	4.5	3.05	1,417.36	9	83.13	11	216.77	1	144.00	1,459.91
Grand Rapids, Mich.	100	4.8	3.21	1,255.21	11	157.35	11	244.85	1	654.00	1,306.00
Green Bay, Wis.	75	4.9	3.52	1,198.77	3	48.98	17	318.90	1	379.00	1,278.06
Houston, Tex.	98	4.9	3.33	1,442.36	5	149.58	10	224.33			1,472.89
Huntsville, Ala.	81	5.0	3.37	1,989.10	13	302.43	21	506.81			1,169.03
Indianapolis, Ind.	145	4.6	3.19	1,276.07	6	75.17	21	634.96	1	150.00	1,372.17
Jacksonville, Fla.	81	4.9	3.12	1,615.18	3	273.67	9	245.33			1,652.57
Johnstown, N. Y.	78	4.5	3.06	1,018.51	60	220.74	9	626.06			1,109.00
Kansas City, Kans., and Kansas City, Mo.	224	4.5	3.12	1,314.93	24	144.18	42	366.77	2	202.50	1,400.95
Knoxville, Tenn.	77	5.4	3.54	1,168.74	12	164.24	19	377.74	3	264.40	1,297.85
Lawrence, Mass.	109	5.3	3.64	1,288.40	12	350.18	26	866.15			1,547.82
Little Rock, Ark.	71	5.1	3.28	1,576.43	2	92.50	16	474.79			1,483.03
Los Angeles, Calif.	202	4.5	3.21	1,284.82	13	120.81	33	331.99	1	31.20	1,346.98
Louisville, Ky.	105	5.1	3.55	1,200.55	18	166.59	21	366.32	2	247.08	1,307.07
Manchester, N. H.	112	5.3	3.51	1,199.56	27	220.48	26	573.38	3	163.67	1,390.20
Memphis, Tenn.	103	4.8	3.43	1,392.11	4	277.35	26	489.92	2	440.00	1,535.09
Meridian, Miss.	78	4.9	3.40	1,353.89	5	56.20	14	258.66			1,403.91
Milwaukee, Wis.	198	4.9	3.39	1,282.19	14	113.04	45	480.70			1,399.43
Minneapolis and St. Paul, Minn.	240	4.8	3.35	1,335.99	15	95.87	39	263.61	1	200.00	1,385.66
Mobile, Ala.	108	4.8	3.31	1,415.38	3	33.55	17	419.46	2	584.00	1,493.15
Newark, N. J.	147	4.7	3.32	1,326.07	11	116.77	32	698.19	2	255.00	1,490.27
New Bern, N. C.	75	5.2	3.31	1,505.27	5	97.60	16	331.53	1	156.00	1,584.58
New Orleans, La.	147	5.3	3.48	1,223.35	7	121.57	18	353.74	3	148.63	1,275.49
New York, N. Y.	518	4.9	3.45	1,264.90	78	210.26	121	817.95	7	410.06	1,493.17
Norfolk, Va.	100	5.1	3.37	1,719.14	6	121.83	21	545.43	1	120.00	1,842.19
Oklahoma City, Okla.	100	4.7	2.95	1,440.19	10	205.85	15	234.02			1,495.88
Omaha, Nebr.	102	4.8	3.15	1,416.97	9	84.20	12	660.35	1	92.00	1,502.99
Pana, Ill.	75	4.8	3.41	1,399.53	5	161.40	9	166.14			1,430.23

[1700]

SOURCES, AND AVERAGE INCOME FROM EACH SOURCE, BY CITIES, ALL INCOMES.

White families.

Average income from—										Total average income other than from earnings.	Total average income.
Lodgers.		Garden and poultry.		Gifts.		Rents and other investments.		Other sources.			
Families having.	Average amount.	Families having.	Average amount.	Families having.	Average amount.	Families having.	Average amount.	Families having.	Average amount.		
9	\$127.56	28	\$27.62	61	\$32.30	6	\$105.80	31	\$21.32	\$69.17	\$1,646.43
4	93.18	73	42.55	105	29.10	11	43.86	29	11.48	45.93	1,411.66
1	14.70	50	19.72	51	32.14	12	124.80	12	15.00	56.07	1,601.86
13	112.95	30	8.09	163	32.48	5	31.00	46	13.41	39.88	1,298.61
10	95.35	121	35.11	109	39.33	34	56.53	47	21.94	82.40	1,737.93
8	96.00	14	21.33	40	47.44	15	112.19	46	62.54	94.05	2,141.51
18	141.74	32	16.00	338	40.93	47	41.98	136	21.32	53.49	1,476.95
-----	-----	59	22.44	52	20.99	4	2.50	21	17.75	36.82	1,353.40
18	91.39	27	21.42	113	34.07	4	88.00	31	22.56	49.82	1,590.78
11	113.27	52	16.86	163	35.77	20	122.72	43	33.76	46.32	1,560.22
3	114.00	32	10.25	84	51.25	10	118.60	32	22.51	67.46	1,934.32
-----	-----	65	28.83	48	19.21	13	38.62	65	26.74	68.99	1,396.93
2	54.00	48	15.28	64	31.03	2	17.00	23	29.04	45.83	1,347.50
11	104.73	32	26.32	68	44.50	15	90.19	16	17.43	66.52	1,704.53
6	105.17	57	55.87	67	35.13	6	117.50	23	26.46	72.65	1,666.40
6	107.50	65	44.49	71	35.82	6	55.47	31	25.95	89.11	1,428.01
22	85.17	95	15.90	264	44.55	61	86.42	65	19.68	62.34	1,519.74
4	38.88	56	41.78	52	31.73	7	48.68	25	12.08	64.71	1,209.39
7	80.64	101	17.23	177	32.86	17	60.45	107	9.71	40.91	1,238.90
11	73.32	95	10.30	228	24.67	63	45.75	68	29.28	50.13	1,599.02
14	78.45	131	18.19	151	24.68	15	126.03	59	11.98	58.02	1,385.70
2	62.50	69	72.05	50	24.57	2	253.50	18	31.76	98.71	1,363.88
-----	-----	39	14.69	65	26.98	15	68.33	34	32.61	55.75	1,483.14
2	70.00	55	59.86	51	36.73	2	106.92	10	7.82	74.64	1,426.73
1	10.00	64	28.45	65	23.28	7	33.47	17	31.44	55.59	1,487.12
7	77.30	85	23.56	123	33.66	34	18.47	64	14.10	53.34	1,400.27
6	151.58	73	19.60	73	45.69	6	172.04	33	16.05	70.96	1,488.92
36	136.31	56	11.82	177	36.84	43	61.23	57	17.55	54.59	1,595.47
10	147.00	57	19.67	62	33.07	3	46.31	40	16.19	73.36	1,691.25
6	72.33	46	18.97	80	25.21	9	41.69	52	15.09	45.75	1,506.47
5	101.40	32	45.47	60	53.19	11	37.96	17	57.72	82.94	1,753.16
2	164.56	64	30.70	66	29.84	24	30.44	27	33.65	77.66	1,501.42
2	35.00	64	13.00	74	28.84	1	27.20	28	37.06	38.69	1,254.95
-----	-----	42	26.62	49	27.04	2	77.10	10	38.11	57.27	1,405.06
1	30.00	35	26.27	123	38.07	4	145.94	42	40.68	50.09	1,365.03
4	45.88	80	17.59	85	29.47	23	5.50	20	8.71	45.32	1,504.16
4	93.00	43	35.35	55	46.09	9	182.85	19	27.90	110.04	1,362.59
2	35.00	47	21.38	57	39.23	10	138.47	8	27.63	63.85	1,523.76
8	142.34	38	9.87	79	27.86	30	43.51	20	15.03	53.21	1,359.20
1	40.00	55	22.09	52	29.10	7	52.67	15	44.56	50.74	1,328.80
10	110.30	61	25.84	65	45.16	4	142.50	20	20.52	67.30	1,540.18
1	72.00	66	37.68	58	22.57	3	47.88	21	26.63	56.28	1,225.31
1	27.00	84	18.01	105	36.01	15	60.88	52	23.46	51.41	1,423.58
9	68.56	18	24.78	25	31.74	3	8.75	6	13.75	24.26	1,676.83
2	106.00	59	27.45	56	44.88	10	51.94	36	19.62	71.42	1,333.37
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7	113.86	104	21.05	166	26.56	9	66.47	41	40.04	43.02	1,443.97
1	30.00	42	41.86	56	42.98	5	23.57	21	39.45	66.77	1,364.62
6	93.83	31	17.36	74	36.35	7	65.75	40	11.22	43.12	1,590.93
6	156.08	40	45.86	43	46.77	29	41.28	13	13.97	86.77	1,772.80
3	61.50	125	18.41	156	40.03	31	87.89	43	19.40	60.84	1,497.82
1	120.00	47	24.07	71	29.81	3	207.07	32	14.63	42.44	1,349.51
9	75.11	77	23.93	78	38.41	20	91.15	38	31.00	76.03	1,466.23
-----	-----	64	37.19	76	46.64	4	63.50	33	20.63	66.60	1,601.69
3	94.67	54	31.47	57	46.23	10	15.54	18	16.85	65.09	1,409.00
6	57.33	82	13.59	141	26.51	41	41.25	49	37.01	43.95	1,443.38
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
10	70.40	141	19.48	178	26.81	27	77.84	45	22.88	47.31	1,432.96
4	134.50	48	35.56	62	31.17	3	210.17	16	15.73	46.85	1,540.00
5	37.60	17	8.88	106	50.67	13	96.12	28	36.84	54.36	1,544.63
2	100.00	37	37.36	39	40.60	9	36.83	14	57.64	57.39	1,641.97
-----	-----	34	13.33	115	34.41	10	121.53	78	39.34	59.14	1,334.63
48	175.63	17	24.23	352	55.59	25	91.86	109	17.16	62.89	1,556.06
13	110.46	23	22.55	41	44.14	13	24.85	20	24.30	45.74	1,887.92
10	152.90	61	22.22	67	32.44	28	78.60	15	23.69	76.14	1,572.02
4	147.13	66	18.35	76	50.36	12	191.10	25	11.46	80.45	1,583.44
3	39.90	71	28.54	55	38.19	4	47.15	48	18.50	71.47	1,501.70

TABLE 3.—NUMBER OF FAMILIES HAVING INCOME FROM CERTAIN CITIES, ALL

## White families—Concluded.

Locality.	Number of families.	Average persons in family.		Average income from earnings of—						Total average earnings.	
		Total.	Equivalent adult males.	Husband.	Wife.		Children.		Dependents.		
					Families having.	Average amt.	Families having.	Average amt.	Families having.		Average amt.
Philadelphia, Pa., and Camden, N. J.	301	4.9	3.42	\$1,333.64	32	\$145.90	74	\$620.67	4	\$319.22	\$1,505.98
Pittsburgh, Pa.	254	5.1	3.44	1,410.18	5	40.40	30	615.96			1,483.73
Portland, Me.	97	4.9	3.38	1,280.33	10	147.20	25	330.64			1,380.72
Portland, Ore.	152	4.8	3.23	1,486.94	17	98.10	23	392.87	1	140.40	1,558.28
Providence, R. I.	158	5.3	3.76	1,133.55	19	161.06	48	701.46			1,366.02
Pueblo, Colo.	79	4.6	3.05	1,524.03	1	300.00	11	325.95	1	365.00	1,577.83
Richmond, Va.	153	5.2	3.63	1,261.34	32	173.69	29	343.18	1	9.00	1,362.71
Roanoke, Va.	82	5.4	3.63	1,540.96	1	400.00	22	526.52	2	350.00	1,695.64
Rock Island and Moline, Ill., and Davenport, Iowa	146	4.7	3.16	1,415.97	12	166.67	20	313.67	1	208.00	1,474.06
Rutland, Vt.	80	5.1	3.04	1,171.11	3	172.00	18	393.73			1,266.15
Sacramento, Calif.	107	4.6	3.23	1,391.14	17	189.87	26	321.08	2	608.00	1,510.69
Salt Lake City, Utah.	103	5.2	3.41	1,491.24	6	189.26	13	429.65			1,556.49
San Francisco and Oakland, Calif.	301	4.5	3.07	1,425.35	13	161.37	32	416.83			1,476.64
Savannah, Ga.	80	4.9	3.19	1,503.92	3	200.33	9	637.22			1,583.12
Scranton, Pa.	151	5.2	3.77	1,249.56	7	117.17	40	483.92	2	127.50	1,384.87
Seattle, Wash.	197	4.4	2.92	1,521.67	14	188.87	26	212.92			1,563.20
Spokane, Wash.	103	4.3	3.09	1,355.11	16	178.33	23	172.82			1,421.40
Steubenville, Ohio.	74	4.9	3.33	1,853.96	3	54.00	11	430.55			1,920.15
St. Louis, Mo., and East St. Louis, Ill.	227	4.6	3.20	1,314.00	9	148.57	36	500.23	2	225.00	1,401.21
Syracuse, N. Y.	158	4.9	3.54	1,271.71	17	102.06	45	408.11	1	260.00	1,400.57
Trenton, N. J.	100	4.4	3.16	1,403.63	7	312.66	19	419.37			1,505.19
Trinidad, Col.	78	5.0	3.25	1,468.01	9	137.22	14	322.76	1	40.00	1,542.29
Virginia, Minn.	71	5.4	3.48	1,548.78	2	131.44	8	293.96			1,585.60
Westfield, Mass.	74	5.2	3.65	1,222.77	10	220.60	16	703.38	1	85.40	1,405.82
Wichita, Kans.	75	4.9	3.32	1,367.29	7	138.78	14	470.89			1,468.14
Wilmington, Del.	98	4.6	3.16	1,620.26	5	113.95	20	656.53			1,760.05
Winston-Salem, N. C.	82	5.4	3.51	1,255.62	7	303.00	20	634.81	1	50.00	1,436.92
Total	12,096	4.9	3.33	1,349.15	1,073	163.65	2,252	479.60	83	284.50	1,454.91

## Colored families.

Atlanta, Ga.	55	4.5	3.15	\$866.01	31	\$119.60	15	\$226.56			\$995.21
Baltimore, Md.	107	5.5	3.52	988.79	57	153.16	32	164.84	3	\$132.67	1,123.40
Birmingham, Ala.	55	5.2	3.70	972.25	28	75.08	16	343.45	1	50.00	1,111.30
Columbus, Ohio.	51	4.8	3.13	1,121.56	15	220.73	5	120.53			1,198.30
Houston, Tex.	49	4.7	3.47	954.55	20	189.33	9	260.70	1	268.00	1,085.18
Jacksonville, Fla.	43	4.6	3.19	966.19	21	127.83	10	112.40	1	48.00	1,055.88
Memphis, Tenn.	49	5.0	3.50	810.41	27	121.48	14	373.81	2	190.00	991.91
Mobile, Ala.	52	4.5	3.21	1,004.82	18	75.56	14	187.73	1	81.00	1,083.07
New Orleans, La.	102	5.2	3.47	877.43	37	100.59	20	135.17	2	136.10	943.09
Pittsburgh, Pa.	49	4.7	3.12	1,147.91	5	82.10	6	208.67			1,181.84
Savannah, Ga.	50	4.4	3.05	1,049.31	31	152.60	13	220.65	2	149.50	1,207.27
St. Louis, Mo.	79	5.6	3.70	1,024.60	34	123.74	28	290.31	3	173.33	1,187.33
Total	741	5.0	3.39	976.44	324	129.73	182	225.58	16	144.78	1,091.69

## SPECIFIED SOURCES, AND AVERAGE INCOME FROM EACH SOURCE, BY INCOMES—Concluded.

## White families—Concluded.

Average income from—										Total average income other than from earnings.	Total average income.
Lodgers.		Garden and poultry.		Gifts.		Rents and other investments.		Other sources.			
Families having.	Average amount.	Families having.	Average amount.	Families having.	Average amount.	Families having.	Average amount.	Families having.	Average amount.		
18	\$75.28	14	\$7.49	206	\$44.36	9	\$135.92	81	\$24.85	\$45.96	\$1,551.94
15	125.10	41	12.13	136	40.34	11	111.20	38	43.63	42.29	1,526.02
10	45.25	25	28.42	83	46.85	13	82.89	41	42.10	80.98	1,461.70
9	74.50	114	34.60	124	37.58	24	97.76	41	27.09	83.76	1,642.04
2	55.88	40	15.23	139	45.13	31	69.96	60	15.40	63.84	1,429.86
4	48.00	46	32.82	60	18.35	10	56.55	27	16.30	48.21	1,626.03
5	38.80	52	21.22	109	33.55	11	59.33	42	16.79	41.32	1,404.03
5	120.60	58	40.62	72	45.29	18	78.03	24	21.58	99.29	1,794.93
17	98.03	107	21.59	123	34.61	14	75.66	33	44.15	73.63	1,547.69
1	33.50	71	36.19	66	30.16	12	118.13	44	13.32	89.82	1,346.98
1	96.00	73	29.87	85	42.24	27	33.25	26	20.00	68.11	1,578.80
2	85.00	46	32.76	93	35.64	9	48.47	41	16.64	59.32	1,615.81
15	140.18	116	19.82	224	41.14	60	26.93	88	24.47	57.76	1,534.40
5	224.40	12	18.06	23	40.34	6	88.99	7	9.14	35.80	1,618.93
6	101.67	81	17.03	101	28.56	17	90.90	68	15.22	49.36	1,434.23
9	64.06	114	30.73	166	36.80	22	71.52	53	35.11	60.15	1,632.34
2	107.00	83	39.97	88	41.03	12	83.25	21	59.14	91.10	1,512.50
3	50.00	32	17.20	68	27.08	8	60.26	24	27.27	49.71	1,969.86
2	70.00	83	18.25	150	29.88	16	47.95	53	11.93	33.20	1,434.41
10	133.15	81	13.30	129	33.27	22	84.80	63	17.40	61.15	1,461.72
3	100.00	32	15.82	45	33.08	2	49.00	40	6.81	26.66	1,531.85
2	96.50	39	53.55	72	35.53	12	67.42	23	7.28	74.56	1,616.86
7	124.17	44	16.98	52	28.20	9	94.46	53	67.90	106.08	1,691.68
3	138.33	48	62.29	63	40.24	5	102.70	37	17.05	95.74	1,501.55
4	64.50	55	19.96	50	25.40	14	91.80	11	31.01	56.70	1,524.83
15	189.60	15	23.46	49	41.85	6	143.67	28	20.65	67.62	1,827.68
3	86.00	57	36.52	61	20.55	6	42.42	25	16.19	51.85	1,488.78
619	108.76	5,355	26.11	8,870	36.42	1,359	68.73	3,440	24.02	58.38	1,513.29

## Colored families.

5	\$92.20	23	\$19.27	36	\$32.91	3	\$27.67	12	\$66.42	\$53.98	\$1,049.19
30	84.61	5	22.84	75	35.08	3	1.00	37	26.82	58.65	1,182.05
1	60.00	41	33.00	43	36.32	1	188.75	34	15.08	63.42	1,174.72
6	76.50	36	17.50	43	37.73	4	72.00	23	20.88	77.39	1,275.69
4	79.88	25	18.72	26	19.53	1	4.00	5	13.00	29.23	1,114.42
9	69.22	5	14.91	12	26.49	1	7	7	8.07	25.02	1,080.90
2	84.00	21	8.93	33	34.08	2	5.97	17	32.15	41.36	1,033.27
4	41.44	30	13.37	33	25.20	2	40.19	16	26.00	35.09	1,118.17
5	8.95	22	11.88	65	23.34	2	125.00	78	23.91	36.95	980.04
9	114.39	8	10.01	28	30.13	2	48.50	11	13.77	48.08	1,229.89
1	210.00	11	17.68	31	13.70	2	1.77	11	16.24	22.10	1,229.37
18	92.51	16	23.06	65	35.09	3	1.77	35	23.69	65.18	1,252.51
94	82.38	243	18.83	490	30.30	21	64.66	286	24.09	47.80	1,139.49

Table 4 shows similar facts to Table 3, the figures being given for all cities combined, by income groups.

TABLE 4.—NUMBER OF FAMILIES HAVING INCOME FROM CERTAIN SPECIFIED SOURCES

*White families.*

Income group.	Number of families.	Average persons in family.		Average income from earnings of—						Total average earnings.	
		Total.	Equivalent adult males.	Husband.	Wife.		Children.		Dependents.		
					Families having.	Average amt.	Families having.	Average amt.	Families having.		Average amt.
Under \$900.....	332	4.3	2.89	\$765.60	44	\$70.86	26	\$88.35	.....	\$781.91	
\$900 and under \$1,200..	2,423	4.5	2.98	1,013.69	274	100.69	205	139.65	12	\$105.31	1,037.42
\$1,200 and under \$1,500.	3,959	4.7	3.16	1,252.45	345	159.82	484	215.34	19	268.83	1,293.99
\$1,500 and under \$1,800.	2,730	5.0	3.36	1,487.92	220	190.64	525	321.16	16	241.45	1,566.46
\$1,800 and under \$2,100.	1,594	5.2	3.62	1,691.07	108	218.31	435	524.21	17	474.45	1,853.97
\$2,100 and under \$2,500.	705	5.7	4.09	1,785.96	63	319.62	326	737.25	13	285.30	2,160.69
\$2,500 and over.....	353	6.4	4.95	1,795.56	19	215.93	251	1,226.82	6	267.31	2,684.05
Total.....	12,096	4.9	3.33	1,349.15	1,073	163.65	2,252	479.60	83	284.50	1,454.91

*Colored families.*

Under \$900.....	136	4.2	2.92	\$719.86	59	\$97.59	16	\$95.27	.....	\$773.41	
\$900 and under \$1,200...	347	4.9	3.31	927.32	159	108.38	77	154.48	9	\$149.32	1,015.13
\$1,200 and under \$1,500.	193	5.4	3.56	1,123.10	80	157.51	59	231.52	5	168.30	1,263.53
\$1,500 and under \$1,800.	43	5.7	4.09	1,323.42	16	216.55	19	347.34	1	81.00	1,559.35
\$1,800 and under \$2,100.	18	6.4	4.24	1,401.65	8	269.65	7	588.79	1	50.00	1,753.24
\$2,100 and under \$2,500.	8	9.0	6.77	1,047.33	2	409.50	3	788.33	.....	.....	2,108.67
\$2,500 and over.....	1	7.0	5.95	1,820.00	.....	.....	1	890.00	.....	.....	2,710.00
Total.....	741	5.0	3.39	976.44	324	129.73	182	225.58	16	144.78	1,091.69

## AND AVERAGE INCOME FROM EACH SOURCE, BY INCOME GROUPS, ALL CITIES.

*White families.*

Average income from—										Average income other than from earnings.	Total average income.
Lodgers.		Garden and poultry.		Gifts.		Rents and other investments.		Other sources.			
Families having.	Average amount.	Families having.	Average amount.	Families having.	Average amount.	Families having.	Average amount.	Families having.	Average amount.		
8	\$58.53	138	\$15.80	249	\$24.16	10	\$21.38	110	\$12.81	\$30.98	\$812.89
89	64.83	995	19.77	1,782	27.90	119	38.45	735	16.66	37.96	1,075.38
184	91.51	1,776	23.67	2,959	32.50	361	60.48	1,134	17.92	49.81	1,343.80
165	107.63	1,238	29.87	1,982	40.08	371	66.12	752	25.21	65.08	1,631.54
96	135.42	759	30.83	1,142	40.40	263	70.72	403	29.46	70.90	1,924.87
54	178.74	302	35.43	506	63.66	152	105.15	201	50.00	111.49	2,272.18
23	166.83	147	33.05	250	53.45	83	92.33	105	73.98	106.20	2,790.25
619	108.76	5,355	26.11	8,870	36.42	1,359	68.73	3,440	24.02	58.38	1,513.29

*Colored families.*

5	\$81.00	36	\$12.67	87	\$20.21	1	\$8.00	58	\$15.94	\$26.12	\$799.53
33	67.02	117	18.43	226	26.80	7	35.20	134	21.90	39.21	1,054.34
45	87.52	66	21.11	135	31.85	6	54.52	67	31.09	62.39	1,325.92
7	115.00	14	20.59	23	30.24	5	135.85	15	44.58	72.94	1,632.30
4	96.00	9	25.03	15	118.96	1	96.00	10	26.25	152.90	1,906.15
-----	-----	1	57.55	3	81.22	-----	-----	1	14.45	105.22	2,213.88
-----	-----	-----	-----	1	9.40	1	1.06	1	3.00	13.46	2,723.46
94	82.38	243	18.83	490	30.30	21	64.66	286	24.09	47.80	1,139.49

## New Trade Agreements in the Cloak, Suit, and Skirt Industry of New York City.<sup>1</sup>

By BORIS EMMET, PH. D., LABOR MANAGER, NEW YORK DRESS AND WAIST MANUFACTURERS' ASSOCIATION.

THE latest account of the workings of trade agreements in the cloak, suit, and skirt industry of New York City by the Bureau of Labor Statistics was published in December, 1917.<sup>2</sup> The agreement in force in 1917, then described, did not expire until June, 1919. Some time prior to its expiration conferences were held between the respective sides for the purpose of renewing their contractual relationship. The collective bargaining contracts described herewith represent the results of these conferences. The new agreements are to be in force for three years from the date of their signing, or until June, 1922.

### Present Organization of the Industry.

The employers of the industry at the present time are organized in two separate and distinct associations—the Cloak, Suit, and Skirt Manufacturers' Protective Association, in existence since 1910, and containing in its membership about 325 of the largest and most prominent employers in the industry, and the American Cloak, Suit, and Skirt Manufacturers' Association, organized a few months ago, with a total membership of about 625. The second association contains a large number of very small employers, contractors, and subcontractors. The first-named association controls about 529 shops, of which number 206 belong nominally to contractors, or about 26 per cent of all the shops in the trade, with total employees estimated at 16,386, which is about 35 per cent of the workers in the industry. The average number of employees per shop is thus 31. The second or newly formed association controls about 625 shops, or about 31 per cent of all. These shops, in aggregate, employ about 11,800 workers, or about 25 per cent of all in the trade. The average number of employees per shop is thus 19.

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<sup>1</sup> Thanks for valuable assistance in the preparation of this report are due to Mr. M. Finkelstein, former manager of the Joint Board of Cloak Makers' Unions of New York City.

<sup>2</sup> MONTHLY REVIEW of the United States Bureau of Labor Statistics, December, 1917, article entitled "Trade agreements in the women's clothing industries in New York City," pp. 21-30.



The union has collective trade agreements with the two associations, in addition to 874 individual shop agreements. These shops employ about 19,200, or over 40 per cent of all the employees in the industry.<sup>1</sup>

Practically speaking, the cloak industry of New York City is completely unionized. The employees belong to the International Ladies' Garment Workers' Union, a national labor organization affiliated with the American Federation of Labor. The local unions concerned in the agreements described in this report are Nos. 1, 3, 9, 10, 11, 17, 21, 23, 35, 64, and 82. These locals, for the purpose of dealing with employers, are joined together into what is known as the Joint Board of Cloak Makers' Unions of New York City.

In addition to the organizations already mentioned there is also in the industry an association of jobbers, known as the Merchants' Ladies' Garment Association. The term "jobber" denotes an entrepreneur who buys ready-made samples and engages contractors to manufacture the garments according to the sample.<sup>2</sup> The bulk of the membership of the above-mentioned American Cloak Association consists of just such contractors. The union, apparently, has little faith in collective agreements with this small type of employer. It therefore attempted, and with some success, to make the jobbers guarantee performance by their contractors. By calling strikes in contractors' shops, the union forced the jobbers' association above referred to to assume responsibility for contractors by guaranteeing that all of the jobbers' work will be done under union conditions and by union help. There is thus a twofold guaranty. The contractor himself, or through his association, guarantees performance. In addition, the individual jobber, or his association, assumes responsibility for maintenance of union standards and the employment of union help.

### General Character of the New Agreements.

Five types of agreements, varying considerably in the extent of union recognition, govern the New York cloak, suit, and skirt industry at the present time. The agreements are: (1) With the Cloak, Suit, and Skirt Manufacturers' Protective Association; (2) with the American Cloak, Suit, and Skirt Manufacturers' Association; (3) with individual employers who do not belong to either of the mentioned associations; (4) with the Merchants' Ladies' Garment Association, the jobbers' association; (5) with individual jobbers who do not belong to the association.

Nominally at least, the specific extent of union recognition accorded appears to vary with the relative economic strength and general responsibility of the employers or employer in question. The agree-

<sup>1</sup> Sanitary Control Monthly Bulletin, October, 1919, p. 7.

<sup>2</sup> Some jobbers furnish also the material and trimmings for the garments.

ment with the Cloak, Suit, and Skirt Manufacturers' Protective Association, in which are the largest and most influential employers in the industry, contains the more liberal terms. The smaller employers, whose financial responsibility and influence are insignificant, are compelled to sign agreements providing for greater extent of union recognition. As a guaranty for compliance the organization of small employers (the American Cloak, Suit, and Skirt Manufacturers' Association) is required to deposit a sum of \$50,000.

The following is a summary of the principal features of the various agreements mentioned. The agreement with the Cloak, Suit, and Skirt Manufacturers' Protective Association includes clauses providing for: (1) The introduction of the week-work system throughout the industry; (2) the preferential union shop; (3) the 44-hour week; (4) a maximum overtime of 10 hours per week and then only during the busy seasons; (5) minimum weekly rates of wages, as per table presented elsewhere in this report; (6) time and a half for overtime work to operators, finishers, and piece tailors, and double time for overtime to other workers; (7) six and a half legal holidays a year (one-half day on Election Day); (8) prohibition of home work, contracting, or subcontracting in inside shops; (9) registration of contractors; (10) assumption of responsibility for contractors (regarding *(a)* employment of not less than 10 operators per shop and observance of all sanitary standards; *(b)* maintenance of all union standards; *(c)* wages of employees in cases of default); (11) joint support for joint board of sanitary control of the industry.

The agreement does not definitely provide for apprentices. It, however, specifies (clause 12) that should there be a shortage of labor in the industry, and the union unable to supply the employers with workers, the employer may engage apprentices. The wages to be paid to such apprentices, as well as the conditions and regulations under which they shall work, are to be determined between the union and association when such emergency arises.

The agreement with the Cloak, Suit, and Skirt Manufacturers' Protective Association states the following to be legitimate causes for discharge: Incompetency, misconduct, insubordination in performance of work, breach of reasonable rules (jointly established), "soldiering on the job." Strikes and lockouts are prohibited. Provision is made for the peaceful joint adjustment of grievances and, in instances of disagreement, for adjustment by a trial board consisting of one representative from each side and an impartial person mutually satisfactory. The agreement also provides for equal division of work during the dull season.

The collective agreement with the associated group of small employers—the American Cloak, Suit, and Skirt Manufacturers' Association—contains virtually all the features of the Protective

Association agreement except that (a) for the preferential union shop is substituted a provision that only members of the union in good standing be employed, and that the employer is to dispense with any or all of his workers upon request of the union; (b) for the Protective Association agreement provision for joint investigation of disputes is substituted a provision granting union officials free entry into shops for investigation purposes, unaccompanied by representatives of the association. As a guaranty of performance the American Association, unlike the Protective Association, is required to deposit \$50,000. The association also makes itself liable for the wages of the employers of individual members in case of default.

The agreement with individual establishments is practically the same as that with the membership of the American Association.

The variation in the extent of union recognition, as shown by the written agreements is, however, more apparent than real. The preferential union shop specified in the agreement with the Cloak, Suit, and Skirt Manufacturers' Protective Association is, in fact, a union shop, that is, virtually all workers in the shops of members of this association are members of the union in good standing. A situation similar in character, but affecting certain rights of the employers, that is, the method provided for the investigation of grievances, will be found in the agreement with the American Cloak Association. Nominally, the agreement with this association gives union officials free entry into shops for investigation purposes, unaccompanied by representatives of the association. This means that the employers' association is, by agreement, denied the privilege of joint investigation of grievances. As a matter of fact, however, the American Association has a large adjusting staff, members of which, as a rule, accompany union officials for purposes of joint investigation of all difficulties arising.

### The Week-Work System.

The introduction of the week-work system of wage payment is the most radical departure in the new agreements. Prior to this year the operating or machine sewing and the bulk of finishing or hand sewing—about three-fourths of all the work in this industry<sup>1</sup>—was being done on a piecework basis. The piecework system had great disadvantages, from the point of view of both the employer and the employee. Constant changes in styles and lack of quantity production, due to the existence of a multitude of small employers, made the establishment of piece-rate time standards impossible. The application of time test in piece-rate making is frequently disadvantageous to the employer

<sup>1</sup> Wages and Regularity of Employment in the Cloak, Suit, and Skirt Industry, Bul. 147, U. S. Bureau of Labor Statistics, Table 1, p. 15.

even with quantity production. Two main reasons may be given for this: (1) The making of one or two test garments consumes a much longer time than quantity work, the difference in time consumed being frequently so great that workers are unwilling to make the proper time discounts, and (2) the test which is usually made by a union worker, "class conscious" for most part, and under the influence of the public opinion of his coworkers, is seldom a correct measurement of the labor involved. A speedy test hand is, as a rule, dubbed "a slave" and is never too popular with the employees.

The so-called bargaining system was therefore the principal method for piece-rate making. This bargaining system is based largely upon guesswork, its final results being determined mostly by the relative strategic position of the parties to the bargain. In the absence of definite time standards, and following the psychology of primitive traders, the workers, as a rule, used to ask double the price they hoped to receive. The employer or foreman, very often an ex-worker himself, knew that and offered much less than what he ultimately expected to pay. This sort of haggling made the final bargain dependent upon the season of the year. If the employer was doing much business and had to make quick deliveries, the better of the bargain was had by the workers. In dull seasons, with little work and workers eager to earn something, the strategic advantage was with the employer and he got his garments made at relatively low prices. Needless to say, this system of piece-rate making was productive of constant controversies and strife.

The piece-rate bargaining system was most unsatisfactory from the union's point of view. Though appealing greatly to the highly individualistic members of the rank and file, the system was always obnoxious to the union. The existence of thousands of price committees made control over them virtually impossible. The constant haggling over piece rates offered great opportunities for unscrupulous employers to despoil members of price committees by favoritism. Furthermore, the busy seasons offered great opportunities to the highly skilled and handy few to "hog" the work through individual speed. Skilled workers were thus pitted against their fellow workers of the rank and file. Such a system is, of course, extremely unsatisfactory to a trade-union, whose principal concern is supposedly the rank and file.

From the point of view of the small employer, however, the piece-work system had one great advantage. The shops virtually ran themselves. The incentive to hustle, due to the possibility of large individual earnings, necessitated very little supervision. As to piece rates, what was lost in bad bargains was easily made up by driving good bargains now and then.

The introduction of the week-work system affected most vitally the interest of the employer, the employee, and the consumer. Week work presupposes the existence of an employer who is competent, in some measure at least, to furnish an efficient system of manufacture. Unfortunately, the majority of employers in this industry, by training and experience, are traders and salesmen, rather than competent production engineers. The week-work system, it is said, has greatly increased labor costs because it decreased greatly the productivity of the individual worker.

The problem of production might have solved itself, partially at least, had the employers had the indisputable right to discharge inefficient workers. This right is, however, greatly limited by the agreement which provided that in every case a discharge is subject to investigation and to ultimate review by an impartial person. Furthermore, the guilt of loafing on the job is difficult to establish before an impartial person, because there are no established standards of output in the industry. The union is not greatly concerned with production. Officially, of course, it believes in a fair day's work for a fair day's wage. The rank and file of the workers, however, have their own definition of the meaning of a fair day's wage. The great restlessness of labor and the constantly mounting cost of living make any wage appear unsatisfactory.

Officials of the union contend that the claims of the employers about greatly reduced production are erroneous. When asked as to the incentive for productivity under the week-work system they point to the following: (a) The fact that good workers actually receive large and frequent increases in weekly wage rates; and (b) the week-work system forces employers to specialize help, with a consequent increase in the productivity. Both reasons, although true, are not sufficient, it is thought, to stimulate production in these days of labor unrest. The specialization reason is the least important of the two because the bulk of employers in the industry have small shops in which there is no quantity production, without which specialization is impossible.

In one respect only did the employers benefit by the introduction of the week-work system. The system of week work eliminated piece-rate disputes. The problem of making piece rates is a most difficult one at the present time because of the lack of willingness on the part of workers to recede from the high piece rates demanded, and of the absence of adequate means for measuring the exact amount of labor involved in the specific operation.

The week-work system may be considered a success from the point of view of the union, although still unpopular with some individualistic persons in its rank and file. The new system eliminated piece-rate controversies and delays in work. Furthermore, by reducing the

speed of production, the new system is making for more work during the dull seasons and for a greater shortage of labor during the busy season. These facts, of course, increase greatly the strategic position of labor.

The principal and immediate loser in the new system of wage payment is, no doubt, the consumer. The employer quickly passes on to the public all additional labor costs. The passing on of costs is easy in this industry because, first, the cost of materials—by far the larger item of expenditure—is steadily mounting skyward and, secondly, very few of the employers sell goods in advance of actual manufacture. This fact enables them easily to pass on any additional labor cost immediately after it has been incurred.

The two most important controversies in the industry at the present time relate to production and wages. The first question has already been discussed at some length and need, therefore, not be commented upon again. The wage question is most acute. The principal cause of the wage difficulties is a great labor shortage during busy seasons, due to the cessation of immigration, a shortage which has greatly strengthened the strategic position of labor. The shortage of labor is so great at times that it causes a veritable panic among employers lest they may not secure the much-needed help. There is a consequent cut-throat competition for help and a great catering to labor. As an illustration the following story, which has its foundation in fact, may be cited. An employee of a certain well-known large cloak and suit house, desiring to make a skirt for some member of his family during the evening hours, packed up his tools at the end of the day to take them home overnight. When seen walking out with his tools he was approached by his employer, who, without any inquiry as to the reason for taking the tools, said, "You do not have to quit me. You can have \$5 more per week." The worker in question, it is said, was already receiving \$12 above the weekly minimum.

The workers are quick to take advantage of such situations. The minima specified in the agreement signed last June are dead letters. The weekly wage in most of the occupations at the present time is 20, 30, and even 40 per cent greater. The constant mounting of wage rates is extremely undesirable from the employer's point of view because the collective agreement with the union, it is said, prohibits reduction in standards. The highest wage rate of one season thus becomes the minimum of the next, to be further increased upon the employees' demand, because of the shortage of help.

Employers in the industry charge that workers frequently enforce demands for increased wages by stoppages and picketing, practices definitely prohibited by the agreement. These employers contend

that their right to refuse increases above the guaranteed minimum and take in new help is actually nonexistent. It is further maintained that these illegitimate practices on the part of the workers are frequently encouraged by union officials, who are afraid to incur the displeasure of the rank and file.

Conditions akin to those just described are agitating the industry at the present time and are bitterly complained of in a statement of one of the members of the Protective Association which appeared as an advertisement in the Daily Garment News, Wednesday, October 22, 1919. The verbatim text of this statement is reproduced herewith.

Before going into the details of this case, I desire to call attention to one important clause in our last agreement between the Cloak, Suit, and Skirt Manufacturers' Protective Association and the International Union, dated May, 1919, which calls particular attention to no "stoppages" of work:

ARTICLE 14. There shall be no lockout or strike in shops of the members of the association during the period of this agreement, nor shall there be any individual shop lockout, stoppage, or shop strike pending the determination of any complaint or grievance. Should there be a stoppage of work or shop strike in any factory, immediate notice thereof shall be given by the association to the union. *The union agrees to return the striking workers to their work within twenty-four hours after the receipt by the union of such notice, and until the expiration of such time it shall not be deemed that the striking workers have abandoned their employment. The consideration of stoppage cases shall have precedence over all other complaints and grievances arising hereunder.*

This clause was originally enacted in the first agreement made between our association and the union in 1910, and repeated in every agreement made since, *and the oftener this clause has been repeated, the oftener it has been violated by the union*—our association records are very clear as regards this point.

The pressing system in our industry, as you all know, consists of two different grades, viz, under pressers and finished pressers, and the wages agreed upon in the last agreement between our association and the union were as follows: Under pressers, \$32.00; finished pressers, \$36.50.

Before starting to work in the latter part of June on fall business I spoke to my pressers and told them plainly that I was willing to pay them a great deal more if they would only give me production.

However, they worked along for four weeks, and, on July 12th, demanded an advance of \$4.00 each for every presser I had working, although I proved to them that their production was fully 40 per cent less than it was in the spring season of 1919, but, notwithstanding this, the advance was given. On August 2d another demand was made upon me that all under pressers be advanced \$4.00 more, and all finished pressers \$2.00 more, and notwithstanding that the cost of pressing had advanced to nearly 75 per cent more than in the spring of this year, and the production nearly 30 per cent less, the advance was granted. But not satisfied with this second advance, on August 23d another demand was made upon me, not only for an additional advance of \$3.50 for under pressers and \$1.50 for finished pressers, but in this last demand for an advance the pressers also demanded that all pressers in the two grades above mentioned must be put into one grade, and all must be considered as finished pressers, and all must receive the same wages, which was \$43.00, and they further demanded that each presser be given not less than six hours' overtime each week at double pay, and they *must be paid for these six hours whether there is work for them or not.*

I had a conference with all of my pressers at these unheard-of demands, and was told very politely by the spokesman, who had only been in my employ for a few weeks, that he might admit that I was an employer in my office—but, as far as the pressers' departments were concerned, the pressers were the "bosses"—the demands were granted!

The pressers continued to work along on the last-named conditions until September 27th, when we practically finished up all of our suits, and on Monday, September 29th, all of our pressers were called together and were told that, before starting on the pressing of our new line of separate coats, they would have to start in at the original union scale of wages, but that if they did not feel inclined to do so, it was a matter for them to decide, and with this understanding they started in the following morning, Tuesday, September 30th—with the absolute knowledge that it was on the original union scale of \$32.00 for under pressers and \$36.50 for finished pressers.

On Monday, October 6th, they refused to accept their pay for the previous week, and said that they were going to have a meeting, and be guided by what the manager of the pressers' union told them to do; however, I personally told all of them in the presence of the shop chairman in our factory that the matter could be taken up by both our association and the union, and if it was decided that I was not absolutely within my rights that every penny of back pay would be given to them, but under no circumstances must a stoppage of work occur.

They had their meeting that night, but returned the following morning as usual and worked until Wednesday, October 8th, when at noontime they told my superintendent that they were not coming back that afternoon, because they were going to participate in the Russian parade, and notwithstanding the fact they were told that this parade was entirely un-American (and we all learned afterward that not even a permit had been granted for this parade), they, however, did not return to work that Wednesday afternoon, but did return the following morning as usual, and worked along until Friday, October 10th, when they gave an ultimatum to my superintendent that unless they received their full maximum pay for the previous week by 9.30 a. m. that day, they would follow instructions of the manager of the pressers' union and go out on strike officially and would prevent by all means any other pressers from taking their places.

Picketing has been going on from early morning until midnight every day since Friday, October 10th, but notwithstanding all this my pressing has been done with very little discomfort, and it has been done by strictly union pressers, and not with strike breakers.

The action on the part of my pressers in stopping work, which is in absolute violation of the agreement, was not of their own doing, but they were guided by instructions of the manager of the pressers' union, and with only one purpose in mind—and that is to make the *test case* with A. E. Lefcourt & Co. and to force through, if they can, upon the manufacturers in the industry the *maximum wage* that existed this fall season as a *minimum wage* to start off the spring season with.

However, the question involved here is a question of principle, and my position is that when the pressers stopped working officially and started in picketing our factory after my telling them that the question of wages would be decided by our association and the union, they forfeited their rights of further employment.

On Friday, October 17th, the shop chairman in our factory came to me and said that Mr. J. Rubin, the secretary of the union, demanded him to ask me whether I was ready to take all of my pressers back to work—to which I made no reply, but evidently my not giving any reply to the shop chairman must have upset Mr. J. Rubin somewhat, so he proceeded to work fast, but coarse, and notwithstanding the fact that the agreement between the association and the union provides that all messages that the union desires to send to its shop chairman in each individual factory *must be delivered first to our association*, and then it is redelivered to the different shops designated—Mr. Rubin decided, however, to take a shorter route, so he instructed the shop chair-



man to deliver the following letter direct to the workers in my shop, and below I give the exact copy of letter delivered to one of our departments:

OCTOBER 18TH, 1919.

To the CUTTERS OF A. E. LEFCOURT,  
136 Madison Avenue, City.

DEAR BROTHERS: You are no doubt aware of the fact that Mr. Lefcourt have locked out his pressers for the reason that they refused to work on reduce prices. You are therefore ordered to appear to a very important shop meeting which will be held on Monday, October 20th, 1919, in Tonawanda Hall, 28th Street and Third Avenue, at 12 o'clock sharp, where it will be decided what steps will be taken against the firm. For further information, see your manager, Mr. M. Gorenstein.

Fraternally, yours,

MANAGER (J. RUBIN).

Now I am ready to give Mr. J. Rubin his answer, which is emphatically "NO"—I am not ready to take my pressers back, and I will go further by saying that not one of the men that stopped working Wednesday, October 8th, to take part in the Russian parade, and then again stopped on Friday, October 10th, will ever be taken back by me.

I fully realize the position I am taking, and I further appreciate that the union officials in making a test case in my shop will stop at nothing to gain their point, but I frankly say that rather than to submit on this issue of vital principle I would prefer retiring from the industry—an industry to which I have devoted the best of my years.

To Mr. J. Rubin and his associate union officials I have only the following few words to say:

*If it is your desire to force the retirement from this industry of A. E. Lefcourt & Co., thereby throwing out of employment about two hundred and fifty individual workers, of which more than 75 per cent have worked with me from three to seventeen years—then the responsibility for so doing rests with you; for, if standing upon one's rights on vital questions of this kind means that an employer can be forced out of an industry, then the sooner the employers of this industry realize this, the better.*

(Signed) A. E. LEFCOURT.

## Rates of Wages.

The following table shows rates of wages in each of the principal occupations. As already stated, the bulk of the workers receive rates much above the minimum:

Occupation.	Minimum wage rate per week.	
	Prior to present agreement (49-hour week). <sup>1</sup>	In present agreement (44-hour week).
Cloak and dress cutters.....	\$31.00	\$39.00
Skirt cutters.....	26.50	34.50
Sample makers.....	25.00	32.00
Jacket, coat, reofer, and dress operators.....	(3)	44.00
Skirt operators.....	(3)	42.00
Piece tailors.....	(3)	38.00
Reofer, jacket, and coat finishers.....	(3)	35.50
Jacket, coat, and reofer finishers' helpers.....	(3)	28.00
Jacket, coat, reofer, and dress upper pressers.....	28.50	36.50
Jacket, coat, reofer, and dress under pressers.....	24.00	32.00
Skirt upper pressers.....	25.00	32.50
Skirt under pressers.....	20.00	25.50
Skirt basters.....	16.50	22.00
Skirt finishers.....	13.00	18.00
Drapers.....	17.00	24.00
Begraders on skirts.....	(3)	28.00
Girl begraders.....	(3)	24.00
Cloak bushelers.....	(3)	22.00
Bushelmen, who also do pinning, marking, and general work.....	(3)	30.00

<sup>1</sup> MONTHLY REVIEW of the U. S. Bureau of Labor Statistics, December, 1917, p. 25.

<sup>2</sup> Not reported.

<sup>3</sup> Piecework.

## Text of the Agreements.

Below are given the texts of the present agreements with the two employers' associations in the industry—the Cloak, Suit, and Skirt Manufacturers' Protective Association and the American Cloak, Suit, and Skirt Manufacturers' Association.

### *Agreement with the Cloak, Suit, and Skirt Manufacturers' Protective Association.*

This agreement, made and entered into this 29th day of May, 1919, by and between The Cloak, Suit, and Skirt Manufacturers' Protective Association, hereinafter styled the "association," and The International Ladies' Garment Workers' Union, and the Joint Board of Cloak Makers' Unions of the City of New York, composed of and representing Locals Nos. 1, 3, 9, 10, 11, 17, 21, 23, 35, 64, and 82, all collectively designated as the "union," contracting herein for and in behalf of the said unions and for and in behalf of the members thereof, now employed and hereafter to be employed by the members of the association, witnesseth:

Whereas the association is composed of a large number of manufacturers engaged in the cloak, suit, and skirt industry in the City of New York, and the union represents the workers in the said trade; and

Whereas the parties hereto desire to establish terms and conditions upon which members of the union shall work for members of the association:

Now, therefore, the parties hereto agree as follows:

#### *Mutual Obligations.*

1. The association obligates itself for its members that they will live up in good faith to all the provisions of this agreement. The union, believing in the principle of "a fair day's labor for a fair day's pay," obligates itself in good faith for all of its members, that they will perform their work conscientiously, faithfully, and efficiently.

2. Each member of the association shall maintain a preferential union shop. A preferential union shop is hereby defined to be a shop in which members of the union in good standing shall be preferred in the hiring and retention of help. The association agrees that its members will not discriminate in any manner against their workers for union membership or activity. A union worker within the meaning of this provision shall be a worker who proves his union membership to the satisfaction of the employer or his representative and the shop chairman.

3. A week's work shall consist of forty-four (44) hours in six (6) week days divided as follows: On the first five (5) working days of the week, work shall begin at 8 a. m. and continue until 5 p. m., with one hour interval for lunch. On Saturdays, work shall be done from 8 a. m. until 12 noon. Workers observing Saturday as the day of the Sabbath may work on Sunday instead from 8 a. m. to 12 noon.

4. No overtime work shall be exacted or permitted in the manufacture of cloaks and suits between November 15 and December 31, nor between May 1 and July 15. Manufacturers engaged in, special lines, such as the manufacture of skirts, pile fabrics, linens and summer goods, shall have the right to establish periods different from those above stated, according to the demands of their business, provided that such periods, in all cases do not exceed eight (8) months in the year.

In the seasons in which overtime is permitted, such overtime shall not exceed ten (10) hours in any week, nor two and one-half (2½) hours in any day, and shall be restricted to the first five working days of the week. Additional overtime shall not be permitted except in cases of emergency, and then only with the consent of the union.

5. All workers except buttonhole makers shall work by the week. The minimum wage scale shall be as follows:

Cloak and dress cutters.....	\$39. 00
Skirt cutters.....	34. 50
Sample makers.....	32. 00
Jacket, coat, reefer and dress operators.....	44. 00
Skirt operators.....	42. 00
Piece tailors.....	38. 00
Reefer, jacket and coat finishers.....	35. 50
Jacket, coat and reefer finishers' helpers.....	23. 00
Jacket, coat, reefer and dress upper pressers.....	36. 50
Jacket, coat, reefer and dress under pressers.....	32. 00
Skirt upper pressers.....	32. 50
Skirt under pressers.....	25. 50
Skirt basters.....	22. 00
Skirt finishers.....	18. 00
Drapers.....	24. 00
Begraders on skirts.....	28. 00
Girl begraders.....	24. 00
Cloak bushelers.....	22. 00
Bushelmen who also do pinning, marking and general work on garments.....	30. 00

Buttonhole makers shall be paid one dollar and ten cents (\$1.10) per hundred buttonholes, employer to furnish machine, silk and finishing: If silk is supplied by the buttonhole maker, the employer shall pay ten cents (10c.) additional, per one hundred buttonholes.

No workers shall receive less than the above scale except those who are deficient in their production by reason of their age or physical condition.

The wages for such workers shall be agreed upon between the employer and the worker, subject to the approval of the union.

All operators, finishers and piece tailors shall be paid at the rate of time and one-half for overtime. All other classes of workers for whom the last agreement provided that double time shall be paid for overtime shall receive that rate under this agreement.

All wages shall be paid weekly on a fixed day and in cash.

6. All workers shall be paid for the following legal holidays, to wit: Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas, and for one-half day of Election Day. And such holidays shall be observed.

Workers may also refrain from work on the first day of May, but without pay.

Italian workers may also refrain from working on Columbus Day, but without pay.

During the week in which a legal holiday occurs, employees working less than a full week shall be paid for the holidays pro rata for the hours worked.

Should any legal holiday fall on a Saturday, the workers who observe Saturday as the Sabbath, shall be allowed to celebrate the Sunday following and be paid for the same.

7. No contracting or subcontracting within the shop shall be permitted.

No work shall be given to workers to be made at home.

8. There shall be no time contracts between the members of the association and their workers, either individually or in groups.

9. The employer shall furnish all workers with sewing machines, driven by electric power, and with all material and the requisites of work.

10. All members of the association shall register with the association, and the association shall register with the union, the names and addresses of all contractors whom they employ, or who do work for them.

The association assumes the following guaranties for the contractors thus to be registered:

That such contractors will operate ten (10) machines and will maintain in their shops proper sanitary conditions to the satisfaction of the joint board of sanitary control.

That such contractors will maintain the standards of wages, hours, holidays, and other shop standards provided for in this agreement.

That they will pay for work done on garments of members of the association, and if the contractors should default in the payment of such wages, the association members will pay to the extent of work done on their garments, provided that notice of default is given to such association members within one week after such default.

A contractor within the meaning of the above provisions is:

(a) One who makes up garments from material delivered to him by a member of the association in cut form.

(b) One who makes up garments from uncut material and who works exclusively for one manufacturer who is a member of this association.

11. The joint board of sanitary control existing in the industry shall be continued at joint expense.

12. Should there be a shortage of labor in the industry, and the union unable to supply the employers with workers, the employers may engage apprentices to make up the deficiency. The wages to be paid to such apprentices, as well as the conditions and regulations under which they shall work, shall be determined between the union and the association when such emergency arises.

13. The employer may discharge his workers for causes such as incompetency, misconduct, insubordination in the performance of his work, breach of reasonable rules to be jointly established, soldiering on the job.

14. There shall be no lockout or strike in the shops of the members of the association during the period of this agreement, nor shall there be any individual shop lockout, stoppage, or shop strike pending the determination of any complaint or grievance. Should there be a stoppage of work or shop strike in any factory, immediate notice thereof shall be given by the association to the union. The union agrees to return the striking workers to their work within twenty-four hours after the receipt by the union of such notice, and until the expiration of such time it shall not be deemed that the striking workers have abandoned their employment. The consideration of stoppage cases shall have precedence over all other complaints and grievances arising hereunder.

15. In times when the employer shall be unable to supply his workers with work full time, the available work in the shop shall be divided as equally as possible among all the workers who are competent to do the work, and they shall be paid for the actual time consumed.

Workers may be divided into shifts and alternated.

As to cutters: When there is insufficient work, the work shall be divided equally by the week. As to pressers: The managing presser shall be entitled to no more work than the other pressers in the factory.

16. The association and the union are in accord that the interests of the industry will be best served by large factory units and to that end fix as a minimum fourteen (14) working machines to a factory organization.

Since the union has provided in its contract with independent manufacturers for the employment of a minimum of fourteen (14) working machines, the association will use its best efforts with its members that they increase their plants to the capacity herein stated.

17. The association will urge its members to make in their inside factories the skirts required for the suit jackets produced in their inside factories; and when suit skirts are made in outside shops, they be sent to as few contractors as possible.

18. Each member of the association shall have the right in good faith to reorganize his factory. A reorganization in good faith shall mean a bona fide reorganization of the employer's business, necessitated by a permanent curtailment of his business or a fundamental change in the character of his business.

19. No member of the association shall do work for an independent employer whose workers are on a strike because of the violation of any of the prescribed standards of this agreement. Nor shall any member of the association make or cause any work to be made, directly or indirectly, in any shop where the union has declared a strike for violating the standards provided for in this agreement.

20. All complaints, disputes, or grievances arising between the parties hereto during the life of this agreement shall be submitted in writing, and the manager of the association and the manager of the union, or their deputies, shall in the first instance jointly investigate such complaints, grievances, or disputes and attempt an adjustment. Decisions reached by the managers or their deputies shall be binding on the parties hereto.

Should the managers fail to agree, the case in question shall be referred to a trial board consisting of one member from each organization and an impartial person who shall be selected from a list of names previously agreed upon between the union and the association. The case shall be reviewed upon its merits and the collective agreement shall constitute the basis upon which the decision shall be rendered. No decision shall be used as a precedent for any subsequent case. Discharge cases shall have precedence over all other cases and a decision shall be rendered within forty-eight (48) hours after the complaint in writing has been made, unless the time is extended by mutual consent. A decision of a majority of this board shall be final and binding upon both sides. If the case involves a discharged worker and the decision of the majority of said board is in favor of the discharged worker, he shall be reinstated with pay for the time lost by reason of the discharge.

Expenses connected with the said board shall be borne equally by the parties hereto.

21. Should any member of the association or the union fail to comply with any decision of the chief clerks or trial board within seventy-two (72) hours after a decision is rendered, said member shall forfeit all benefits and rights of this agreement.

22. Before accepting a new member, the association shall inform the union, in writing, of the application. If a strike or dispute is pending between the applicant and the union at the time, the union shall give the association, in writing, full particulars of the nature of the dispute. The association may undertake to adjust the dispute on the basis of the provisions of this contract. The adjustment, however, shall not conflict with the provisions of the agreement existing between the applicant and the union.

This agreement shall enter into force on the day of the execution hereof and shall continue to and including the first day of June, 1922.

*Agreement with American Cloak, Suit, and Skirt Manufacturers' Association.*

Memorandum of agreement made and entered into this — day of June, 1919, by and between the American Cloak, Suit, and Manufacturers' Association, hereinafter styled the "association," and the International Ladies' Garment Workers' Union and the Joint Board of Cloak Makers' Unions of the City of New York, composed of the following local unions, to wit: Cloak Operators' Union, Local No. 1; Piece Tailors' and Sample Makers' Union, Local No. 3; Cloak and Suit Tailors' Union, Local No. 9;

Amalgamated Ladies' Garment Cutters' Union, Local No. 10; Cloak Makers' Union of Brownsville, Local No. 11; New York Reefer Makers' Union, Local No. 17; Cloak and Suit Makers' Union, Local No. 21; Skirt and Dressmakers' Union, Local No. 23; Cloak and Suit Pressers' Union, Local No. 35; Designers' Union, Local No. 45; Italian Cloak Makers' Union, Local No. 48; Buttonhole Makers' Union, Local No. 64; and Examiners, Begraders, and Bushelers' Union, Local No. 82, all collectively designated herein as the "union," contracting herein for and in behalf of the said unions and for and in behalf of the members thereof, now employed and hereafter to be employed by the members of the association, witnesseth:

Whereas the association is composed of a large number of manufacturers engaged in the cloak, suit, and skirt industry in the city of New York, and the union represents the workers in the said trade, and

Whereas the parties hereto desire to establish terms and conditions upon which members of the union shall work for members of the association;

Now, therefore, the parties hereto agree as follows:

#### *Union Recognition.*

1. The unions agree that their members, employed by each member of the association, will work for such members upon the terms and conditions set forth in the agreement.

2. (a) Each member of the association will employ none but members in good standing of the local unions above mentioned, to perform all cutting, operating, sewing, pressing, finishing, basting, draping, cleaning, examining, begrading, busheling, and buttonhole making required by him in the manufacture of cloaks, reefers, suits, skirts, and dresses. A member in good standing is one who is fully paid up or who is in arrears for not more than two months of dues and assessments in the International Ladies' Garment Workers' Union, and who carries a union membership card.

(b) No member of the firm, foreman, or designer will do any work in any of the branches above enumerated.

(c) The association agrees that none of its members will engage any workers except such as will present union working cards, directing them to the particular place of business of the member. Upon request of the union the member of the association will dispense with the services of any or all workers in his employ, in which event, however, the member shall be given an opportunity to retain the workers until they have finished the work in hand. The union undertakes to furnish other workers to the said firm.

3. (a) There shall be at all times in the shop of the members of the association a shop chairman elected by the employees at a regular shop meeting called by the union. He shall act as the representative of the employees in the dealings with the firm

(b) A duly authorized officer or representative of the union shall have access to the factory of the members of the association at all hours for the purpose of investigating the conditions of the shop, and for the purpose of ascertaining whether the provisions of this agreement are fully complied with. Such investigation will be conducted so as not to cause unnecessary interference with the work. He shall also have access to the firm's books for the purpose of ascertaining the correct earnings of the workers employed in the shop and for the purpose of ascertaining the names of manufacturers and jobbers for whom the firm is doing work, or the names of the manufacturers and contractors to whom the firm is sending work. Whenever an investigation involves the examination of the firm's books a member may call in a representative of the association to partake in such investigation, provided the investigation is not thereby delayed.

#### *Hours.*

4. (a) A week's work shall consist of 44 hours in six working days, divided as follows:

On the first five days of the week work shall begin at 8 o'clock a. m. and continue until 5 p. m., with one hour interval for lunch. On Saturday work shall be done from 8 o'clock until noon.

[1720]

(b) Workers observing Saturday as Sabbath may work on Sunday instead.

5. (a) No overtime work shall be exacted or permitted in the manufacture of cloaks and suits between November 15 and December 31, nor between May 1 and July 15. Manufacturers engaged in special lines, such as the manufacture of skirts, pile fabrics, linens, and summer goods shall have the right to establish periods different from those above stated, according to the demands of their business, provided that such periods in all cases do not exceed eight months in the year.

In the seasons in which overtime is permitted, such overtime shall not exceed 10 hours in any week nor two and a half hours in any day, and shall be restricted to the first five working days of the week.

Additional overtime shall not be permitted except in cases of emergency, and then only with the consent of the union.

(b) All operators, finishers, and piece tailors shall be paid at the rate of time and one-half time for overtime. All other classes of workers for whom the last agreement in the industry provided that double time shall be paid for overtime shall receive that rate under this agreement.

#### *Holidays.*

6. All workers shall be paid for the following legal holidays, to wit: Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas, and for one-half day of Election Day. And such holidays shall be observed.

Workers may also refrain from work on the 1st day of May but without pay. Italian workers may also refrain from work on Columbus Day but without pay.

During the week in which a legal holiday occurs, employees working less than a full week shall be paid for the holiday pro rata for the hours worked.

Should any legal holiday fall on a Saturday, the workers who observe Saturday as the Sabbath shall be allowed to celebrate the Sunday following and be paid for the same.

#### *Wages.*

7. (a) All workers employed in-cutting, sample making, operating, finishing, skirt and dress operating, skirt and dress finishing, skirt and dress basting, pressing, examining, busheling, and begrading, shall be paid at a weekly basis, the following minimum wage:

Cloak and dress cutters.....	\$39. 00
Skirt cutters.....	34. 50
Sample makers.....	32. 00
Jacket, coat, reefer, and dress operators.....	44. 00
Skirt operators.....	42. 00
Piece tailors.....	38. 00
Reefer, jacket, and coat finishers.....	35. 50
Jacket, coat, and reefer finishers' helpers.....	28. 00
Jacket, coat, reefer, and dress upper pressers.....	36. 50
Jacket, coat, reefer, and dress under pressers.....	32. 00
Skirt upper pressers.....	32. 50
Skirt under pressers.....	25. 50
Skirt basters.....	22. 00
Skirt finishers.....	18. 00
Drapers.....	24. 00
Begraders on skirts.....	28. 00
Girls' begraders.....	24. 00
Cloak bushelers.....	22. 00
Examiners, pinners, and begraders.....	30. 00
Skirt and dress bushelers.....	16. 00

(b) All buttonholes shall be made in the inside shop at a minimum rate of \$1.10 per hundred, and the finishing of same shall be supplied by the employer. The employer shall furnish the buttonhole machines, silks, or mercerized guimpe and whatever other materials and accessories that go with the making of buttonholes.

(c) The employer agrees not to reduce the wages of any of the workers in his employ receiving above the stipulated minimum wage, and that increases obtained are to continue in force and effect for the life of this agreement.

(d) The member agrees to enter the weekly earnings of each and every worker in his employ on a special pay card issued by the union.

(e) A schedule of prices covering wages of every individual worker employed in the factory of a member shall be prepared and countersigned by the shop chairman, of which a copy shall be delivered to the union.

(f) Wages shall be paid in cash to all workers on Saturday.

*Standards and Conditions.*

8. (a) The association agrees that its members will employ during the life of this agreement fourteen operators (or as many more as he employs at the time of the signing of this agreement) and all such other help which is necessary in order that the operators may work without interruption, such as cutters, sample makers, finishers, pressers, etc.

(b) All help engaged after the signing of this agreement shall after a trial period of one week be considered as regular employees of the firm, and shall be entitled to all rights, privileges, and benefits provided for in this agreement.

(c) The employer agrees that all suit skirts required for suit jackets made in their inside factories will also be made in the inside factory.

(d) No member of the association shall enter into individual agreement with any employee, and no cash deposits or other securities shall be accepted by said member from any employee, nor shall any arrangements be made for guaranteeing any length of employment, except that the employer and the workers of any given shop may with the approval of the union enter into a time contract stipulating the length of time that the employer agrees to employ the workers of his shop at full time. Such contracts must cover all the workers of the shop. In such cases the employer will be individually liable in case of a breach of this arrangement.

9. (a) No contracting or submanufacturing work within the shop shall be permitted. No work shall be given to employees to be made at home. No operator or finisher shall work with more than one helper. No samples shall be made in sections.

(b) The employer shall furnish all employees with sewing machines driven by electric power and with all material and requisites of work and air pressure pressing irons.

10. (a) No work shall be given by the employer to a contractor nor shall any ready-made goods be purchased by the employer from another manufacturer unless the name and place of business of such contractor or manufacturer has been registered with the union and the union has certified in writing to the member that such contractor or manufacturer maintains proper working standards and sanitary conditions. Whenever the union will inform the employer that any submanufacturer or contractor does not maintain union standards as specified in this agreement, the contract with such contractor or submanufacturer shall be canceled and his work shall be discontinued.

(b) Each member of the association will furnish to the union through the association the names and addresses of all firms from whom he is or hereafter will be receiving work, cut or uncut. Manufacturers working for jobbers shall register with the union all such jobbers for whom work is done by them, and no work shall be done by any member of the association for any jobber unless such jobber has settled with the union individually or collectively. It is hereby understood that a contractor is one who receives cut goods for the purpose of manufacture and that a submanufacturer is one who receives uncut goods for the purpose of manufacture.



(c) The association agrees that its members will not do any work for firms nor sell any goods to firms against whom the union has declared a strike nor shall any member of the association send any goods to such firms or its principals, agents, factors, or jobbers during the pendency of the strike.

(d) To facilitate the enforcement of the provisions of this article the union will periodically supply to the members of this association printed lists of manufacturers, submanufacturers, contractors and jobbers, who are under contract with the union.

(e) No work shall be given by any member of the association to a new contractor or shall be made by him in a new outside shop unless his inside shop and all contractors at the time doing work for the said member of the association shall be supplied with work to their full capacity. If the said member of the association does not supply his contractors or outside shops with work sufficient to keep ten machines fully employed he shall not give work to additional contractors or outside shops.

(f) The association hereby guarantees for its members the maintenance of the standards hereby established by all contractors and submanufacturers employed by him, and agrees to pay the wages of all employees of such contractors and submanufacturers if such contractors or submanufacturers fail to pay such wages, and the association hereby assumes joint liability for the same, and will pay such wages to the extent of work done on garments for members of the association, provided that notice of default is given to the association within one week after such default.

11. (a) In times when the member of the association shall be unable to supply his workers with work full time the available work in the shop shall be divided as equally as possible among all the workers who are competent to do the work, and they shall be paid for the actual time consumed. Workers should be divided into shifts and alternated.

As to cutters, when there is insufficient work the work shall be divided equally by the week. And as to pressers, the managing presser shall be entitled to do no more work than the pressers in the factory.

#### *Sanitation.*

12. (a) The association agrees that its members shall comply with all the standards of sanitation, and all other rules now established by the joint board of sanitary control in the cloak and suit industry. The association will pay to the joint board of sanitary control the sum of \$10 annually per member for inspection and other services.

(b) The association agrees for its members that at the expiration of the lease of a member on the premises now occupied by said member before he enters into any new lease for the premises now occupied by him, or engages new premises, such premises will be first approved by the joint board of sanitary control as being safe and free from fire dangers.

(c) All new workers employed by a member of this association shall, in addition to securing certificates from the union that they are in good standing also secure certificates from the joint board of sanitary control to the effect that they are free from contagious diseases.

#### *Miscellaneous.*

13. (a) Except for misbehavior the employer shall not discharge any employee before notice in writing is given to the union containing the cause or reason for said discharge. In case of a dispute between the employer and the union as to sufficiency or insufficiency of the causes or reasons for the discharge the dispute may be by mutual consent submitted to an impartial person selected by both parties whose decision shall be final and binding on both sides.

The union shall investigate the notice of the contemplated discharge within one week of written notice.

The association hereby agrees that as security for the faithful performance of this agreement on its part and on the part of all the manufacturers constituting its membership, the said association shall deposit the sum of \$50,000 (fifty thousand dollars) with the Union Exchange National Bank as trustee hereunder for the present membership and proportionate additional sums for increased members. If any manufacturers shall violate any of the terms of this agreement, the union shall serve notice thereof upon the association and such complaint shall be referred to an adjustment committee to consist of one representative of the association and one representative of the union, and if they cannot agree, they shall call in a third impartial person, to be either Dr. Judah L. Magnes or A. E. Rothstein, as umpire. Such adjustment committee shall render its decision within 48 hours after the notice by the union upon the association has been served. The adjustment committee shall decide upon the amount of the damage to be paid to the union by reason of the breach of this agreement, and the decision of the adjustment committee shall be final.

The damage so to be sustained by the union shall be paid to it out of the deposit by the trustee immediately upon the receipt of notice of the committee's award, and the association shall restore the amount of such withdrawal to such deposit within seventy-two (72) hours thereafter, or the association may in the alternative pay the amount of such damage directly to the union within seventy-two (72) hours after such notice, leaving the deposit intact.

The association further agrees that if any of the manufacturers constituting its members violate any of the terms of this agreement, that then the association shall take proper measures to discipline such manufacturer by expulsion from the association or otherwise, and any member of the association who shall be suspended or expelled therefrom shall forfeit any rights or privileges in or to this agreement.

The association agrees that its members shall employ none but piece tailors in the making of samples in their factory, who are to be members of either Local No. 3 or Local No. 48 of the International Ladies' Garment Workers' Union.

The designers likewise should be members of the Designers' Union, Local No. 45, of the International Ladies' Garment Workers' Union.

(b) Before accepting a new member, the association shall inform the union in writing of the application. If a strike or dispute is pending between the applicant and the union at the time, the union shall give the association, in writing, full particulars of the nature of the dispute. The association may undertake to adjust the dispute on the basis of the provisions of this contract. The adjustment, however, shall not conflict with the provisions of the agreement existing between the applicant and the union.

This agreement shall enter into force on the day of the execution hereof and shall continue to and including the first day of June, 1922.

## INDUSTRIAL RELATIONS.

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### International Labor Conference, Washington, D. C., October 29 to November 29, 1919.

**I**N ACCORDANCE with the provisions of the labor code of the Peace Treaty the International Labor Conference convened in Washington from October 29 to November 29, 1919, the Secretary of Labor, Hon. W. B. Wilson, presiding. The conference was composed of delegates from 41 countries who assembled to consider the subjects included in the agenda set forth in the annex to section 1, Part XIII of the Peace Treaty. These subjects were: The 8-hour day; Unemployment; Women's employment; Employment of children; and the Berne convention prohibiting the use of white phosphorus in the manufacture of matches.

Inasmuch as the conference had not concluded its deliberations in time for a full account to be published in this issue of the MONTHLY LABOR REVIEW, an extended report of the discussions and of the resolutions adopted will appear in the January number.

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### The Bituminous Coal Strike.

By C. F. STODDARD.

**T**HE strike of approximately 425,000 bituminous coal miners called by the executive officers of the United Mine Workers of America on October 15, 1919, effective at midnight on October 31, tied up about 75 per cent of the soft-coal mining industry in the country, for it affected not only the central competitive field, comprising Illinois, Indiana, Ohio, and western Pennsylvania, but bituminous miners, members of the United Mine Workers of America, in 17 other States.<sup>1</sup> Orders to strike were issued as the result of the adoption of the recommendations of the scale committee by the miners' delegates at the twenty-seventh consecutive and fourth biennial convention of the United Mine Workers of America held at Cleveland in September. The convention took the position that the war had in effect ended; that therefore the contract, applicable directly to the central competitive field, which had been made for the period

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<sup>1</sup> Alabama, Arkansas, Colorado, Iowa, Kentucky, Missouri, Montana, New Mexico, North Dakota, Oklahoma, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wyoming.

of the war but to extend not later than March 31, 1920, is inoperative; and that, although not bound by the agreement, they had continued work for nearly a year under its terms. The miners felt that it was only fair that a new wage agreement should be negotiated, in view of the fact that they had not had a wage advance for nearly two years and that present wages were not commensurate with the cost of living. A reduction of hours, they argued, would be a solution of the problem of unemployment, for they estimated that since the signing of the armistice miners had been employed on an average only three days a week. The demands of the miners as adopted by the convention were presented by the scale committee to the operators at the joint wage conference which met first in Buffalo on September 25 and later in Philadelphia. The paramount provisions of this document were demands first for a 60 per cent increase in wages, and second for a six-hour day and five-day week. The full text of the miners' demands is as follows:<sup>1</sup>

1. We recommend that this report be accepted as a substitute for all wage-scale resolutions that have been presented to the convention.

2. We recommend that this convention demand a 60 per cent increase to be applicable to all classifications of day labor and to all tonnage, yardage, and dead work rates throughout the central competitive field.

3. We recommend that this convention demand that all wage agreements that are negotiated to replace existing agreements shall be based on a six-hour workday, from bank to bank, five days a week.

4. That all day labor shall be paid time and a half for overtime and double time for all work done on Sundays and legal holidays.

5. That all agreements entered into by the United Mine Workers of America shall have incorporated therein a provision providing for weekly pay days.

6. That all double-shift work on the coal shall be abolished except as may be necessary for development and ventilating purposes, and development for increased tonnage shall not be regarded as being a reason for double-shift work; it being understood that this rule shall not be applicable to new mines that are in the process of development.

7. That no automatic penalty clause shall be written into any agreement entered into by the United Mine Workers of America.

8. That all internal differences not covered by joint interstate agreement shall be referred back to the respective districts for adjustment.

9. That all contracts in the bituminous field shall be declared as having automatically expired November 1, 1919, and that no sectional settlement shall be allowed, and new contracts must run concurrently for a period of two years in all bituminous districts under our jurisdiction.

10. That agreements negotiated for outlying districts shall be retroactive and become effective on the date upon which the agreement for the central competitive field becomes effective.

11. That no agreement for the central competitive field shall be concluded until after this convention has been reconvened and the agreement has been ratified by the reconvened convention, which reconvened convention shall also define a policy to be applicable to outlying districts, and that the reconvened convention shall be held in Indianapolis on such date as may be designated by the resident international officials.

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<sup>1</sup> Coal Mining Review for Oct. 1, 1919, p. 11.

12. We recommend that in event a satisfactory wage agreement is not secured for the central competitive field before November 1, 1919, to replace the one now in effect, that the international officials be authorized to and are hereby instructed to call a general strike of all bituminous miners and mine workers throughout the United States, the same to become effective November 1, 1919.

13. That this convention go on record as favoring the ratification of the wage demands made by the anthracite miners in their tristate convention, which was held in Wilkes-Barre, Pa., from August 19 to 23, inclusive, and that we pledge to the anthracite mine workers our power and influence in aiding them to the fulfillment of their demands.

The agreement which the miners proposed to abrogate was negotiated on October 6, 1917, at Washington, D. C., with the sanction of the Fuel Administration, acting for the Government.<sup>1</sup> It superseded the agreement of April 16, 1916, and provided for an increase of 10 cents per ton for pick and machine miners, on a mine-run basis, an advance of \$1.40 per day for all day labor and monthly men except trappers and other boys, an advance of 75 cents per day for trappers, with \$1 per day for boys being paid more than \$1.90 but less than men's wages, and an advance of 15 per cent for all yardage, dead work, and room turning.

### Wages of Bituminous Miners in 1914 and 1919.

As already stated, this so-called Washington agreement was to be in force for the period of the war, but not later than March 31, 1920. Hours and daily rates of pay of bituminous coal miners under the Washington agreement show considerable increase over the rates in force in 1914, as may be seen from the following table,<sup>2</sup> which gives the rates on a mine-run basis in the Hocking Valley district and the Pittsburgh district, two representative districts in the central field. It should be explained that the central competitive field uses the Hocking Valley district of Ohio as the basing district upon which rates are built for all four States. Therefore the wage changes in this district may be taken as representative of the trend of wage rates in the entire central field, and in a general way for practically all bituminous mines in the country.

<sup>1</sup> For full text of provisions of this agreement see MONTHLY REVIEW for December, 1917, p. 110.

<sup>2</sup> Wages in various industries: A summary of wage movement during the war. Bureau of Applied Economics, Washington, 1919, p. 26.

RATES OF WAGES OF MINERS AND DAY LABORERS, ON MINE-RUN BASIS, BITUMINOUS  
 COAL MINING, 1914 AND 1919.

Occupation.	1914	1919	Per cent of increase.
<i>Hocking Valley district.</i>			
Mining, rates per ton:			
Pick mining.....	\$0.676	\$0.8764	29.4
Machine mining—chain machines—cutting, drilling and loading- in rooms.....	.47	.70	48.9
Inside labor, rates per day:			
Tracklayers, cagers, drivers, trip riders, water haulers, machine haulers, timbermen, wiremen, and motormen.....	2.84	5.00	75.6
Tracklayers' helpers.....	2.62	4.75	81.2
Trappers.....	1.32	2.65	100.7
Pipemen.....	2.78	4.92	76.9
Outside labor, rates per day:			
First blacksmiths.....	3.12	5.27	68.9
Second blacksmiths and carpenters.....	2.81	4.95	76.1
Blacksmiths' helpers, dumpers, and trimmers.....	2.62	4.75	81.2
Greasers and couplers.....	1.56	3.64	133.3
<i>Pittsburgh district.</i>			
Mining, rates per ton:			
Pick mining—			
Thin vein.....	.6464	.8764	35.5
Thick vein.....	.5611	.7911	40.9
Machine mining—chain machines—cutting and loading-in rooms—			
Thin vein.....	.4461	.70	56.7
Thick vein.....	.3892	.6431	65.2
Inside labor, rates per day:			
Tracklayers, drivers, cagers, trip rope riders, water haulers, and timbermen.....	2.84	5.00	76.0
Tracklayers' helpers.....	2.62	4.75	81.2
Trappers.....	1.25	2.65	112.0
Pipemen.....	2.78	4.92	76.0

Average hours and monthly earnings of bituminous miners, by occupation, during a half-month period, with accompanying explanation, based on data gathered by the Bureau of Labor Statistics early in 1919, covering 40,508 workers employed in 201 mines, are presented in an article on pages 207 to 229 of this issue of the MONTHLY LABOR REVIEW.

In support of the contention of the miners that they have not been permitted to work full time, to remedy which situation they demand a six-hour day and a five-day week, the following statement by Mr. Gompers, president of the American Federation of Labor, is pertinent:

In the first instance, it should be known that the demands of the miners, which upon the surface seem so radical and far-reaching, are by no means so. For several years the miners have not had more than a half year's work—their working days averaging from 160 to 180 days a year, intermittent, by days and by weeks—employment and then unemployment. The miners simply ask for a regulation of the working time, so that coal production and employment may be regular rather than intermittent. If the miners were permitted by the operators to work full time, the supply of coal thus mined would soon force down the price of coal on the market, and this the operators are determined not to permit. The miners' case might better be stated by their demanding at least five days of six hours' work per week, which is really more than they are permitted to work at the present time.

The United States Geological Survey confirms this statement in a letter<sup>1</sup> to Senator Owen under date of November 5, 1919, in which the director states:

The fact brought out by the Survey's weekly production statistics shows to me that the trouble with the bituminous coal industry is that for the year past it has been working on an average 30-hour week. This in turn suggests that we have had too many mines and miners to meet the current coal demands, although last November the demand was sufficient to bring out a production representing nearly a 40-hour week.

On looking over the weekly record I find that in the 12 weeks of February, March, and April the average working time was only a fraction over 24 hours. During this period, therefore, when, as I remember it, the chief trouble was no market demand for coal, the mines were on a half-time basis.

The impression should not be allowed to prevail that responsibility for broken time rests exclusively upon the operator or upon the miner. Each is immediately responsible—the one for closing down the mine, and the other for absenting himself from the mine when it is running. Reference to this has been made in the Bureau's report of its investigation into wages and hours of labor in the coal mining industry in 1919, where a table is given from which may be roughly apportioned the immediate responsibility, so far as relates to bituminous mining, as between the failure of employers to operate their mines and the failure of miners to report for work when the mines are operating. This table is on page 223.

### Issuance of the Strike Order.

The joint wage conference was unable to reach a satisfactory agreement, the operators rejecting the demands of the miners as being "extravagantly excessive and impossible of acceptance," and also on the ground that the war had not ended and that the wage contract under which they were working was still in force and would be until peace was formally proclaimed, unless March 31, 1920, should intervene. A strike order was then issued to become effective on November 1. Further attempts to get together were futile, the operators declaring that they would not even discuss the situation unless the strike order was withdrawn and certain assurances relative to carrying out the existing contract were given by the miners' representatives, while the latter held that the operators must show a disposition really to negotiate before it would be worth while for them to go into conference.

It was of course recognized that a tie-up of the bituminous coal industry would within a few weeks at most paralyze all other industries and stop the business of transportation, thus cutting off food supplies, and would, if allowed to materialize, bring much inconvenience to all the people and real suffering to many thousands. The

<sup>1</sup> Congressional Record for Nov. 10, 1919, p. 8661.

matter thus assumed a national aspect, and the Government found it necessary to do all it possibly could to avert the calamity. Estimates of the amount of soft coal on hand were not very encouraging, and, with the railroads idle for lack of fuel, even the coal at the mines would be of no use to industry. It became a question not of the right to strike, as the miners' leaders contended when the Government evinced a serious interest in the matter, but of protecting the public from the consequences of a great industrial upheaval.

### Efforts of Secretary of Labor Wilson and of the President.

Secretary of Labor Wilson was successful in bringing into conference in his office, on October 16, 1919, a representative of the miners, John L. Lewis, acting president of the United Mine Workers of America, and a representative of the operators, Thomas T. Brewster, president of the Coal Operators' Association, and the three officials, in several protracted sessions, made an earnest attempt to reach common ground which would result in an agreement to settle the dispute and prevent the threatened strike. Speaking for the operators, Mr. Brewster steadfastly refused to enter into negotiations for a new wage scale until the strike order was rescinded and continuation of work assured. Mr. Lewis was as firm in his contention that he had no authority to call off the threatened strike. An agreement seemed impossible. The Secretary then invited the scale committees of the coal operators and of the United Mine Workers of America, respectively, to meet with him and Messrs. Lewis and Brewster on October 21, in an effort to reach an adjustment. Conferences were held for four days during which several compromises were suggested by Secretary Wilson. One provided "that the wages of the miners be increased, at the expiration of the present contract, an amount equal to the difference between the increase in wages received by the mine workers since July, 1914, and the increase in the cost of living since that date; that the increase be effective from the termination of the present agreement until March 31, 1920; that on these conditions the strike order be withdrawn and the miners continue at work on these terms; that negotiations be entered into at the usual time for the making of a new scale to be effective after March 31, 1920." This compromise was rejected by both sides on the ground that it was indefinite and inadequate. Secretary Wilson then proposed a straight increase of 15 cents a ton for pick mining, with an increase in the same proportion for machine and other classes of labor, with an eight-hour day from bank to bank and a half holiday on Saturday, the agreement to be effective November 1 and to continue until March 31, 1920. This was also re-



jected by both sides. Hopelessly deadlocked, the conference adjourned.

At this juncture, on October 24, 1919, the President issued a public statement in which he characterized the projected strike as "unjustifiable" and "unlawful"; that it "must be considered a grave moral and legal wrong against the Government and the people of the United States," and added that "the law will be enforced and the means will be found to protect the interests of the Nation in any emergency that may arise out of this unhappy business." The text of the President's statement is as follows:

*President's Statement Warning of Federal Action.*

On September 23, 1919, the convention of the United Mine Workers of America at Cleveland, Ohio, adopted a proposal declaring that all contracts in the bituminous field shall be declared as having automatically expired November 1, 1919, and making various demands, including a 60 per cent increase in wages and the adoption of a six-hour workday and a five-day week; and providing that, in the event a satisfactory wage agreement should not be secured for the central competitive field before November 1, 1919, the national officials should be authorized and instructed to call a general strike of all bituminous miners and mine workers throughout the United States, effective November 1, 1919.

*Recalls the War Agreement.*

Pursuant to these instructions, the officers of the organization have issued a call to make the strike effective November 1. This is one of the gravest steps ever proposed in this country, affecting the economic welfare and the domestic comfort and health of the people.

It is proposed to abrogate an agreement as to wages which was made with the sanction of the United States Fuel Administration, and which was to run during the continuance of the war, but not beyond April 1, 1920. This strike is proposed at a time when the Government is making the most earnest effort to reduce the cost of living and has appealed with success to other classes of workers to postpone similar disputes until a reasonable opportunity has been afforded for dealing with the cost of living.

It is recognized that the strike would practically shut off the country's supply of its principal fuel at a time when interference with that supply is calculated to create a disastrous fuel famine. All interests would be affected alike by a strike of this character, and its victims would be not the rich only, but the poor and the needy as well—those least able to provide in advance a fuel supply for domestic use.

It would involve the shutting down of countless industries and the throwing out of employment of a large number of the workers of the country. It would involve stopping the operation of railroads, electric light and gas plants, street railway lines and other public utilities, and the shipping to and from this country, thus preventing our giving aid to the Allied countries with supplies which they so seriously need.

The country is confronted with this prospect at a time when the war itself is still a fact, when the world is still in suspense as to negotiations for peace, when our troops are still being transported, and when their means of transport is in urgent need of fuel.

*Without Approval of Workers.*

From whatever angle the subject may be viewed, it is apparent that such a strike in such circumstances would be the most far-reaching plan ever presented in this country to limit the facilities of production and distribution of a necessity of life and

thus indirectly to restrict the production and distribution of all the necessaries of life. A strike under these circumstances is not only unjustifiable; it is unlawful.

The action proposed has apparently been taken without any vote upon the specific proposition by the individual members of the United Mine Workers of America throughout the United States, an almost unprecedented proceeding. I can not believe that any right of any American worker needs for its protection the taking of this extraordinary step, and I am convinced that when the time and money are considered it constitutes a fundamental attack, which is wrong, both morally and legally, upon the rights of society and upon the welfare of our country.

I feel convinced that individual members of the United Mine Workers would not vote, upon full consideration, in favor of such a strike under these conditions.

*Interest of Public Paramount.*

When a movement reaches a point where it appears to involve practically the entire productive capacity of the country with respect to one of the most vital necessities of daily domestic and industrial life, and when the movement is asserted in the circumstances I have stated, and at a time and in a manner calculated to involve the maximum of dangers in the public welfare in this critical hour of our country's life, the public interest becomes the paramount consideration.

In these circumstances I solemnly request both the national and the local officers and also the individual members of the United Mine Workers of America to recall all orders looking to a strike on November 1, and to take whatever steps may be necessary to prevent any stoppage of work.

It is time for plain speaking. These matters with which we now deal touch not only the welfare of a class but vitally concern the well-being, the comfort, and the very life of all the people.

I feel it is my duty in the public interest to declare that any attempt to carry out the purpose of this strike and thus to paralyze the industry of the country, with the consequent suffering and distress of all our people, must be considered a grave moral and legal wrong against the Government and the people of the United States.

*Laws are to be Enforced.*

I can do nothing else than to say that the law will be enforced, and the means will be found to protect the interests of the Nation in any emergency that may arise out of this unhappy business.

I express no opinion on the merits of the controversy. I have already suggested a plan by which a settlement may be reached, and I hold myself in readiness at the request of either or both sides to appoint at once a tribunal to investigate all the facts with a view to aiding in the earliest possible orderly settlement of the questions at issue between the coal operators and the coal miners, to the end that the just rights, not only of those interests but also of the general public may be fully protected.

The strike was not called off.

Justification for the President's declaration that the threatened strike was unlawful was found in the provisions of the act of August 10, 1917, the Lever Food and Fuel Control Act, which was enacted by Congress as a wartime measure and which is still in force. This provision is as follows: <sup>1</sup>

It is hereby made unlawful for any person willfully to conspire, combine, agree, or arrange with any other person to limit the facilities for transporting, producing, manufacturing, supplying, storing, or dealing in any necessities; to restrict distribution

<sup>1</sup> See U. S. Stat., vol. 40, p. 1, p. 277.

of any necessities; to prevent, limit, or lessen the manufacture or production of any necessities in order to enhance the price thereof, or to exact excessive prices for any necessities; or to aid or abet the doing of any act made unlawful by this section.

## The Position of the Government.

Determined to fulfill his promise to enforce the law, the President directed the Attorney General to take such steps as might be necessary to protect the public interest. Attorney General Palmer shortly afterwards, on October 29, issued the following public statement setting forth the position of the Government in the crisis:

There can be no doubt that the Government has the power in the public interest, under the law, to deal with the projected strike of the bituminous coal miners, without infringing upon the recognized right of men in any line of industry to work when they please and quit work when they please. The illegality of this strike can and will be established without in any way impairing the general right to strike, and the general right to strike is not in issue in any sense whatever in the present situation. This is true because the circumstances differentiate this case from the case of any other strike that has ever taken place in this country. It does not follow that every strike is lawful merely because the right to strike is recognized to exist. Every case must stand upon its own bottom and be governed by its own facts. Therefore, when the President said in his statement last Saturday that "such a strike in such circumstances" is not only unjustifiable but unlawful, reference was had only to the conditions in the pending situation.

The proposed strike was ordered in a manner, for a purpose and with a necessary effect, which taken together put it outside the pale of the law. After the war began, the production of fuel was regarded as one of the subjects of such peculiar public importance as to justify a special statutory enactment. The Fuel Administration was created to supervise the subject, and matters of wages as well as prices were considered and sanctioned by the Fuel Administration. After the cessation of hostilities, the Fuel Administration suspended certain of its orders, but did not terminate them, and they are subject to reinstatement at any time upon the President's order and the statute under which the orders were made is still in full force.

With this situation existing, the convention of United Mine Workers at Cleveland, last September, decided to annul all wage contracts on November 1, and took the unprecedented step of deciding in advance of any opportunity for consultation either with the Government or with the coal operators, to strike on November 1, unless satisfactory new arrangements should be made.

Without any expression from the workers themselves, the organization promulgated a demand for a 60 per cent increase in wages, a six-hour day and a five-day week, and authorized a strike to be effective November 1, before the demands were even presented to the operators. The demand for a new wage agreement covered only a part of the coal fields, but the strike order was sent broadcast to workers in other fields where operators had been given no opportunity to even consider demands for increased wages or decreased hours. All this has been done while the miners in every field, through their right of collective bargaining, had entered into a solemn contract with the operators, fixing wages and hours for a definite period which has not yet expired. The operators, upon the insistence of the President, indicated their willingness to negotiate and arbitrate, providing the strike is deferred, while the miners rejected the President's request for arbitration as a means of settlement, and refused to defer the strike. Some of the wage contracts were made with the sanction of the Federal Government, operating through the Fuel Administration, to run during the

continuation of the war, or until April 1, 1920. Many others, however, run until a time still in the future without regard for the continuation of the war.

While it is perfectly plain that the war is still on and any contract running until its conclusion is still in force, whatever weight may be given to the argument that the successful operation of the war no longer requires such contracts, it has no application whatever to the large number of such contracts which expire at a fixed date without regard for the war period. The armistice did not end the war and the courts in many cases have held that the war emergency statutes are still in force; the same rule must apply to war emergency contracts. The Congress has held to this position so late as October 22, when an act of Congress was approved making even more effective the Food and Fuel Control Act.

The suspension of the restrictions as to the price of coal is not necessarily permanent and conditions may possibly warrant a renewal of those restrictions at any time; and yet the Government would be absolutely helpless to protect the people against exorbitant prices of the product if the contracts made under its sanction should now be deliberately broken. This does not mean that a change could not be negotiated and either agreed upon or arbitrated if proper protection of the public be accorded in the settlement, but it does mean that the public welfare in the war-time emergency must still be the paramount interest to be served by both parties. The Government is the protector of the public welfare.

The proposed strike, if carried to its logical conclusion, will paralyze transportation and industry; it will deprive unnumbered thousands of men who are making no complaint about their employment of their right to earn a livelihood for themselves and families; will put cities in darkness, and, if continued only for a few days, will bring cold and hunger to millions of our people; if continued for a month, it will leave death and starvation in its wake. It would be a more deadly attack upon the life of the Nation than an invading army.

By enacting the Food and Fuel Control Act, Congress has recognized the vital importance in the present circumstances of maintaining production and distribution of the necessaries of life, and has made it unlawful for any concerted action, agreement, or the arrangement to be made by two or more persons to limit the facilities of transportation and production, or to restrict the supply and distribution of fuel, or to aid or abet the doing of any act having this purpose or effect. Making a strike effective under the circumstances which I have described amounts to such concerted action or arrangement.

It is the solemn duty of the Department of Justice to enforce this statute. We have enforced it in many cases. We must continue to do so irrespective of the persons involved in its violation. I hope it will not be necessary to enforce it in this case. Indeed, I am hearing from many sources that large numbers of the miners themselves do not wish to quit work and will not do so if assured of the protection of the Government, of which they properly feel themselves a part. It is probably unnecessary for me to say that such protection will everywhere be given, so that men may exercise their undoubted right of continuing to work under such terms and conditions as they shall see fit. The facts present a situation which challenges the supremacy of the law, and every resource of the Government will be brought to bear to prevent the national disaster which would inevitably result from the cessation of mining operations.

### The Position of the Miners.

On the same day (Oct. 29) a meeting of the miners' representatives was held at Indianapolis to consider the whole situation and particularly the suggestion of the President that negotiations be resumed

and his offer to designate a board of arbitration to settle the difficulty. The meeting resulted in a vote to stand by the strike order. Upon its adjournment the following statement was issued defining the position of the miners:

The conference of United Mine Workers, composed of members of the international executive board, the scale committee of the central competitive district, and the district presidents, United Mine Workers of America, gave most profound consideration to the statement of the President of the United States, which appeared in the public press recently, relative to the impending strike of bituminous miners set for November 1. No communication was received by the officers of the United Mine Workers of America from either the President or any representative of the Federal Government.

A canvass of the entire situation shows that a strike of bituminous miners cannot be avoided. A regularly constituted convention of representatives of United Mine Workers, held at Cleveland, Ohio, on September 23, ordered a strike of bituminous mine workers, to become effective November 1 in the event a wage scale was not negotiated before that time. The highest authority of the organization has acted in this manner and no representatives of the organization have authority to set such action aside. The facts are that the same supreme authority which ordered the impending strike is the same as that which approved the contract which has now expired.

The responsibility for the strike rests with the coal operators. They have refused to negotiate a wage agreement, notwithstanding the fact the mine workers' representatives have urged and beseeched them to do so. The fundamental causes which prompted the mine workers to take this drastic action are deep-seated. For two years their wages have remained stationary. They appealed one year ago to the Federal Fuel Administrator, Dr. Garfield, and from him to the President of the United States, for an increase in wages sufficient to meet the increase in the cost of the necessaries of life. Their appeal was rejected and their request refused. Notwithstanding this, they continued mining coal until now their contract expires, when they are determined that their grievances must be adjusted in a reasonably satisfactory manner.

The courts have held that the workingmen have a right to strike and may quit work either singly or collectively for the purpose of redressing grievances and righting wrongs. The constitutional guaranties of this free Government give men the right to work or quit work individually or collectively.

The mine workers, therefore, are but exercising the right guaranteed by the Constitution and which cannot be taken away by the representatives of the Government when they quit work or when they refuse to work until their grievances are adjusted. The mine workers' representatives are ready, willing, and anxious to meet the coal operators for the purpose of negotiating an agreement and bringing about a settlement of the present unhappy situation. They will respond at any time to a call for such a meeting and will honestly endeavor to work out a wage agreement upon a fair and equitable basis. Such action alone will put the mines in operation and guarantee the nation an adequate supply of coal.

We assert that the mine workers have no other purpose in view—other than to secure a working wage agreement. All of their demands are incorporated in the wage proposal submitted to the coal operators and are subject to negotiation. Conscious of the grave responsibility resting upon the representatives of the coal miners, we have no other alternative than to carry out the instructions of the United Mine Workers' convention. The issue has been made, and if it must be settled upon the field of industrial battle, the responsibility rests fairly and squarely upon the coal barons alone.

## Action Taken by the Government.

All hope of settling the controversy by November 1, or of calling off the strike pending further negotiations, was abandoned. The Government at once took definite steps to protect the "interests of the Nation" and on October 31 the Attorney General obtained from Federal Judge A. B. Anderson, at Indianapolis, an order restraining the union officials "from doing any further act whatsoever to bring about or continue in effect the above-described strike and cessation from work on the part of the miners and mine workers in the bituminous mines." The order was granted on the ground, as set forth in the petition of the Department of Justice, that the strike would reduce the production of coal by at least 80 per cent, would result in widespread shutting down of factories and industrial operations and consequently enforced idleness and cessation of wages to vast numbers of workers throughout the country, in the curtailment of production of many necessary articles and commodities and in widespread suffering from cold in a large section of the United States, so as to constitute a national disaster in those respects. The request for the restraining order was based primarily upon the act of August 10, 1917, the Food and Fuel Control Act, which makes it unlawful to limit the facilities for transportation or to restrict distribution of any necessaries as indicated in the quotation from the act on page 68. Considerable emphasis was laid upon the effect the strike would have upon transportation facilities, resulting in an ultimate suspension of the operation of the railroads because of inability of operators to fulfill their contracts with the Railroad Administration. The strike would, declared the brief, paralyze both intra and interstate commerce.

The petition also maintained that the contract under which the miners were working was in force and effect, and attention was called to the fact that the strike did not only affect the central competitive field, to which the Washington agreement applied, but practically the entire bituminous coal-producing area of the country.

Under the provisions of the order the officers of the union were restrained from aiding the strike in any way by "messages of encouragement or exhortation" or from using any of the union funds for strike benefits. This was a very important point, for by denying the distribution of benefits upon which the miners had depended for support during the strike, the Government employed a most effective weapon to discourage the action of the workers who had been led to lay down their picks and shovels. The essential provisions of the temporary restraining order which was operative until November 8 are as follows:

It is ordered that a temporary restraining order issue out of and under the seal of this court commanding the said defendants, \* \* \* both individually and in their representative capacities as officers of the International Union United Mine Workers of America, or as members of said organization or any of its district or local unions or any committee thereof, and all persons combining, conspiring, agreeing, or arranging with them, and all other persons whomsoever, not to issue any messages that the strike of the miners and mine workers in the bituminous coal fields of the United States heretofore ordered by the said defendants or some of them to take effect at midnight on October 31, 1919, is to be enforced as previously announced or otherwise and to desist and refrain from doing any further act whatsoever to bring about or continue in effect the above-described strike and cessation from work on the part of the miners and mine workers in the bituminous mines; from issuing any further strike orders to local unions and members of local unions or to district unions for the purpose of supporting such strike by bringing about or maintaining any other strikes; from issuing any instructions, written or oral, covering or arranging for the details of enforcing such strike ordered to begin at midnight on October 31, 1919; from issuing any messages of encouragement or exhortation to striking miners or mine workers or unions thereof to abstain from work and not to return to the mines in pursuance of such strike; and from issuing and distributing, or taking any steps to procure the issuance or distribution, to miners and mine workers striking and abstaining from work in pursuance of such strike, of so-called strike benefits or sums of money previously accumulated or subsequently acquired to assist such striking miners and mine workers to subsist while striking or to aid them in any way by reason of or with reference to such strike and abstaining from work, and from conspiring, combining, agreeing, or arranging with each other or any other person to limit the facilities for the production of coal, or to restrict the supply or distribution of coal, or from aiding or abetting the doing of any such act or thing.

On October 30 the President signed an Executive order restoring rules and regulations which prevailed during the war relating to the fixing of prices, gross margins, etc., for bituminous coal and authorizing the Fuel Administrator to "restore, change, or make such rules or regulations relating to the production, sale, shipment, distribution, apportionment, storage or use of bituminous and lignite coal as in his judgment may be necessary." The object of this order was to prevent profiteering or increase of prices during the emergency caused by the strike.

The order fixing priority in the distribution of coal was reestablished. This gave the railroads and inland and coastwise vessels the first claim, followed in order by domestic establishments, including hotels, hospitals, and asylums, the Navy and Army, public utilities, etc.

### Action by Congress.

In the meantime Congress upheld the administration by adopting a resolution (S. Con. Res. 15) pledging "constant, continuous, and unqualified support." The text of this resolution is as follows:

Whereas the enforcement of the law and the maintenance of order for the security of life and property and the protection of the individual citizen in the exercise of his constitutional rights is the first and paramount duty of the Government and must

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be at all times vigorously and effectively safeguarded by the use of every means essential to that end: Therefore be it

*Resolved by the Senate (the House of Representatives concurring),* That we hereby give the National Administration and all others in authority the assurance of our constant, continuous, and unqualified support in the use of such constitutional and lawful means as may be necessary to meet the present industrial emergency and in vindicating the majesty and power of the Government in enforcing obedience to and respect for the Constitution and the laws, and in fully protecting every citizen in the maintenance and exercise of his lawful rights and the observance of his lawful obligations.

### Number and Nationality of Miners Affected.

The strike order went into effect, as planned, at midnight, October 31. The Washington agreement, as has been stated, affected the central competitive field composed of Illinois, Indiana, Ohio, and western Pennsylvania, which produces about 50 per cent of all the bituminous coal mined in the United States, and the new wage agreement when negotiated will likewise affect this district. However, the strike order was applicable to members of the United Mine Workers of America not only in this district, but to those in practically every bituminous-coal-producing district. The number of men thus affected was about 425,000, of whom about 250,000 were in the central competitive field. According to a statement made by the vice president of the National Coal Association, in a canvass of the bituminous fields in July, 1918, covering approximately 2,000 operating companies and practically the entire producing field in the country, the nationality of the miners employed was as follows: <sup>1</sup>

#### NATIONALITY OF EMPLOYEES IN THE BITUMINOUS COAL INDUSTRY.

Nationality.	Number of employees.	Per cent of total employees.
Americans.....	283,340	63.40
Foreign born.....	163,516	36.60
Total.....	446,856	100.00

#### *Foreign-born employees, by nationalities.*

Austro-Hungarians, including Slovaks, Ruthenians, Magyars, and Hortats (Croats).....	59,271	Mexicans.....	820
Bulgarians.....	545	Montenegrins.....	590
Chinese.....	59	Polish.....	16,801
Danes.....	67	Portuguese.....	25
Dutch.....	105	Roumanians.....	740
Finns.....	1,060	Russians.....	9,944
French.....	4,478	Serbians.....	1,282
Germans.....	5,548	Spanish.....	850
Greeks.....	3,088	Syrians.....	131
Italians.....	44,869	Swedish.....	1,167
Japanese.....	412	Turks.....	200
Lithuanians.....	3,767	Miscellaneous.....	7,697
		Total.....	163,516

<sup>1</sup> See Congressional Record for Oct. 21, 1919, p. 7673.



## Strike Order Withdrawn and Negotiations Resumed.

On November 8 the Government's application for a temporary injunction was granted. In doing so, the court held that the miners had been guilty of conspiracy under the Lever Food and Fuel Act, and therefore had violated that law. An order was then entered by the court directing the United Mine Workers of America to withdraw the strike order, giving them until 6 p. m. November 11 to issue the withdrawal notice. Hurriedly a meeting of miners' officials was called and on Tuesday, November 11, the strike order was canceled. Secretary Wilson at once called a meeting of the representatives of miners and operators for November 14. Several sessions were held, during which a number of compromise proposals were submitted by each side and by the Secretary. The operators offered to grant a wage increase of 20 per cent to day laborers and of 15 cents per ton to coal diggers. The miners indicated that they would accept Secretary Wilson's proposal for a flat increase in the mine rates of 27.12 cents per ton, a flat increase in day wages of \$1.58, and an increase for yardage and day work of 31.61 per cent. The operators asked for an adjournment to consider the proposal separately and to consult Dr. Garfield, the Fuel Administrator, to learn if he would fix a selling price which would enable them to operate if they granted this increase. As respects hours, the miners insisted upon the counter proposal that they had submitted at a preceding meeting, namely, a seven-hour day and Saturday half holiday.

The President's Cabinet discussed the situation at several meetings which were attended by the Director General of Railroads and by the Fuel Administrator, who in the meantime had given effect to the order reestablishing priority in the distribution of coal. Plans for settling the dispute were presented by Secretary Wilson and by the Fuel Administrator, and carefully considered by the Cabinet.

On November 26, with the authorization of the Cabinet, the Fuel Administrator took the position that a 14 per cent increase in wages should be granted the miners, and announced that on this basis the operators would not be permitted to advance the price of coal. In reaching his decision Dr. Garfield pointed out that according to data furnished by the United States Bureau of Labor Statistics the average increase in wages of all mine labor is now 57.6 per cent over the 1914 base, while the increase in the cost of living in the central coal field during the same period has been 79.8 per cent.

\* In other words, an average increase of 14.1 per cent in the present rate of wages would bring the increase in the wages of the industry up to a parity with the increase in the cost of living. Miners are paid by the ton; other mine workers are paid by the day. The day laborers generally have received advances of wages since 1913 equal to, and in some instances in excess of, the increase in the cost of living.

The Bureau's figures upon which the Fuel Administrator based his calculations are presented in the following tables. In the first table, showing index numbers of wages for the different occupation groups, the year 1913 is taken as the base or 100 and the index numbers are weighted according to the number of employees in each occupation group in the mines of Ohio and Pennsylvania, as ascertained by the Bureau in its industrial survey in the early months of this year.<sup>1</sup>

INDEX NUMBERS OF WAGES OF MINE LABOR IN THE CENTRAL COAL FIELD IN 1919.  
[1913=100.]

Group No.	Occupation.	Weight number.	Index number.
I	Machine mining—loaders and cutters.....	6,878	156.1
II	Hand mining—pick miners.....	1,872	134.3
III	Tracklayers' helpers.....	440	181.3
IV	Pipemen.....	110	177.0
V	Trappers (boys).....	120	200.8
VI	Tracklayers, cagers, drivers, trip runners, haulers, timbermen, wiremen, motormen.....	1,913	177.0
	Weighted average.....		157.6

Changes in the cost of living since 1914 in the central coal field, as estimated by the Bureau, are shown in the next table:

ESTIMATED PER CENT OF INCREASE IN COST OF LIVING IN CENTRAL COAL FIELDS,  
FROM DECEMBER, 1914, TO JUNE, 1919.

Items of expenditure	Per cent of total expenditure.	Average per cent of increase in prices from December, 1914, to June, 1919.	Per cent of increase as applied to family budgets.
Food.....	36.9	76.70	28.30
Clothing.....	16.8	120.30	21.55
Housing.....	10.3	17.75	1.83
Fuel and light.....	5.5	45.07	2.48
Furniture and furnishings..	6.8	129.62	8.81
Miscellaneous.....	23.6	71.31	16.83
All items.....			79.80

The Bureau has no price data going back to 1914 for the immediate localities in which the mines are situated and it took the average increase in the prices of the different groups of items for a number of industrial centers. While it is not held that the prices in these industrial centers necessarily agree with prices in the coal region, yet the experience of the Bureau goes to show that the changes in prices in the industrial centers used are fairly representative of changes in the country generally except as to rents.

Rents are purely local prices, and therefore changes in rents in a given locality can be obtained only by a special study conducted in that locality. The rentals in bituminous mining districts were

<sup>1</sup> For further data as to wages of mine labor see article on pages 207 to 209.

obtained for the Bureau for 1918. No information was secured as to rents previous to that year or subsequent thereto. It is known, however, that there have been very slight changes in rents of dwellings in these localities—certainly nothing like as great changes as have obtained in other industrial centers. The percentage of increase in rents in industrial centers has been applied to the budgets in the bituminous mining centers. These average increases of the groups of items in the budget, weighted according to the percentage of expenditure in the bituminous mining centers, give a total increase in the cost of living for mining towns of 79.8 per cent. If we assume that there has been no increase in rents in these bituminous mining towns, which is probably much nearer the fact, the total increase in cost of living would be practically 78 per cent.

The 14 per cent wage increase announced by the Fuel Administrator was rejected by the miners; the operators quite generally appeared to be willing to adopt the suggestion. The cancelling of the strike order had not resulted in a general resumption of work so that in effect the strike was not ended upon November 11 but continued throughout the month with the result that on the 1st of December the production of soft coal was hardly more than 50 per cent of normal.

In the meantime the Government succeeded in getting sufficient evidence to institute contempt proceedings against certain of the miners and miners' officials, alleging that they had violated the order of the court by contriving to encourage and assist the strike.

### Conclusion.

On December 9 the miners' representatives met at Indianapolis to consider a proposition submitted to them by the President, but not made public until that date. The President proposed that the miners accept the 14 per cent wage increase announced by the Fuel Administrator, and that the matter of determining whether further increases in wages or in the price of coal are warranted be left to a fairly constituted tribunal representing all parties interested. The text of the President's communication is as follows:

I have watched with deep concern the developments in the bituminous coal strike and am convinced there is much confusion in the minds of the people generally and possibly of both parties to this unfortunate controversy as to the attitude and purposes of the Government in its handling of the situation.

The mine owners offered a wage increase of 20 per cent, conditioned, however, upon the price of coal being raised to an amount sufficient to cover this proposed increase of wages, which would have added at least \$150,000,000 to the annual coal bill of the people. The Fuel Administrator in the light of present information has taken the position, and I think with entire justification, that the public is now paying as high prices for coal as it ought to be required to pay, and that any wage increase made at this time ought to come out of the profits of the coal operators.

In reaching this conclusion, the Fuel Administration expressed the personal opinion that the 14 per cent increase in all mine wages is reasonable, because it would equalize

the miners' wages on the average with the cost of living, but he made it perfectly clear that the operators and miners are at liberty to agree upon a larger increase provided the operators will pay it out of their profits so that the price of coal would remain the same.

The Secretary of Labor, in an effort at conciliation between the parties, expressed his personal opinion in favor of a larger increase. His effort at conciliation failed, however, because the coal operators were unwilling to pay the scale he proposed unless the Government would advance the price of coal to the public, and this the Government was unwilling to do.

The Fuel Administrator had also suggested that a tribunal be created in which the miners and operators would be equally represented to consider further questions of wages and working conditions, as well as profits of operators and proper prices for coal. I shall, of course, be glad to aid in the formation of such a tribunal.

I understand the operators have generally agreed to absorb an increase of 14 per cent in wages so that the public would pay not to exceed the present price fixed by the Fuel Administrator, and thus a way is opened to secure the coal of which the people stand in need, if the miners will resume work on these terms pending a thorough investigation by an impartial commission which may readjust these wages and prices.

By the acceptance of such a plan the miners are assured immediate steady employment at a substantial increase in wages, and are further assured prompt investigation and action upon questions which are not now settled to their satisfaction. I must believe that with a clear understanding of these points they will promptly return to work. If, nevertheless, they persist in remaining on strike, they will put themselves in an attitude of striking in order to force the Government to increase the price of coal to the public, so as to give a still further increase in wages at this time rather than allow the question of further increase in wages to be dealt with in an orderly manner by a fairly constituted tribunal representing all parties interested.

No group of our people can justify such a position, and the miners owe it to themselves, their families, their fellow workmen in other industries, and to their country to return to work.

Immediately upon a general resumption of mining, I shall be glad to aid in the prompt formation of such a tribunal as I have indicated to make further inquiries into this whole matter and to review not only the reasonableness of the wages at which the miners start to work but also the reasonableness of the Government prices for coal. Such a tribunal should within 60 days make its report, which could be used as a basis for negotiation for a wage agreement.

I must make it clear, however, that the Government can not give its aid to any such further investigation until there is a general resumption of work.

I ask every individual miner to give his personal thought to what I say. I hope he understands fully that he will be hurting his own interest and the interest of his family and will be throwing countless other laboring men out of employment if he shall continue the present strike, and, further, that he will create an unnecessary and unfortunate prejudice against organized labor which will be injurious to the best interests of workmen everywhere.

The miners voted to accept the President's suggestion and the strike, which had under mandate of the court been called off on November 11, actually terminated by a general resumption of work about a month later. Subsequently the President appointed as members of the commission referred to in his communication to the miners Rembrant Peale, of Pennsylvania, to represent the operators; John P. White, of Iowa, formerly president of the United Mine Workers of America, to represent the miners; and W. M. Robinson, of California, to represent the public.

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## The Steel Strike.

By MRS. M. A. GADSBY.

THE primary issue in the present controversy between the steel companies and their employees is the right of the workers to organize in trade-unions and to bargain collectively through representatives of their own choosing. The policy of the steel companies has been to discourage the unionization of their employees. Prior to 1892 unionism had gained a foothold in the industry, but this was to a great extent lost through the strikes of 1892, 1901, and 1909. Soon after the formation of the United States Steel Corporation in 1901 a formal resolution was passed by the executive committee of the corporation defining the attitude of the companies as follows:

That we are unalterably opposed to any expansion of union labor, and advise subsidiary companies to take a firm position when these questions come up, and say that they are not going to recognize it—that is, any extension of the unions in mills where they do not now exist; that great care should be used to prevent trouble, and that they promptly report and confer with the corporation.<sup>1</sup>

As a result of this policy, by 1912 in no manufacturing plant of the United States Steel Corporation was there any form of labor organization, although in various plants a few workmen were employed who still held union cards. Of the large independent companies there were only two which had any dealings with the unions. Union membership was practically confined to the plants operated by members of the Western Bar Iron Association and a few isolated bar-iron manufacturers not members of the association, and to a number of independent sheet and tin-plate mills.<sup>2</sup>

There is nothing to indicate that the policy of the steel companies has changed up to the present time. Mr. Gary, in his testimony before the Senate committee investigating the present strike, says:

It has been my policy, the policy of our corporation, not to deal with labor leaders.  
\* \* \* When an employer contracts with the union labor leaders he immediately drives all of his employees into the unions. Otherwise they can not get employment. That is a part of the reason for trying to organize the men, and that is why we have been such an obstruction. I am not antagonizing unions; I am not saying that they have not a perfect right to form unions; of course they have; but we are not obliged to contract with them if we do not choose to do so; and we think, because of many things that have

<sup>1</sup> Investigation of strike in steel industry. Hearings before the Senate Committee on Education and Labor, 1919, v. 1, p. 430.

<sup>2</sup> For more detailed account of trade-unionism in the iron and steel industry see U. S. Bureau of Labor Report on Conditions of Labor in the Iron and Steel Industry, Vol. III, pp. 111-137.

happened—and some of them are happening to-day—that unionism is not a good thing for the employer or employee.<sup>1</sup>

In spite of this attitude of the employing companies, 25 international unions are represented in the steel industry. The members of one of these, the Amalgamated Association of Iron, Steel and Tin Workers, are all employed in the industry. The other unions are represented by employees in certain skilled jobs common to other industries, e. g., boiler makers, electricians, bricklayers, etc., who hold cards in the unions of their craft.

### Recent Campaign for Organization.

The steel companies contend that the pressure came from the outside and that the strike was inaugurated by the union leaders outside the steel industry, not by the employees. Mr. Gary says: "The union leaders have been attempting all these years to organize the men. The men have not been seeking the assistance of anyone to organize them." It is the contention of the unions, on the other hand, that the men in the mills have tried for years to organize and have asked the assistance of the union organizations to help them improve existing conditions. As a result of this demand, a resolution was introduced by the Chicago Federation of Labor at the annual meeting of the American Federation of Labor held in St. Paul in 1918, requesting that the organization of the steel workers be undertaken. An organization committee composed of the presidents of the 25 unions represented in the industry was appointed for this purpose at the convention. Up to that time efforts of the American Federation of Labor had been restricted largely to organization of the skilled workers. At a meeting of this committee held in August, 1918, however, it was decided that particular attention be given to the organization of the unskilled workmen because it was from them that complaints of working conditions were most frequent.

The officials appointed by this committee to do the actual work of organizing the workers reported that they met with considerable opposition on the part of local authorities in some of the districts. In some cities they were forbidden to hold public meetings of any description in halls in the city or in vacant lots in the vicinity.<sup>2</sup> It was claimed, however, that in spite of these obstacles 100,000 of the 500,000 men employed in the steel industry had joined the union by July, 1919.<sup>3</sup>

<sup>1</sup> Investigation of strike in the steel industry. Hearings before the Senate Committee on Education and Labor, 1919, vol. 1, p. 163.

<sup>2</sup> *Idem*, p. 7.

<sup>3</sup> *Idem*, p. 13.

The demands of the organized men became increasingly insistent and in June, 1919, Mr. Gompers, president of the American Federation of Labor, wrote to Mr. Gary, chief executive officer of the United States Steel Corporation, asking that he accord a committee an opportunity to meet him for the purpose of discussing the grievances of the steel workers. The letter appears to have been unanswered. On July 24, 1919, a meeting of the 25 unions represented in the steel industry was called to discuss the demands of the men. It was decided to put the matter to a strike vote. Within the month before the strike vote was compiled an additional 50,000 men were reported as having joined the union.<sup>1</sup> Ninety-eight per cent of the votes cast were in favor of authorizing the representatives to call a strike in the event of failure to get consideration.<sup>2</sup>

On August 26 the steel and iron workers' committee wrote to Mr. Gary asking for a conference.

Judge Gary replied as follows:

GENTLEMEN: Receipt of your communication of August 26 instant is acknowledged.

We do not think you are authorized to represent the sentiment of a majority of the employees of the United States Steel Corporation and its subsidiaries. We express no opinion concerning any other members of the iron and steel industry.

As heretofore publicly stated and repeated, our corporation and subsidiaries, although they do not combat labor unions as such, decline to discuss business with them. The corporation and subsidiaries are opposed to the "closed shop." They stand for the "open shop" which permits one to engage in any line of employment whether one does or does not belong to a labor union. This best promotes the welfare of both employees and employers. In view of the well-known attitude, as above expressed, the officers of the corporation respectfully decline to discuss with you as representatives of a labor union, any matters relating to employees. In doing so no personal discourtesy is intended.

In all decisions and acts of the corporation and subsidiaries pertaining to employees and employment their interests are of highest importance. In wage rates, living and working conditions, conservation of life and health, care and comfort in times of sickness or old age, and providing facilities for the general welfare and happiness of employees and their families, the corporation and subsidiaries have endeavored to occupy a leading and advanced position among employers.

It will be the object of the corporation and subsidiaries to give such consideration to employees as to show them their loyal and efficient service in the past is appreciated, and that they may expect in the future fair treatment.

The committee's reply to this letter was as follows:

We have received your answer to our request for a conference on behalf of the employees of your corporation, and we understand the first paragraph of your answer to be an absolute refusal on the part of your corporation to concede to your employees the right of collective bargaining.

You question the authority of our committee to represent the majority of your employees. The only way by which we can prove our authority is to put the strike vote into effect and we sincerely hope you will not force a strike to prove this point.

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<sup>1</sup> Investigation of strike in the steel industry. Hearings before the Senate Committee on Education and Labor, 1919, vol. 1, p. 15.

<sup>2</sup> *Idem*, p. 14.

We asked for a conference for the purpose of arranging a meeting where the questions of wages, hours, conditions of employment, and collective bargaining might be discussed. Your answer is a flat refusal for such conference, which raises the question, if the accredited representatives of your employees and the international unions affiliated with the American Federation of Labor and the Federation itself are denied a conference, what chance has the employee as such to secure any consideration of the views they entertain or the complaints they may be justified in making?

We noted particularly your definition of the attitude of your corporation on the question of the open and closed shop and the positive declaration in refusing to meet representatives of union labor. These subjects are matters which might well be discussed in conference. There has not anything arisen between your corporation and the employees whom we represent in which the question of the closed shop has been even mooted.

We read with great care your statement as to the interest the corporation takes in the lives and welfare of the employees and their families, and if that were true even in a minor degree, we would not be pressing consideration through a conference of the terrible conditions that exist. The conditions of employment, the home life, the misery in the hovels of the steel workers is beyond description. You may not be aware that the standard of life of the average steel workers is below the pauper line, which means that charitable institutions furnish to the pauper a better home, more food, clothing, light, and heat than many steel workers can bring into their lives upon the compensation received for putting forth their best efforts in the steel industry. Surely this is a matter which will be discussed in conference.

You also made reference to the attitude of your corporation in not opposing or preventing your employees from joining labor organizations. It is a matter of common knowledge that the tactics employed by your corporation and subsidiaries have for years most effectually prevented any attempt at organization by your employees. We feel that a conference would be valuable to your corporation for the purpose of getting facts of which, judging from your letter, you seem to be uninformed.

Some few days are still at the disposal of our committee before the time limit will have expired when there will be no discretion left to the committee but to enforce the decree of your employees whom we have the honor to represent.

We submit that reason and fairness should obtain than that the alternative shall be compulsory upon us.

Surely reasonable men can find a common ground upon which we can all stand and prosper.

If you will communicate with us further upon this entire matter, please address your communication to the National Hotel, Washington, D. C., where we shall be Thursday and Friday, August 28 and 29.

To this letter there has apparently been no reply.

About August 28, following, Mr. Gompers and a committee of the steel workers conferred with President Wilson and asked him to try to bring about a conference with Mr. Gary. The President said he would try to prevail upon Mr. Gary to permit such conference to take place.<sup>1</sup>

On September 8, Mr. Gompers advised that the strike be deferred, but the committee decided that in view of the temper of the men, due in part to the fact that I. W. W. organizers had been busy among the unskilled workers, and of the certainty felt by the com-

<sup>1</sup> Investigation of strike in the steel industry. Hearings before the Senate Committee on Education and Labor, 1919, vol. 1, p. 107.



mittee that the strike was inevitable, it would be better to conduct the strike according to the peaceful methods of the American Federation of Labor than to leave the men to the influence of the more radical I. W. W. element. They wired the President asking him what degree of progress, if any, he had made in his efforts to adjust matters in the controversy. The President wired that he was somewhat discouraged with his efforts, leading the men to assume at least that negotiations had not developed to a degree where the President had any assurance that results would be forthcoming. The strike was ordered for September 22.

### Reasons Against Postponement.

After the committee had adjourned and had gone to Pittsburgh to set the strike order in motion, the message of the President was received requesting that the matter be deferred until after the Industrial Conference of October 6. The strike order had already gone out, but the committee met again to consider the President's request. After three days' consideration of the situation it voted unanimously to adhere to the original date of the strike and sent a letter to the President setting forth the following reasons for their action:

1. Mr. Gary has asserted that his men need no trained representation in their behalf in presenting their grievances, notwithstanding that they can neither economically, by lack of means, nor intelligently, by lack of schooling, cope with him or his representatives.

2. That ever since the men started to organize, a systematic persecution was instituted, beginning with discharge and ending with murder.

3. Through the efforts of the representatives of the steel industry, officials in various localities have denied the men free assembly and free speech. Instances are too numerous where meetings have been suppressed, men arrested, tried on various unfounded charges, excessive bail required, and cruel punishment imposed, all without warrant in law and justice.

4. As one of many examples: In the city of McKeesport a meeting held by the men within their constitutional rights was broken up and men arrested and thrown into jail, charged with riot, and held to the excessive bail of \$5,000 each, while one of the hirelings of the steel industry arrested for the murder of a woman speaker at Brackenridge, Pa., is being held under bail of about \$2,500. Another patent example is Hammond, Ind., where four defenseless union men were charged upon and killed by hired detectives of the steel industry, and witnesses in behalf of their survivors have been so intimidated and maltreated that the truth of the killing was suppressed.

5. Guns and cannon have been planted in mills, and highly charged electric wires have been strung around their premises.

6. Armed men in large numbers are going about intimidating not only the workers, but everybody in many communities who show the slightest indication of sympathy with the men.

7. Men have been discharged in increasingly large numbers day by day. Threats and intimidation are resorted to for the purpose of putting the men in fear and preventing them from the exercise of their own free will. They are coerced into signing

statements that they are not members nor will become members of any labor organization and threatened with eviction, blacklist, denial of credit, and starvation.

8. That a forced decline of the market would be imposed, so as to wipe out their holdings in stock which they were induced to purchase in years past. Threats to move the mills and to close them up indefinitely.

9. That an organized propaganda for vilification of the American Federation of Labor, spreading rumors that the strike will be delayed, and that such delay is only a sell out.

10. Showing no opposition to the men joining dual organizations. As a result of this propaganda the I. W. W. is making rapid headway in some of the districts.

11. That the real reason for opposition to organized labor representation on behalf of the men who have grievances is that the steel industry is preparing to cut wages and to lower the standards to prewar times and to return to a condition that encouraged the padrone system, so prevalent in that particular industry.

Mr. President, delay is no longer possible. We have tried to find a way, but can not. We regret that for the first time your call upon organized labor can not meet with favorable response. Believe us, the fault is not ours. If delay were no more than delay, even at the cost of loss of membership in our organizations, we would urge the same to the fullest of our ability, notwithstanding the men are firmly set for an immediate strike. But delay here means the surrender of all hope. This strike is not at the call of its leaders, but that of the men involved. Win or lose, the strike is inevitable and will continue until industrial despotism will recede from the untenable position now occupied by Mr. Gary. We have faith in your desire to bring about a conference and hope you will succeed therein. We fully understand the hardships that meanwhile will follow and the reign of terror that unfair employers will institute. The burden falls upon the men, but the great responsibility therefor rests upon the other side.

### Progress of the Strike.

On September 22, when the strike was called, the national organizing committee of the steel workers reported 279,000 men as idle. On September 25 it was reported that 340,000 steel workers had gone on strike.<sup>1</sup> The following figures indicate the number of men claimed to be out in the various districts on October 9:

Western Pennsylvania.....	113,000
Youngstown (Ohio) district.....	70,000
Wheeling (W. Va.) district.....	18,600
Cleveland (Ohio) district.....	25,000
Steubenville (Ohio) district.....	12,000
Chicago (Ill.) district.....	90,000
Buffalo (N. Y.) district.....	12,000
Pueblo (Colo.) district.....	6,400
Bethlehem, Pa. (5 plants).....	20,000
Total.....	367,000

Employers deny the accuracy of these figures. They maintain that not over 40 per cent of the workers in the districts where strikes are pending have been out at any one time and that there is at present

<sup>1</sup> Investigation of strike in the steel industry. Hearings before the Senate Committee on Education and Labor, 1919, vol. 1, p. 27.

a slow but steady stream of strikers going back to work. The Homestead steel plant reports 65.9 per cent of the force remained at work on September 22, when the strike was called, and 75.2 were at work on October 9.<sup>1</sup> The company does not state, however, whether the increase is due to the strikers coming back to work or to the replacement of striking workers by new men. It is also maintained by the companies that most of the strikers are unskilled workers. It was estimated, however, by an investigator<sup>2</sup> of conditions in the Chicago district that 90 per cent of the skilled men were on strike.

The number of men out does not necessarily determine the effectiveness of the strike. A few skilled men employed on the more essential jobs may, by striking, impair the efficiency of the entire force to a considerable extent. Apparently to avoid this difficulty the steel companies in Pennsylvania have closed the mills in some of the outlying towns and concentrated all efforts on the Pittsburgh district. However, in Pittsburgh on November 1 the output was reported to be approximately 40 per cent of normal. The steel companies claim that only a small percentage of the men out are union men, and that the remainder, mainly foreigners, have been intimidated by the unions. They report that foreigners whose homes are in a district predominantly foreign are nearly all out, while men of the same nationality, working under the same conditions, whose homes are more widely scattered, are in many cases still at work.

In general the conduct of the strike has been peaceful. There has been a very evident desire on the part of the strikers to avoid violence. Federal troops have been called in a few cases, and some of the companies have taken steps to protect their property. Some of the mills in the Pittsburgh district are protected by armed guards and by electrified wires.

In Braddock and Duquesne the men who remained at work were housed in the mills, furnished meals, sleeping accommodations, and amusement. In some of the plants, shortly before the strike, a census was taken of the men who expected to work on Monday, September 22. Those who indicated their intention of remaining at work were invited to become deputy sheriffs and were furnished with arms as a means of protection against possible lawless strikers.

On October 11 the national organizing committee of the workers reported that in Warren, Ohio, the Trumbull Steel Co., employing 5,800 men, had recognized the union and agreed to the right of employees to bargain collectively.

<sup>1</sup> Investigation of strike in the steel industry. Hearings before the Senate Committee on Education and Labor, 1919, vol. 2, p. 481.

<sup>2</sup> William Allen White, *New York Post*, Oct. 16, 1919.

## Demands of the Workers.

The demands which the committee intended to bring to the attention of the United States Steel Corporation, in case the request for a conference should be conceded, are as follows:

- Right of collective bargaining.
- Reinstatement of men discharged for union activities.
- An eight-hour day.
- One day's rest in seven.
- Abolition of the 24-hour shift.
- Increase in wages sufficient to guarantee American standard of living.
- Standard scales of wages in all trades, and classification of workers.
- Double rate of pay for all overtime, holiday and Sunday work.
- Check-off system of collecting union dues and assessments.
- Principle of seniority to apply in maintenance, reduction, and increase of working forces.
- Abolition of company unions.
- Abolition of physical examination of applicants for employment.<sup>1</sup>

Only the more vital demands, namely the right of collective bargaining, and those having to do with wages and hours of labor, will be discussed in the following pages.

### Collective Bargaining.

As has been stated, the primary issue in the strike is the right of workers to bargain collectively through their trade-union representatives. The union men asked for a conference, the granting of which would have implied a recognition of the union. They were refused, and they contend that the closed-shop issue was "dragged in to becloud the real issue," which is whether or not the 500,000 men employed in the steel industry shall be represented in the government of the industry upon which their lives depend.

The attitude of the steel companies toward unionization has been set forth above. The contention of the unions is that wages and conditions of employment are determined by the relative strength of the workers and employers of the industry. They state that the individual workman has no influence upon an organization having the strength and resources of the United States Steel Corporation, and that only by organization can an equal competitive footing be approximated. They point out that the right of men to organize and bargain collectively was recognized by the United States Government during the war. The Government itself established the precedent by bargaining collectively with its employees on the railroads, in the navy yards, the shipyards, and with the telephone employees. The National War Labor Board, composed of representa-

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<sup>1</sup>U. S. Congress Senate Report No. 239. Investigation of strike in steel industries, 1919, p. 9.

tives of employers, employees, and the public, laid down as its first principle the right of workers to organize in trade-unions and to bargain collectively through chosen representatives, and declared further "this right shall not be denied, abridged, or interfered with by the employers in any manner whatsoever." With the realization of the Government's sanction of this principle, thousands of steel workers joined the American Federation of Labor.

The union leaders assert their belief that if a conference had been granted and the union recognized, an agreement could have been reached and the strike averted.

### Wages.

On September 23 the Senate passed a resolution instructing the Committee on Education and Labor to investigate the dispute and report to the Senate upon the causes which brought it about. Mr. Gary's testimony in the hearings before this committee includes the following statistics of wages paid in the steel industry:

The lowest wage rates pertain to unskilled labor working 10 hours per day at 42 cents per hour on the basic 8-hour plan, 42 cents per hour for 8 hours and for the hours over 8, time and one-half, at the rate of 63 cents per hour, making \$4.62 for the 10-hour day. There are a few boys getting \$3 a day.<sup>1</sup>

Where strikes are pending 46,638, or 24.4 per cent, of the employees are receiving the 42-cent rate, 154,327, or 75.6 per cent, are receiving more than 42 cents an hour.<sup>2</sup>

The average wage for all employees including superintendents and foremen is \$6.27 per day. The average for unskilled labor is \$5, and for the skilled is \$6.70.<sup>3</sup>

There are a number of the more skilled workers receiving \$28 or \$29 per day, one roller receiving as high as \$32.56 per day.<sup>4</sup> \* \* \* In some cases these men have helpers who are paid out of this wage.

The annual report of the steel corporation for the year ending December 31, 1914, states the average salary for all employees including administrative and selling force to be \$2.97 per day.<sup>5</sup> The report of the corporation for the year ending December 31, 1918, states the average salary to be \$5.38, an increase of approximately 81 per cent.<sup>5</sup> The cost of living in various steel manufacturing centers has very nearly kept pace with this increase and in some cases has exceeded it. In Cleveland, Ohio, the cost of living increased 71.4 per cent between December, 1914, and December, 1918; by June, 1919, it had increased 77.2 per cent. In Buffalo, N. Y., the increase from December, 1914, to December, 1918, was approximately 81 per cent; by June, 1919, it had increased 84.2 per cent. In Chicago the increase was 72.1 per

<sup>1</sup> Investigation of strike in the steel industry. Hearings before the Senate Committee on Education and Labor, 1919, vol. 1, p. 156.

<sup>2</sup> Idem, p. 199.

<sup>3</sup> Idem, p. 157.

<sup>4</sup> Idem, p. 159.

<sup>5</sup> United States Steel Corporation. Annual report, 1914, p. 23.

cent from December, 1914, to December, 1918, and 74.4 per cent by June, 1919.<sup>1</sup> There are no figures available for the increase of all commodities in Pittsburgh for the period 1914 to 1918, but the retail price of food between December, 1914, and December, 1918, increased 79.6 per cent.

With regard to the lowest-paid employees the above figures seem somewhat in conflict with the figures which appear later in the testimony before the Senate committee investigating the strike on the number and wages of employees subscribing to stock in the corporation. It was reported that in 1919, 1,473 of the employees receiving less than \$800 per year were subscribers to stock in the corporation. In 1918 there were 1,920 such employees.<sup>2</sup> At the rate of \$4.62 per day, which is reported as the lowest rate paid, figured on the basis of the 6-day week and allowing for holidays and sickness, the yearly wage would amount to considerably more than \$800 per year. It is probable also that only a small proportion of the lower paid employees are stockholders.

The recent industrial survey conducted by the United States Bureau of Labor Statistics<sup>3</sup> shows a total of 2,204 out of a total of 31,588 employees for which reports were secured in the iron and steel industry in the United States receiving in 1919 average earnings of less than 40 cents per hour. These figures are drawn from both Steel Corporation and independent plants.

#### Hours of Labor.

The investigation conducted by the United States Bureau of Labor in 1910 on the working conditions in the iron and steel industry<sup>4</sup> showed that approximately one-half of the employees in the iron and steel industry were working on a 12-hour shift. At the end of the day shift or the night shift the workmen were liable to be called upon to work 12 hours more in place of absent workmen. Many cases were encountered in the investigation where workmen were on duty continuously for 36 hours, often without an hour's sleep or rest and sometimes without even hot food. In August, 1912, more than 15 per cent in the industry generally and more than 50 per cent of the blast furnace workmen were working on a regular schedule of 7 days a week, with a long turn of 18 or 24 hours at the change of shift. In April, 1912, a committee of stockholders of the United States Steel Corporation recommended that steps be taken for the reduction of the long hours. In The Survey of September 27, 1919,<sup>5</sup> the following

<sup>1</sup> MONTHLY LABOR REVIEW, September, 1919, pp. 108-110.

<sup>2</sup> Investigation of strike in the steel industry. Hearings before the Senate Committee on Education and Labor, 1919, vol. 1, p. 27.

<sup>3</sup> MONTHLY LABOR REVIEW, October, 1919, pp. 107-123.

<sup>4</sup> U. S. Bureau of Labor. Report on conditions of employment in the iron and steel industry, Vol. III, 1912, pp. 159-160.

<sup>5</sup> Pp. 891-892.

statement is made concerning what has been actually done since 1910 in the matter of hours in the steel industry.

In 1913, the finance committee reported to the stockholders that nothing could be done unless the competitors of the Steel Corporation also adopted a shorter workday. Nothing was done therefore toward mitigating this evil by the Steel Corporation or its principal competitors until September, just a year ago, when the Steel Corporation announced the adoption of the 'basic' 8-hour day. This move, which was followed largely by the independents, did not mean a shortening of the working-day. It meant the payment of overtime after 8 hours and amounted to a 10 per cent increase in wages, with the men working 12 hours as before. The Colorado Fuel & Iron Co., with a plant at Pueblo, Colo., is the only steel company that is known to have adopted the actual 8-hour day with three shifts of workers in the 24 hours.

The stockholders' committee of 1912 also reported on the 6-day week. They found it general in departments where continuous operation was essential and to a certain extent in other departments. By 1914, 7-day labor had been greatly reduced in the corporation mills and many others.

Then came the war, with its excessive demand on the steel industry. The 6-day week went by the board nearly everywhere. The Lackawanna Steel Co., at Buffalo was prevented by the New York law from requiring its men to work 7 days a week, but elsewhere 7-day labor became general. In Pittsburgh even the rolling mills, for a time at least, were operated 7 days a week.

The latest official figures of hours of labor in the various industries are for 1914 and were published in 1917 in the Abstract of the Census of Manufactures. In these figures it appears that over 34,000 workers in steel works and rolling mills—17 per cent of all—were working 72 hours or more per week, and of the 20,000 men in blast furnaces, 69 per cent of all were working 72 hours or over. Since then, the tendency has been to increase the length of the working week.

In his testimony before the Senate committee Mr. Gary said:

With reference to the 12-hour-turn employees, 26½ per cent of all employees work the 12-hour turn and the number is 69,284. The number working 8 and 10 hours is 191,896; approximately, 8 hours, 88,994, and 10 hours, 102,902.<sup>1</sup>

Out of a total of 191,000 employees in the manufacturing plants 82 worked a continuous 24 hours once in each month, 344 men worked a continuous 18 hours twice each month. These are all in the blast furnace department. No other employees work a continuous 24 or 18 hours except in emergency times, like the war or something of that sort.<sup>2</sup>

Mr. J. J. Martin, who testified for the United States Steel Corporation before the Senate committee, stated, however, that of the 8,000 men employed in the Ohio Mill at Youngstown, four or five hundred men work 24 hours a day every two weeks.<sup>3</sup>

The recent survey of hours and earnings of employees in the iron and steel industry, made by the United States Bureau of Labor Statistics<sup>4</sup> showed that 5,497 employees out of a total of 31,588 included in the survey worked 72 hours a week or over in the pay-roll period for which the record was obtained. These figures are based

<sup>1</sup> Investigation of strike in the steel industry. Hearings before the Committee on Education and Labor, 1919, vol. 1, p. 157.

<sup>2</sup> *Idem*, p. 202.

<sup>3</sup> *Idem*, p. 315.

<sup>4</sup> MONTHLY LABOR REVIEW, October, 1919, pp. 107-123.

on the records of independent companies and of the United States Steel Corporation combined.

### The Foreign Element in the Iron and Steel Industry.

The number of unnaturalized foreigners in the iron and steel industry appears to have been somewhat overestimated in the current reports of the strike if the Homestead Steel Works may be considered representative of the steel industry as a whole. A report of the nationalities represented in the Homestead Steel Works was published in the hearings before the Senate Committee.<sup>1</sup> This report indicated that 5,799 workmen, or 39.45 per cent of the total number employed, are either American born or have become naturalized. In addition to this number there are 1,734, or 11.8 per cent of the workers, listed as American Negroes. There is a total, therefore, of 7,533 Americans, or 51.21 per cent, in the Homestead plant.

The following table shows for the industry as a whole the racial distribution existing for 1907 and 1908 as reported by the Immigration Commission.

RACIAL DISTRIBUTION OF EMPLOYEES IN THE IRON AND STEEL INDUSTRY.<sup>1</sup>

General nativity and race.	Num-ber.	Per cent distri-bution.	General nativity and race.	Num-ber.	Per cent distri-bution.
Native born of native father:			Foreign born, by race—Concd.		
White.....	20,801	24.2	Lithuanian.....	964	1.1
Negro.....	4,066	4.7	Magyar.....	4,675	5.4
Native born of foreign father,			Polish.....	7,897	9.2
by country of birth of father:			Roumanian.....	974	1.1
Austria-Hungary.....	408	.5	Russian.....	1,372	1.6
England.....	1,610	1.9	Scotch.....	660	.8
Germany.....	4,265	5.0	Serbian.....	1,046	1.2
Ireland.....	3,032	3.5	Slovak.....	9,029	10.5
Scotland.....	524	.6	Slovenian.....	1,359	1.6
Wales.....	771	.9	Swedish.....	1,072	1.2
All others.....	932	1.1	Welsh.....	1,237	1.4
Foreign born, by race:			All others <sup>2</sup> .....	2,661	3.1
Croatian.....	4,003	4.6	Grand total.....	86,089	100.0
English.....	2,340	2.7	Total native born of foreign		
German.....	4,426	5.1	father.....	11,542	13.4
Greek.....	567	.7	Total native born.....	36,409	42.3
Irish.....	2,448	2.8	Total foreign born.....	49,680	57.7
Italian, North.....	1,157	1.3			
Italian, South.....	1,793	2.1			

<sup>1</sup> U. S. Immigration Commission Reports, Vol. VIII, p. 33.

<sup>2</sup> Including all races having less than one-half of 1 per cent of the total.

No comparison can be made of the number of Americans, either including naturalized foreigners or excluding them, employed in 1907 and 1919 owing to the fact that in the report of nationalities in the Homestead Steel Works there is no indication as to how many in the group classed "Americans" are native born. It is possible, however, to discover the general increase or decrease in the number of workmen of the various nationalities employed. There is apparently, for ex-

<sup>1</sup> Investigation of strike in the steel industry. Hearings before the Senate Committee on Education and Labor, 1919, vol. 2, p. 480.



ample, either a perceptible decrease in the number of Germans, Swedes, Hungarians, Italians and Poles employed, or else a considerably larger number of workmen of these nationalities have become citizens. There is, on the other hand, a decided increase in the number of Russian and Slovak workmen: It is impossible, of course, to determine what effect decreased immigration, due to the war, may have had on the status of the various nationalities employed.

Perhaps the most noteworthy development in the racial distribution in the iron and steel industry is the increased employment of Negroes. The Immigration Commission reports the proportion of Negroes in the entire eastern district, which includes New York, all of Pennsylvania and West Virginia, as only 1.1 per cent of all workmen employed in that district in 1907.<sup>1</sup> Eleven and eight-tenths per cent of the workmen employed at present in the Homestead Steel Works are Negroes.

The company reported that there were no Negroes on strike in the Homestead works.

### Freedom of Speech and Assemblage.

The hearings before the Senate Committee on Education and Labor disclosed many grievances on the part of the men in addition to the matter of wages, hours, and conditions of labor. The strikers feel that they have a very real grievance in the alleged suppression of their rights as citizens to meet openly and speak freely, both before the strike took place and since it was called. In this respect there is considerable difference in the attitude of the authorities in the vicinity of Chicago and in the Pittsburgh district. In Chicago and the Cleveland district the strikers were allowed to hold meetings, although under very close supervision. After the arrival of the troops in Gary all outdoor public gatherings were strictly prohibited. No groups of more than 4 persons were permitted in any portion of the city and the number of union pickets was limited to two. The following paragraph from the New York Times indicates the circumstances under which meetings were allowed:<sup>2</sup>

The first outdoor mass meeting of the strikers since the arrival of the troops in Gary was held this afternoon by permission of Col. Mapes, who sat on the speakers' platform during the meeting. Secret Service men were in the crowd of nearly 3,000 strikers, and soldiers were stationed on the outskirts. Near the park machine guns were held in readiness.

In the Pittsburgh district, however, meetings have been prohibited from the time the campaign for organization started. In McKeesport and Duquesne, several months before the strike was called the

<sup>1</sup> U. S. Immigration Commission Reports, Vol. VIII, p. 34; this table also indicates 0.5 per cent of the workmen in the Middle West district to be Negroes, and 39.1 per cent in the South.

<sup>2</sup> New York Times, Oct. 16, 1919, p. 2.

organizers were forbidden to hold meetings of any sort in halls within the city or on vacant lots anywhere in the vicinity. Appeal was made without avail to the mayor of the city and to the Governor of Pennsylvania. In Clairton, meetings were held on Sundays for several weeks prior to the strike but on September 21 the sheriff proclaimed that "there should not be any meetings of any kind anywhere."<sup>1</sup>

There were 15,000 men on strike in Pittsburgh proper. The mayor of the city permitted these men to hold meetings in their own labor temple which accommodates only 2,000 men, and in one other place which the strikers maintained was inaccessible because of the distance from the strike district. Permits to hold meetings were refused at Braddock and Rankin. In towns where meetings were permitted it was stipulated that there should be no speeches in foreign languages. The union organizers were not allowed to pass hand bills containing a notice of meetings even though such meetings were to be held on private property with the consent of the owner. Not more than two persons were allowed to congregate on the streets at one time. Newspapers refused to publish notices of union meetings. In some instances in which halls had been rented by the union organizers notices were found posted, on the night of the meeting, declaring the halls closed by order of the board of health. All owners of halls were instructed not to rent them without a permit from city authorities. The authorities, usually the sheriff or the mayor, refused to grant the permit.

This denial of free speech and free assemblage has had an undeniable influence on the strike. In Duquesne, for example, where meetings were prohibited, approximately 5 per cent of the men were reported to be organized. In Cleveland and Lackawanna, where the men were allowed to meet, approximately 80 per cent were reported to be organized and the mills practically closed down when the strike was called.

The Pennsylvania State Federation of Labor called an emergency convention to "devise means of restoring civil liberty in western Pennsylvania." By a virtually unanimous vote of 500 delegates at the meeting held in Pittsburgh on November 2 a resolution was adopted calling on Gov. Sproul and United States Attorney General Palmer to restore free speech, free press, and freedom of assembly in Pennsylvania. The executive committee of the State Federation was authorized to call a general strike in event of the failure of the State and National Governments to remedy the existing condition.

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<sup>1</sup> Investigation of strike in the steel industry. Hearings before Senate Committee on Education and Labor, vol. 2, p. 518.

## The Senate Report on the Strike.

The Senate Committee on Education and Labor authorized to investigate the dispute held hearings in Washington and Pittsburgh at which witnesses on both sides of the controversy were examined. The report of the committee was issued November 10.<sup>1</sup> In this report the committee declared that the underlying cause of the strike was the determination of the American Federation of Labor to organize the steel workers in opposition to the known and long-established policy of the steel industry against unionization; that both parties are at fault in refusing to heed the request of the President and evidence a lack of consideration for that great third party, the public, which is always the greatest sufferer in a strike of this character.

The committee also presents these propositions:

(a) That the laborers in the steel mills had a just complaint relative to the long hours of service on the part of some of them and the right to have that complaint heard by the company.

(b) That they had the right to have the representatives of their own choosing present grievances to the employers.

(c) That behind this strike there is massed a considerable element of I. W. W.'s, anarchists, revolutionists, and Russian soviets, and that some radical men **not** in harmony with the conservative elements of the American Federation of Labor **are** attempting to use the strike as a means of elevating themselves to power **within** the ranks of organized labor.

The following recommendations, which fairly represent the conclusions arrived at by the committee, are suggested for remedying similar situations:

1. That a board or commission somewhat similar to the War Labor Board should be established, this board to have power of compulsory investigation; to **have** large power in mediation and conciliation and recommendations; not to the extent of compulsory arbitration, but before this board controversies could be heard, investigations made, and decisions rendered. That pending said investigation and decision no strike should be declared, provided no employees are discharged for **taking** part in the controversy, and provided further, that all opportunity for the employer to take advantage of the delay has been removed; that the principle of collective bargaining and an eight-hour day should be considered by said board, and recommendations made to labor and industry in relation thereto; that the board should be in the nature of a Federal industrial commission, seeking at all times not only to settle pending disputes but to help bring about a more harmonious condition between employer and employee. A just decision of said board would be indorsed by the public and public sentiment is powerful enough to enforce the findings of such a commission. There is good sense enough among the great body of the American people to bring about an adjustment of these difficulties. The great body of the American people believe in a liberal industrial system, in living wages for men employed in industry; wages that will permit them to raise their families according to the standards of American life and to enjoy recreation from hard, grinding toil;

<sup>1</sup> Report No. 289, 66th Cong., 1st sess.

but the American people have no patience and will have none with any leadership that seeks to accomplish its purposes by barbarous methods of freezing or starving the American people. They do not propose to freeze and they do not propose to be starved, and they do not propose that a few men in this country shall have the power to bring about such condition of affairs. On the other hand, they are as much opposed to an autocracy of capital. Capital must be reasonable likewise. The employer must recognize that there is a new spirit in the world; that labor is not content to be merely a hewer of wood and a drawer of water, and that labor is fighting for a status in industrial life, and it is not concerned merely with wages.

2. That an Americanization bill be passed by the Congress which will provide for the effective education and Americanization of the illiterate foreigners and native illiterates in this country. A bill of this kind has already been reported out of this committee and your committee urges an early adoption of the same by Congress.

3. It is observable in the strike districts that the men who own their homes are more contented and more interested in the affairs of the country. One real antidote for unrest in this country is home ownership. It is difficult to plant the seeds of revolution in the minds of those who own their own homes. The work of the steel companies in building homes has been most commendable. It is to be hoped that such work will be enlarged and carried on by them. It would not be out of place to suggest that it would be most commendable for the steel companies to use some of their large profits in extending the work of home building. The question of aid and encouragement in the work of assisting townspeople of small means in securing their own homes in some such way as the farmer has been aided under the Federal Farm Loan Act is worthy the serious consideration of Congress.

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4. There should be a change in our naturalization laws which will require the naturalization and some education of all foreigners, at least to the extent of speaking the American language; that they should acquire such knowledge within a period of five years after they arrive; with proper limitations upon further immigration, giving to those already here a certain period of time in which to become naturalized, and if this is not done then deportation should follow.

5. An effective law should be passed dealing with anarchists, revolutionists, and all who would destroy the American Government. There are too many Americans who love their country and are willing to give their life for it and who intend that all the doors of American opportunity shall remain open for the children of to-day and the children of to-morrow to permit a few thousand anarchists, revolutionists, and I. W. W.'s to keep on with their nefarious propaganda to destroy the Government.

## The Strike of the Longshoremens at the Port of New York.

By B. M. SQUIRES.

FOR THE fourth time during the present year, shipping at the port of New York has been tied up by a strike. Early in January, men employed on harbor craft struck because of the refusal of employers to submit to arbitration. The strike lasted three days and was called off in response to a cabled request from the President and assurance that the War Labor Board would hear and determine the case.

On March 4, the same employees struck again, this time in protest against the decision of the umpire to whom the War Labor Board had referred the case. A few days after the strike was called, Government interests at the port, employing approximately 50 per cent of the men affected, conceded the major demands of the strikers and operation was resumed. The strike against private operators continued for a period of seven weeks and was settled finally on terms less favorable to the men than were offered prior to the strike.<sup>1</sup>

In June, sailors, firemen, and stewards on ocean-going vessels struck for higher wages and union preference in employment. Captains and engineers later joined the strike. After three weeks a compromise settlement was made, a wage increase being granted and an understanding reached in the matter of preference without distinctly binding steamship companies to unqualified union preference in employment.

On October 7, longshoremens struck in protest against an award by a National Adjustment Commission to which they had agreed to submit their demands and by whose decision they had agreed to abide. The strike has been the most severe in the history of the port. Measured merely by its paralyzing effect on shipping activities, it is not too much to say that the strike has been a matter of international concern, no less grave than had it occurred during actual hostilities of war. Touching as it has upon the fundamental issue of the validity of trade agreements, and upon the efficacy of arbitration and orderly procedure in general, it is of especial significance at this time and throws light on the world industrial situation. Complications arising from the strike, serving to prolong it, will be more readily appreciated if consideration is first given to normal conditions in the longshore industry and to events leading up to the strike.

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<sup>1</sup> For an account of the strikes of harbor employees at the port of New York, see MONTHLY LABOR REVIEW, February, 1919, pp. 12-27, and August, 1919, pp. 173-185.

## Longshore Work and Longshoremen.

An outstanding feature of longshore work is its irregularity. Just how irregular it is for the individual longshoreman, no one knows. Some longshoremen work regularly for one company whenever work is to be had. Others drift from pier to pier. Obviously, the pay rolls of any particular company would not give conclusive evidence of total individual employment or earnings and if the pay rolls of all companies were assembled, the comparing of names would be an impossible task, because of the fact that they are written as they strike the ears of the different timekeepers—if indeed the record is kept by names and not by check numbers—and varying at times to suit the tastes and needs of individual employees. Only a system of compulsory registration, coupled with a pay-roll record by registration numbers rather than by name, will show accurately the range of earnings and employment. Thus far such a system has not been deemed practicable in this country.

Longshore work being irregular, it follows that if enough longshoremen are constantly available to satisfy any unusual demand, there will be a surplus of longshoremen at other times. This is aggravated by another factor, namely, the absence of any system of clearing for surplus labor. In practice, longshoremen "shape" (assemble) outside the gates to the pier. A foreman designates the men whom he will employ. Longshoremen may be divided roughly into the so-called regular men who secure all or the greater part of their work from one company, and the irregular men who work wherever they may. There is a tendency among the regular men not to seek employment at other piers than those where they are customarily employed. This is due in part to disinclination to work on other piers or to handle different lines of cargo, and in part to the difficulty of securing employment elsewhere. Most companies have their regular men to whom preference in employment is given. Employing foremen know that regular gangs from other companies are apt to "quit on the job" when ships operated by their own companies arrive, and consequently prefer to hire irregular men not attached to a particular company whenever it is necessary to supplement regular gangs. As a consequence the number of longshoremen at the port is probably in excess of the most extreme demand. In the absence of a central clearing house, there may well be a shortage of labor in one part of the port and a surplus in another part. This will be appreciated more fully when it is considered that the length of the New York Harbor water front is 771 miles, of which 392 miles is developed with 852 piers.<sup>1</sup>

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<sup>1</sup> New York Chamber of Commerce, Annual Report, 1914, Pt. II, pp. 191-195.

All the evils that follow upon casual employment are found in the longshore industry. To it are attracted the floater, the chronically unemployed, the temporarily out of work. Being casual, the work is higher paid per hour than labor of like skill regularly employed. With the opportunity afforded for considerable overtime at a higher rate, it is possible to earn enough in two or three days of almost continual employment to enable the worker to subsist for the rest of the week without employment. In spite of the encouragement thus given to irregularity and to frequent jags of idleness, there is found to be in the longshore industry a large number of earnest men, self-respecting citizens, to whom the work is a trade, a profession, a permanent means of livelihood for themselves and their families.

As might be expected from the nature of the work, all the nationalities of the port are to be found among the longshoremen. Indeed, the changing tide of immigration is clearly indicated by the nationalities of men on the water front. Barnes estimates that as late as 1880, 95 per cent of the longshoremen of New York were Irish and Irish-American; the remaining 5 per cent, German, Scotch, English, and Scandinavian. In 1912, he estimates, Italians made up one-third of the total, and of the remaining two-thirds a considerable number were from other southern European countries. In Mr. Barnes' judgment, the coming of the southern Italians, with their low standards of wages and living, made possible a change to a poorer grade of labor in longshore work.<sup>1</sup>

### Early Organizations and Strikes of Longshoremen.<sup>2</sup>

It will not be possible in an article of this length to review even briefly the history of organizations of longshoremen at the port of New York. However, certain phases of organization activities are directly related to the present situation and forecast its outcome.

The first recorded strike of longshoremen at the port occurred in 1836 and was lost. The next strike of consequence occurred in 1874, at which time there were five unions, locals of the Longshoremen's Union Protective Association, though not closely affiliated through any central body. Wages were then 40 cents per hour for day work; 80 cents per hour for night work; and \$1 per hour for Sundays. Notice was served on the men that wages would be reduced to 30 cents per hour for day work and to 45 cents per hour for night work. This strike was also unsuccessful.

For the next few years there was little union activity, but in the early eighties an impetus was given to organization by the phenomenal rise of the Knights of Labor. Barnes states that by the fall of

<sup>1</sup> The Longshoremen, by Charles B. Barnes, p. 5.

<sup>2</sup> Facts pertaining to early organization and strikes of longshoremen at the port of New York are from *The Longshoremen*, by Charles B. Barnes.

1886, the majority of the members of the regular longshore organizations at New York had joined the ocean or maritime associations of the Knights of Labor, though not giving up membership in the Longshoremen's Union Protective Association. Early in 1887 one of the coastwise lines attempted to change from an hourly to a weekly wage. The men asked time for consideration but the company was evidently prepared for action. The men were locked out and Negroes were put in their places, whereupon the Knights of Labor declared a boycott against the company. At the same time a reduction in wages of railroad coal handlers along the New Jersey side of the port precipitated another strike. This was under the direct jurisdiction of the Knights of Labor and, in connection with the execution of the boycott mentioned above, served to involve the entire waterfront in strike. It is estimated that 50,000 men were on strike, a number of industries being tied up by sympathetic action. Finally a settlement was reached with the railroads, and the Knights of Labor declared the strike off. The longshoremen felt they had been deserted and returned to work at a reduction in pay. From this time until 1896 there was practically no organization of longshoremen at the port.

In 1896, the Dockers' Union of England sent Edward McHugh to organize water-front workers in this country. The American Longshoremen's Union was formed, which within a year had an estimated membership in New York of 15,000. Misappropriation of funds by the general secretary led to the dissolution of the union in 1897 and its reorganization under the old name of the Longshoremen's Union Protective Association. In 1907, the membership was estimated to be 3,100. One local, however, the Brooklyn Italian Branch, had withdrawn and secured a charter as the United Longshoremen's Protective Association.

The next serious strike of longshoremen occurred in 1907. The success of a strike of unorganized men on one of the coastwise lines for an increase started the movement among other coastwise longshoremen, but the general strike was precipitated by the Italian longshoremen of Brooklyn, who selected May 1 as a time to make a demonstration for better treatment. It was intended to be only a one-day show of strength but the strike spread and was finally given official union sanction. Union membership increased rapidly during the strike and in a few weeks was in excess of 12,000. After six weeks of idleness, the men returned to work at the same wages they were receiving before the strike. As in previous strikes, the men stayed out until they had exhausted their resources. Many became dissatisfied with their unions and dropped out.



The year 1907 marks also the beginning of control in the port by the International Longshoremen's Association, then known as the International Longshoremen, Marine and Transport Workers' Association. This association was organized in 1892 in Detroit as the International Association of the Lumber Handlers. The next year it became affiliated with the American Federation of Labor and began to take in all marine workers. In 1902 its name was changed to the International Longshoremen, Marine and Transport Workers' Association, which name it retained until 1908, when the International Seamen's Union objected to the use of the term "Marine and Transport Workers" and the name was changed to the International Longshoremen's Association.

Prior to the 1907 strike of longshoremen in New York, the then International Longshoremen, Marine and Transport Workers' Association had at the port locals of marine workers other than longshoremen. After the loss of the strike, sentiment among some of the longshoremen was in favor of affiliation with the new association. One local became affiliated in 1907, and a number of other locals affiliated during 1908.

From 1907 to 1914 there was considerable bitterness between the associations of longshoremen and each strove for control. The International Longshoremen's Association gradually gained ground, and in 1914 the remaining branches of the Longshoremen's Union Protective Association took out charters under the International Longshoremen's Association. In absorbing the previous organization however, the International Longshoremen's Association received the legacy of minority opposition and the animosity of deposed leaders. As will be pointed out later, this came to the surface again in the recent strike.

The significance of the above recital is threefold. First, organization of longshoremen has been comparatively easy to accomplish but very difficult to maintain, thus following the usual organization experience among casual workers, particularly where numerous nationalities are represented. Second, in a real test of strength, steamship interests have proven the stronger and the strike has been followed by temporary disorganization of unions. This has been due in part to bad leadership, in part to the lack of support by other organizations of labor and the lack of funds to carry on the strike either as individuals or as a union, and in part to the available supply of unorganized labor to take the place of the strikers. Third, in spite of repeated defeats, longshoremen at the port have not been wholly disorganized for any considerable time.

Wages of longshoremen at New York remained at very nearly the same level for a period of 40 years. Wages in 1874 were 40 cents per hour for day work, but this was due to after-the-war inflation. After the strike of that year, wages dropped to 30 cents per hour. Between 1875 and 1913, wages fluctuated between 25 and 30 cents per hour. In 1914, wages of deep-sea longshoremen were advanced to 33 cents per hour. The increase in wages in other industries following the outbreak of the World War could not fail to affect longshoremen's wages. The wages of deep-sea longshoremen at New York were increased to 40 cents per hour in 1916; and of coastwise longshoremen to 35 cents.

Under the circumstances set forth, it is not surprising that signed agreements between longshoremen and shipping interests at the port are of recent origin. Prior to 1912, no such agreement had been entered into, though preference to union men was the rule with a number of companies. In 1913 the first agreement was negotiated with a few steamship lines. In 1918, practically all of the steamship lines and contracting stevedores at the port signed an agreement granting preference to members of the International Longshoremen's Association. The war was partly responsible for this change in attitude, but it may be attributed chiefly to the confidence which steamship interests had in the integrity of the leaders of the association. This confidence is reflected also in the removal of opposition to unionism. In 1911, the membership of the International Longshoremen's Association at the port was reported to be 3,200. In 1914, with the consolidation referred to, the membership was estimated at over 6,000. In 1918, the membership included practically every longshoreman in the port, the total being variously estimated at from 40,000 to 60,000.

### The National Adjustment Commission.

Our entry into the European war brought into being many adjustment agencies designed to prevent strikes and lockouts in essential war industries. The shipping industry, as the link between this country and Europe, naturally received early attention. The Macey Board was established for shipyards. In June, 1917, the so-called Atlantic agreement was drawn up for the determination of wages and working conditions of men employed on ocean-going vessels. In August a National Adjustment Commission was created through agreement entered into by the United States Shipping Board, the Secretary of War, the Secretary of Labor, the American Federation of Labor, the International Longshoremen's Association, and the principal shipping interests of the Atlantic and Gulf coasts then more or less under the control of the committee on shipping of the Council

of National Defense. Subsequently the agreement was ratified in modified form by shipping interests of the Pacific coast and the Great Lakes.

The function of the commission was to adjust and control wages, hours, and conditions of labor in the loading and unloading of vessels. The commission was made up of four members, one nominated by the Shipping Board, one by the Secretary of War, one by the International Longshoremen's Association, and two by the committee on shipping of the Council of National Defense, one to represent coastwise carriers, and one to represent carriers engaged in foreign trade. Local commissions, similarly constituted except that the Shipping Board and the War Department appointed one member jointly, were to be set up in the important ports.

No provision was made for enforcement of awards, but it was agreed that work should continue without interruption pending action of any local commission or the decision of the National Commission, and that all adjustments of wages, hours, and conditions made by the National Adjustment Commission should be binding on all parties.

In accordance with the agreement, the National Adjustment Commission set up local commissions in some 24 ports. For a time the National Commission was occupied chiefly with appeals from decisions of local commissions. In October, 1917, the local commission at New York awarded 50 cents per hour to deep-sea longshoremen and 45 cents per hour to coastwise longshoremen. Some of the coastwise men struck and the National Commission on appeal awarded 48 cents per hour. Except for this instance, no serious strike of longshoremen occurred during actual hostilities of war.

As the war continued and greater demands were made on the available labor supply, and as shipping activities increased, it became necessary to prepare for the contingency of allocating longshore labor to relieve congestion at any particular port. To do this with the least friction necessitated the standardizing of wages and conditions. The National Adjustment Commission accordingly assumed original jurisdiction and, after a general hearing in October, 1918, established the basic day of eight hours, a rate of 65 cents per hour regular time and \$1 per hour overtime for deep-sea longshoremen in North Atlantic and Gulf ports. A slightly lower rate was established for South Atlantic ports. Coastwise longshoremen in North Atlantic ports were awarded the same rate, thus eliminating the long-existing differential between deep-sea and coastwise wage rates. At the same time the commission established the Saturday half holiday, in anticipation of an Executive order to that effect for all industries.

## The National Adjustment Commission Reconstituted.

Although the agreement creating the National Adjustment Commission did not provide for its termination, some of the members of the commission were appointed by purely war-time agencies, thus clearly implying a war-time period of effectiveness. Whether private shipping interests or the International Longshoremen's Association would have taken the initiative in negotiating an agreement to continue the National Adjustment Commission is a matter of conjecture, but both were clearly disinclined to revert to prewar methods of adjusting differences.

As with the original agreement, the Shipping Board took the initial step and called a Joint Shipping Industrial Conference at Washington, D. C., in June, 1919, for the purpose of considering plans to reconstitute the National Adjustment Commission on a peace-time basis and to set up adjustment machinery for other branches of the marine industry.<sup>1</sup> The conference resolved itself into three sections—a marine section, a harbor section, and a longshore section. The marine section deadlocked on the question of union preference in employment, which question led ultimately to the strike of seamen referred to in the beginning of this article. The harbor section went as far as to recommend the establishment in important ports of local arbitration boards made up of equal numbers of representatives of employers and employees with an impartial chairman selected by the representatives first chosen. The longshore section, however, approved a tentative agreement to govern industrial relations in the longshore industry and voted to submit it to the various interests for approval.

The International Longshoremen's Association submitted the proposed agreement to each of its locals, directing them to instruct delegates to the forthcoming international convention how to vote on the question. Associations of steamship interests and contracting stevedores submitted the proposal to their membership. The Trans-Atlantic Associated Freight Conferences, comprising practically all of the trans-Atlantic steamship lines and contracting stevedores of the port of Greater New York and vicinity, adopted the agreement in principle, leaving the details to be worked out by its standing committee. The International Longshoremen's Association in convention assembled adopted, without a dissenting vote, the following committee report on the proposed agreement:

We, your committee, realizing that this document is the most important matter that has been presented to this convention and dealing as it does with the future everyday work and life of our membership, recommend that our incoming president appoint

<sup>1</sup> For a detailed account of the Joint Shipping Industrial Conference, see MONTHLY LABOR REVIEW, July, 1919, pp. 14-23.

a committee from among the district officers and incoming executive council to go thoroughly into the principles expressed in this document and be empowered to draft a document that will fully protect the interests of our association. We further recommend that after preparing such suitable document said committee be fully empowered to meet with representatives of the employers and enter into an agreement for the solution of all disputes covering wages, hours, and conditions in connection with longshore labor.

In accordance with the action taken by the Trans-Atlantic Associated Freight Conferences and the International Longshoremen's Association, committees of these two bodies met, and with some few changes, adopted the agreement first approved at the Washington conference. The amended agreement was resubmitted to and ratified by associations of deep-sea steamship interests and contracting stevedores of the Atlantic and Gulf ports, the executive council of the International Longshoremen's Association, and the United States Shipping Board.

In the meantime representatives of the various locals of longshoremen in North Atlantic ports met and drew up a proposed wage scale, specifying also working conditions, to replace existing agreements, most of which were dated to expire September 30, 1919. These proposals were submitted to deep-sea employing interests in North Atlantic ports but after several conferences it was agreed by both sides to refer the matter directly to the National Adjustment Commission. Shortly thereafter identical demands were presented by coastwise and deep-sea longshoremen of all Atlantic and Gulf ports with the understanding that if adjustment was not reached locally the National Adjustment Commission would hear and determine all cases.

Thus before the commission was formally reconstituted, it was faced with the prospect of having to hear evidence and determine wages and working conditions for some 20 ports, each of which wanted a separate hearing regardless of the uniformity of demands. Shipping interests felt that the need for uniform wage rates no longer existed. Coastwise shipping interests were particularly insistent that their business would not stand a further increase and that to maintain existing wages would mean the curtailment of service. Employees and employers in each port felt that conditions peculiar to the port precluded general consideration.

Under normal circumstances the procedure would have been for the interests in each port to attempt self-adjustment, failing which the matter would be referred to a local adjustment commission, and finally, on appeal, to the National Adjustment Commission. The agreement provided, however, that by joint consent the parties could refer the case directly to the National Commission, and in most ports this was the course agreed upon. Possibly if the new agreement had been longer in effect, with local commissions reorganized and in readi-

ness to handle the case, the procedure would have been different, but without such local commissions and with but a few days intervening between the presentation of demands and the expiration of existing agreements, the general disposition was to waive any right to local adjustment. Moreover, the feeling prevailed that any decision of a local commission would be appealed from and that any time spent before such a body would be wasted.

The task with which the commission was confronted was made more difficult by the decentralized organization under the new plan as contrasted with a highly centralized organization under the old plan. As first constituted under war-time conditions, four men represented all deep-sea interests and the Government on the commission. By substituting two coastwise representatives for two deep-sea representatives, the commission had jurisdiction over all coastwise matters. As reconstituted the National Commission is made up of five men—one named by the Shipping Board as impartial chairman, two named by shipping interests, and two named by the International Longshoremen's Association. The Departments of War, Navy, Commerce, and Labor and the United States Railroad Administration are entitled to advisory representation. Employer and employee representation, however, is by a system of alternates, two representatives of shipping interests and two representatives of the International Longshoremen's Association being chosen to represent each of the following nine districts:

North Atlantic deep-sea district.	Gulf coastwise district.
North Atlantic coastwise district.	Pacific deep-sea district.
South Atlantic deep-sea district.	Pacific coastwise district.
South Atlantic coastwise district.	Great Lakes.
Gulf deep-sea district.	

Exclusive of advisory members, there are thus 37 members on the commission, though only 5 sit at one time and this for the consideration only of matters pertaining to a particular district. All members of the commission, including advisory, may sit as occasion requires as a general dock council, but when sitting thus the members have advisory and recommendatory authority only. There are, in effect, nine National Adjustment Commissions each supreme in its own district and having no authority over other districts. The agreement provides that the same person may be named to represent more than one district, but this provision would not extend the jurisdiction of the commission for a particular district unless by joint consent other districts concurred in the nomination of a majority of the members on the commission. The neutral chairman remains the same for all districts as does the executive secretary. Except for this there is no way of linking together the several districts.

Under such circumstances a general hearing for all ports would be impossible. The nearest approach to a general hearing would be to have the full panel of commissioners available to sit alternately as evidence pertaining to any particular district was presented. No general award could be issued covering all ports, though the action taken by the commission sitting for one district might be confirmed by the commissions sitting for other districts.

The National Adjustment Commission was formally reconstituted for the North Atlantic deep-sea district on September 26, 1919, and on the same date began hearings on the demands of deep-sea longshoremen for all North Atlantic ports. The demands were for \$1 per hour straight time and \$2 per hour overtime, with certain commodity differentials. The scale then in effect was 65 cents per hour straight time and \$1 per hour overtime. The basic eight-hour day with Saturday half holiday had been established by a previous award and was not in question. Ten other crafts affiliated with the International Longshoremen's Association, namely, steamship clerks and checkers, cargo repairmen, scalers, weighers, steamship horse and cattle fitters, and grain ceilers, commonly known as bull stallers, coal bunkerers, grain handlers, pier office clerks, foremen, and marine beef handlers, presented demands for proportionate increases. Hearings on coastwise demands followed the above, the commission being reconstituted for the North Atlantic coastwise district.

Before an award could be arrived at for deep-sea longshoremen, several thousand men in Brooklyn quit work, whereupon the commission announced that no award would be issued until the men resumed work. The men were induced to return to their positions and on October 6, 1919, the commission, by a 3 to 2 vote, longshoremen representatives dissenting, issued an award to deep-sea longshoremen at the port of New York, granting a temporary increase of 5 cents per hour straight time and 10 cents per hour overtime, with double time for work performed during the mealtime and with commodity differentials favorable to the men. The award was accompanied by a communication addressed to the members of the International Longshoremen's Association, which, after quoting the President's appeal in the case of railway shopmen to postpone their demands because any substantial increase of wages would "crush the general campaign which the Government is waging \* \* \* to reduce the high cost of living," said that while convinced of the soundness of this policy the commission, taking into consideration the hardships of an unsteady and casual employment, had granted a partial and immediate compliance with their demands. Attention was directed to the decreased efficiency of longshore labor, and the commission, with a view to

granting further relief, agreed to reopen the case as of December 1, 1919, if prevailing high prices did not substantially decline or if the men showed a material improvement in efficiency.

Scarcely had the award been issued when longshoremen at New York began to quit work, and in spite of protests of union officials the entire port was tied up in a few days. In view of the abnormal situation in which many men affiliated with the general longshoremen were undoubtedly forced out in self-defense, the commission departed from its established practice of not taking action until men returned to work, and issued awards to other classes of longshore labor. To some an award was made for one year with a greater proportionate increase than was granted general deep-sea longshoremen. Scalemen, grain handlers, and bull stallers were increased from 75 to 90 cents per hour; weighers from \$6 per day to \$8 per day; cargo repairmen from 65 cents to 80 cents per hour; steamship clerks and checkers were increased from \$5 to \$5.50 per day with provision for reopening the case on December 1, 1919; men engaged in coal bunkering were increased \$5 per week; the demands of beef handlers were settled out of court; pier office clerks and foremen were granted an 8-hour day, but wages were left to determination by the parties at interest.

The case of the coastwise longshoremen presented the greatest difficulty. Evidence was introduced to show conclusively that the coastwise lines were operating at a loss, and the commission was faced with the alternative of granting no increase or of legislating the coastwise lines out of business and taking away from several thousand men their means of livelihood. The commission finally announced that for the time no change would be made in coastwise wage rates except that work during meal periods would be compensated at double the prevailing rate. The following preliminary statement accompanied the award:

As to coastwise rates per hour, the men have presented as effective an appeal for an advance to meet the present unprecedented high cost of living as in deep-sea business, but the conditions surrounding this traffic are entirely different. It is subject to direct competition with all rail lines, and a large share of the tonnage is already moving by such lines. The evidence is convincing. Coastwise shipping is not only greatly depressed; it is threatened with extinction as more and more traffic goes by land.

The coastwise lines, whether operated by private interests or by the United States Government, are already running at a heavy loss. But this alone would not convince us that the men ought to bear the entire burden of high prices. Wages are rightfully a first charge on industry. The men must live. But this case is peculiar. Terminal expenses are already prohibitive. Any further increase in the cost of loading and unloading coastwise ships would inevitably put them quite out of business. If all the tonnage goes by rail, the boats will simply be tied up. The men will have no work at all. There is but one remedy, namely, a general increase of freight rates. Such an increase must be granted by the proper authorities or the water lines will be forced into bankruptcy.

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Under these circumstances it is beyond our power to grant relief at this time to these men, however deserving their claim may be. The men must choose between some employment at present rates and greatly reduced employment, if any remained at all, if an increase of pay were to be allowed. We can not vote to deprive the men of work; but we agree to reconsider the case without prejudice if present high prices persist and if a general increase of freight rates should in course of time occur.

This action until amended restores a differential between deep-sea and coastwise longshore work. Deep-sea loading requires more skill, but coastwise work may be more arduous. It is not clear that a permanent differential such as prevailed for many years should continue to exist. But the possibility of imperative conditions restoring the differential was contemplated in the award of October 4, 1918, by this commission. It reserved the right to restore such differentials if its purpose to further the welfare of the longshoremen and of the industry appeared otherwise to be frustrated. Subsequent investigation after increase of general freight rates by rail would seem to be necessary before the final balance between deep-sea and coastwise rates per hour is struck.

WILLIAM Z. RIPLEY,

*Chairman National Adjustment Commission.*

The awards of the commission to longshoremen and affiliated locals at New York were made applicable in basic wage rates and working conditions to other North Atlantic ports and, except for a temporary walkout of a few thousand men at Boston, were accepted without any interruption to shipping activities. The strike at New York, however, continued for a period of four weeks before the men began to return to work in any considerable numbers, and it was fully six weeks before the port was back to normal activity.

### Outstanding Features of the Longshore Strike.

Although generally referred to as a strike, the tie-up of the port from a union standpoint was not a strike but a walkout. No strike was officially called or sanctioned. No strike benefits were paid and the charters of a number of recalcitrant locals were revoked. Although voting against the award and expressing the conviction at the time that the men would not accept it without a strike, the representatives of the longshoremen on the commission took the position that the association had entered into the agreement in good faith and must carry it out. In this they had the full support of all international officials of the association and the majority of local officials. The press was unanimous in support of the commission. The Shipping Board announced that it would use all the power at its command to operate its ships. The Secretary of War gave word that transports would be loaded and discharged by union men if they were willing to work at the rate fixed by the commission, but that in any event the ships would be worked. The Railroad Administration declared its acceptance of the award as applicable to coastwise lines under Federal control. Private shipping interests met and agreed to stand by the award. The Secretary of Labor appealed to

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the men to live up to their agreement and return to work. The American Federation of Labor reaffirmed the principle of inviolability of agreements. There was thus presented a formidable array of public opinion before which no body of men could stand opposed for long unless led to believe that the opinion was unjustified and that by holding out their demands would be granted. Encouragement in this belief was not lacking and served to prolong the strike.

Reference has been made previously to the comparatively recent ascendancy in the port of New York of the International Longshoremen's Association and the legacy received in its absorption of the Longshoremen's Union Protective Association. The years 1914 to 1919 show an enormous increase in membership and with this increase the importance of the port in determining the affairs of the association began to be felt. Whoever could swing the New York vote at the international convention was a power to be reckoned with.

At the 1917 convention of the International Longshoremen's Association, Richard J. Butler, formerly an official of the Longshoremen's Union Protective Association, was an unsuccessful candidate for the presidency. No open break occurred in the port, however, until the strike of men on harbor craft early in 1919. The strike interfered seriously with coastwise and overseas shipping and forced many longshoremen out of work. Moreover, four of the harbor unions were affiliated locals of the International Longshoremen's Association, and the strike threatened to involve the longshoremen in sympathetic action. The president of the International Longshoremen's Association took the position that the strike was in violation of an agreement to accept the decision of the War Labor Board and endeavored to bring about a settlement. He succeeded finally in inducing two of the affiliated unions to accept a compromise offer but was promptly accused by officials of other striking unions of helping to break the strike. A subsequent settlement of the harbor strike on terms less favorable than were offered prior to the strike served to intensify the ill feeling. Further complication arose from the fact that the business manager of one of the unions remaining on strike was also fifth vice president of the International Longshoremen's Association. Without going further into the details of the controversy, it may be remarked that at a meeting of the executive council of the International Longshoremen's Association in April, 1919, called for the purpose of considering charges against the international president, action was taken exonerating the president and declaring the office of fifth vice president of the International Longshoremen's Association vacant.

From that time open warfare prevailed. The deposed vice president began the publication of a paper, the *Loyal Labor Legion Review*. The first issue was devoted largely to his removal from

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office, and contained the statement "that 16 local unions with a membership of 22,000, have withdrawn from the Longshoremen's district council," because of his removal. This action was decided upon at a meeting "at which it was also voted to ignore orders of President O'Connor until such time as the national executive council reverses its action in declaring F. Paul A. Vaccarelli no longer vice president of the parent body."<sup>1</sup>

The same issue quoted a statement from Mr. Vaccarelli appearing in the *New York Herald* of May 14, that the desire of the 22,000 men who have formed themselves into the River Front and Transport Workers' Federation "is not to withdraw from the parent body (the I. L. A.), but that they reserve the right as an affiliated body to conduct their own affairs without an interference from the president of the international."<sup>2</sup>

The breach was further widened at the national convention of longshoremen held at Galveston during July. The convention refused to seat Mr. Vaccarelli, on the ground that he was an employer of labor,<sup>3</sup> but later seated him that he might present charges and contest the action of the executive council in declaring the office vacant. The convention refused also to seat Mr. Richard J. Butler "for the reason that he is connected with a detective agency \* \* \* which agency is detrimental to the best interest of our international association."<sup>3</sup>

In the election of officers, Mr. O'Connor was returned as president but Mr. Vaccarelli was defeated as vice president. It was at this convention that the proposed agreement to reconstitute the National Adjustment Commission was ratified without a dissenting vote.

Between the Galveston convention and the hearing before the National Adjustment Commission an effort was made to line up the recalcitrant unions in New York. A number surrendered their charters in the River Front and Transport Workers' Federation and reaffirmed their allegiance to the I. L. A. Rumors were current on the water front, however, that unless the commission conceded the major portion of their demands, the longshoremen would strike. Rumors that the commission would grant 80 cents per hour straight time and that many of the steamship companies were willing to pay 85 cents, had the effect of arousing the expectations of the men.

In view of this, the members of the committee selected to present the case of the longshoremen were severally called upon at the opening of the hearing to state their willingness to submit the case without reservations and their intention to abide by the decision. All answered in the affirmative. Under such circumstances the strike or

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<sup>1</sup> *Loyal Labor Legion Review*, May 20, 1919, p. 9.

<sup>2</sup> *Idem*, p. 12.

<sup>3</sup> *Proceedings of the International Longshoremen's Convention, 1919*, p. 22.

walkout which followed immediately upon the announcement of the award must have been due to a breach of faith on the part of those agreeing to reconstitute the commission and to accept its decision, or to influences at work beyond the control, for the time, of those regularly chosen to represent the rank and file. The former may be dismissed in view of the orderly procedure followed in submitting the proposed agreement, first, to all locals of the I. L. A. with the request that delegates be instructed how to vote at the convention, and second, to the delegates at the convention. The repeated efforts also of local representatives to induce the men to return to work is further evidence of their intention to abide by their agreement.

The conclusion is forced, therefore, that factional differences played an important role in inducing the men to violate their agreement. There are indications, too, that the opportunity was seized to disrupt the I. L. A. Handbills in Italian and English, signed by the Marine Transport Workers' Industrial Union, No. 100, of the Industrial Workers of the World, and calling upon the longshoremen to organize their industrial power in one big union, were circulated widely on the water front during the strike. Another handbill was signed, "The Workers," and contained the following sentences among others: "The bosses own the State—its Army—its police—its press." "You struck against the bosses and the Government Wage Adjustment Board." "You are striking against the scab unionism of the A. F. of L." "Strike means victory." "Arbitration means defeat." "The only way is to get rid of the present bosses' government and establish a workers' government in its place—a workers' government like the soviet government of Russia."

Longshoremen, however, were quick to resent the implication that the strike was due to radicalism within the ranks. Every mass meeting was made the occasion for emphatic assertions that the rank and file had nothing in common with bolshevism or I. W. W.ism and was only seeking justice.

It is noteworthy that after the first few days of confusion, during which no one seemed in control, the authorized representatives of some 15 locals were able to induce the membership to place the matter again in the hands of the union officials. The strike now resolved itself into two opposing factions. One, led by the international officers of the longshoremen and the majority of the local officials, denounced the strike as a violation of an agreement and urged the men to keep their word. The other, led by Messrs. Vaccarelli and Butler, denounced the international officials and declared that the rank and file did not agree to arbitrate and had been grossly misrepresented. The award of the commission, granting an increase of 5 cents per hour straight time and 10 cents per hour overtime, was characterized as the "Woolworth award." Meeting after meeting

was held at which those counseling compliance with the award found difficulty in securing an opportunity to speak.

Officials of the I. L. A. continued to regain control, however, and received the full support of the Government and private shipping interests. The Shipping Board statement previously referred to concluded that:

A minority has for the moment succeeded in influencing a majority of the men to break the agreement in opposition to the orders of their leaders and to express this repudiation by striking and by threat of driving other men from the docks. Such a course destroys the principle of collective bargaining. Every resource within the power of the United States Shipping Board will be employed to move its ships and to sustain the decision of the commission.

Secretary Wilson's appeal stated in part that:

The record is clear that all parties agreed to accept the decision of the National Adjustment Commission. As workmen the members of the I. L. A. should realize that their action subjects them to charges of bad faith, and questions their willingness faithfully to perform agreements into which they have entered. They should realize that their most valuable asset is a record for honestly carrying out contracts to which they are a party, even if deep disappointment be felt in their failure to realize in full demands the justice of which they are fully convinced.

In a subsequent telegram the Secretary stated that:

Engagements solemnly entered into must be carried out. It is the greatest single asset that the workingman has. There can be no assurances of wages, conditions of employment, or of any other protection to wageworkers if engagements made in good faith can not be relied upon. Any other condition would lead to confusion under which the masses least able to take care of themselves would suffer most.

In the meantime the port had become extremely congested, and the situation was made more critical by the strike of express drivers and ferry employees, both under the jurisdiction of the Railroad Administration. On October 15 it was announced that locals of longshoremen, comprising 15,000 men, had voted to return to work, and it was the consensus of opinion that the strike was broken.

It was estimated that not more than 5,000 men returned to work on the following day, but it was clear that large numbers of men were ready to join in a concerted action to resume work. Threats of violence were reported and there were occasional clashes between workers and strikers. On October 18 the Shipping Board issued the following statement:

The delay on the part of the longshoremen on the Atlantic coast in abandoning their unauthorized strike in violation of their agreement to abide by the awards of the National Adjustment Commission makes it necessary for the United States Shipping Board to give immediate consideration to the working of the ships under its control.

The delay is resulting in great inconvenience to the public, in a serious interruption in the operation of the merchant marine, and in an appalling economic waste. This is a condition which can not be permitted to continue and a remedy must be found at once to sustain these awards and carry on the business of the country.

This was followed by a press statement that the transport *George Washington* was on its way to New York with soldiers to guard the piers, and although the contingent proved to be for the purpose of loading and unloading transports, it was not without sobering effect.

The situation by this time had reached a point where men were daily returning to work, and those remaining idle were beginning to see that neither the Government nor private shipping interests had any intention of compromising with the award of the commission. Further encouragement was given to the strikers, however, by the appointment by the Secretary of Labor of a special conciliation commission made up of Mayor Hylan, F. P. A. Vaccarelli, formerly vice president of the I. L. A. and one of the leaders of the striking longshoremen, and James L. Hughes, immigration commissioner of Philadelphia, who had served previously as commissioner of conciliation during the strike of harbor employees.

The appointment of the conciliation commission raised a storm of protest. The district council of the I. L. A. objected particularly to the appointment of Mr. Vaccarelli and refused to appear before the commission so long as he was a member. The Secretary of Labor declined to remove Mr. Vaccarelli, however, on the ground that this name had been suggested by the mayor. It developed that the suggestion for the commission and its personnel was made to the mayor by officials of the engineers and pilots during a conference on the strike of ferryboat employees. Acting on the suggestion, the mayor requested the Secretary of Labor to appoint the commission, stating that he believed it would make for immediate settlement of the strike. It may be remarked in this connection that pilots and engineers were involved in the strike of harbor employees previously referred to and joined in criticizing the president of the longshoremen for urging a compromise settlement.

The unfortunate part of the procedure is that, while the commission was no doubt suggested and appointed in good faith and with the expectation, not of compromising with the principle of orderly procedure but of inducing the men on strike to observe their agreement, it served actually to encourage the belief that a more liberal settlement was in sight.

Numerous conferences were held by this special conciliation commission with striking longshoremen and their representatives and one with representatives of steamship interests. On October 23 the steamship lines and employing stevedores made public announcement of their position, stating in part that:

They desire it to be clearly understood that while they entertain the highest respect and regard for the mayor of the city of New York and while they recognize that his motives in entering into this controversy were of the highest and entitled to every

consideration, they have definitely decided and bound themselves in agreement to strictly observe and maintain the Award of the National Adjustment Commission in its entirety and that under no circumstances whatever will they be influenced to vary from that position.

It must be apparent to every man that if the steamship interests or the longshoremen refuse to abide by the award in any particular the whole system of arbitration in any disputes or controversies becomes inoperative and useless.

The steamship lines are convinced that the great body of the longshoremen are at all times willing and ready to perform their obligations and carry out their agreements, but in the present instance are confused by the developments in the controversy, and they desire therefore to make this final statement to the men and the public that with every possible regard and respect for his honor the mayor, the award of the National Adjustment Commission must be lived up to.

Longshoremen continued to return to work in increasing numbers, though not without occasional clashes with pickets. A riot was reported in Brooklyn on October 27, resulting in two deaths and a number of injured. Some few strike breakers were used and preparations were made to bring men in considerable numbers from other ports, but the daily increase in union longshoremen reporting for work made this unnecessary. On November 4 a check of the different piers showed approximately 25,000 men working and in some sections it was necessary to turn men away. On November 5 the mayor called a meeting of those remaining on strike and urged them to go back to work, the press quoting them as saying:

I endeavored to get you to go back to work and to have the Adjustment Commission reopen your case and get as large increases as possible. \* \* \*

If O'Connor had represented you faithfully, you would not now be out on strike. I feel that the other members of the Adjustment Commission are not responsible for the shortcomings of your labor representative elected to represent you.

I request you to go back to work pending a rehearing of your case and I will leave nothing undone to present as strongly as possible your viewpoint.

The men voted to return to work at the rates in effect prior to the award by the commission, whereupon the mayor sent the following telegram to the Secretary of Labor:

This afternoon I appeared at a meeting of the longshoremen held at Tammany Hall. After addressing the meeting and urging the men to return to work immediately, they agreed to do so at the old rates of 65 cents per hour and \$1 per hour pending the decision of the National Adjustment Commission upon the application for a rehearing of the award to be made by representatives of the various locals and the board of conciliation composed of Mr. Hughes, Mr. Vaccarelli, and myself.

The action of the longshoremen was in line with the recommendations made to them by the board of conciliation appointed by you. A motion was made and unanimously carried that the longshoremen of New York and vicinity pass a vote of thanks and confidence in Secretary of Labor Wilson and the board of conciliation for their efforts to settle their difficulties in an amicable manner.

The remaining men on strike presented themselves for work during the next few days. Steamship companies insisted, however, on paying the rate awarded by the National Adjustment Commission and no refusals to accept the new rate were reported.

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The award of the commission provided for a reopening of the case as of December 1, 1919, unless the cost of living showed a substantial decline. No material decrease in prices being apparent the commission announced a rehearing for November 21, 1919, following which an award was issued effective December 1, 1919, increasing the basic rate of deep-sea longshoremen from 70 cents to 80 cents per hour and the overtime rate from \$1.10 to \$1.20 per hour. The wages of steamship clerks and checkers were increased from \$5.50 to \$6 per day.

### Conclusion.

The strike can not be condemned too strongly. An agreement was solemnly entered into after having been submitted to the rank and file for their approval or disapproval. No effort was spared that the agreement might express the will of the majority. Its unanimous acceptance by the international convention of delegates from all locals should have made the instrument as binding as the constitution of the association. That it was so regarded by the duly elected and authorized representatives of the association is demonstrated by their unqualified stand for its observance. The support given these officials during the strike by steamship interests in the face of losses estimated at \$50,000,000, sufficient to have granted the full demands for a period of at least two years, is almost without a parallel in labor history, and is evidence of the confidence which the shipping interests at the port have in the intention of the organization to observe its agreements.

No power is given to the National Adjustment Commission to enforce its awards, but the agreement constituting the commission provides that "no stoppage or lockout of any kind whatever shall take place until the difference or dispute shall have been referred and dealt with according to this agreement or rules which may be established under it. The several parties to this agreement obligate themselves to give effectiveness to the recommendations of the National Adjustment Commission or its agencies and to take such steps as may be necessary to assure the carrying out of this agreement by individual members of the associations signatory thereto."

The evidence is clear that the walkout was not an indignant protest against an unjust award, overshadowing for a time all sense of contractual obligation, but that the award was the opportunity for those within and without the organization who sought personal aggrandizement and wished to subvert the organization to their ends. To them the validity of an agreement was nothing, and arbitration carried with it the reservation to accept or reject as they saw fit.



Unfortunately arbitration experience has not always engendered respect for this form of adjusting industrial controversy. To the lion has been given the lion's share with an acclaim of justice. Any other procedure has been foredoomed to failure because neither party was willing to accept less than it felt able to get by a show of strength. As a consequence arbitration has too frequently resolved itself into the familiar process of higgling, with greater emphasis on expediency and what would be acceptable, than on the merits of the controversy.

It seems altogether probable that both sides have been sobered by the controversy just ended and that respect for orderly procedure has increased in spite of violation of the principle.

## The British Railway Strike.

By N. C. ADAMS.<sup>1</sup>

THE British railway strike which began at midnight, September 26, 1919, and lasted until October 5, affecting some 600,000 men and tying up at first the entire railway system of the country, had been threatened for a long time—actively since the armistice only, but in reality all through the war. Indeed, ever since the strike in 1911 it had been a foregone conclusion that the wages and general working conditions of railwaymen must undergo radical changes if a strike was to be avoided.

In 1911, the Sailors' and Firemen's Union, a comparatively weak organization, had won out in some demands, thereby inspiring other bodies of underpaid men to take action, and a series of strikes followed. Finally, in August, 1911, the railwaymen's unions issued an ultimatum to the companies that unless they agreed to meet the representatives of the unions within 24 hours a strike would follow. The companies remained firm in their refusal and the strike began, limited, however, to certain important sections. Then Mr. Lloyd George, at that time chancellor of the exchequer, and the president of the Board of Trade, succeeded in arranging a conference between the two sides and a settlement was reached, after the men had been out three days, on the following terms:

1. Immediate termination of the strike.
2. Reinstatement without prejudice of all striking employees.
3. Appointment by the Government of a special commission to investigate the workings of the conciliation schemes.<sup>2</sup>

The unprecedented heat of the summer of 1911, coupled with the unusual number of foreign visitors, owing to the festivities attendant upon the coronation of King George, had made railway travel at best an ordeal and the public was not in a mood to sympathize with any cause, however just, which added to its discomfort; hence the railwaymen started with scant support. However, the publicity of the strike brought to general knowledge the low wages paid to the men in whose hands rested the safety of the traveling public and this, together with the fact that the strike, which was generally realized to be a battle for recognition of the unions, was practically won, may

<sup>1</sup> For 18 months, until September, 1919, Mr. Adams was special representative in London of the Bureau of Labor Statistics.

<sup>2</sup> Conciliation boards for each railway company were set up in 1907 as the outcome of a series of conferences following a threatened general strike.

be said to have brought the National Union of Railwaymen<sup>1</sup> into prominence. From that time the British people have had a wholesome sympathy with the railwaymen's just demands for the betterment of working conditions acknowledged to be far from satisfactory or equitable.

In the spring of 1914 the miners, railwaymen, and transport workers of Great Britain formed the now celebrated Triple Alliance to aid in the support of one another's demands. A history of this alliance and of its part in the negotiations with the Government during the spring of 1919 was given in the MONTHLY LABOR REVIEW for June, 1919.

At the beginning of the war, railwaymen were still notoriously underpaid, porters receiving 16s. to 22s. (\$3.89 to \$5.35)<sup>2</sup> per week, ticket collectors 21s. to 31s. (\$5.11 to \$7.54), passenger or goods guards 25s. to 35s. (\$6.08 to \$8.52), shunters 20s. to 31s. (\$4.87 to \$7.54), goods porters 20s. to 26s. (\$4.87 to \$6.33), checkers 21s. to 31s. (\$5.11 to \$7.54), carmen 20s. to 29s. (\$4.87 to \$7.06), and plate layers 21s. to 24s. (\$5.11 to \$5.84) per week. The railwaymen's spokesman is authority for the statement that before the war there were 100,000 railway employees whose wages were £1 (\$4.87) per week or lower. But to meet the increased cost of living as the war progressed, the Government, having taken over control of the railways, granted a flat war wage or bonus to all railway workers. This increase, when the cost of living reached its maximum, 125 per cent above the prewar rate, had amounted by successive advances to 33s. (\$8.03) per man per week, regardless of his grade of service or rate of wages. Hence, to each of the rates given above, 33s. should be added to get the wages prevailing at the time of the armistice and still in force at the beginning of the strike, but even with this addition, a vast improvement over prewar conditions, it is asserted that railway employees were getting lower wages than were men doing similar work in other industries. For example, during the strike conferences it developed that plate layers and shunters employed at collieries were paid 71s. (\$17.28) and upward and 76s. (\$18.49) and upward, respectively, as compared with the 54s. to 57s. (\$13.14 to \$13.87) paid to railway plate layers and 53s. to 64s. (\$12.90 to \$15.57) paid to shunters. In this case, however, there may be some differences in conditions of employment, although none necessarily in living conditions in the same locality. Passenger and goods guards were paid 58s. to 68s. (\$14.11 to \$16.55), while bus and tram conductors were receiving over 70s. (\$17.03) per week.

<sup>1</sup> The union by this name dates from 1913 only, but it was formed by uniting three of the four unions that took part in the conference with the Government and the railway companies in August, 1911. The Associated Society of Locomotive Engineers and Firemen retains its separate identity. The National Union of Railwaymen started in 1913 with a membership of less than one-third of the railway workers of the country, but the enrollment now has increased 150 per cent.

<sup>2</sup> Conversions made on the basis of par value, 1 shilling=24.33 cents.

After the armistice the railwaymen put forward a request that their future wages should be based upon the amounts which they were receiving in wage and war bonus, and in addition that the pay of all men doing similar work under similar conditions should be standardized. They asked also for improved general conditions of service, including an 8-hour day, extra pay for various classes of overtime work, and other minor adjustments.

The Government did not seem disposed to meet the men's demands in full and the gravity of the situation<sup>1</sup> increased daily through February and March, 1919, until, all negotiations having failed to bring about an agreement, a general strike was threatened by the National Union of Railwaymen. To avert this outcome the Government, after a final conference with the railwaymen's unions<sup>2</sup> on March 24, 1919, guaranteed a week of 48 hours, made concessions as to overtime work and conditions of employment, and entered into an agreement with the railway unions that until December 31, 1919, wages should remain at the same figures as prevailed at the armistice. (This gave the railwaymen a slight advantage over other workmen of the country whose wages were stabilized by the Wages (Temporary Regulation) Act till Nov. 21, 1919, only.) Moreover, the agreement provided that negotiations should be instituted to adjust wages and to fix future minimum wages for all grades of service.

The union officials assert that from the remarks of Mr. Bonar Law, leader of the House of Commons and member of the War Cabinet, speaking at the March conference on behalf of the cabinet regarding standardization of wages by grades of employees, the only inference was that the Government promised standardization in an upward direction. That is that when several rates were in use by different companies in any grade, the highest basic rate and not the lowest should be the basic rate used for standardization.

General conditions of employment apparently have been enormously improved as a result of these negotiations following the March agreement, but the standardization negotiations proceeded too slowly to suit the already strained temper of the unions. Rightly or wrongly there is a public belief that a strong rivalry exists between the two unions concerned, the National Union of Railwaymen (of which Mr. J. H. Thomas is secretary) and the Associated Society of Locomotive Engineers and Firemen (of which Mr. J. Bromley is

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<sup>1</sup> See MONTHLY LABOR REVIEW, June, 1919, pp. 169-177.

<sup>2</sup> National Union of Railwaymen—approximately 450,000 members—and Associated Society of Locomotive Engineers and Firemen—approximately 50,000 members. The Railway Clerks' Association—approximately 75,000 members—is a separate organization, and had no active part in these negotiations.

secretary) and that belief should perhaps be borne in mind in considering the condition of affairs in late September of this year. The Government's proposals as to the readjusted wages of locomotive drivers, firemen, and cleaners, who make up Mr. Bromley's organization, had been made and accepted as satisfactory in August. The "standardization" had been made "upwards," that is, the agreement apparently made the standardization on the highest basic rates.

### Announcement of an "Imminent Crisis."

The impatience of the National Union of Railwaymen was increasing as the Government's proposals for other grades of employees, grades belonging to the National Union of Railwaymen—that is, all classes of railway servants except locomotive men and clerks—came in slowly and in no case followed the "upward" plan of the locomotive men's agreement. It has been suggested that the National Union of Railwaymen officials, who have given frequent and unmistakable evidences of conservatism, found it increasingly difficult to restrain the impatience of some of their radical branches at, first, this apparent discrimination in the Government's proposals, both as to speed and method, between the two unions and, second, at this very conservatism of their officials, and that suddenly this daily-augmented prodding by the radical element proved too strong a force to be resisted. However that may be, it is a fact that the first announcement by Mr. Thomas on September 23 of the "imminent crisis" in the railwaymen's affairs was dramatic in its unexpectedness. The Government and Mr. Bromley, the spokesman of the Associated Society of Locomotive Engineers and Firemen, both declared the "crisis" to be "news," and the public was taken totally unawares.

This last condition turned out to be an important one, as the public having given tacit, but well understood, sympathy to the railwaymen naturally felt that more consideration should have been given to their welfare. The National Union of Railwaymen had, therefore, to start with, very little backing from outside sources including other unions, while as one sympathetic paper says, "the railwaymen believed that a great injustice was going to be done them—an injustice so obvious to them that they believed they could confidently appeal to the public they had served so faithfully throughout the war."

Mr. Thomas' statement as to the sequence of events leading up to the "crisis" shows that following the locomotive men's agreement in August he began to urge the Government's representatives for an early settlement in the other grades and on September 16, he waited

upon the president of the Board of Trade, Sir Auckland Geddes, to ask for immediate and "definite" proposals. On September 19, the first proposals reached the National Union of Railwaymen but they "did not give effect in any shape or form to the principle conceded in the case of the drivers and firemen" ("standardization upwards"). The accompanying letter said:

I trust your executive [committee] will realize that this will be a heavy burden for the railways of this country to stand, and I therefore wish you to understand that the proposals contained in the attached memoranda are not put forward as a basis of negotiation but as the definitive offer of the Government.

The executive committee were unanimous in their disapproval of the proposals, but on the same day informed Sir Auckland Geddes that they would defer action until the remainder of the proposals had been received. Further proposals submitted on September 23, likewise did not concede the "upward" principle desired, and it was intimated that they also were "definitive" offers. The executive committee thereupon passed the resolution forwarded to the Government on the 24th, with the statement that should the Government fail to make reply to the union's claims for negotiation on the standard wages by noon of September 25, "action by the union" would take place at midnight on the following day.

The executive committee of the National Union of Railwaymen on September 24, sent to its branch secretaries a notice that "Failing further instructions from this committee by 12 midnight on Friday the 26th instant, the whole of your members must immediately cease work until instructed to return by this executive committee."

Notice of this "crisis" was given to the press on the afternoon of the 23d, this being the first public intimation of impending trouble. Curiously, this sudden recrudescence of the strike menace on September 23, coincided with the beginning of the official life of the new Ministry of Transport, with Sir Eric Geddes at its head, who took over powers relating to transportation from the Board of Trade and other departments. This coincidence was widely commented upon. On this day also both the Board of Trade and the Ministry of Transport informed the National Union of Railwaymen that the railwaymen's negotiations had been transferred to the ministry, and Sir Eric Geddes added to his letter an intimation that he would be happy to discuss the situation with the union's executive committee. As a result of this invitation a meeting was arranged for September 25, at which the Prime Minister, the Minister of Transport, the president of the Board of Trade (Sir Auckland Geddes), and his predecessor (Sir Alfred Stanley), Mr. Bonar Law, and others met Mr. Thomas and his executive committee and this meeting was continued on the 26th.

## The Government's Wage Proposal.

The Prime Minister finally summarized what he considered the new proposals to mean:

(1) The new standard wage proposed is equal to an average of at least 100 per cent over the prewar wages, and guarantees to every adult railway worker, irrespective of any fall in the cost of living, a permanent minimum of 40s. (\$9.73) per week. This figure, 40s., corresponds with the minimum of 18s. to 20s. (\$4.38 to \$4.87) per week before the war.

(2) In addition the extra payments for Sunday duty, night duty, and overtime recently conceded and now in operation are equal on the average to another 20 per cent on the prewar wage.

(3) In addition to these advantages in money the hours of labor have been reduced to eight.

(4) These increases are put forward as the permanent railway wage to remain irrespective of any possible fall in the cost of living.

(5) In any event the issue does not arise until the 31st of December, as until then no man will receive less than his present aggregate earnings and during that time there is time for negotiations which the Government are willing to continue.

(6) In addition to this standard increase there is no question of reducing the present total wage at the 31st of December if the cost of living should be the same as at present.

It was explained by the Government that while the settlement with the locomotive men had appeared to be a standardization upward, and was that in effect, it had not been so in purpose, but was intended, as the settlement in all grades was intended, to be an increase, on the average, of 100 per cent over the prewar wages. Locomotive drivers being more highly paid than most other grades, had not benefited in the same proportion as other grades by the flat war wage of 33s. (\$8.03) and it was considered that by raising all grades now by the same percentage the possible injustice of the former method would be, in some degree, righted. Drivers' wages before the war had averaged 40s. 6d. (\$9.85)—a few getting as high as 57s. (\$13.87) per week—consequently their per cent of increase after adding the 33s. (\$8.03) war bonus was considerably lower than that of other employees, few of whom had been paid in prewar times an amount equal to the bonus itself.

The new offer of a guaranteed minimum of 40s. (\$9.73) was a blow to the lower paid men to whom it applied; for example, men whose wages were 18s. (\$4.38) per week and who, with their war wage of 33s. had been receiving 51s. (\$12.41) per week stood to lose 11s. (\$2.68) per week. However, item 6 of the Prime Minister's interpretation summary specifically states that there was no intention of reducing the present total wage on December 31, if the cost of living remained at its present high level—115 per cent above 1914. This point seemed a surprise to Mr. Thomas and was the basis of long discussion. The Government agreed that no reduction in present total wages should be made until the cost of living had fallen, and remained for three months, below 110 per cent.

The basis of the possible reduction to follow could not, the Prime Minister said, be definitely stated for the reason that not only the railwaymen but every industry in the country was concerned and the matter must be determined in a manner fair to all, but he did assure Mr. Thomas that a drop in the cost of living to a point below 110 per cent for three months did not mean that the residue of the war bonus would all come off—that it was not certain that any man's wages would be reduced to the minimum, 40s. Further Mr. Lloyd George said the Government would be willing to discuss anomalies and cases of hardship to any particular grades in the application of the percentage of increase to be made. At this point Mr. Thomas suggested that he was in a position to show that the proposal for standard rates even on a percentage basis was not equally advantageous to all grades, the implication being a request for a discussion upon that point. Sir Eric Geddes here remarked, *sotto voce*, to the Prime Minister, "We must not accept that."

### The Strike Called.

This seems to have been a fatal moment in the conference which had continued through two days and followed upon several other somewhat hectic periods. The strain throughout must have been enormous and here proved too much for the railwaymen, who after some further rather futile discussion withdrew for a short interval "to consider the Government's proposals." Upon their return Mr. Thomas announced that they were unanimous in regretting that the Government would not apply to the other grades the principle which brought about the settlement with locomotive drivers and firemen and felt they could not affect a settlement which would be acceptable to their members. "Consequently, we are forced to put into operation our decisions of the 23d and 24th and now confirm the instructions already issued to the branches." The conference shortly terminated and the union's executive committee telegraphed its branches: "Negotiations broken down; strike at midnight." Mr. Bromley also telegraphed to his members as follows: "Executive decided to support N. U. R. Our members must strike midnight tonight." These orders were carried out and the railways of the country were brought practically to a standstill on September 26.

Not only was the rest of labor taken unawares but the general public was not given reasonable notice. It would appear that this was a tactical error to start with. The public had had too short a time to decide upon the justice of the railwaymen's case, and immediately jumped to the conclusion that in any event, to foist upon the country, without warning, and for a problematical grievance which might arise three months hence, a strike which most seriously



threatened the very life of the whole country was unthinkable and unpardonable. Further, it was not lost on the public that the strike was announced upon the very day that, with the beginning of the official life of the Ministry of Transport, the railways became for all practical purposes a nationalized system, and amused comment was made that Mr. Justice Sankey in his *Miners' Commission Report* had suggested that nationalization as a measure would tend to avert strikes.

The Government had great numbers of army motor trucks at its disposal and a system was immediately inaugurated for keeping up the distribution of milk and the perishable food supply of the country. In this undertaking the Government was aided by all classes of people who enrolled themselves as voluntary workers, lending also their motor cars. The training of these people gained through war years as loyal helpers was a valuable asset indeed. This voluntary work done by the men and women of England was of an extraordinary self-sacrificing character and in 1918 had developed to such a degree that high efficiency had become a habit. Demobilization of all forces, including the Women's Royal Naval Service, was immediately suspended and added greatly to the body of trained helpers. Good weather favored the public and the temper of the people was unruffled. The same spirit that was evidenced in 1918 was again displayed. The public felt that the railwaymen—loyal and hardworking as they had been during the war and yet, owing to the essential character of their work, not permitted to be exposed to the ravages of the war on the Continent—had hardly played fair with the Government and with the public, and fair play is the *sine qua non* of an Englishman's existence.

The Government concentrated its efforts on keeping open the railway routes which are the principal arteries of the food supply of the country and by Monday, September 29, services were in operation from London to Birmingham, to Manchester and Liverpool, to Yarmouth and the East Coast, to Hull, to Southampton and Plymouth, and to Dover. These services were maintained by all classes of men with experience who responded to the Government's call for assistance, including railway servants not on strike and at least some of the railwaymen themselves. By October 4, 3,480 trains were scheduled to run, not including some 900 of the London underground system which serves a very large suburban area.

Hyde Park was closed to the public and used as a milk distributing center, the milk being brought in by motor vehicles, while Regents Park was used as a depot for motor lorries and vans engaged in food distribution. About 25,000 motor vehicles were in active operation.

The food controller immediately amended the food consumption regulation, putting the entire country again on war rations. On

the first day of the strike about 50 per cent of the regular milk supply was available in London and later about 80 per cent was distributed. The meat supply was fairly well kept up while an oversupply of fish was brought to London by boat. Throughout the country conditions kept pace with those of London.

The Prime Minister on the first day of the strike characterized it as an "anarchist conspiracy \* \* \* not a strike for wages or better conditions but engineered by a small but active body of men who wrought tirelessly but insidiously to exploit the labor organizations of the country to subversive ends." Mr. R. Smillie, of the Miners' Federation, was reported to have said that he hoped "the railway crisis would pass without the necessity of a great industrial upheaval," while to Mr. R. Williams, of the Transport Workers' Federation, was attributed the statement that "The Triple Alliance will be involved and the country will be paralysed." Happily, however, the country was not "paralysed" and in fact carried on with surprisingly little lack of comfort or of spirit.

Mr. Adamson, the House of Commons leader of the Labor Party, asked the Prime Minister to summon Parliament, and this request was advocated also by a portion of the press.

The Government announced, on October 2, that the pay of railway workers which would have been paid at this time would be withheld, as the men had broken their contracts, and the Government would not be justified in handing over to the strikers a sum which would be used in prolonging the struggle endangering the whole life of the nation.

The Daily Herald of October 2 said that the National Union of Railwaymen were said to have fixed strike benefits at 12s. (\$2.92) per week for "scale A," which covered 75 per cent of the men, at 6s. (\$1.46) per week for the remainder, and to all 1s. (24.3 cents) per week for each child under 12.

The Times, in a leading article counseling moderation, warned the country that—

We stand at the parting of the ways. On the one hand a party of misguided men whose leaders have not scrupled to disorganize the life of the country \* \* \* and to enforce through its suffering their will on the Government. On the other, the Government who, notwithstanding serious faults of statesmanship, have made it possible for the community to cope with the emergency and who represent the tradition of centuries of ordered freedom and to resistance to all forms of tyranny.

The vehicle workers held a meeting during the first day of the strike to consider what their attitude should be toward the strike, at which was read a message from Messrs. Bromley and Cramp of the Associated Society of Locomotive Engineers and Firemen saying, "At present time not necessary to take action." That same night Mr. Thomas addressed a mass meeting of railwaymen in the huge

Albert Hall, in which he is reported to have implied that the Government tried to trap him.

Rumors were numerous during the succeeding days but there were no positive results until October 1, the fifth day, when there was a meeting at Caxton Hall convened by the executive committee of the Transport Workers' Federation. Invitations to be present had been sent to the executive committees of unions already affected or likely to be affected by the dispute (representing some 3,000,000 work-people), other than those affiliated with the Federation of Transport Workers. It was explained that this was not a conference of the federation, but a meeting with other unions for the formation of a policy.

Upon request Mr. Lloyd George received a trade-union deputation from this meeting and told it that he was "ready, if asked, to meet the executive of the National Union of Railwaymen but that in the opinion of the Government it would be quite impracticable to continue negotiations until work is resumed, as apart from other considerations, ministers who would be concerned could not possibly attempt to deal with questions involved while all their energies are devoted to carrying on the life of the nation."

On Friday, October 3, after the trade-union mediators had again interviewed the Prime Minister and reported to the National Union of Railwaymen the executives of the two railway unions paid a four hours' visit to Mr. Lloyd George, who proposed a seven-day truce while continuing negotiations, but this was not acceptable to the railwaymen unless the Government was prepared immediately to concede that the upward standardization principle should prevail. The Government was not disposed to do this and the conference broke down.

On October 4 the mediators, after a long conference with the railwaymen, paid a surprise visit to Downing Street, being received by Mr. Bonar Law in the temporary absence of the Prime Minister, and arranged to continue the conference on the following morning. For the fourth time since the beginning of the strike the railway executives with the trade-union conference intermediaries conferred with the heads of the Government at the Prime Minister's residence. This meeting lasted from 11.30 a. m. till 4.15 p. m., at which time the announcement was made that an agreement had been reached. The terms issued later were as follows:

1. Work to be resumed at once.
2. On the full resumption of work negotiations shall be continued with the understanding that they shall be completed by December 31.
3. Wages will be stabilized in the United Kingdom at their present level up to September 30, 1920. Any time after August 1, 1920, they may be reviewed in the light of the circumstances then existing.

4. No adult railwayman in Great Britain shall receive less than 51s. [\$12.41] so long as the cost of living is not less than 110 per cent above the prewar level.

5. The National Union of Railwaymen and Associated Societies of Locomotive Engineers and Firemen agree that the men shall work harmoniously with the railway servants who have remained at or returned to work and the Government and the National Union of Railwaymen and Associated Society of Locomotive Engineers and Firemen agree that no one shall be prejudiced in any way as a result of the strike.

6. The arrears of wages which have been withheld in consequence of breach of contract will be paid after resumption of work.

This strike "revealed the power of the community to meet a grave emergency courageously and without bitterness or tumult."

At the first it was evident that the real danger lay in strikes in sympathy; however the entire lack of public indorsement seemed to astonish the watching workers next in line and to suggest caution.

The surface lines in London were never interfered with. Their union was said to lack funds and to have been intimidated by the ready response of volunteers to take the places of strikers. The Government evinced a firm stand and conditions grew better each day.

The transport workers evidently felt the public pulse and decided that the only course was the moderate one, which they followed and which, through the meeting called by them, eventually brought about the final settlement.

The strike period proved a great triumph for motor-driven road transport. As one paper said, "War had left the position of motors immensely strengthened. They are doing now exactly what they were doing in war service. Also high railway fares and few trains had caused to be gotten together a great expeditionary force of motor coaches, all ready for the handling of passenger service."

As might be expected, the radical labor press heralded a "great victory" for the railwaymen, but the terms of the agreement hardly bear out these claims. It is difficult to see that these terms promise to result in conditions very much better than would have resulted from the proposal of the Government as interpreted by the Prime Minister on September 26. In fact, one paper has rather accused the Government of having engineered the strike "to take place on grounds unfavorable to the men, so that popular opinion would be aroused against them and their defeat insured, and the whole labor situation eased. A struggle representing an attack by labor on the community which ended in victory for the Government would check the tendency to vote labor and help the electoral rehabilitation of the coalition."

The less radical press was practically unanimous in rebuking the attitude of the railwaymen and in upholding the Government, though not by any means holding the Government altogether blameless for the deplorable situation which brought about huge loss to the nation.

As an aftermath of this strike a plan has just been put into operation, by the Federation of English Industries, which has for its object the pooling of resources by industries on a clearing-house model in order that manufacturers may be supplied with the materials they need in any time of stress, especially during strikes, and thus to limit unemployment at such periods. The cooperation of the British Government in this plan has been assured.

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## Report of National Civic Federation on Labor Situation in Great Britain and France.<sup>1</sup>

**A**S A result of the apparent desire on the part of many Americans for a first-hand study of present labor conditions in Great Britain and France, particularly as these conditions might throw light on or aid in solving postwar labor and social problems in this country, the Industrial Economics Department of the National Civic Federation appointed a commission to make such a study in those countries in the early part of this year.

The members of the commission who carried on the inquiry were Charles Mayer (shipping), chairman; Charles S. Barrett (farmer); Albert F. Bemis (textile manufacturer); J. Grant Forbes (contracting engineer), James W. Sullivan (typographical trade-unionist); Andrew Parker Nevin (attorney at law); E. A. Quarles, secretary.

The principal points covered in the study were the methods employed with regard to relations of employer and employee; the shop steward and shop committee systems; the results to date of the Whitley councils; and the housing problem. The report, which is in four parts, was written by three of the members of the commission, Mr. Nevin, Mr. Sullivan, and Mr. Bemis, in their positions, respectively, as representatives of the public, the labor unions, and the employers.

The plan of the study was to present conditions, from the standpoint of the different interests represented, in a broad and general way, avoiding too much detail, and was carried on with the desire to present a well-rounded view of the existing problems and conditions. In general, relations between capital and labor were found to differ widely in the different countries. In Great Britain, as trade-unionism is accepted by employers as a part of the industrial system, the problem there, in order to meet satisfactorily the need for increased production, if the country is to survive as a great industrial nation, was found to be the necessity for British employers to convince the workers that they are going to receive fair play, and, on the other hand,

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<sup>1</sup> The Labor Situation in Great Britain and France. The Commission on Foreign Inquiry of the National Civic Federation. E. P. Dutton & Co., New York, 1919. 433 pp.

to induce labor to consent to the introduction of more efficient methods. The writer for the public group found that public opinion in England generally demanded better industrial conditions, and that there is "a growing demand that the status of labor be stated in terms of a new morale of industry." He finds, however, that a development overshadowing the relations of employers and employed is that of the relation between workmen and the Government, that in an increasing degree the Government has been drawn into industrial disputes and that upon the outcome of this present phase of the situation depends the continuance or the disruption of the present political system.

The report dealing with the situation from the labor viewpoint emphasizes the complicated character of labor organizations in England and contrasts conditions and methods with trade-union organization in this country. The rise of the shop steward movement which was a protest against the roundabout and ineffective methods of the unions is compared with the centralized organization of the American Federation of Labor which was able "to offer to employers a complete union mechanism applicable to every industry throughout the country, with models of rules, regulations, and organizations for the rapidly forming unorganized working forces." The political character of the English trade-union organization is also considered by the writer to be a drawback to the strength of the movement since the party comprises many members who are not of the working class and who also represent many varieties of political opinions. He considers that the shop committee movement was a mere temporary expedient to meet emergency conditions and that it has already been proved that it will have no part in new national labor schemes. In discussing industrial democracy the writer is of the opinion that there are too many factors which enter into the successful carrying on of industry to make it either possible or advisable for the workers to have any extended share in management and that even in the most heralded example of the transmission of directive powers to the workers, that of the Renold factories at Manchester, in no point does the owner part with authority of ownership. The Whitley councils likewise show that there is no real tendency to share control and that so far they have produced but a scant crop of results. The socialistic trend of thought in the British Labor Party is believed by the writer to be entirely foreign to the aims of the American trade-unions.

In France the trade-union movement has little strength in itself, being a part of the socialist and syndicalist movement and it is stated that nothing new has resulted from the war either in the way of improved relationships between employers and employed or in introduction of new methods of cooperation.

The status of woman workers in Great Britain and the question of equal pay for equal work are discussed.

In the third part of the report the establishment of the eight-hour day is discussed as it affects the need for production caused by losses of both life and property through the war, and the writer finds that the most important field for the efforts of organized labor as well as for capital and management is in stimulating production, subject, of course, to the health and well-being of workers, and to try to bring about a common understanding by all classes of the elementary principles of industry and economics. The author finds in the establishment of the national industrial council in England the most interesting and probably most helpful development toward adjustment of industrial relations. As it is still distinctly experimental, however, he believes that in following out these ideas it is well for this country to "make haste slowly."

The concluding chapter is a summary of housing conditions in Great Britain and France, together with suggestions as to the extent to which Federal aid should be given in this country and the utilization of the existing agencies such as the Federal farm loan system. The housing shortage in this country is not to be compared with that of Great Britain and France (the latter largely in the devastated area), but it is such that the writer believes that the Federal Government should extend help and that employers, employed, and the public generally should cooperate so that America may become an example of the best accomplishment possible in housing her rapidly increasing population.

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## French Law on the Nationalization of Mines.

ON SEPTEMBER 9, 1919, the President of the French Republic signed a law which limits the period for which mining concessions will henceforth run. The former practice was to grant leases in perpetuity, while the new law limits the grants to a definite period. The new legislation also provides for participation of the State and of the workers in the profits. The law became effective on September 11, 1919, the date of its publication in the *Journal Officiel*. In form the new law is amendatory of the law of April 21, 1810. A translation of its provisions is given below.

### *Law of September 9, 1919.<sup>1</sup>*

ARTICLE 1. From the date of the promulgation of this law mining grants will only be made for a limited period and subject to participation of the State and of the employees in the profits under conditions fixed by the lease which must accompany the decree making the grant.

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<sup>1</sup> Union des Industries Métallurgiques et Minières. Document No. 1160. Paris, Sept. 25, 1919.

In the case of exploitation by the State of a discovered mineral deposit a decree issued by the Council of State (*Conseil d'État*) shall fix the boundaries of each surface holding and regulate the rights of the owner thereof to the products of the operation of the mine, and possibly also the compensation due to the discoverers. The grant may be made to a Department, a commune, by authority of law to a trade-union, and, under conditions to be fixed by a special law, to any commercial association, as well as to an individual.

On the expiration of the grant, as well as in the case of its definitive forfeiture or relinquishment, the mines revert to the State. These mines, as well as those for which in accordance with paragraph 2 of the present article no grant is made, may be operated directly by the State, or, after legal authorization, under a partnership plan in which the State shares in the profits and losses (*en régie intéressée*), or on any other plan, under the conditions determined by the model leases provided for below. They may also be returned by the State to the status of mineral deposits open to prospecting.

Mining grants made for a specified period establish real property rights and may be mortgaged as such.

ART. 2. The lease shall particularly determine—

1. The duration of the grant reckoned from January 1 following the issuance of the decree making the grant.

In the case of pit coal and lignite deposits it shall invariably be fixed at 99 years; and in the case of other mineral deposits at not less than 50 and not more than 99 years.

Grants of the same kind of mineral deposits shall all have the same duration.

2. The form of the notification, which before the beginning of the twenty-fifth year preceding the termination of the grant shall be sent by the administration to the grantee for the purpose of informing him whether or not it intends to renew the grant.

In any case the grantee shall, before the beginning of the twenty-sixth year preceding the termination of the grant, address a registered letter to the minister inquiring whether the State will exercise its right of revoking the grant.

Before the beginning of the twenty-fifth year preceding the termination of the grant, and, in case of delay on the part of the grantee in complying with the provision of the preceding paragraph, within one year after receipt of the inquiry prescribed by this paragraph, the administration shall notify the grantee of its decision. In default of such notification the grant shall be considered incontestably extended under the previous conditions for a period of 25 years from the date of the expiration of the former term.

The provisions of the two preceding paragraphs shall be applicable with the same waiting period as to further notifications and to continuance of the grant for 25 years without renewal of the lease.

3. The measures necessary in order that, in case of nonrenewal of the grant, preparatory work, operation, and maintenance work shall nevertheless be carried on in the interest of the mine up to the termination of the grant, and particularly the rules for the charging and refunding of sums spent by the grantee for improvements made with the approval of the administration during the last 25 years of the grant; the method of participation of the State in the refund; the administrative and financial conditions by which the grantee may during the last five years of the grant be compelled to execute the work considered necessary for the purpose of future operation of the mine; the method of payment for such work by the State.

4. The land, buildings, works, machinery, apparatus, and engines of all kinds which serve for the operation of the grant and constitute the fixed assets in accordance with article 8 of the law of April 21, 1810, and which in pursuance of this law must be returned to the State without compensation. The termination of the grant shall involve the annulment of all mortgage rights; the recorders of deeds must cancel these after having taken cognizance of the ministerial decision refusing renewal of the grant or declaring it forfeited.

[1794]



5. The conditions under which for the purpose of a grant the State or the new grantee may in accordance with an opinion rendered by experts take possession of the material extracted, the supplies and other movable objects as well as buildings and construction work not coming under the class designated in the preceding paragraph.

6. The conditions under which the forfeiture of the grant may be pronounced owing to nonobservance of obligations imposed on the grantee; such forfeiture may be pronounced by the minister and may be appealed to the Council of State.

If expenditures made by the former grantee have increased the intrinsic value of the mine, such grantee shall have a right to compensation.

This compensation shall be distributed among the preferred and mortgage creditors in the order of the priority of their liens.

7. The conditions under which the grant may be relinquished before its expiration.

8. The financial conditions, for the sharing by the State and by the working staff in the profits of operation. These conditions must be uniform for all grants of the same character and shall include more particularly—

(a) The rate of the annual compound interest, allowed on the capital invested in the enterprise and not refunded, over and above which the State and the staff of employees shall share in the profits;

(b) The progressive scale according to which shall be computed the share of the State and of the staff of employees;

(c) The conditions under which the participants shall divide the net assets after refund of the capital in case of liquidation or cessation of exploitation of the grant. These conditions must be so determined that the share apportioned to the participants is equal to the total of the amounts which would have annually been paid to them if all the disposable profits had been distributed.

(d) The mode of profit sharing computed on the basis of the net proceeds, among which shall be considered the profit from the exploitation of the mine comprising the proceeds of uninterrupted and accessory operation after deduction of general expenses inclusive of interest on the capital and administrative, commercial, fiscal, and general operating expenses, and after deduction of the refund of expenditures for new improvements.

9. The general conditions for the sharing in the profits of the exploitation of the grant by the entire working staff, salaried employees as well as workers, leaving to the interested parties the decision as to whether the share in the profits should be distributed to the staff individually and in what form, or whether it should be used in conformity with the law of April 26, 1917, or whether the whole share in the profits accruing to the working staff or only a part of it should be paid into the autonomous miners' fund. In the latter case the board of directors of the fund may assign these resources to a special fund provided in article 10 of the law of February 25, 1914, or to a provident fund or a fund for social solidarity in which all the miners are interested. The share of the working staff shall be allocated before the share of the State and in the amount of 25 per cent of the latter.

10. If the grantee is an association, the initial capital with which the association is to be formed as well as the conditions under which subsequent increases of the capital shall be subject to approval by the administration.

11. The conditions under which the scale of wages to be paid to workers in the mine and its auxiliary establishments shall be established, applied, and revised.

12. The special conditions of the grant which may include the establishment and functions of joint committees of employers and workers, of syndicates, joint sales or export offices, the construction or maintenance of chemical works, smelters, or blast furnaces.

ART. 3. An advisory mine council shall be established which shall comprise technical experts of the administration of mines, members of the Council of State and of the interested public administrations, mine operators, and miners nominated by their respective organizations, and members of Parliament.

The advisory council shall render opinions on the conditions of model leases and their modification.

In addition to their members designated by the minister by reason of their qualifications as experts or their present or past functions, the Senate and the Chamber of Deputies shall be represented in the advisory council by five senators and seven deputies elected every four years by the Senate and the Chamber, respectively.

A public administrative decree shall regulate the rights, detailed composition, and functions of this council.

ART. 4. Public administrative regulations shall determine the conditions for the application of the present law and fix especially—

1. The text of the model leases.
2. The extent of financial supervision to which the grants shall be subject, the conditions for the exercise of this supervision, and the powers assigned to the representatives of the State charged with this supervision.
3. The form of investigations occasioned by requests for grants and the institution of State operation; the time limit within which requests for grants shall be investigated.
4. The administrative and financial conditions to which the operation of mines by the State shall be subject.

The administrative organs charged with the management of mines operated by the State shall be subject to the same laws, taxes, and contributions of all kinds and to the same general obligations as private grantees; the obligations assumed for operation of the establishment shall be entered in their annual accounts; the refunding period of loans contracted by these organs shall in no case exceed 50 years.

ART. 5. The exploitation of mines is considered a business; this provision applies also to existing associations not formed for business purposes (*sociétés civiles*) without making it necessary for them to amend their by-laws.

ART. 6. Public administrative regulations shall determine under what conditions the present law shall be applicable to Algiers.

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## Socio-Political Provisions of the New German Constitution.

ON JULY 31, 1919, the German National Constituent Assembly in session at Weimar adopted a constitution for the new German Republic which became effective on August 11, 1919. The full text of the constitution was published in the *Reichs-Gesetzblatt* (No. 1383). The *Reichs-Arbeitsblatt*,<sup>1</sup> the monthly bulletin of the Bureau of Labor Statistics in the German Statistical Office, reprints the provisions of the constitution which deal with the social policy of the new Republic. These provisions are as follows:

ARTICLE 7. The National Government has the right of legislation on matters relating to—

9. Labor, the insurance and protection of workers and salaried employees, as well as employment offices.

<sup>1</sup> *Reichs-Arbeitsblatt*. Vol. 17, No. 8, p. 624. Berlin, Aug. 27, 1919.

10. The organization of occupational representation for the whole of Germany.
11. The care of participants in the war and their survivors.
12. Expropriation.
13. The socialization of natural resources and economic undertakings, as well as of the production, manufacture, distribution, and price regulation of economic commodities.
16. Industry and mining.
17. Insurance.

ART. 10. By means of legislation the National Government may determine guiding principles for—

4. The right of land ownership, the distribution of land, the right of settlement and homestead, the pledging of real estate, the housing system, and the distribution of the population.

ART. 12, par. 2. The National Government shall have the right to veto State laws relating to matters dealt with in No. 13 of article 7, in so far as such laws affect the common weal of the Nation.

ART. 16, par. 2. Officials, salaried employees, and workers of the national administration shall, on their request, be assigned to service in their home district, in so far as this is possible and is not contrary to considerations of their training and of service requirements.

ART. 111. All German citizens shall enjoy freedom of migration within the entire German Republic. Everybody shall have the right to sojourn or settle in any locality of Germany he may choose, to acquire real estate there, and to exercise there any gainful occupation. This right may only be restricted through national laws.

ART. 118. Within the limitations of the general laws every German citizen shall have the right of free expression of his opinion by word, in writing, print, pictorial representation or in other manner. He shall not be prevented from the exercise of this right through working or employment relations and nobody may discriminate against him if he exercises this right.

ART. 119, par. 2, sentence 2. Families with numerous children have a claim to equalizing (*ausgleichende*) care.

Maternity has a claim to the protection and care of the State.

ART. 123. All German citizens shall have the right to gather in meeting peaceably and unarmed without notifying the authorities and without special permission.

Open-air meetings may by national law be made liable to previous notification of the authorities and, in the presence of immediate danger to public safety, be forbidden.

ART. 124. All German citizens shall have the right to form societies or associations for purposes not contrary to the penal laws. This right shall not be restricted through preventive measures. These provisions are also applicable to religious societies and associations.

Every society shall have the right to acquire the character of a legal person in accordance with the provisions of the civil code. The granting of this character may not be refused to a society because it pursues a political, socio-political or religious object.

ART. 145. There shall be general compulsory attendance at school. The common school (*Volksschule*), with at least eight grades and the continuation school (*Fortbildungsschule*) with instruction up to the completion of the eighteenth year of age, shall serve as the principal means for compliance with the obligation of attending school. Instruction, and textbooks and other school materials in the common and continuation schools shall be free.

ART. 148, par. 5. Civics and manual training shall be subjects which must be taught in the schools. On leaving school every pupil shall be given a copy of the Constitution.

The system of popular education, inclusive of high schools (*Volkshochschulen*), shall be promoted by the Nation, the States, and the communes.

ART. 155. The distribution and use of the land shall be controlled by the State in such a way as to prevent its misuse and to promote the object of assuring to every German a sanitary dwelling and to all German families, especially those with numerous children, a dwelling and economic homestead (*Wohn- und Wirtschafts-heimstätte*) corresponding to their requirements. War veterans are to be specially considered in the homestead law to be enacted.

Real estate, the acquisition of which is necessary to meet housing needs, to encourage settling and bringing of land under cultivation or to promote agriculture, may be expropriated. Entailments are to be dissolved.

The working and exploitation of the land is a duty of the landowner toward the community. An increase of the value of land produced without the applying of labor or capital to the property is to be made to serve the community as a whole.

All mineral resources and all economically useful forces of nature are under the control of the State. Private rights are to be turned over to the State through legislation.

ART. 156. The National Government may through law, without prejudice to compensation, and with a proper application of the provisions covering expropriation, transfer to public ownership private economic enterprises suited for socialization. The National Government may itself take part in the administration of economic undertakings and federations, or transfer such rights to States or communes, or insure itself a dominating influence in some other way.

Furthermore, the National Government may, if this is urgently required for purposes of socialized management, combine through law economic enterprises and federations on the basis of self-administration, with the aim of insuring the cooperation of all the productive forces of the Nation, of allowing employers and workers to participate in the administration and of regulating the production, manufacture, distribution, use and prices, as well as the import and export of economic commodities according to socialistic principles.

Cooperative societies for the sale, purchase, and production of commodities and their federations shall on their request and with consideration of their constitution and peculiarities be embodied in the system of socialized management.

ART. 157. The working forces are under the special protection of the National Government. The National Government shall create uniform labor legislation.

ART. 159. The right of combination for the defense and promotion of labor and economic conditions is guaranteed to everybody and to all occupations. All agreements and measures which aim at limiting and impeding the freedom of combination are illegal.

ART. 160. Anyone in a service or working relation as salaried employee or worker shall have the right to the time off required for the exercise of his civic rights and, so far as it does not materially injure the establishment, for the exercise of public honorary offices conferred upon him. How far he shall have a claim to compensation for the time lost in this manner shall be determined by law.

ART. 161. For the purpose of conserving health and the capacity to work, of protecting maternity, and of providing against the economic effects of old age, debility, and the vicissitudes of life the National Government shall create a comprehensive system of insurance with the authoritative cooperation of the insured.

ART. 162. The National Government favors an international regulation of the legal status of the workers that aims at a general minimum measure of social rights for the whole working class of the world.

ART. 163. It is the moral duty of every German, without prejudice to his personal liberty, to use his mental and physical powers in a manner required by the welfare of the community

Every German shall be given the possibility of earning his living through economic labor. In so far as a suitable opportunity to work can not be given to him his necessary maintenance will be looked after. Details will be arranged through special national laws.

ART. 164. The independent middle class in agriculture, industry, and commerce is to be protected through legislation and administration and be guarded against overburdening and absorption.

ART. 165. The workers and salaried employees are qualified to take part with equal rights and in cooperation with the employers in the regulation of wage and working conditions, as well as to cooperate in the entire economic development of the productive forces. The organizations on both sides and the agreements concluded by them are recognized.

The workers and salaried employees shall be given legal representation in the works councils (*Betriebsarbeiterräten*) as well as in the district workers' councils (*Bezirksarbeiterräten*) grouped according to economic districts, and in a national workers' council (*Reichsarbeitererrat*) for the purpose of looking after their social and economic interests.

The district workers' council and the national workers' council shall meet together with the representatives of the employers and of other interested circles of the population in district economic councils (*Bezirkswirtschaftsräten*) and a national economic council (*Reichswirtschaftsrat*) for the purpose of carrying out the joint economic tasks and for cooperation in the putting into effect of the socialization laws. The district economic councils and the national economic council shall be formed in a manner that will provide for proper representation therein of all the important occupational groups according to their economic and social importance.

Drafts of socio-political and economic laws of fundamental importance shall before their presentation to the Reichstag be submitted by the National Government to the national economic council for its opinion. The national council itself has the right to propose such bills. If the National Government does not approve of a bill proposed by the national economic council it shall nevertheless introduce the bill in the Reichstag with an exposition of its standpoint. The national economic council may have its bills represented by one of its members before the Reichstag.

In the fields of activity assigned to them the workers and economic councils may have conferred upon them the powers of control and administration.

The organization and the duties of the workers' and economic councils as well as their relations to other social self-administrative bodies shall exclusively be regulated by the National Government.

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## Report on Nationalization of the New Zealand Coal Industry.<sup>1</sup>

ACCORDING to an account in the British (Government) Board of Trade Journal, the New Zealand Board of Trade was, on September 10, 1918, authorized by warrant to inquire into and report upon the coal industry of the Dominion. Most of the evidence was taken at closed hearings and will not be printed. The report of the board, dated May 20, 1919, recommends a system of national control rather than the national purchase and direct State management of the coal mines.

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<sup>1</sup> British (Government) Board of Trade Journal, London.

It is pointed out that the coal mining industry of New Zealand is not a large one, the record output being in 1914, when only 2,275,614 tons were mined. The estimate for 1918 is only 2,034,250 tons. The total number of employees in 1914 was 4,734. By 1918 the number had decreased by 16 per cent, but the output per man had increased above 10 per cent. During the war the average output was 720 tons per man per year as compared with an average of 654 tons for the previous four years. The output per underground worker is said to be higher than in most other countries.

Although the board found that the coal-mining industry had not exploited the public during the war, and that the price of coal had not been unduly high, it did find that unless certain improvements were made, particularly in the organization of this industry, the relative price of coal would continue to rise, and probably rise rapidly. Some of the factors having an adverse influence upon coal mining were said to be stoppages of work and disturbance of good feeling through industrial unrest, the waste of resources due to a lack of markets (in some cases a permanent lack) for part of the output, and the difficulty of providing such a social environment as will permanently attract a good class of workers. In order to improve conditions generally, the board concluded after careful consideration that the essential need was some form of nationalization, but that this change should not take the form of State purchase and direct management of the mines. Instead it urged the combining of the undoubted advantages of centralized policy and management with those that may reasonably be expected to result from representation of labor and of consumers (through the State) on the controlling body.

In order to achieve this result, the board recommended the immediate institution of a Dominion coal board (for development and conservation), to consist of five members—two representatives each of the existing coal companies and the employees of these companies, and one representative of the Crown, who should be president. The shareholders of the coal companies should elect their representatives in the same manner as they elect their directors, and the workers should determine their system of election. Each representative should serve two years, and be eligible for reelection.

The aims and functions of the coal board were declared to be as follows:

- (1) The introduction of economies in the cost of producing the output of coal.
- (2) The conservation of the coal resources of the Dominion, with due regard to the most equitable distribution of the available supplies as between present and future needs; the systematic and easy development and expansion of the industry to satisfy the growing requirements of the community.
- (3) The concentration of the industry at any given time in the most profitable fields.
- (4) The removal of the causes of labor unrest. Subsidiary to this is the institution of proper housing for mine workers.

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(5) The inauguration of an efficient system of distribution.

(6) The regulation of coal prices in the interests of consumers.

To these ends the board should be empowered to take over the existing coal companies with their assets and liabilities at valuation, and to issue stock to the existing shareholders in exchange for the shares held by them at the average market value of such shares for the period of the three years immediately preceding such exchange; such average market value to be calculated and determined by a specially appointed commission. Existing company law should apply to the Dominion Coal Board, but it should be modified wherever required to permit the board to exercise the functions necessary to achieve the objects in view. Stockholders should be guaranteed a pure interest rate of 4 per cent on their paid-up capital. From the balance left, after payment of this rate, working and maintenance expenses, and making provision for renewals and depreciation and reasonable development, there should be paid:

(1) A risk rate to stockholders, and

(2) Bonuses to stockholders and employees in the proportions, respectively, of the amount of dividend calculated at the pure interest and risk rates combined and the total amount of the pay roll of the board.

The board should also take over, administer, and develop the existing coal mines of the State. The industry should be subject to taxation and rating in common with all other industries.

A further recommendation of the Board of Trade is that the coal board be authorized to impose a levy of 3d. (6 cents) per ton on all coal mined in the Dominion, and, in addition, a duty of 3d. per ton on all imported coal, for the purpose of providing interest and sinking-fund charges for loans to build houses and provide suitable means of recreation for mine workers on recognized town-planning lines.

Other features of the reorganization advocated by the board are that the workers be given a voice in the management of the business through the institution of works committees and joint district committees or councils, and that the Dominion Coal Board be empowered to undertake the business of distributing coal, including its carriage by sea. At the same time, however, the necessity of maintaining so far as possible the principle of competition as a price regulator is recognized and it is urged that the importation and use of foreign coal should not be restricted. In fact, it should be the duty of the coal board to devise a system of healthy regulated competition among its mines, study foreign improvements in mining methods with a view to introducing them into New Zealand, and, in general, do all in its power to keep the capital, labor, and management at the highest degree of efficiency.

## LABOR MOBILITY.

### Employment Policies and Labor Mobility in a California Sugar Refinery.

By PAUL F. BRISSENDEN.

THE sugar refinery here reported is establishment No. 7 of the group of California concerns reported in the MONTHLY LABOR REVIEW for February, 1919.<sup>1</sup> This article presents a more detailed analysis of the extent and distribution of turnover, among the different departments and occupations and between the sexes. A brief description of the labor policy and employment system of the establishment is also given. The method of treatment is, in general, similar to that followed in previously published articles dealing with two other establishments in this same California group.<sup>2</sup> Unfortunately, however, the abnormal circumstances of the war period, to which the figures refer, make practically meaningless any comparison of the industrial stability of male and female employees, since during such a period the male separation rate is bound to be much higher and the female separation rate likely to be much lower than would normally be the case for either. Not only was this true of this period but there was also extensive substitution of female for male labor, many occupations filled exclusively by males in June of 1917 being filled predominantly by females a year later. In this establishment, therefore, despite the fact that (with an unusually high accession rate for women) there would be every prospect of finding a very low separation rate for women, the length-of-service distribution of women on the pay roll at the end of the year<sup>3</sup> (May 31, 1918) shows that over 90 per cent of the active female employees had served less than one year. It will be quite evident all along that the sex classifications of accession and separation rates show primarily the effect of war-time changes in industry, and that they prove nothing as to the relative normal industrial stability of male and female wage earners.

<sup>1</sup> "Labor turnover in the San Francisco Bay region," MONTHLY LABOR REVIEW, U. S. Bureau of Labor Statistics, February, 1919, pp. 45-62. Other articles on labor turnover have appeared in the following issues of the REVIEW: June and October, 1918; January, February, March, April, May, September, and November, 1919.

<sup>2</sup> "Labor policies and labor turnover in the California oil-refining industry," MONTHLY LABOR REVIEW, April, 1919, pp. 23-52; "Labor turnover among employees of a California copper mining and smelting company," MONTHLY LABOR REVIEW, May, 1919, pp. 63-84.

<sup>3</sup> This service classification of employees on the pay roll at the end of the year will be referred to in this paper as the "active service distribution." The same classification when put on a rate basis will be called the "active service rate." For employees leaving during the year the corresponding phrases are "separation service distribution" and "separation service rate."



## Employment System and Labor Policy.

As was pointed out in the summary report already referred to, the employment machinery of this sugar refinery is rather completely centralized.<sup>1</sup> An employment bureau is maintained by the company. In charge of this bureau is an employment manager who is responsible in matters of employment policy directly to the plant manager and who has full authority in the matter of hiring. The foreman's authority in the matter of discharge is slightly abridged, however, by the requirement of the plant manager's approval. All records<sup>2</sup> (of accession, transfer, promotion, and separation) "clear" through the employment bureau, where all job seekers must apply and where they are interviewed by the employment manager or by one of his assistants. All applicants who are considered at all are required to fill out application forms, which are used as individual employment records after they are hired. For some jobs the applicant is referred to the particular foreman interested for an interview, before being employed. In such cases the foreman's assent must be secured before final action is taken.

The establishment is run as an open shop, all properly qualified applicants being hired without regard to affiliation or nonaffiliation with labor organizations. Evidently only a very small minority of the labor force are members of labor organizations. There is no collective bargaining between the company and its employees, all workers being hired on an individual contract basis. There is no official rule or system for the hearing or adjustment of employees' grievances. In practice, however, it has been customary to present grievances to the plant manager. This official gives careful attention to any complaints brought before him and employees are expected to take advantage of this custom. As already noted all discharges are subject to the plant manager's approval. No foreman may put through a discharge slip until it has been reviewed and approved by the plant manager. The latter official states that he stops, or commutes to "lay-off" or reinstatement, 50 per cent of all discharge slips coming to him. The same official states that almost no employees are laid off for lack of work. But there are evidently many separations due to lack of work of the particular kind at which the employee has been engaged. These are listed\* as lay-offs in this article. The company's statement refers to lack of work of any kind. It is quite evident from the manager's statement that alternative work is always available and is offered (at "alternative" rates of pay, of course), and that no employees need leave the company's employ,

<sup>1</sup> MONTHLY LABOR REVIEW, U. S. Bureau of Labor Statistics, February, 1919, p. 46.

\*With the partial exception of records for the warehouse division.

since they can at least continue in service at other work—as roustabouts, for example.

Employees work eight hours a day on a three-shift arrangement. It is believed that the general level of wages at this establishment is rather low as compared with wages paid for similar work at other Pacific coast points. There seems to be little doubt that it is the wage schedule which more than anything else affects the stability of the refinery work force. It must be said that almost all the other elements in the local labor situation are distinctly favorable and probably above the average and no doubt this fact to some extent offsets the relatively low wage level.

The company has so far undertaken no special system of training employees. Its work in this respect is limited to such informal "training" as the inexperienced worker usually gets from fellow employees. Foremen in all departments are encouraged by the management to take special pains with the instruction of new hands. The company reports that it is planning more systematic work along this line. A safety engineer is employed by the company and made responsible for accident cases and the maintenance of safety standards. There is no regular company physician. In case of sickness employees are sent to one or the other of two specially designated physicians in the community.

The refinery is located in a small town which until 1917 was amply equipped with housing facilities for its industrial population. At the present time, however, these facilities are very inadequate and, although the transportation facilities are fairly good, making it possible for a good many of the refinery employees to commute from outside points, there still remains a large unsatisfied demand for house room in the local community. The company has for some years maintained a large hotel adjacent to the refinery. This hotel is reserved primarily for employees, to whom very reasonable rates are made for rooms and meals. The company has also recently completed a number of cottages for workmen with families, as well as a dormitory for single men, and is planning large extensions in its housing program.

Sanitary conditions throughout the plant are good. Suction exhaust devices have been installed for the removal of dust. The factory rooms, especially the newer ones, are well ventilated and lighted. Some of the working places are very unpleasant and uncomfortable on account of the heat or moisture, or both, but this seems to be in great degree unavoidable because of the nature of the work. For example, in the "centrifugal station" and boiler rooms it is exceedingly hot, and many employees give this fact as the reason for quitting. In some other places, the "raw-bag laundry," for example, it is very wet, and this is probably a factor in increasing the turnover.

Drinking water is provided in various parts of the plant through bubblers. Very attractive toilet and rest rooms are provided for women employees. The accommodations for men are somewhat less adequate. Wash rooms are provided for all employees, not only in the refinery, but also in the company hotel already referred to, and lockers are provided for all employees in the plant. With the exception of the one at the hotel there are no employees' lunch rooms. The company reports that it is planning to install them.

### Nature of Separations and Extent of Turnover.

The "percentage of turnover" for the period covered in this article—the year ending May 31, 1918—is found by dividing the total number of separations during the period by the average number of equivalent full-year workers for the period and multiplying the quotient by 100. This gives the rate of separation per 100 equivalent full-year workers. Inasmuch as the normal or standard work force underwent considerable expansion during the year reported it follows that all of the separations were replaced and that the separation rate is therefore identical with the replacement rate. Expressed in terms of replacement, then, the "turnover percentages" reported in these pages are rates of replacement per 100 equivalent full-year workers. The average number of full-year workers, based on daily attendance records for the year ending May 31, 1918, including both sexes, was 1,130. The changes in the working force during the year, by sex and department, are indicated in Table 1, which gives the average number of full-time workers for the months ending May 31, 1917, and May 31, 1918:

TABLE 1.—CHANGES IN THE WORKING FORCE DURING THE YEAR, BY SEX AND DEPARTMENT.

Department.	Number of full-time workers for month ending—				Per cent of increase (+) or decrease (-).	
	May 31, 1917.		May 31, 1918.			
	Males.	Females.	Males.	Females.	Males.	Females.
Sugar boiling.....	26	.....	25	.....	- 4	.....
Steam boiling and refinery mechanics.....	43	.....	58	.....	+35	.....
Centrifugals.....	91	.....	107	8	+18	.....
Char and mechanical filtration.....	99	.....	89	7	-10	.....
Char house.....	33	.....	33	.....	.....	.....
Container.....	18	23	16	38	-11	+ 65
Cubes.....	10	.....	3	30	-70	.....
Operation, repair, and upkeep.....	129	.....	193	.....	+50	.....
Pack room.....	75	.....	102	24	+36	.....
Powder mill.....	9	.....	8	.....	-11	.....
Raw-bag laundry.....	18	.....	9	9	-50	.....
Sanitation (cleaners).....	17	.....	29	.....	+71	.....
Small pack.....	5	22	1	21	-80	- 5
Washing station.....	37	.....	39	.....	+ 5	.....
Clerical and administrative.....	15	2	14	4	- 7	+100
Laborers.....	279	.....	253	.....	- 9	.....
Miscellaneous.....	42	.....	61	7	+45	.....
Total.....	946	47	1,040	148	+10	+215

Although there was a decrease during the year in the number of employees in some departments, there was a marked increase in the force as a whole. The number of male employees increased 10 per cent and of female employees 215 per cent. In some departments women were employed to replace men; in others, as in the pack room, they were employed to increase the working force.

The extent of the labor "flow" during the year and the nature of the separations are shown for each sex and for all employees in Table 2.

TABLE 2.—NUMBER OF ACCESSIONS AND SEPARATIONS, RATES PER 1,000 FULL-YEAR WORKERS, AND PER CENT OF TURNOVER, FOR THE YEAR ENDING MAY 31, 1918, BY SEX.

Sex.	Number of full-year workers. <sup>1</sup>	Accessions during year.	Classified separations.					Labor flux. <sup>2</sup>	"Percent of turnover."
			Discharged.	Laid off.	Military service.	Left voluntarily.	Total.		
<i>Number.</i>									
Males.....	1,030	3,322	334	53	88	2,043	2,518	5,840	244.5
Females.....	100	244	4	33	.....	26	63	307	63.0
All employees.....	<sup>3</sup> 1,130	<sup>4</sup> 3,566	338	86	88	2,069	<sup>5</sup> 2,581	6,147	228.4
<i>Per cent distribution of separations.</i>									
Males.....	.....	.....	13	2	3	81	100	.....	.....
Females.....	.....	.....	6	52	.....	41	100	.....	.....
All employees.....	.....	.....	13	3	3	80	100	.....	.....
<i>Annual rate per 1,000 full-year workers.</i>									
Males.....	1,030	3,225	324	50	85	1,983	2,445	5,670	.....
Females.....	100	2,440	40	330	.....	260	630	3,070	.....
All employees.....	1,130	3,156	299	76	78	1,831	2,284	5,440	.....

<sup>1</sup> Number of full-year workers for each sex is computed from the total (1,130) by distributing it according to the sex proportions indicated in Table 1, as follows:  $\frac{946+1,040}{2}=993$ , mean number of males, and  $\frac{47+148}{2}=97.5$ , mean number of females.

<sup>2</sup> Sum of accessions and separations.

<sup>3</sup> Not including 129 full-year workers constituting warehouse complement.

<sup>4</sup> Not including employees hired in warehouse department.

<sup>5</sup> Not including 430 warehouse separations.

The separation rate per 1,000 full-year workers in the plant as a whole was 2,284. The rate was 2,445 for males and 630 for females. It would appear, therefore, to have been about four times as heavy for males as for females. The accession rate for men was 3,225 and for women 2,440. The hiring rate for males is, therefore, only about 33 per cent greater than it is for females. It is evident that both accessions and separations must be taken into consideration in comparing the stability of different groups. The sum of the accession and separation rates is suggested as being, perhaps, the best single standard of measurement. This may be called the "flux rate," inasmuch as it is a total rate of flow, without regard to its direction. It is evident from Table 2 that the total flux rate for this refinery is 5,440 per 1,000 full-year workers. The male flux rate is 5,670. The female rate is

3,070. The last two numbers indicate the relative mobility of male and female labor in this establishment during the year studied. The abnormal industrial conditions which prevailed are obviously the primary cause of this difference between the sexes. It was a year during which women were very largely being introduced into the sugar-refining industry. They would consequently not be expected to show such high mobility as under ordinary circumstances. For men, on the contrary, the mobility would be abnormally high.

It will be seen from the figures of Table 2 that it was necessary, in order to maintain the work force of this refinery, to hire 3,566 employees during the year, or 3,156 employees for each 1,000 equivalent full-year workers employed. This was necessary partly to build up the force but chiefly for the reason that 2,581 employees left, or 2,284 per 1,000 full-year workers employed. An inspection of the percentage distribution figures indicates that 80 per cent of all leaving left voluntarily. Among female employees, however, less than half of the few who did leave left voluntarily. Thirty-three out of 63, or 52 per cent of them, were laid off because of lack of work at the particular job at which they were engaged. Thirteen per cent of the males and 6 per cent of the females who left were discharged. Only 2 per cent of the males were laid off. Three per cent entered military service.

The rate figures show much better than percentage distribution figures the relative extent of the different kinds of separations among male and female employees. From them it appears that the quitting rate for males was over seven times as high as the quitting rate for females. For females the quitting rate was greatly exceeded by the lay-off rate, which was over six times as high as the lay-off rate for males. The discharge rate for males, on the other hand, was eight times as high as the discharge rate for females.

In Table 3 the material presented in Table 2 is classified by departments. It shows for each of the 17 refinery departments the number and the rate per 1,000 equivalent full-year workers, of accessions during the year, and of separations for each classified cause.

The accession rates and the total separation (that is, the replacement, or "turnover") rates show that the greatest instability is to be charged up to the following departments: Steam boiler and refinery mechanics; operation, repairs, and upkeep (largely common labor); containers, and cubes. The highest stability appears to have been in the following departments: Clerical and administrative; miscellaneous; raw-bag laundry, and small pack. The unexpectedly light turnover in the raw-bag laundry, which is one of the more unpleasant refinery work places, is explained by the fact that despite the hot, wet work place the work is easy and also by the fact that positions in this department are filled largely by transfer of old employees from other departments.

TABLE 3.—NUMBER OF ACCESSIONS AND SEPARATIONS, RATES PER 1,000 FULL-YEAR WORKERS, AND PER CENT OF TURNOVER, FOR THE YEAR ENDING MAY 31, 1918, BY DEPARTMENTS.

Department.	Number of full-year workers.	Accessions during year.		Classified separations.								"Per cent of turnover."	
				Discharged.		Laid off.		Military service.	Left voluntarily.		Total.		
		M.	F.	M.	F.	M.	F.		M.	F.	M.		F.
		<i>Number.</i>											
Sugar boiling.....	25	64	.....	1	.....	2	.....	2	30	.....	35	.....	140
Steam boiler and refinery mechanics.....	58	295	.....	32	.....	10	.....	5	201	.....	248	.....	428
Centrifugals.....	104	192	.....	17	.....	.....	.....	10	106	.....	133	.....	128
Char and mechanical filtration.	100	306	.....	17	.....	9	.....	15	194	.....	235	.....	235
Char house.....	32	97	.....	6	.....	.....	.....	1	59	.....	66	.....	206
Containers.....	47	178	123	14	3	6	17	3	104	9	127	29	332
Cubes.....	19	44	72	4	.....	1	5	.....	25	15	30	20	263
Operating, repairs, and upkeep	203	1,055	.....	160	.....	9	.....	24	634	.....	827	.....	407
Pack room.....	88	277	17	22	1	2	5	9	156	1	189	7	223
Powder mill.....	9	25	.....	3	.....	.....	.....	2	14	.....	19	.....	211
Raw-bag laundry.....	18	20	11	1	.....	3	.....	2	12	1	13	4	94
Sanitation.....	26	61	.....	8	.....	2	.....	2	37	.....	49	.....	188
Small pack.....	23	30	13	3	.....	3	.....	.....	16	.....	19	3	96
Washing station.....	38	96	.....	3	.....	.....	.....	3	61	.....	67	.....	176
Clerical and administrative.....	18	16	2	1	.....	.....	.....	1	6	.....	8	.....	44
Laborers.....	256	497	.....	37	.....	12	.....	8	344	.....	401	.....	157
Miscellaneous.....	66	69	6	5	.....	.....	.....	3	44	.....	52	.....	79
Total <sup>1</sup> .....	<sup>2</sup> 1,130	3,322	244	334	4	53	33	88	2,043	26	<sup>3</sup> 2,518	63	228
		<i>Annual rate per 1,000 full-year workers.</i>											
Sugar boiling.....	25	2,560	.....	40	.....	80	.....	80	1,200	.....	1,400	.....	.....
Steam boiler and refinery mechanics.....	58	5,086	.....	552	.....	172	.....	86	3,466	.....	4,276	.....	.....
Centrifugals.....	104	1,846	.....	163	.....	.....	.....	96	1,019	.....	1,279	.....	.....
Char and mechanical filtration.	100	3,060	.....	170	.....	90	.....	150	1,940	.....	2,350	.....	.....
Char house.....	32	3,031	.....	188	.....	.....	.....	31	1,844	.....	2,063	.....	.....
Containers.....	47	6,404	.....	362	.....	489	.....	64	2,404	.....	3,319	.....	.....
Cubes.....	19	6,105	.....	211	.....	316	.....	.....	2,105	.....	2,632	.....	.....
Operating, repairs, and upkeep	203	5,197	.....	788	.....	44	.....	118	3,123	.....	4,074	.....	.....
Pack room.....	88	3,341	.....	261	.....	80	.....	102	1,784	.....	2,227	.....	.....
Powder mill.....	9	2,778	.....	333	.....	.....	.....	222	1,556	.....	2,111	.....	.....
Raw-bag laundry.....	18	1,722	.....	56	.....	167	.....	.....	722	.....	944	.....	.....
Sanitation.....	26	2,346	.....	308	.....	77	.....	77	1,423	.....	1,885	.....	.....
Small pack.....	23	1,870	.....	130	.....	130	.....	.....	696	.....	957	.....	.....
Washing station.....	38	2,526	.....	79	.....	.....	.....	79	1,605	.....	1,763	.....	.....
Clerical and administrative.....	18	1,000	.....	956	.....	.....	.....	56	333	.....	444	.....	.....
Laborers.....	256	1,941	.....	145	.....	47	.....	31	1,344	.....	1,566	.....	.....
Miscellaneous.....	66	1,136	.....	76	.....	.....	.....	45	667	.....	788	.....	.....
Total.....	1,130	3,156	.....	299	.....	76	.....	78	1,831	.....	2,284	.....	.....

<sup>1</sup> Not including employment figures for warehouse.<sup>2</sup> Not including 129 full-year workers constituting warehouse force.<sup>3</sup> Not including 430 warehouse separations.

### Length-of-Service Records.

In Table 4 are shown, for each department or occupation group, the number of employees on the pay roll at the end of the year ("active" employees) and the number who left during the year, ("separated" employees) who had served different periods from one week or less up to over five years. The table shows the distribution, by length of service, of the 1,450 active and the 2,581 separated employees for each department or occupation group and for the whole working force. The lower half of the table gives the number per thousand of those on the pay roll, and of those separated, for each department and for each length-of-service period. These "serv-

ice rates" are computed by using as a base the equivalent number of full-year employees in each department and in the plant as a whole for the entire year ending May 31, 1918. For example, in the sugar-boiling department the number on the pay roll at the end of the year was 46; the equivalent number of full-year workers throughout the year was 25. Dividing 5 (the number who had served one week or less) by 25 and multiplying by 1,000, we get 200, which is the number of sugar boilers (on the pay roll at the end of the year) in each thousand equivalent full-year sugar boilers, who had served one week or less. This rate per thousand workers employed as compared with the average number of full-year workers for the year may be called the "active service rate." The total active service rate (1,840 for sugar boilers) is subdivided into separate rates for each of the classified service periods. These service period rates and the total active service rate are computed, of course, in exactly the same way. In three departments or occupation groups the working force at the end of the year was smaller than the average number of full-year workers for the year, namely, the centrifugals, raw-bag laundry, and laborers, the rates for these being 981, 944, and 484 per 1,000 full-year workers, respectively. The "active service rate" for the laborer group indicates that by readjustments in the working force, the plant was able to continue operations at the end of the year with less than half the average number of laborers carried throughout the year. This probably means that occupations which were formerly designated as common labor came to be dignified by some more important sounding name carrying a larger wage so as to induce the workers to stay with the plant. On the other hand, the "active service rate" in the containers department was 2,830, and in the cubes department 2,579, indicating an increase in the working force of 2.8 times, and 2.6 times, respectively.

The "separation service rates" are computed in the same way as the "active service rates" by dividing the number of separations for each department and each length-of-service period by the average number of full-year jobs throughout the year and multiplying by 1,000. The "separation service rates" exactly correspond with the "active service rates" except that they refer to those employees who have left during a specified period instead of, like the "active service rates," to those on the pay roll on some given day. They are both service rates, as the phrase in each case indicates. The highest separation service (or "turnover"<sup>1</sup>) rates were for steam boiler and refinery mechanics, operating, repairs, and upkeep, and containers, being 4,276, 4,073, and 3,319 per 1,000 full-year workers, respectively; the lowest were for clerical and administrative employees, raw-bag laundry, and small pack, being 444, 944, and 957 per 1,000 full-year workers, respectively.

<sup>1</sup> In the commonly accepted sense of rate of separation.

TABLE 4.—NUMBER AND ANNUAL RATE PER 1000 FULL-YEAR WORKERS OF ACTIVE AND SEPARATED EMPLOYEES WHO HAD WORKED SPECIFIED PERIODS OF TIME, BY DEPARTMENTS.

Department.	Number of full-year workers.	Employees on pay roll at end of year (active employees) who had served continuously—										Separated employees who had served continuously—												
		One wk. and under.	Over 1 wk. to 2 wks.	Over 2 wks. to 1 mo.	Over 1 mo. to 3 mos.	Over 3 mos. to 6 mos.	Over 6 mos. to 1 yr.	Over 1 yr. to 2 yrs.	Over 2 yrs. to 3 yrs.	Over 3 yrs. to 5 yrs.	Over 5 yrs.	Total.	One wk. and under.	Over 1 wk. to 2 wks.	Over 2 wks. to 1 mo.	Over 1 mo. to 3 mos.	Over 3 mos. to 6 mos.	Over 6 mos. to 1 yr.	Over 1 yr. to 2 yrs.	Over 2 yrs. to 3 yrs.	Over 3 yrs. to 5 yrs.	Over 5 yrs.	Total.	
		<i>Number.</i>																						
Sugar boiling.....	25	5	5	3	5	6	4	7	2	3	6	46	3	4	7	9	4	.....	4	.....	2	2	35	
Steam boiler and refinery mechanics.....	58	2	2	6	13	16	32	10	7	7	14	15	115	50	39	54	46	23	18	11	4	1	2	248
Centrifugals.....	104	20	2	8	19	9	10	10	3	5	16	102	26	12	26	30	15	11	4	.....	7	2	133	
Char and mechanical filtration.....	100	6	3	15	25	13	25	17	3	9	11	127	74	24	32	48	17	24	10	1	1	4	235	
Char house.....	32	2	2	5	8	8	10	2	2	7	3	47	26	5	15	11	2	3	2	2	2	2	66	
Containers.....	47	6	6	19	39	23	23	7	1	1	6	133	32	23	19	35	16	12	8	2	5	4	156	
Cubes.....	19	6	7	7	7	12	3	3	.....	1	1	49	15	7	14	3	3	1	.....	.....	.....	.....	50	
Operating, repairs, and upkeep.....	203	39	10	37	75	42	52	28	9	11	19	322	161	111	177	246	71	37	13	2	3	6	827	
Pack room.....	88	18	7	14	29	25	15	11	6	7	11	143	50	31	25	53	18	9	4	2	3	1	196	
Powder mill.....	9	2	1	.....	5	3	2	.....	1	1	1	16	3	3	4	1	1	3	1	1	1	1	19	
Raw-bag laundry.....	18	1	.....	1	6	5	1	.....	3	1	1	17	3	.....	5	6	2	1	.....	.....	.....	.....	17	
Sanitation.....	26	3	4	8	6	3	3	7	2	2	2	40	8	6	9	12	7	3	3	1	.....	.....	49	
Small pack.....	23	2	.....	3	8	3	3	2	3	2	1	24	1	1	2	4	3	2	3	2	3	1	22	
Washing station.....	38	4	2	7	5	5	4	5	2	2	5	41	15	12	13	13	5	3	3	.....	2	1	67	
Clerical and administrative.....	18	2	.....	2	4	5	4	3	2	7	29	2	1	3	1	.....	.....	.....	.....	.....	.....	.....	8	
Laborers.....	256	9	6	15	20	19	33	20	1	.....	1	124	97	65	76	100	41	17	4	.....	.....	.....	401	
Miscellaneous.....	66	3	1	10	10	11	15	9	3	3	10	75	6	3	12	12	9	6	1	1	.....	2	52	
Total.....	1,130	128	56	155	277	212	242	142	48	75	115	1,450	570	346	485	641	240	153	72	16	30	28	2,581	
<i>Annual rate per 1,000 full-year workers.</i>																								
Sugar boiling.....	25	200	200	120	200	240	160	280	80	120	240	1,840	120	160	280	360	160	.....	160	.....	80	80	1,400	
Steam boiler and refinery mechanics.....	58	.....	34	103	224	276	552	172	121	241	259	1,983	862	672	931	793	397	310	190	69	17	34	4,275	
Centrifugals.....	104	192	19	77	183	87	96	96	29	48	154	981	250	115	250	288	144	106	38	.....	67	19	1,279	
Char and mechanical filtration.....	100	60	30	150	250	130	250	170	30	90	110	1,270	740	240	320	480	170	240	100	10	10	40	2,350	
Char house.....	32	63	.....	156	250	250	313	63	63	219	94	1,469	813	156	469	344	63	94	63	.....	63	.....	2,033	
Containers.....	47	128	128	404	830	489	489	149	21	64	128	2,830	681	489	404	745	340	255	170	43	106	85	3,319	
Miscellaneous.....	19	316	368	368	368	632	263	158	.....	53	53	2,579	789	368	368	737	158	158	53	.....	.....	.....	2,632	

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Operating, repairs, and upkeep.....	203	192	49	182	369	207	256	138	44	54	94	1,586	793	547	872	1,212	350	182	64	10	15	30	4,074
Pack room.....	88	204	80	159	330	284	170	125	68	80	125	1,625	568	352	284	602	205	102	45	23	34	11	2,227
Powder mill.....	9	222	111	.....	556	333	222	.....	111	111	111	1,778	333	333	444	111	111	333	111	111	111	111	2,111
Raw-bag laundry.....	18	56	.....	56	333	278	56	.....	167	.....	.....	944	167	.....	278	333	111	56	.....	.....	.....	.....	944
Sanitation.....	26	115	153	308	231	115	115	269	77	77	77	1,538	308	231	347	463	269	115	115	38	.....	.....	1,885
Small pack.....	23	87	.....	.....	130	348	130	87	130	87	43	1,043	43	43	87	174	130	87	130	87	130	43	957
Washing station.....	38	105	53	184	132	132	105	132	53	53	132	1,079	395	316	342	342	132	79	79	.....	53	26	1,763
Clerical and administrative.....	18	111	.....	.....	111	222	278	222	167	111	389	1,611	111	56	167	56	.....	.....	.....	.....	.....	56	444
Laborers.....	256	35	23	59	78	74	129	78	4	.....	4	484	379	254	297	391	160	66	16	.....	.....	4	1,566
Miscellaneous.....	66	45	15	152	152	167	227	136	45	45	152	1,136	91	45	182	182	136	91	15	15	.....	30	788
Total.....	1,130	113	50	137	245	188	214	126	42	66	102	1,283	504	306	429	567	212	135	64	14	27	25	2,284

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There is a considerable difference, in all departments, between the service distribution rate figures for active employees and the corresponding figures for separated employees. This difference is of considerable importance; for the extent to which the separation service rates for the various length-of-service groups exceed the service rates for those in active service for corresponding periods may be fairly said to measure the extent of unnecessary and avoidable turnover in the various department groups. This statement obviously requires further elucidation. Imagine the labor flow in and out of an industrial establishment reduced to the relatively small volume of what may be called absolutely unavoidable turnover. Assume further that the concern is neither increasing nor decreasing the size of its plant but is simply replacing men obliged to leave for such necessary causes as sickness, death, moving out of town, etc. In such circumstances the separation rates would be no higher, and might even be lower, than the corresponding active service distribution rates for the various length-of-service periods. Moreover the distribution, as between the classified length-of-service periods, would show a fairly close parallel between the rate figures for active and those for separated groups of employees. That is to say, the separation service rate in the one-week-and-under period would be very nearly the same as the active service rate for the same period. There would be no heavy bunching of high separation service rates in the short-service groups without a similar bunching of active service rates in those groups. If this is so it must therefore follow, as already stated, that the extent to which (in the average concern, where there is much unnecessary turnover) the separation rates for the various length-of-service groups exceed the corresponding active service rates may be taken to measure the extent of unnecessary and avoidable turnover in the concern as a whole and in its several departments. This does not mean that the short service groups of active employees are more unstable than the long service groups. The fact that a certain proportion of the active employees had on the day of the inquiry worked under one week of course signifies nothing as to their stability. Some may stick to their jobs for months or years; others may quit the following week. The point here made is that if the rate of labor flow in any plant should by any chance be found to be somewhere near an irreducible minimum—in the neighborhood, say, of 100 per thousand full-year workers—it would also be found that the service-period distribution of the rates, as well as their general level in corresponding service groups, would be about the same among employees on the pay roll on any given date as among those who had left during, say, the year ending on that date. If in any particular concern there appeared no such rough correspondence between the rate of

separation and the rate of active service distribution, it would follow that the labor flow in that concern must be abnormally heavy, the extent of this undue mobility being roughly measured, as already stated, by the excess of the separation rates in the various service groups over the corresponding active service rates.

An inspection from this point of view of the rates per thousand given in Table 4 indicates that there are abnormally heavy separation rates in the short service groups and at the same time unusually wide variations between these rates and the active service rates shown in the lower left-hand side of the table. For example among steam boiler and refinery mechanics the total separation rate is 4,276. Of this rate, 862 is the rate attributable to separating employees who had served under one week. This high separation service rate for the minimum service period is especially significant in view of the fact that of the 115 employees in this group at the end of the year not one had served under one week, only 2 had served between one and two weeks, and only 6 had served between two weeks and one month. Similarly, taking the figures for the operating, repairs, and upkeep department, which includes a good deal of common labor, it will be noted that the separation service rates for the four shortest time periods are 793, 547, 872, and 1,212 per thousand full-year workers, whereas among employees in this group who were on the pay roll at the end of the year the corresponding rates are 192, 49, 182, and 369, respectively, per thousand full-year workers.

The range of rates for the two sexes and in the different service groups for both employees on the pay roll at the end of the year and those separated during the year is brought out more clearly in Table 5, in which the totals of the preceding table are subdivided according to sex. The table shows for the working force as a whole and for each sex the number, per cent distribution, and rate per thousand full-year workers of the active and separated employees. The figures in columns (1), (3), and (5) of the table show the length-of-service distribution of employees on the pay roll at the end of the year. These figures may be assumed to indicate quite accurately the normal length-of-service distribution of the active working force throughout the year reported. It is realized that the length-of-service distribution of the active work force might conceivably be subject to some variations during the period reported, but since the seasonal factor does not enter very largely into the labor situation in the sugar refining industry it is not believed that there will be much difference in the length-of-service cross section of the working force at different times of the year.

TABLE 5.—NUMBER, PER CENT DISTRIBUTION, AND ANNUAL RATE PER 1,000 FULL-YEAR WORKERS OF ACTIVE AND SEPARATED EMPLOYEES, BY LENGTH OF SERVICE AND SEX.

Sex and length-of-service period.	Number of employees—		Per cent distribution of employees—		Annual rate per 1,000 full-year workers of employees— <sup>1</sup>	
	On payroll at end of year (active). (1)	Separated during the year. (2)	On payroll at end of year (active). (3)	Separated during the year. (4)	On payroll at end of year (active). (5)	Separated during the year. (6)
<i>Males.</i>						
One week and under.....	116	559	9	22	113	543
Over 1 week to 2 weeks.....	48	338	4	13	45	323
Over 2 weeks to 1 month.....	134	483	10	19	130	469
Over 1 month to 3 months.....	241	621	18	25	234	603
Over 3 months to 6 months.....	172	232	13	9	167	225
Over 6 months to 1 year.....	228	147	17	6	219	143
Over 1 year to 2 years.....	159	71	11	3	135	69
Over 2 years to 3 years.....	47	16	4	1	46	16
Over 3 years to 5 years.....	73	25	6	1	71	24
Over 5 years.....	110	26	8	1	107	23
Total.....	1,306	2,518	100	100	1,267	2,445
<i>Females.</i>						
One week and under.....	12	11	8	17	120	110
Over 1 week to 2 weeks.....	8	8	6	13	80	80
Over 2 weeks to 1 month.....	21	2	15	3	210	20
Over 1 month to 3 months.....	36	20	25	32	360	200
Over 3 months to 6 months.....	40	8	28	13	400	80
Over 6 months to 1 year.....	16	6	11	10	160	60
Over 1 year to 2 years.....	3	1	2	2	30	10
Over 2 years to 3 years.....	1	.....	1	.....	10	.....
Over 3 years to 5 years.....	2	5	1	8	20	50
Over 5 years.....	5	2	3	3	50	20
Total.....	144	63	100	100	1,440	630
<i>All employees.</i>						
One week and under.....	128	570	9	22	113	504
Over 1 week to 2 weeks.....	56	346	4	13	50	306
Over 2 weeks to 1 month.....	155	485	11	19	137	429
Over 1 month to 3 months.....	277	641	19	25	245	567
Over 3 months to 6 months.....	212	240	15	9	188	212
Over 6 months to 1 year.....	242	153	17	6	214	135
Over 1 year to 2 years.....	142	72	10	3	126	64
Over 2 years to 3 years.....	48	16	3	1	42	14
Over 3 years to 5 years.....	75	30	5	1	66	27
Over 5 years.....	115	23	8	1	102	25
Total.....	1,450	2,581	100	100	1,283	2,284

<sup>1</sup> Based on the following numbers of full-year workers: Males, 1,030; females, 100; total, 1,130.

The figures of Table 5 show quite clearly the enormous difference in length-of-service distribution between active and separated employees. It is quite evident from an inspection of the rate and percentage columns that it is the short-time employee who contributes the overwhelmingly greater proportion of the turnover. For example, 504 per 1,000 full-year workers leaving during the year had served under one week, whereas of the active working force only 113 per 1,000 were found in this particular service group. On the other hand, it is to be noticed in the longer service groups, and in fact in all of the time groups over six months, that the active service rates are con-

siderably higher than the separation service rates for the corresponding groups. Thus, among the active employees (on the pay roll at the end of the year) 102 per 1,000 full-year workers in the plant had served more than 5 years, whereas of those who left during the year only 25 per 1,000 had served over five years. As has been already remarked the sex classification for this establishment can not be given much weight for the reason that the establishment just about tripled the size of its female personnel during the year studied. What was going on was the creation of a substitute female work force and there were naturally very few women leaving service during the period studied. This situation is fairly well revealed in the rate figures for females in Table 5. They show a separation service rate distribution for the different service periods even lower on the whole than the active service rate distribution, indicating that the female employees were responsible for hardly any of the turnover during the year reported.

It is apparent from the figures of Table 4 that in all occupations both active and separated groups contain rather large proportions of one-year-and-under service records. Naturally this proportion of short-service employees is very much higher among "separated" than it is among those employees on the pay roll at any given time—the "active" employees. As already remarked, this difference between the active and separated group is an important measure of the stability of the working force. The greater this difference the greater the extent of unnecessary turnover. If the proportion of one-year-and-under employees of either sex or in any occupation or department is only slightly greater among separated than among active employees it follows that the turnover in that sex or department group is relatively light. As already remarked it goes without saying that short-service employees in active service on any particular date are not necessarily unstable and the comparison here used of active with separated employees does not involve any such imputation. In Table 6 a comparison is made between the active and separated employees who served over one year and one year and under, respectively, for each sex and for the working force as a whole.

TABLE 6.—NUMBER, PER CENT DISTRIBUTION, AND ANNUAL RATE PER 1,000 FULL-YEAR WORKERS, OF ACTIVE AND SEPARATED EMPLOYEES WHO HAD SERVED 1 YEAR AND UNDER, AND MORE THAN 1 YEAR, BY SEX.

Sex.	Number of full-year workers.	Employees on pay roll at end of year (active) who had served—		Employees separated during the year who had served—	
		Over 1 year.	1 year and under.	Over 1 year.	1 year and under.
<i>Number.</i>					
Males.....	1,030	369	937	138	2,380
Females.....	100	11	133	8	55
Total.....	1,130	380	1,070	146	2,435
<i>Per cent.</i>					
Males.....	1,030	29	71	6	94
Females.....	100	7	93	13	78
Total.....	1,130	26	74	6	94
<i>Annual rate per 1,000 full-year workers.</i>					
Males.....	1,030	359	908	134	2,311
Females.....	100	110	1,330	80	550
Total.....	1,130	336	947	130	2,154

The totals given in this table indicate that the one-year-and-under group of sugar refinery employees makes up no less than 94 per cent of the separated employees but that the corresponding short service group constitutes only 74 per cent of the employees on the pay roll at the end of the year. The separation rate for one-year-and-under employees (2,154) is about 17 times the rate for over-one-year employees (130). That is to say, it would seem that there is a tendency for employees who have served one year and under to leave service 17 times as fast as employees who have served more than a year. A somewhat similar analysis, without regard to sex but showing separately for each department group the number and annual rate per 1,000 full-year employees of active and separated employees in the over-one-year and one-year-and-under groups, is given in Table 7.

TABLE 7.—NUMBER, AND ANNUAL RATE PER 1,000 FULL-YEAR WORKERS, OF ACTIVE AND SEPARATED EMPLOYEES WHO HAD SERVED 1 YEAR AND UNDER AND MORE THAN 1 YEAR, BY DEPARTMENT.

Department.	Number of full-year workers.	Number of employees—				Rate per 1,000 full-year workers of employees—			
		On pay roll at end of year (active) who had served—		Separated during the year who had served—		On pay roll at end of year (active) who had served—		Separated during the year who had served—	
		Over 1 year.	1 year and under.	Over 1 year.	1 year and under.	Over 1 year.	1 year and under.	Over 1 year.	1 year and under.
Sugar boiling.....	25	18	28	8	27	720	1,120	320	1,080
Steam boiler and refinery mechanics..	58	46	69	18	230	794	1,189	312	3,964
Centrifugal.....	104	34	68	13	120	327	654	126	1,153
Char and mechanical filtration.....	106	40	87	16	219	400	870	160	2,190
Char house.....	32	14	33	4	62	437	1,032	124	1,939
Container.....	47	17	116	19	137	362	2,468	405	2,914
Cubes.....	19	5	44	1	49	264	2,315	54	2,578
Operating, repairs, and upkeep.....	203	67	255	24	803	331	1,255	118	3,955
Pack room.....	88	35	108	10	186	398	1,227	114	2,113
Powder mill.....	9	3	13	4	15	334	1,444	446	1,965
Raw-bag laundry.....	18	3	14	.....	17	165	779	.....	944
Sanitation.....	26	13	27	4	45	501	1,037	156	1,733
Small pack.....	23	8	16	9	13	349	694	393	564
Washing station.....	38	14	27	6	61	368	711	157	1,606
Clerical and administrative.....	18	16	13	1	7	889	722	54	390
Laborers.....	256	22	102	5	396	86	398	19	1,547
Miscellaneous.....	66	25	50	4	48	378	758	61	1,727
Total.....	1,130	380	1,070	146	2,435	336	947	130	2,154

The rate figures at the right show rather concisely the departmental variation in labor stability. In general the unstable group shows a higher rate than the other group, both among active and separated employees, but the difference between the rates chargeable to long and to short service employees, respectively, is much greater among separated than among active employees. Among the latter the service rate for long-service employees is nearly always higher and the service rate for short service employees nearly always lower than the corresponding rates for separated employees.

In Table 8 figures are presented for eight of the departments containing female employees and show for each department the number, percentage distribution, and annual rate per 1,000 (full-year workers of each sex), of active and separated male and female employees who had served one year and under and more than one year, respectively.

TABLE 8.—NUMBER, PER CENT DISTRIBUTION, AND ANNUAL RATE PER 1,000 FULL-YEAR WORKERS, OF ACTIVE AND SEPARATED EMPLOYEES WHO HAD SERVED 1 YEAR AND UNDER AND MORE THAN 1 YEAR, BY SEX AND DEPARTMENT.

[This table includes only 8 of the departments having female employees.]

Department.	Number of full-year-workers, <sup>1</sup>	Number of employees—				Per cent distribution of employees—				Rate per 1,000 full-year workers of employees—				
		On pay roll at end of year (active) who had served—		Separated during the year who had served—		On pay roll at end of year (active) who had served—		Separated during the year who had served—		On pay roll at end of year (active) who had served—		Separated during the year who had served—		
		Over 1 year.	1 year and under.	Over 1 year.	1 year and under.	Over 1 year.	1 year and under.	Over 1 year.	1 year and under.	Over 1 year.	1 year and under.	Over 1 year.	1 year and under.	
<i>Males.</i>														
Char and mechanical filtration.....	95	40	83	16	219	32	68	7	93	421	874	168	2,305	
Containers.....	16	13	58	12	115	18	82	9	91	813	3,625	750	7,188	
Cubes.....	5	4	15	1	29	21	79	3	97	800	3,000	200	5,800	
Packing room.....	76	34	86	10	179	28	72	5	95	447	1,132	132	2,355	
Raw-bag laundry.....	12	3	7		13	30	70		100	250	583		103	
Small pack.....	2	6	8	8	11	43	57	42	58	3,000	4,000	4,000	5,500	
Clerical and administrative.....	13	15	11	1	7	58	42	13	87	1,154	846	77	538	
Miscellaneous.....	60	23	47	4	48	33	67	8	92	383	783	67	800	
Total.....	279	138	315	52	621	30	70	8	92	495	1,129	186	2,226	
<i>Females.</i>														
Char and mechanical filtration.....	5		4				100				800			
Containers.....	31	4	58	7	22	6	94	24	76	129	1,871	226	710	
Cubes.....	14	1	29		20	3	97		100	71	2,072		1,429	
Packing room.....	12	1	22		7	4	96		100	83	1,833		583	
Raw-bag laundry.....	6		7		4		100		100		1,167		667	
Small pack.....	21	2	8	1	2	20	80	33	67	95	381	48	95	
Clerical and administrative.....	5	1	2			33	67			200	400			
Miscellaneous.....	6	2	3			40	60			333	500			
Total.....	100	11	133	8	55	8	92	13	87	110	1,330	80	550	

<sup>1</sup> Obtained by apportioning the figures for both sexes combined (Table 3, column 2) in the ratio of the mean numbers for the year for each sex.

### Average Weekly Service and Separation Rates.

It is a matter of course that as the period of service increases the number of employees who have served such period decreases—and decreases usually at a progressively increasing rate. This naturally holds true for both active and separated groups of employees. The length-of-service figures already presented failed to show this tendency for the reason that the length-of-service records were not tabulated on a scale made up of equal time intervals. In Table 5, for example, it appears that there were more separated employees with service records of from one to three months than with records of one week and under, but it is to be noted that the one-week period is only one-ninth as long as the other and consequently no fair comparison can be made between the numbers of separated



employees assignable to such unequal periods of time. The really significant difference is that between the number of quitters who had worked one week and under and the average weekly number of quitters among those who had worked from one to three months. The comparison should be between the weekly averages of active and separated employees in the different tenure groups. In other words, the important thing to know is not so much the number leaving who have one to three months service records as the number of quitters assignable on the average to each of the nine weeks of the one-to-three month period—what may be called briefly “the average weekly number” leaving in each classified service period. Such a weekly average is the basis of Table 9 which, with this very important difference, covers the same ground as Table 4. It shows the “average weekly number,” and annual rate per 1,000 full-year workers in each departmental group, of active and separated employees who had served specified periods of time.<sup>1</sup>

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<sup>1</sup> See footnote to Table 9.

TABLE 9—AVERAGE WEEKLY NUMBER, AND ANNUAL RATE PER 1,000 FULL-YEAR WORKERS, OF ACTIVE AND SEPARATED EMPLOYEES WHO HAD SERVED SPECIFIED PERIODS OF TIME, BY DEPARTMENT.

Department.	Number of full-year workers.	Employees on pay roll at end of year (active employees) who had served continuously—									Separated employees who had served continuously—								
		One week and under.	Over 1 week to 2 weeks.	Over 2 weeks to 1 month.	Over 1 mo. to 3 mos.	Over 3 mos. to 6 mos.	Over 6 mos. to 1 year.	Over 1 year to 2 years.	Over 2 years to 3 years.	Over 3 years to 5 years.	One week and under.	Over 1 week to 2 weeks.	Over 2 weeks to 1 month.	Over 1 mo. to 3 mos.	Over 3 mos. to 6 mos.	Over 6 mos. to 1 year.	Over 1 year to 2 years.	Over 2 years to 3 years.	Over 3 years to 5 years.
		Average weekly number. <sup>1</sup>																	
Sugar boiling.....	25	5.00	5.00	1.50	0.56	0.46	0.15	0.13	0.04	0.03	3.00	4.00	3.50	1.00	0.31	.....	0.08	.....	0.02
Steam boiler and refinery mechanics.....	58	.....	2.00	3.00	1.44	1.23	1.23	.19	.10	.13	50.00	39.00	27.00	5.11	1.77	0.69	.21	0.08	.01
Centrifugals.....	104	20.00	2.00	4.00	2.10	.69	.38	.19	.06	.05	26.00	12.00	13.00	3.33	1.15	.42	.08	.....	.07
Char and mechanical filtration.....	100	6.00	3.00	7.50	2.78	1.00	.96	.32	.06	.09	74.00	24.00	16.00	5.33	1.31	.92	.19	.02	.01
Char house.....	32	2.00	.....	2.50	.89	.61	.38	.04	.04	.07	26.00	5.00	7.50	1.22	.15	.12	.04	.....	.02
Containers.....	47	6.00	6.00	9.50	4.33	1.77	.88	.13	.02	.03	32.00	23.00	9.50	3.89	1.23	.46	.15	.04	.05
Cubes.....	19	6.00	7.00	3.50	.78	.92	.19	.06	.....	.01	15.00	7.00	3.50	1.56	.23	.12	.02	.....	.....
Operating, repairs, and upkeep.....	203	39.00	10.00	18.50	8.33	3.23	2.00	.54	.17	.11	161.00	111.00	88.50	27.33	5.46	1.42	.25	.04	.03
Pack room.....	88	18.00	7.00	7.00	3.22	1.92	.58	.21	.12	.07	50.00	31.00	12.50	5.89	1.38	.35	.08	.04	.03
Powder mill.....	9	2.00	1.00	.....	.56	.23	.08	.....	.02	.01	3.00	3.00	2.00	.11	.08	.12	.02	.....	.01
Raw-bag laundry.....	18	1.00	.....	.50	.67	.38	.04	.....	.....	.03	3.00	.....	2.50	.67	.15	.04	.....	.....	.....
Sanitation.....	26	3.00	4.00	4.00	.67	.23	.12	.13	.04	.02	8.00	6.00	4.50	1.33	.54	.12	.06	.02	.....
Small pack.....	23	2.00	.....	.....	.33	.62	.12	.04	.06	.02	1.00	1.00	1.00	.44	.23	.08	.06	.....	.03
Washing station.....	38	4.00	2.00	3.50	.56	.38	.15	.10	.04	.02	15.00	12.00	6.50	1.44	.38	.12	.06	.....	.02
Clerical and administrative.....	18	2.00	.....	.....	.22	.31	.19	.07	.06	.02	2.00	1.00	1.50	.11	.....	.....	.....	.....	.....
Laborers.....	259	9.00	6.00	7.50	2.22	1.46	1.27	.38	.02	.....	97.00	65.00	38.00	11.11	3.15	.65	.08	.....	.....
Miscellaneous.....	66	3.00	1.00	5.00	1.11	.85	.58	.17	.06	.03	6.00	3.00	6.00	1.33	.69	.23	.02	.....	.....
Total.....	1,130	128.00	56.00	77.50	30.78	16.31	9.31	2.73	.92	.72	570.00	346.00	242.50	71.22	18.46	5.88	1.38	.31	.29
<i>Annual rate per 1,000 full-year workers.</i>																			
Sugar boiling.....	25	200.00	200.00	60.00	22.40	18.40	6.00	5.20	1.60	1.20	120.00	160.00	140.00	40.00	12.40	.....	3.20	.....	0.80
Steam boiler and refinery mechanics.....	58	.....	34.48	51.72	24.82	21.21	21.21	3.28	1.72	2.24	862.07	672.41	465.52	88.10	30.52	11.90	3.62	1.38	.17
Centrifugals.....	104	192.31	19.23	38.46	20.19	6.63	3.65	1.83	.58	.48	250.00	115.38	125.00	32.02	11.06	4.04	.77	.....	.67
Char and mechanical filtration.....	100	60.00	30.00	75.00	27.80	10.00	9.60	3.20	.60	.90	740.00	240.00	160.00	53.30	13.80	9.20	1.90	.20	.10
Char house.....	32	63.00	.....	78.13	27.81	19.06	11.87	1.25	1.25	2.19	812.50	156.25	234.38	38.13	4.69	3.75	1.25	.....	.63
Containers.....	47	127.66	127.66	202.13	92.13	37.66	18.72	2.77	.43	.64	702.13	489.36	202.13	82.77	26.17	9.79	3.19	.85	1.06
Cubes.....	19	315.79	368.42	184.21	41.05	48.42	9.99	3.16	.....	.53	793.47	368.42	184.21	82.11	12.11	6.32	1.05	.....	.....
Operating, repairs, and upkeep.....	203	192.12	49.26	91.13	41.03	15.91	9.85	2.66	.84	.54	788.18	546.80	435.96	134.63	27.29	7.00	1.23	.20	.15
Pack room.....	88	204.55	79.55	79.55	36.59	21.81	6.59	2.39	1.36	.80	568.18	352.27	142.36	66.93	16.59	3.98	.91	.45	.34

[1820]

Powder mill.....	9	222.22	111.11	.....	62.22	25.56	8.89	.....	2.22	1.11	333.33	333.33	222.22	12.22	8.89	16.67	2.22	2.22	1.11
Raw-bag laundry.....	18	55.56	.....	27.78	37.22	21.11	2.22	.....	.....	1.67	166.67	.....	138.89	37.22	8.33	2.22	.....	.....	.....
Sanitation.....	26	115.38	153.84	153.84	25.77	8.84	4.62	5.00	1.54	.77	307.69	230.77	173.08	51.15	20.77	4.62	2.31	.77	.....
Small pack.....	23	86.96	.....	.....	14.35	26.96	5.22	1.74	2.61	.87	43.48	43.48	43.48	19.13	10.00	3.48	2.61	1.74	1.30
Washing station.....	38	105.26	52.63	92.11	14.74	10.00	3.95	2.63	1.05	.53	394.74	315.79	171.05	37.89	10.00	3.16	1.58	.....	.53
Clerical and administrative.....	18	111.11	.....	.....	12.22	17.22	10.56	3.89	3.33	1.11	111.11	55.56	83.33	6.11	.....	.....	.....	.....	.....
Laborers.....	256	35.16	23.44	29.30	8.67	5.70	4.96	1.48	.08	.....	378.91	253.91	148.44	43.40	12.30	2.54	.31	.....	.....
Miscellaneous.....	66	45.45	15.15	75.78	16.82	12.88	8.78	2.58	.91	.45	90.91	45.45	90.91	20.15	10.45	3.48	.30	.30	.....
Total.....	1,130	113.27	49.56	68.58	27.24	14.43	8.24	2.42	.81	.64	504.42	306.19	214.16	63.03	16.54	5.24	1.22	.27	.26

<sup>1</sup> The average weekly numbers are obtained by dividing the whole numbers in each group (as shown in Table 4) by the approximate number of weeks in the respective groups, as follows:

Over 1 week to 2 weeks.....	1 week.	Over 6 months to 1 year.....	26 weeks.
Over 2 weeks to 1 month.....	2 weeks.	Over 1 year to 3 years.....	52 weeks.
Over 1 month to 3 months.....	9 weeks.	Over 3 years to 5 years.....	104 weeks.
Over 3 months to 6 months.....	13 weeks.		

In the above table the declination of the numbers indicates much more accurately than do the unsubdivided figures the relative importance of long and short time employees as factors in the labor stability situation. Relatively high average weekly separation rates, especially in the shorter time periods, indicate relatively low stability—that is to say, high turnover. The very low figures in the longer service groups, especially those for separated employees, show much more accurately what an insignificant part of the labor flow is to be charged to over-one-year employees; indeed the same thing is true of every time period after the first six months, except for one or two departments, like the steam boiler and refinery mechanics, whose six-months-to-one-year quitters make up an unusually high proportion of the total.

A summary of the figures presented in Table 9 is given in Table 10, which also shows the total number of employees who had served each classified period, and thus brings out more clearly the difference between the original length-of-service figures of Table 4 and those on the equated weekly basis of Table 9.

Table 10 indicates how rapidly the weekly rate of separation declines and also how entirely out of proportion these separation rates are to the active service distribution or employment rates. It demonstrates also that the great bulk of the instability, as indicated in the preceding table, is caused by the separation of those who had served less than one month and that after the three-to-six-months group is passed the decline in the separation service distribution rate is roughly proportionate to the decline of the active service distribution rate. This would seem to indicate that there is no very great amount of avoidable mobility caused by the separation of employees who had served three months or longer.

TABLE 10.—TOTAL NUMBER, AVERAGE WEEKLY NUMBER, AND ANNUAL RATE PER 1,000 FULL-YEAR WORKERS, OF ACTIVE AND SEPARATED EMPLOYEES WHO HAD SERVED SPECIFIED PERIODS OF TIME, BY SEX.

Length of service.	Approximate number of weeks in period.	Total number of employees.		Employees assignable, on the average, to each weekly service subdivision.			
				Number.		Annual rate per 1,000 full-year workers. <sup>1</sup>	
		Active.	Separated.	Active.	Separated.	Active.	Separated.
<i>Males.</i>							
One week and under.....	1	116	559	116.00	557.00	112.62	540.78
Over 1 week to 2 weeks.....	1	48	338	48.00	337.00	46.60	327.18
Over 2 weeks to 1 month.....	2	134	483	67.00	241.00	65.05	233.98
Over 1 month to 3 months.....	9	241	621	26.78	69.00	26.00	66.99
Over 3 months to 6 months.....	13	172	232	13.23	18.07	12.84	17.54
Over 6 months to 1 year.....	26	226	147	8.69	5.69	8.44	5.52
Over 1 year to 2 years.....	52	139	71	2.67	1.37	2.59	1.33
Over 2 years to 3 years.....	52	47	16	.90	.31	.87	.30
Over 3 years to 5 years.....	104	73	25	.70	.24	.68	.23
Over 5 years.....		110	26				
Total.....		1,306	2,518				

<sup>1</sup> Based on 1,030 full-year males, 100 females, and 1,130 all employees.

[1822]

TABLE 10.—TOTAL NUMBER, AVERAGE WEEKLY NUMBER, AND ANNUAL RATE PER 1,000 FULL-YEAR WORKERS, OF ACTIVE AND SEPARATED EMPLOYEES WHO HAD SERVED SPECIFIED PERIODS OF TIME, BY SEX—Concluded.

Length of service.	Approximate number of weeks in period.	Total number of employees.		Employees assignable, on the average, to each weekly service subdivision.			
				Number.		Annual rate per 1,000 full-year workers. <sup>1</sup>	
		Active.	Separated	Active.	Separated	Active.	Separated
<i>Females.</i>							
One week and under.....	1	12	11	12.00	11.00	120.00	110.00
Over 1 week to 2 weeks.....	1	8	8	8.00	8.00	80.00	80.00
Over 2 weeks to 1 month.....	2	21	2	10.50	1.00	105.00	10.00
Over 1 month to 3 months.....	9	36	20	4.00	2.22	40.00	22.20
Over 3 months to 6 months.....	13	40	8	3.08	.62	30.80	6.20
Over 6 months to 1 year.....	26	16	6	.62	.23	6.20	2.30
Over 1 year to 2 years.....	52	3	1	.06	.02	.60	.20
Over 2 years to 3 years.....	52	1	.....	.02	.....	.20	.....
Over 3 years to 5 years.....	104	2	5	.02	.05	.20	.50
Over 5 years.....	.....	5	2	.....	.....	.....	.....
Total.....	.....	144	63	.....	.....	.....	.....
<i>All employees.</i>							
One week and under.....	1	128	570	128.00	570.00	113.27	504.42
Over 1 week to 2 weeks.....	1	56	346	56.00	346.00	49.56	306.19
Over 2 weeks to 1 month.....	2	155	485	77.50	242.50	68.58	214.16
Over 1 month to 3 months.....	9	277	641	30.78	71.22	27.24	63.03
Over 3 months to 6 months.....	13	212	240	16.31	18.46	14.43	16.54
Over 6 months to 1 year.....	26	242	153	9.31	5.88	8.24	5.24
Over 1 year to 2 years.....	52	142	72	2.73	1.38	2.42	1.22
Over 2 years to 3 years.....	52	48	16	.92	.31	.81	.27
Over 3 years to 5 years.....	104	75	30	.72	.29	.64	.26
Over 5 years.....	.....	115	28	.....	.....	.....	.....
Total.....	.....	1,450	2,581	.....	.....	.....	.....

<sup>1</sup> Based on 1,030 full-year males, 100 females, and 1,130 all employees.

### Number of Jobs Affected by Instability.

As has been already explained in earlier articles in this series, it is possible to make a fairly accurate determination of the "number of equivalent full-year jobs" in any particular group of employees which are always occupied by persons who have served one week or less, one to two weeks, and so on—the "number of equivalent full-year jobs" which are, that is to say, affected by varying degrees of instability. This matter is treated very briefly in this article because it has received very detailed treatment in earlier numbers of this REVIEW.<sup>1</sup> The various steps of the process are indicated in Table 11, which shows the separation frequency distribution of jobs directly affected by instability.

<sup>1</sup> See especially articles on "Labor turnover in the San Francisco Bay region," MONTHLY LABOR REVIEW, February, 1919, pp. 59-62; "Labor policies and labor turnover in the California oil-refining industry," MONTHLY LABOR REVIEW, April, 1919, pp. 47-51.

TABLE 11.—SEPARATION FREQUENCY DISTRIBUTION OF JOBS DIRECTLY AFFECTED BY LABOR INSTABILITY.

Length-of-service period.	Approximate number of weeks in period.	Mean length of service (days).	Corresponding annual separation rate per 1,000.	Separated employees who had served each specified period.		Total number of man days worked by each group.	Equivalent full-year jobs in each group.			
				Total number.	Average weekly number.		Number.	Rate per 1,000 full-year workers. <sup>1</sup>	Average weekly number.	Average weekly rate per 1,000 full-year workers. <sup>1</sup>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
One week and under.....	1	4	90,250	570	570.00	2,280	6.247	5.5	6.247	5.5
Over 1 week to 2 weeks.....	1	11	32,182	346	346.00	3,806	10.427	9.2	10.427	9.2
Over 2 weeks to 1 month.....	2	22	15,591	485	242.50	10,670	29.233	25.9	14.617	12.9
Over 1 month to 3 months.....	9	60	5,083	641	71.22	38,460	105.370	93.2	11.708	10.3
Over 3 months to 6 months.....	13	135	1,704	240	18.46	32,400	88.767	78.6	6.828	6.0
Over 6 months to 1 year.....	26	274	332	153	5.88	41,922	114.855	101.6	4.418	3.9
Over 1 year to 2 years.....	52	548	.....	72	1.38	39,456	108.099	95.7	2.079	1.8
Over 2 years to 3 years.....	52	913	.....	16	.31	14,608	40.022	35.4	.770	.7
Over 3 years to 5 years.....	104	1,460	.....	30	.29	43,800	120.000	106.2	1.154	1.0

<sup>1</sup> Based on a standard working force of 1,130 full-year workers.

The items and relations involved in this table are, with the exception of column (5), exactly the same as those in Table 8 in the earlier article on labor turnover in the California oil refining industry<sup>1</sup> and the figures in the various columns are derived in exactly the same way, the whole analysis resting as before upon the assumed mean length-of-service figures in column (2).

The figures in columns (8) and (10) show the total number of jobs and the average weekly number of jobs (per 1,000 full-year workers) which are affected by degrees of instability corresponding to the length-of-service period in which they fall. The "corresponding annual separation rates" shown in column (3) are based upon the mean length of service corresponding to the particular service period. There appear to have been 5.5 full-year jobs per 1,000 full-year workers affected by a separation rate of 90,250 per 1,000, 9.2 full-year jobs per 1,000 affected by a separation rate of 32,182, 25.9 full-year jobs per 1,000 affected by a separation rate of 15,591, 101.6 full-year jobs in each 1,000 affected by a separation rate of 332, and so forth. If the total numbers of jobs affected are split up into weekly averages it appears that the following numbers of full-year jobs per thousand, that is, 5.5, 9.2, 12.9, 10.3, 6.0, and 3.9 were represented, respectively, by annual separation rates of 90,250, 32,182, 15,591, 5,083, 1,704, and 332 per 1,000 full-year workers. It would seem that although the highest frequency of job replacement occurs naturally in the shortest service periods, yet the average weekly number of jobs affected per 1,000 is less in the one-week-and-under and the over-one-week-to-two-weeks groups than it is in the two following groups, the average weekly number of jobs affected per 1,000 in the third and fourth groups being about twice as great as in the one-week-and-under group.

## PRICES AND COST OF LIVING.

### Retail Prices of Food in the United States.

**T**HE retail price of food in the United States decreased two-tenths of 1 per cent in October, 1919, as compared with September, 1919.<sup>1</sup>

Of the 43 articles for which comparison can be made during the month period, the following 18 articles increased in price in October: Eggs, 14 per cent; butter and raisins, 8 per cent each; rice, 5 per cent; salmon, sugar, and prunes, 4 per cent each; oranges, 3 per cent; fresh milk, and bananas, 2 per cent each; canned milk, rolled oats, corn flakes, macaroni, navy beans, and canned tomatoes, 1 per cent each. Cream of Wheat and tea increased less than five-tenths of 1 per cent. Flour, nut margarine, bread, and baked beans remained the same price as in September.

The 21 articles which decreased were: Potatoes, 12 per cent; cabbage, 8 per cent; lard, 6 per cent; bacon, ham, and Crisco, 5 per cent each; pork chops, 4 per cent; round steak, chuck roast, plate beef, hens, and onions, 3 per cent each; rib roast, lamb, corn meal, and coffee, 2 per cent each; oleomargarine, cheese, canned corn, and canned peas, 1 per cent each.

From October, 1918, to October, 1919, the retail price of food increased 4 per cent.<sup>1</sup> In the year period, the following ten articles decreased in price: Navy beans, 25 per cent; plate beef, 18 per cent; chuck roast, 12 per cent; sirloin steak and bacon, 9 per cent each; round steak and rib roast, 5 per cent each; lamb, 4 per cent; corn meal, 3 per cent; and pork chops, 2 per cent. During the year, the following articles increased in price: Prunes, 58 per cent; coffee, 56 per cent; onions, 40 per cent; raisins, 35 per cent; rice, 24 per cent; salmon, 13 per cent; eggs, 12 per cent; cheese, 10 per cent; flour, butter, and potatoes, 9 per cent each; fresh milk, sugar, and tea, 8 per cent each; lard, 6 per cent; hens and bread, 3 per cent each; and ham, 1 per cent.

<sup>1</sup> This is based on the retail cost of the following 22 articles of food, weighted according to the consumption of the average family: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

AVERAGE RETAIL PRICE AND PER CENT OF INCREASE OR DECREASE, OCT. 15, 1919,  
COMPARED WITH OCT. 15, 1918, AND SEPT. 15, 1919.

Article.	Unit.	Average retail price on—			Per cent of increase (+) or decrease (—) Oct. 15, 1919, compared with—	
		Oct. 15, 1918.	Sept. 15, 1919.	Oct. 15, 1919.	Oct. 15, 1918.	Sept. 15, 1919.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Sirloin steak.....	Pound.....	41.0	40.9	39.8	- 3	- 3
Round steak.....	do.....	39.0	37.9	36.9	- 5	- 3
Rib roast.....	do.....	32.3	31.2	30.6	- 5	- 2
Chuck roast.....	do.....	27.9	25.3	24.5	-12	- 3
Plate beef.....	do.....	21.5	18.2	17.6	-18	- 3
Pork chops.....	do.....	45.4	46.0	44.3	- 2	- 4
Bacon.....	do.....	57.9	55.6	52.8	- 9	- 5
Ham.....	do.....	52.0	55.2	52.4	+ 1	- 5
Lamb.....	do.....	35.2	34.6	33.9	- 4	- 2
Hens.....	do.....	39.0	41.4	40.3	+ 3	- 3
Salmon, canned.....	do.....	30.9	33.6	34.8	+13	+ 4
Milk, fresh.....	Quart.....	14.8	15.7	16.0	+ 8	+ 2
Milk, evaporated (unsweetened).....	15-16 oz. can.....		16.5	16.6		+ 1
Butter.....	Pound.....	65.1	65.7	71.1	+ 9	+ 8
Oleomargarine.....	do.....		42.8	42.6		- 1
Nut margarine.....	do.....		35.8	35.8		(1) - 1
Cheese.....	do.....	38.5	43.0	42.4	+10	- 1
Lard.....	do.....	34.2	38.2	36.1	+ 6	- 6
Crisco.....	do.....		39.5	37.5		- 5
Eggs, strictly fresh.....	Dozen.....	64.1	63.2	72.0	+12	+14
Eggs, storage.....	do.....			59.2		
Bread.....	Pound <sup>2</sup> .....	9.8	10.1	10.1	+ 3	(1) - 1
Flour.....	Pound.....	6.7	7.3	7.3	+ 9	(1) - 2
Corn meal.....	do.....	6.8	6.7	6.6	- 3	+ 1
Rolled oats.....	do.....		9.1	9.2		+ 1
Corn flakes.....	8-oz. pkg.....		14.0	14.1		
Cream of Wheat.....	28-oz. pkg.....		25.1	25.2		(3) + 1
Macaroni.....	Pound.....		19.4	19.5		+ 5
Rice.....	do.....	14.0	16.5	17.3	+24	+ 1
Beans, navy.....	do.....	16.7	12.4	12.5	-25	-12
Potatoes.....	do.....	3.5	4.3	3.8	+ 9	- 3
Onions.....	do.....	4.5	6.5	6.3	+40	- 8
Cabbage.....	do.....		4.9	4.5		(1) - 1
Beans, baked.....	No. 2 can.....		17.1	17.1		- 1
Corn, canned.....	do.....		19.2	19.1		- 1
Peas, canned.....	do.....		19.2	19.1		+ 1
Tomatoes, canned.....	do.....		16.0	16.1		+ 4
Sugar, granulated.....	Pound.....	10.6		11.4	+ 8	(3) - 2
Tea.....	do.....	65.7	70.7	71.0	+ 8	+ 4
Coffee.....	do.....	30.5	48.8	47.5	+58	+ 8
Prunes.....	do.....	18.3	28.0	29.0	+35	+ 2
Raisins.....	do.....	15.5	19.4	20.9		+ 8
Bananas.....	Dozen.....		38.4	39.3		+ 2
Oranges.....	do.....		53.9	55.3		+ 3
22 weighted articles combined.....					+ 4	(4)

<sup>1</sup> No change in price.

<sup>2</sup> Baked weight.

<sup>3</sup> Increase of less than five-tenths of 1 per cent.

<sup>4</sup> Decrease of less than five-tenths of 1 per cent.

For the 6-year period, October, 1913, to October, 1919, the increase for the 22 articles of food combined was 82 per cent.

Lard shows the greatest increase, being 127 per cent higher than six years ago. Other articles which increased over 100 per cent were: Sugar, 107 per cent; potatoes, 111 per cent; corn meal, 113 per cent, and flour 121 per cent.



AVERAGE RETAIL PRICES AND PER CENT OF INCREASE OR DECREASE OCT. 15 OF EACH SPECIFIED YEAR COMPARED WITH OCT. 15, 1913.

Article.	Unit.	Average retail price Oct. 15—							Per cent of increase (+) or decrease (-) Oct. 15 of each specified year compared with Oct. 15, 1913.					
		1913	1914	1915	1916	1917	1918	1919	1914	1915	1916	1917	1918	1919
		<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>						
Sirloin steak.....	Pound..	25.7	26.2	25.9	27.6	33.0	41.0	39.8	+ 2	+ 1	+ 7	+ 28	+ 60	+ 55
Round steak.....	do.....	23.3	23.8	23.3	24.7	30.9	39.0	36.9	+ 2	( <sup>1</sup> )	+ 6	+ 33	+ 67	+ 58
Rib roast.....	do.....	19.9	20.6	20.1	21.2	25.7	32.3	30.6	+ 4	+ 1	+ 7	+ 29	+ 62	+ 54
Chuck roast.....	do.....	16.4	17.4	16.5	17.4	21.8	27.9	24.5	+ 6	+ 1	+ 6	+ 33	+ 70	+ 49
Plate beef.....	do.....	12.3	12.8	12.2	12.9	16.5	21.5	17.6	+ 4	- 1	+ 5	+ 34	+ 75	+ 43
Pork chops.....	do.....	22.5	22.9	23.2	24.7	38.8	45.4	44.3	+ 2	+ 3	+ 10	+ 72	+ 102	+ 97
Bacon.....	do.....	27.8	28.7	27.3	29.8	48.2	57.9	52.8	+ 3	- 2	+ 7	+ 73	+ 108	+ 90
Ham.....	do.....	27.6	28.2	26.5	33.2	42.6	52.0	52.4	+ 2	- 4	+ 20	+ 54	+ 88	+ 90
Lamb.....	do.....	18.4	19.3	20.9	22.5	31.6	35.2	33.9	+ 5	+ 14	+ 22	+ 72	+ 91	+ 84
Hens.....	do.....	21.2	21.5	20.5	24.3	31.2	39.0	40.3	+ 1	- 3	+ 15	+ 47	+ 84	+ 90
Salmon (canned).....	do.....	.....	.....	19.8	20.4	28.3	30.9	34.8	.....	.....	.....	.....	.....	.....
Milk, fresh.....	Quart..	9.0	9.0	8.8	9.4	12.7	14.8	16.0	( <sup>1</sup> )	- 2	+ 4	+ 41	+ 64	+ 78
Milk, evaporated (unsweetened).....	15-16 oz. can.....	.....	.....	.....	.....	.....	.....	16.6	.....	.....	.....	.....	.....	.....
Butter.....	Pound..	38.2	37.4	35.1	41.8	50.8	65.1	71.1	- 2	- 8	+ 9	+ 33	+ 70	+ 86
Oleomargarine.....	do.....	.....	.....	.....	.....	.....	.....	42.6	.....	.....	.....	.....	.....	.....
Nut margarine.....	do.....	.....	.....	.....	.....	.....	.....	35.8	.....	.....	.....	.....	.....	.....
Cheese.....	do.....	22.4	23.0	23.0	26.8	34.8	38.5	42.4	+ 3	+ 3	+ 20	+ 55	+ 72	+ 89
Lard.....	do.....	15.9	15.6	14.4	23.1	31.2	34.2	36.1	- 2	- 10	+ 45	+ 96	+ 115	+ 127
Crisco.....	do.....	.....	.....	.....	.....	.....	.....	37.5	.....	.....	.....	.....	.....	.....
Eggs, strictly fresh.....	Dozen..	41.6	39.0	40.1	45.8	55.1	64.1	72.0	- 6	- 4	+ 10	+ 32	+ 54	+ 73
Eggs, storage.....	do.....	.....	.....	.....	.....	.....	.....	59.2	.....	.....	.....	.....	.....	.....
Rolled oats.....	Pound..	.....	.....	.....	.....	.....	.....	9.2	.....	.....	.....	.....	.....	.....
Bread.....	do. <sup>2</sup>	5.6	6.4	7.0	8.1	9.9	9.8	10.1	+ 14	+ 25	+ 45	+ 77	+ 75	+ 80
Flour.....	do.....	3.3	3.7	3.7	5.1	7.0	6.7	7.3	+ 12	+ 12	+ 55	+ 112	+ 103	+ 121
Corn meal.....	do.....	3.1	3.3	3.3	3.5	7.0	6.8	6.6	+ 6	+ 6	+ 13	+ 126	+ 119	+ 113
Corn flakes.....	8-oz. pkg.....	.....	.....	.....	.....	.....	.....	14.1	.....	.....	.....	.....	.....	.....
Cream of Wheat.....	28-oz. pkg.....	.....	.....	.....	.....	.....	.....	25.2	.....	.....	.....	.....	.....	.....
Macaroni.....	Pound..	.....	.....	.....	.....	.....	.....	19.5	.....	.....	.....	.....	.....	.....
Rice.....	do.....	8.7	8.8	9.1	9.1	11.1	14.0	17.3	+ 1	+ 5	+ 5	+ 28	+ 61	+ 99
Beans, navy.....	do.....	.....	.....	7.9	12.2	18.9	16.7	12.5	.....	.....	.....	.....	.....	.....
Potatoes.....	do.....	1.8	1.6	1.6	2.9	3.1	3.5	3.8	- 11	- 11	+ 61	+ 72	+ 94	+ 111
Onions.....	do.....	.....	.....	3.3	4.7	4.9	4.5	6.3	.....	.....	.....	.....	.....	.....
Cabbage.....	do.....	.....	.....	.....	.....	.....	.....	4.5	.....	.....	.....	.....	.....	.....
Beans, baked.....	No. 2 can.....	.....	.....	.....	.....	.....	.....	17.1	.....	.....	.....	.....	.....	.....
Corn, canned.....	do.....	.....	.....	.....	.....	.....	.....	19.1	.....	.....	.....	.....	.....	.....
Peas, canned.....	do.....	.....	.....	.....	.....	.....	.....	19.1	.....	.....	.....	.....	.....	.....
Tomatoes, canned.....	do.....	.....	.....	.....	.....	.....	.....	16.1	.....	.....	.....	.....	.....	.....
Sugar, granulated.....	Pound..	5.5	7.2	6.1	8.2	9.7	10.6	11.4	+ 31	+ 11	+ 49	+ 76	+ 93	+ 107
Tea.....	do.....	54.5	54.7	54.6	54.6	61.2	65.7	71.0	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	+ 12	+ 21	+ 30
Coffee.....	do.....	29.7	29.6	29.9	29.9	30.5	30.5	47.5	( <sup>4</sup> )	+ 1	+ 1	+ 3	+ 3	+ 60
Prunes.....	do.....	.....	.....	13.4	13.5	16.5	18.3	29.0	.....	.....	.....	.....	.....	.....
Raisins.....	do.....	.....	.....	12.5	13.0	15.0	15.5	20.9	.....	.....	.....	.....	.....	.....
Bananas.....	Dozen..	.....	.....	.....	.....	.....	.....	39.3	.....	.....	.....	.....	.....	.....
Oranges.....	do.....	.....	.....	.....	.....	.....	.....	55.3	.....	.....	.....	.....	.....	.....
22 weighted articles combined.....	.....	.....	.....	.....	.....	.....	.....	.....	+ 2	- 1	+ 17	+ 50	+ 75	+ 82

<sup>1</sup> No change in price.<sup>2</sup> Baked weight.<sup>3</sup> Increase of less than five-tenths of 1 per cent.<sup>4</sup> Decrease of less than five-tenths of 1 per cent.

## RELATIVE RETAIL PRICES OF FOOD IN THE UNITED STATES ON SEPT. 15 AND OCT. 15, 1919, AND OCT. 15, 1913, 1914, 1915, 1916, 1917, AND 1918.

[The relative price is the per cent that the average price on the 15th of each month is of the average price for the year 1913.]

Article.	Unit.	1919		Oct. 15—					
		Sept. 15.	Oct. 15.	1913	1914	1915	1916	1917	1918
Sirloin steak.....	Pound..	161	157	101	103	103	108	130	161
Round steak.....	do....	170	165	104	107	104	111	138	175
Rib roast.....	do....	158	155	101	104	102	108	130	163
Chuck roast.....	do....	158	153	103	106	101	108	136	174
Plate beef.....	do....	150	145	102	106	99	106	136	178
Pork chops.....	do....	219	211	107	110	110	118	185	216
Bacon.....	do....	206	196	103	106	101	110	178	214
Ham.....	do....	205	195	102	105	99	114	159	193
Hens.....	do....	194	189	100	100	97	114	146	183
Milk.....	Quart..	176	180	101	101	100	105	143	166
Butter.....	Pound..	172	186	100	98	92	109	133	170
Cheese.....	do....	195	192	101	104	104	122	158	174
Lard.....	do....	242	228	101	98	91	123	198	216
Eggs, strictly fresh.....	Dozen..	183	209	121	113	117	132	160	186
Bread.....	Pound <sup>1</sup> .	177	177	100	114	124	144	176	172
Flour.....	Pound..	221	221	99	111	113	155	214	203
Corn meal.....	do....	223	220	103	109	108	117	232	227
Rice.....	do....	190	199	100	101	104	105	128	161
Potatoes.....	do....	253	224	106	89	94	165	178	206
Sugar, granulated.....	do....	200	207	101	132	111	149	177	193
Tea.....	do....	130	131	100	101	100	100	113	124
Coffee.....	do....	164	159	100	99	100	100	102	102
All articles combined.....		188	188	104	105	103	121	157	181

<sup>1</sup> Baked weight.

## Trend in Retail Prices of 22 Food Articles, Combined, by Months.

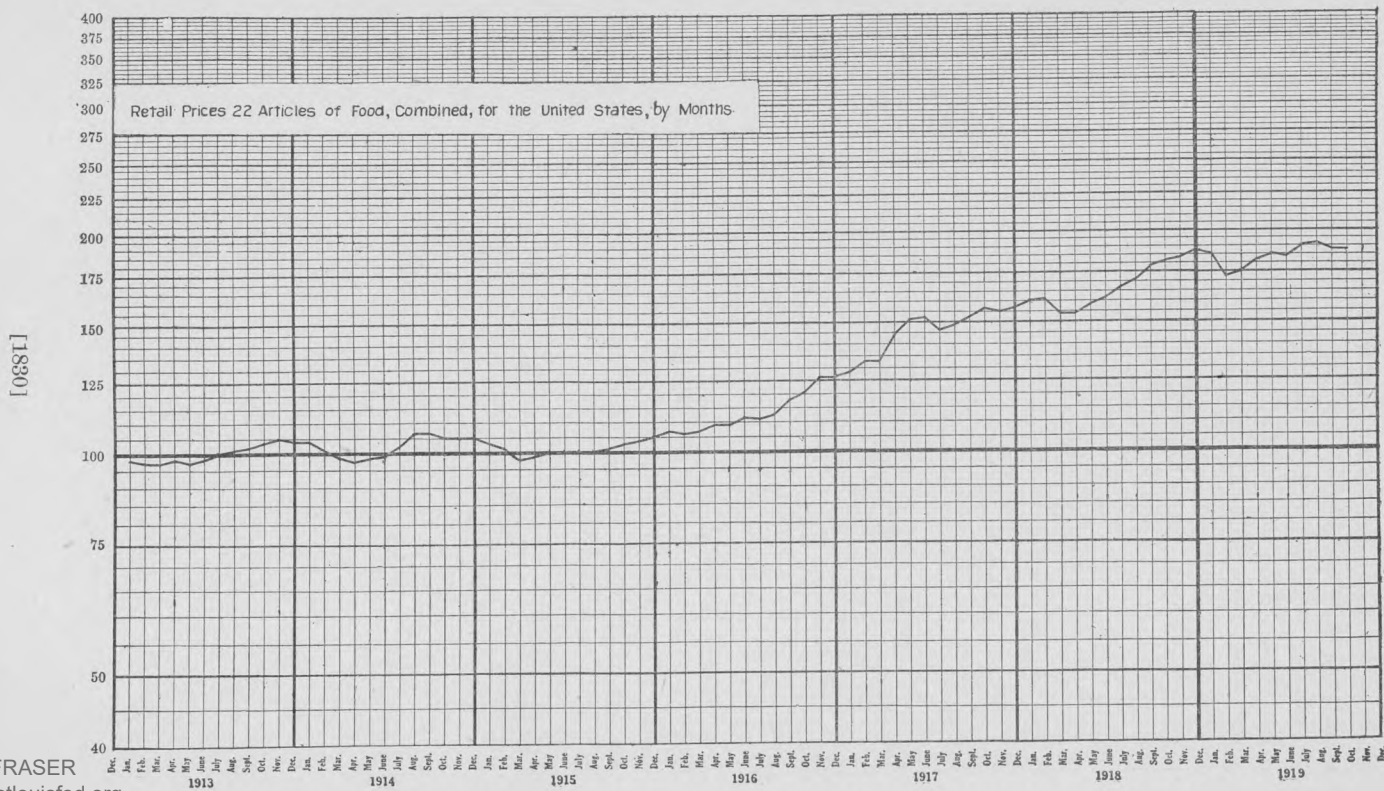
The chart on page 166 shows the curve in the retail cost of 22 of the most essential foods,<sup>1</sup> for the United States, for each month from January, 1913, to and including October, 1919. The logarithmic chart is used because the percentages of increase or decrease are more clearly seen than on an arithmetic chart.<sup>2</sup> The chart is the result of a weighted aggregate of actual prices in order that each commodity may have an influence equal only to its relative importance. The price of each commodity to be included in the aggregate for each month has been multiplied by a number representing the importance of that commodity in the average family consumption. These weighted products of the several commodities to be combined are added and computed as percentages of the aggregate, similarly computed, for the year 1913. The resulting index numbers show the trend in the retail cost of the several articles combined.

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<sup>1</sup> See note on p. 161.

<sup>2</sup> For discussion of the logarithmic chart, see article on "Comparison of arithmetic and ratio charts," by Lucius W. Chaney, MONTHLY LABOR REVIEW for March, 1919, pp. 20-34. Also, The "Ratio" Chart, by Prof. Irving Fisher, reprinted from Quarterly Publications of the American Statistical Association June, 1917, 24 pages.

TREND IN RETAIL PRICES OF 22 FOOD ARTICLES, COMBINED, FOR THE UNITED STATES, BY MONTHS, JANUARY, 1913, TO OCTOBER, 1919.  
 [Average for 1913=100.]



From September, 1915, there has been a steady increase in the cost of these 22 articles of food. In December, 1918, the cost of these foods was 87 per cent above the 1913 average. In January, 1919, there was a slight decline. February prices declined 7 per cent, but from that date until June the prices advanced. In June, there was a decline of less than five-tenths of 1 per cent. July prices increased 3 per cent. August prices showed a further increase of 1 per cent, which month became the high-water mark. In September there was a decrease of 2 per cent, and in October a decrease of two-tenths of 1 per cent. The relative figure for both October and September was 188.

### Retail Prices of Food in 50 Cities on Specified Dates.

Effort is made by the Bureau to secure quotations on similar grades of commodities in all cities. There are, however, some local customs which must be taken into consideration when any comparison is made of the prices in the different cities. The method of cutting sirloin steak in Boston, Mass.; Manchester, N. H.; Philadelphia, Pa.; Providence, R. I.; and Portland, Me., differs from that in other cities. The cut known as "sirloin" in these five cities would be in other cities known as "porterhouse." There is in these cities, owing to the methods of dividing the round from the loin, no cut that corresponds to that of "sirloin" in other cities. There is also a greater amount of trimming demanded by the retail trade in these cities than in others. This is particularly true of Providence, R. I. These, together with the fact that almost all the beef sold in these cities is of better grade, are the main reasons why the retail prices of beef in these cities are higher than in others.

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD

[The prices shown in the tables following are computed from reports sent monthly to the Bureau by retail

Article.	Unit.	Atlanta, Ga.						Baltimore, Md.					
		Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.	Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.
		1913	1914	1917	1918			1913	1914	1917	1918		
		<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
Sirloin steak.....	Pound.	24.2	26.3	31.1	40.0	38.7	37.8	23.5	21.8	32.6	45.8	41.8	39.8
Round steak.....	do.	21.3	22.9	27.8	37.2	35.6	34.4	22.0	21.2	31.5	44.9	40.5	38.7
Rib roast.....	do.	19.7	18.5	24.1	31.5	28.8	27.9	17.3	18.4	25.9	35.6	33.1	31.5
Chuck roast.....	do.	15.4	16.4	21.2	26.7	22.5	21.9	15.3	15.6	22.0	30.1	26.9	25.7
Plate beef.....	do.	9.6	10.3	15.7	21.1	17.2	16.2	12.6	13.6	16.9	24.1	20.9	19.3
Pork chops.....	do.	25.0	24.5	39.9	46.3	42.2	41.7	19.6	19.0	37.1	47.2	47.3	43.2
Bacon.....	do.	32.2	31.3	49.0	60.3	60.2	57.2	22.5	25.5	45.7	58.3	52.3	49.4
Ham.....	do.	30.8	30.0	43.9	54.9	55.4	53.8	28.5	31.0	47.7	58.5	60.4	56.8
Lamb.....	do.	20.2	20.3	31.6	40.0	38.0	36.1	18.0	18.5	33.3	40.2	35.8	34.5
Hens.....	do.	20.8	21.2	33.7	38.3	38.6	40.0	20.8	21.5	32.1	44.4	45.4	43.6
Salmon (canned).....	do.			24.6	26.8	27.0	28.2			25.4	27.9	29.9	32.5
Milk, fresh.....	Quart.	10.6	10.6	15.9	20.0	22.5	22.5	8.7	8.7	11.7	16.0	15.5	16.0
Milk, evaporated (unsweet- ened).	( <sup>2</sup> )					17.2	17.4					16.1	16.1
Butter.....	Pound.	39.0	38.8	55.1	64.5	68.2	74.1	38.8	38.5	53.8	67.8	68.4	72.1
Oleomargarine.....	do.					42.8	44.3					40.4	40.8
Nut margarine.....	do.						37.8					35.7	36.2
Cheese.....	do.	25.0	25.0	35.5	40.0	41.3	39.9	23.3	23.3	36.0	40.4	43.3	42.8
Lard.....	do.	15.4	15.3	31.9	35.1	37.3	35.1	14.8	14.8	32.6	34.2	37.7	34.1
Crisco.....	do.					39.2	35.1					37.8	34.4
Eggs, strictly fresh.....	Dozen.	34.1	32.9	48.2	58.5	58.1	64.7	36.3	34.5	51.9	63.9	59.4	65.5
Eggs, storage.....	do.						60.0						57.7
Rolled oats.....	Pound.					11.1	10.5					8.1	8.2
Bread.....	do. <sup>3</sup>	5.9	6.0	10.2	10.0	10.0	10.0	5.5	5.7	9.2	9.7	9.6	9.6
Flour.....	do.	3.5	3.7	7.2	6.8	7.3	7.2	3.2	3.7	7.0	7.0	7.5	7.5
Corn meal.....	do.	2.7	2.8	5.9	5.7	6.1	5.7	2.6	2.5	6.4	6.5	6.0	5.8
Corn flakes.....	( <sup>4</sup> )					14.2	14.0					13.2	13.0
Cream of Wheat.....	( <sup>5</sup> )					25.0	24.7					23.4	23.4
Macaroni.....	Pound.					20.3	20.3					17.9	18.6
Rice.....	do.	8.6	8.6	10.8	14.5	16.7	17.0	9.0	9.0	11.2	13.7	17.0	18.3
Beans, navy.....	do.			18.8	18.3	14.3	15.0			18.7	18.0	12.7	12.2
Potatoes.....	do.	2.3	1.8	3.8	4.7	5.7	5.0	1.8	1.7	3.0	4.2	4.0	3.8
Onions.....	do.			5.9	5.7	8.6	8.4			5.5	5.0	6.5	5.8
Cabbage.....	do.					6.6	6.2					4.4	3.8
Beans, baked.....	( <sup>6</sup> )					16.1	16.1					15.7	16.1
Corn, canned.....	( <sup>6</sup> )					20.5	20.3					19.3	19.1
Peas, canned.....	( <sup>6</sup> )					20.1	20.4					18.8	18.7
Tomatoes, canned.....	( <sup>6</sup> )					14.4	14.2					14.7	14.6
Sugar, granulated.....	Pound.	5.8	7.6	10.4	10.5	11.6	11.8	4.9	6.7	9.2	10.4	10.8	10.9
Tea.....	do.	60.0	60.0	79.6	89.2	88.9	87.1	55.0	56.0	63.4	71.8	72.4	73.0
Coffee.....	do.	32.0	33.0	29.4	30.8	49.3	49.8	24.4	24.4	27.7	28.6	45.1	45.0
Prunes.....	do.			17.9	18.1	22.2	25.3			16.5	17.8	29.1	29.5
Raisins.....	do.			16.2	18.0	19.4	21.0			14.6	15.6	19.3	21.9
Bananas.....	Dozen.					29.7	31.8					31.5	33.5
Oranges.....	do.					58.9	54.1					59.2	59.1

<sup>1</sup> The steak, for which prices are here quoted is known as "porterhouse" in most of the cities included in this report but in this city it is called "sirloin" steak.

ON OCT. 15, 1913, 1914, 1917, 1918, 1919, AND SEPT. 15, 1919, FOR 19 CITIES.

dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Birmingham, Ala.				Boston, Mass.								Buffalo, N. Y.							
Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.	Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.	Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.		
1913	1914	1917	1918			1913	1914	1917	1918			1913	1914	1917	1918				
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.		
28.5	29.2	35.5	41.3	40.7	39.1	35.0	36.3	44.2	45.1	62.7	60.7	72.3	23.4	31.5	40.0	39.0	37.3		
23.0	24.6	31.4	37.8	38.8	37.3	35.0	35.0	44.9	57.8	56.2	55.7	19.3	21.0	29.3	37.5	36.2	34.0		
20.5	21.3	26.6	33.9	30.5	31.7	25.6	25.2	31.5	39.4	40.2	39.9	16.5	17.8	24.7	31.6	31.2	29.9		
16.5	17.5	21.2	29.3	26.1	26.4	18.0	18.2	26.9	32.5	31.0	30.7	15.0	15.8	22.0	28.3	26.3	25.0		
10.4	11.7	17.0	22.7	18.6	17.6	.....	.....	.....	.....	.....	.....	11.5	12.8	17.2	22.6	19.5	18.3		
24.6	24.6	38.9	45.5	42.0	43.0	24.4	25.3	40.9	49.7	50.0	49.9	21.0	21.8	38.8	44.7	49.2	42.9		
35.0	35.0	50.9	60.9	61.1	58.3	25.4	26.8	45.8	53.4	52.2	48.9	22.3	23.0	46.1	52.8	48.9	43.3		
32.0	32.5	45.0	52.0	56.0	55.0	31.3	33.0	45.6	56.7	59.8	56.9	26.7	28.0	43.2	52.3	56.3	51.5		
21.9	22.5	43.3	38.5	37.0	37.5	20.5	21.5	34.5	37.4	37.4	37.4	15.3	16.5	28.9	31.9	28.9	26.7		
20.0	19.4	28.6	38.1	36.5	38.2	25.6	34.4	43.9	46.8	46.8	45.5	21.0	20.4	30.9	39.4	42.4	39.1		
.....	.....	27.8	31.0	34.1	34.7	.....	.....	29.4	32.0	33.2	33.3	.....	.....	27.5	28.6	30.8	32.3		
10.0	10.4	15.2	20.0	21.7	25.0	8.9	8.9	13.0	15.8	16.0	16.4	8.0	8.0	13.0	15.5	16.0	16.0		
.....	.....	.....	.....	17.5	17.7	.....	.....	.....	.....	16.6	16.7	.....	.....	.....	.....	15.9	16.0		
40.0	40.0	56.0	66.7	67.5	75.0	38.0	36.9	52.4	60.8	65.4	68.3	37.1	35.8	51.0	65.2	63.5	70.0		
.....	.....	.....	.....	44.6	44.6	.....	.....	.....	.....	42.4	42.5	.....	.....	.....	.....	42.2	41.6		
.....	.....	.....	.....	39.5	40.1	.....	.....	.....	.....	.....	35.8	.....	.....	.....	.....	.....	.....		
23.0	23.1	35.6	39.6	41.3	40.0	23.1	23.7	32.8	34.4	42.0	42.2	21.5	21.5	33.3	36.1	34.0	34.0		
15.2	15.1	30.8	34.7	36.6	36.0	15.7	15.4	30.9	34.4	39.1	37.1	14.4	14.0	30.6	32.8	35.7	33.4		
.....	.....	.....	.....	39.1	37.8	.....	.....	.....	.....	40.0	36.1	.....	.....	.....	.....	37.9	36.0		
35.0	35.0	49.4	56.7	56.4	59.3	53.3	46.7	66.0	83.8	81.7	92.9	36.6	38.3	55.1	64.2	63.8	72.7		
.....	.....	.....	.....	.....	55.0	.....	.....	.....	.....	.....	8.0	.....	.....	.....	.....	.....	57.6		
.....	.....	.....	.....	11.2	11.2	.....	.....	.....	.....	.....	62.5	.....	.....	.....	.....	.....	7.7		
5.4	5.5	10.6	11.1	10.0	9.6	6.0	6.0	9.1	9.1	9.7	9.6	5.6	5.2	9.9	10.0	10.0	10.0		
3.6	3.7	7.2	6.9	7.5	7.5	3.6	4.1	7.5	6.8	7.8	7.8	3.0	3.5	6.5	6.3	6.8	6.9		
2.4	2.6	5.4	5.5	5.6	5.3	3.5	3.8	7.5	7.4	7.5	7.8	2.5	2.8	7.0	6.4	6.4	6.2		
.....	.....	.....	.....	14.5	14.7	.....	.....	.....	.....	13.3	14.0	.....	.....	.....	.....	12.8	13.1		
.....	.....	.....	.....	25.8	25.7	.....	.....	.....	.....	24.8	24.7	.....	.....	.....	.....	24.0	24.0		
.....	.....	.....	.....	20.7	20.6	.....	.....	.....	.....	21.6	21.6	.....	.....	.....	.....	19.8	20.0		
8.2	7.9	12.2	14.4	16.7	17.5	9.4	9.4	11.5	13.4	16.0	17.1	9.3	9.3	10.8	13.4	16.0	17.4		
.....	.....	19.7	18.0	15.0	15.0	.....	.....	18.4	17.3	11.6	11.7	.....	.....	18.2	15.9	11.8	11.6		
2.2	2.0	3.7	4.3	5.3	4.9	1.7	1.3	3.4	3.7	3.6	3.2	1.7	1.1	3.1	3.1	4.2	3.0		
.....	.....	5.8	4.9	7.3	7.6	.....	.....	5.6	4.6	6.2	6.1	.....	.....	5.6	4.2	7.2	6.3		
.....	.....	.....	.....	6.0	5.5	.....	.....	.....	.....	4.1	3.8	.....	.....	.....	.....	5.7	4.9		
.....	.....	.....	.....	18.9	18.4	.....	.....	.....	.....	17.9	17.6	.....	.....	.....	.....	13.9	13.9		
.....	.....	.....	.....	19.4	19.2	.....	.....	.....	.....	21.4	21.3	.....	.....	.....	.....	18.4	18.4		
.....	.....	.....	.....	22.0	22.0	.....	.....	.....	.....	20.9	20.6	.....	.....	.....	.....	17.5	17.5		
.....	.....	.....	.....	14.5	14.8	.....	.....	.....	.....	16.8	17.0	.....	.....	.....	.....	16.3	16.3		
5.7	7.6	10.2	10.5	11.2	11.6	5.4	7.2	9.8	10.7	10.8	10.9	5.4	7.2	10.0	10.4	10.6	10.9		
61.3	61.3	74.0	79.4	88.4	89.1	58.6	58.6	64.6	66.1	66.2	67.1	45.0	45.0	53.4	64.0	66.2	66.2		
28.8	28.8	32.8	32.2	49.3	49.5	33.0	32.7	34.1	34.1	52.8	53.0	29.3	29.3	29.3	29.6	45.7	46.2		
.....	.....	16.0	16.2	27.5	33.3	.....	.....	16.8	19.8	31.1	31.8	.....	15.6	19.1	30.2	28.7	28.7		
.....	.....	15.2	15.6	18.8	20.4	.....	.....	15.0	15.4	18.4	20.8	.....	13.7	14.1	17.2	18.8	18.8		
.....	.....	.....	.....	40.3	40.0	.....	.....	.....	.....	45.9	44.6	.....	.....	.....	.....	42.2	42.3		
.....	.....	.....	.....	53.8	50.3	.....	.....	.....	.....	56.4	62.1	.....	.....	.....	.....	57.7	60.2		

<sup>2</sup> 15-16 ounce can.    <sup>3</sup> Baked weight.    <sup>4</sup> 8-ounce package.    <sup>5</sup> 28-ounce package.    <sup>6</sup> No. 2 can.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD ON

Article.	Unit.	Chicago, Ill.						Cleveland, Ohio.					
		Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.	Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.
		1913	1914	1917	1918			1913	1914	1917	1918		
Sirloin steak.....	Pound.	Cts. 24.8	Cts. 26.8	Cts. 30.6	Cts. 37.6	Cts. 38.4	Cts. 36.6	Cts. 25.4	Cts. 25.4	Cts. 30.7	Cts. 36.6	Cts. 38.7	Cts. 37.6
Round steak.....	do.	21.6	23.8	27.3	34.3	34.1	32.5	22.9	22.6	28.8	34.1	35.6	34.5
Rib roast.....	do.	20.1	21.9	24.7	31.3	30.7	28.9	18.7	19.6	23.2	28.1	28.8	28.3
Chuck roast.....	do.	15.8	17.9	21.3	27.6	26.1	24.3	16.9	17.3	21.1	26.0	24.9	24.3
Plate beef.....	do.	12.0	13.0	16.5	20.8	19.2	17.0	12.9	12.3	15.8	19.9	17.6	17.4
Pork chops.....	do.	21.0	20.5	35.8	39.0	43.9	41.0	23.0	22.6	38.7	42.3	47.2	44.9
Bacon.....	do.	32.7	32.7	47.5	59.3	58.6	54.6	28.1	29.9	46.8	55.7	52.6	49.8
Ham.....	do.	32.0	33.9	43.9	52.0	57.9	54.0	35.7	35.0	43.6	55.3	59.6	56.2
Lamb.....	do.	19.8	19.9	31.4	32.3	34.1	33.1	18.7	20.0	30.6	33.0	35.2	31.6
Hens.....	do.	18.4	19.3	27.1	33.7	37.9	33.1	20.9	21.1	31.7	38.1	41.4	39.2
Salmon (canned).....	do.			30.0	30.6	34.7	34.9			27.0	29.9	33.0	35.0
Milk, fresh.....	Quart.	8.0	8.0	12.9	12.9	15.0	15.0	8.0	8.0	12.0	14.0	15.0	15.7
Milk, evaporated (unsweetened). Butter.....	Pound.	35.4	34.0	48.7	61.5	60.3	67.8	39.2	38.6	53.0	65.1	64.8	73.8
Oleomargarine.....	do.					41.1	40.4					43.3	43.7
Nut margarine.....	do.												35.6
Cheese.....	do.	25.7	25.0	36.8	39.5	44.8	44.4	24.0	24.5	35.0	36.7	43.2	42.1
Lard.....	do.	15.0	15.1	29.9	33.2	36.3	34.6	16.4	16.0	31.8	34.3	37.7	36.2
Crisco.....	do.					37.7	35.5					39.5	38.4
Eggs, strictly fresh.....	Dozen.	33.3	30.1	46.9	55.9	56.1	65.6	42.7	37.8	57.0	65.6	64.0	75.8
Eggs, storage.....	do.					56.1							61.5
Rolled oats.....	Pound.					6.9	7.0					9.2	9.4
Bread.....	do. <sup>1</sup>	6.1	6.2	10.5	10.2	10.0	10.7	5.6	5.7	9.9	10.0	10.0	9.7
Flour.....	do.	2.9	3.4	6.6	6.4	7.1	7.1	3.1	3.6	7.1	6.7	7.2	7.4
Corn meal.....	do.	2.8	2.8	7.1	6.7	6.8	6.7	3.0	3.4	7.3	6.6	6.3	6.5
Corn flakes.....	( <sup>3</sup> )					12.9	12.8					14.2	14.2
Cream of Wheat.....	( <sup>4</sup> )					23.9	24.1					24.4	24.4
Macaroni.....	Pound.					18.3	17.8					18.6	18.6
Rice.....	do.	9.0	9.0	10.3	13.9	15.4	16.6	9.0	9.5	11.1	14.4	16.9	18.0
Beans, navy.....	do.			18.6	16.3	12.1	11.8			19.1	14.7	12.6	11.9
Potatoes.....	do.	1.7	1.3	2.8	2.7	4.4	3.4	1.9	1.4	3.2	3.4	5.0	4.1
Onions.....	do.			4.8	3.6	6.3	5.9			5.0	3.8	5.5	5.6
Cabbage.....	do.					5.3	4.5					6.2	4.7
Beans, baked.....	( <sup>5</sup> )					16.6	16.6					16.3	16.3
Corn, canned.....	( <sup>5</sup> )					17.5	17.6					19.7	18.9
Peas, canned.....	( <sup>5</sup> )					17.3	17.5					18.9	18.6
Tomatoes, canned.....	( <sup>5</sup> )					15.8	15.5					16.6	16.2
Sugar, granulated.....	Pound.	5.2	6.6	8.8	10.0	11.3	12.4	5.5	7.4	9.7	10.1	10.9	11.0
Tea.....	do.	55.0	55.0	57.3	60.7	63.7	63.7	50.0	50.0	56.6	66.1	72.8	73.8
Coffee.....	do.	30.7	30.0	28.5	28.9	44.5	44.4	26.5	26.5	29.1	29.8	49.4	49.3
Prunes.....	do.			16.1	18.2	29.9	28.9			16.5	17.9	24.9	29.4
Raisins.....	do.			14.5	15.4	19.6	20.2			14.3	15.0	20.7	22.1
Bananas.....	Dozen.					35.6	35.6					45.0	46.0
Oranges.....	do.					49.8	52.8					53.4	57.8

<sup>1</sup> 15-16 ounce can.

<sup>2</sup> Baked weight.

<sup>3</sup> 8-ounce package.



MONTHLY LABOR REVIEW.

OCT. 15, 1913, 1914, 1917, 1918, 1919, AND SEPT. 15, 1919, FOR 19 CITIES—Continued.

Denver, Colo.						Detroit, Mich.						Los Angeles, Calif.					
Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.	Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.	Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918			1913	1914	1917	1918		
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	
23.9	23.6	30.7	37.4	34.0	33.3	25.4	24.9	30.5	37.9	38.6	37.8	24.0	23.7	27.7	32.8	31.5	31.1
21.4	22.1	28.5	34.7	31.7	30.1	20.8	21.4	27.5	34.3	34.3	32.5	21.0	21.3	24.7	31.4	28.0	28.1
17.8	17.9	23.2	27.8	27.7	26.4	20.0	19.5	24.2	30.1	29.2	29.5	19.4	20.0	22.9	29.3	26.5	26.2
15.8	16.1	20.7	24.7	22.2	21.0	15.4	16.1	19.7	24.9	23.2	22.7	15.8	15.8	18.6	24.1	19.6	19.7
10.0	10.7	14.4	17.9	14.5	14.1	11.0	12.4	15.8	20.0	17.1	16.6	13.3	12.7	15.2	19.9	15.5	15.6
20.8	22.1	40.2	44.3	44.5	45.3	21.6	21.0	36.9	42.9	46.5	45.1	25.4	26.9	37.2	46.4	48.5	44.7
28.0	30.5	52.0	59.2	57.0	54.8	23.5	25.0	45.7	55.5	52.8	49.2	33.1	35.5	54.6	64.1	62.5	58.5
31.7	32.5	46.3	57.1	60.9	57.2	27.0	29.0	43.6	55.4	58.6	56.6	35.0	37.5	51.3	60.9	62.6	59.1
14.6	17.6	30.3	32.3	30.2	27.8	16.4	17.5	31.3	34.0	35.1	34.4	18.6	19.3	28.8	33.2	30.7	29.7
19.4	20.6	28.4	34.9	37.7	36.7	19.8	20.3	31.4	37.2	41.6	39.3	26.2	25.7	31.9	42.3	45.6	46.0
-----	-----	26.4	29.9	33.9	35.6	-----	-----	28.8	31.2	33.3	34.6	-----	-----	26.8	35.2	40.4	42.1
8.4	8.4	11.6	11.8	13.0	12.7	9.0	9.0	12.0	15.0	16.0	16.0	10.0	10.0	12.0	14.0	14.0	14.0
-----	-----	16.3	16.4	16.3	16.4	-----	-----	-----	-----	15.9	16.1	-----	-----	-----	-----	14.6	14.8
39.0	34.6	49.5	63.0	63.9	71.0	37.0	36.4	50.2	64.0	64.2	71.5	39.5	40.0	53.5	67.7	70.5	73.4
-----	-----	-----	-----	40.7	42.2	-----	-----	-----	-----	42.3	41.4	-----	-----	-----	-----	46.8	45.4
-----	-----	-----	-----	35.3	35.6	-----	-----	-----	-----	34.7	34.9	-----	-----	-----	-----	36.4	36.4
26.1	26.1	35.2	38.3	44.7	44.9	21.7	22.0	34.4	39.7	42.1	42.0	19.5	20.0	33.9	39.0	44.9	44.7
16.1	15.8	32.9	34.6	39.0	37.9	16.5	16.0	31.4	33.9	37.8	35.5	17.9	17.1	30.1	34.6	39.7	34.9
-----	-----	-----	-----	38.4	35.5	-----	-----	-----	-----	38.4	36.6	-----	-----	-----	-----	37.1	34.8
37.1	35.0	50.3	58.5	58.6	64.0	35.6	32.7	53.2	63.4	62.3	70.7	52.5	56.3	61.0	73.5	66.6	77.6
-----	-----	-----	-----	55.0	8.7	-----	-----	-----	-----	-----	57.4	-----	-----	-----	-----	-----	63.0
-----	-----	-----	-----	8.6	8.7	-----	-----	-----	-----	8.3	8.6	-----	-----	-----	-----	8.7	9.0
5.5	5.6	9.9	12.0	11.2	11.2	5.6	5.9	9.5	9.5	10.2	10.2	6.0	6.5	9.2	9.2	9.4	9.4
2.6	2.8	5.7	5.9	6.1	6.1	3.1	3.5	6.8	6.6	7.1	7.2	3.4	4.0	6.5	7.1	7.2	7.2
2.6	2.7	6.1	6.1	5.9	6.1	2.8	3.2	7.5	6.9	7.1	6.9	3.4	3.9	7.8	7.6	7.5	7.6
-----	-----	-----	-----	14.7	14.7	-----	-----	-----	-----	13.8	14.1	-----	-----	-----	-----	12.8	13.2
-----	-----	-----	-----	25.1	25.0	-----	-----	-----	-----	24.9	25.0	-----	-----	-----	-----	24.2	24.4
-----	-----	-----	-----	19.0	19.5	-----	-----	-----	-----	19.2	19.4	-----	-----	-----	-----	17.0	17.6
8.6	8.6	11.1	14.7	15.9	17.1	8.4	8.4	11.6	14.6	17.2	18.1	7.7	8.0	10.4	14.3	15.6	16.3
-----	-----	18.5	16.4	13.4	13.2	-----	-----	19.4	14.8	12.2	11.8	-----	-----	17.9	16.4	10.4	11.0
1.4	1.2	2.3	2.9	3.6	3.4	1.6	1.3	2.9	2.8	4.3	3.3	1.7	1.7	3.2	3.3	3.7	3.7
-----	-----	3.9	4.0	5.0	6.4	-----	-----	4.9	4.3	6.5	6.2	-----	-----	3.3	3.5	5.3	4.9
-----	-----	-----	-----	2.7	2.7	-----	-----	-----	-----	4.5	4.1	-----	-----	-----	-----	3.3	3.0
-----	-----	-----	-----	17.6	17.6	-----	-----	-----	-----	16.0	16.0	-----	-----	-----	-----	17.8	18.0
-----	-----	-----	-----	18.3	17.7	-----	-----	-----	-----	20.4	19.8	-----	-----	-----	-----	18.5	19.1
-----	-----	-----	-----	19.5	19.2	-----	-----	-----	-----	19.3	18.0	-----	-----	-----	-----	18.6	18.2
-----	-----	-----	-----	15.5	15.2	-----	-----	-----	-----	17.7	16.6	-----	-----	-----	-----	15.0	15.3
5.4	6.8	8.9	11.0	11.2	12.4	5.4	7.3	10.4	9.7	11.1	11.1	5.5	7.2	8.4	10.5	10.8	11.7
52.8	52.8	57.3	64.2	69.5	70.5	43.3	43.3	54.5	60.1	62.1	63.3	54.5	54.5	59.0	66.5	68.7	68.8
29.4	29.4	30.0	30.2	48.9	49.2	29.3	30.0	30.7	30.3	49.4	49.2	36.3	36.3	31.8	30.4	47.1	46.5
-----	-----	-----	-----	17.9	18.7	-----	-----	-----	-----	29.4	31.0	-----	-----	15.8	18.7	28.7	29.0
-----	-----	-----	-----	14.4	14.7	-----	-----	-----	-----	19.8	21.1	-----	-----	14.9	15.3	18.1	19.6
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	30.5	31.7	-----	-----	-----	-----	40.0	40.0
-----	-----	-----	-----	49.9	50.1	-----	-----	-----	-----	52.7	52.5	-----	-----	-----	-----	40.9	41.3

<sup>a</sup> 28-ounce package.

<sup>b</sup> No. 2 can.

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD ON

Article.	Unit.	Milwaukee, Wis.						New Orleans, La.						
		Oct. 15—				Sept. 15, 1919	Oct. 1, 1919	Oct. 15—				Sept. 15, 1919	Oct. 1, 1919	
		1913	1914	1917	1918			1913	1914	1917	1918			
		<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
Sirloin steak.....	Pound.	23.6	24.0	29.3	36.1	38.7	36.0	21.5	23.6	27.1	32.9	32.3	31.7	
Round steak.....	do.	21.6	22.3	28.0	34.5	36.6	34.0	19.0	20.0	24.6	30.1	29.3	29.2	
Rib roast.....	do.	18.8	19.5	23.8	28.6	30.6	28.9	18.4	19.5	23.6	29.6	28.6	28.3	
Chuck roast.....	do.	16.4	17.5	21.7	26.6	27.4	25.7	15.5	14.9	18.3	23.2	21.7	22.1	
Plate beef.....	do.	12.1	12.8	16.0	20.0	19.3	18.1	11.2	13.0	15.5	19.1	18.5	18.2	
Pork chops.....	do.	21.2	21.3	37.0	40.2	45.2	41.7	25.0	25.5	40.1	49.1	46.4	47.2	
Bacon.....	do.	28.6	29.3	47.2	56.0	56.8	54.0	30.4	32.8	50.3	64.1	59.1	55.5	
Ham.....	do.	29.0	29.8	43.6	51.6	55.4	52.7	26.0	28.4	42.5	50.0	52.7	49.5	
Lamb.....	do.	19.5	20.0	31.9	34.2	36.7	34.0	21.0	21.7	31.4	39.2	36.7	38.5	
Hens.....	do.	18.8	18.8	27.2	32.0	38.6	32.5	21.0	22.8	33.0	38.9	42.1	43.5	
Salmon (canned).....	do.			27.7	28.3	35.1	37.4			30.4	34.2	35.8	36.6	
Milk, fresh.....	Quart.	7.0	7.0	11.0	12.0	13.0	13.0	9.5	9.8	13.2	15.7	16.0	18.5	
Milk, evaporated (unsweet- ened),.....	( <sup>2</sup> )					17.0	16.9					16.3	16.5	
Butter.....	Pound.	35.0	35.3	49.9	63.1	63.9	71.8	37.5	36.5	51.9	65.6	65.7	71.5	
Oleomargarine.....	do.					42.9	42.4					44.5	43.4	
Nut margarine.....	do.						34.4					36.3	36.1	
Cheese.....	do.	22.0	22.3	36.9	41.0	42.8	42.0	21.4	22.8	35.0	39.9	43.0	42.0	
Lard.....	do.	15.8	16.3	31.5	34.9	38.4	36.3	14.9	14.6	30.1	34.4	38.5	35.9	
Crisco.....	do.					39.3	37.6					38.9	39.5	
Eggs, strictly fresh.....	Dozen.	35.0	32.3	48.2	54.3	62.8	65.1	34.3	32.6	46.9	59.3	58.1	62.3	
Eggs, storage.....	do.						55.8						57.2	
Rolled oats.....	Pound.					8.5	8.4					8.6	8.7	
Bread.....	do. <sup>3</sup>	5.7	6.2	9.0	9.2	10.0	10.0	5.0	5.3	8.7	9.6	9.1	9.2	
Flour.....	do.	3.0	3.6	6.9	6.6	7.4	7.4	3.8	3.9	7.9	7.3	7.4	7.5	
Corn meal.....	do.	3.7	3.6	7.8	6.7	6.3	6.7	2.9	3.0	7.2	6.8	6.1	5.8	
Corn flakes.....	( <sup>4</sup> )					14.2	14.2					14.2	14.1	
Cream of Wheat.....	( <sup>5</sup> )					25.3	25.3					24.9	24.8	
Macaroni.....	Pound.					19.4	19.0					11.1	11.4	
Rice.....	do.	9.0	9.5	11.4	14.6	16.7	17.6	7.5	7.5	10.0	12.3	15.2	14.8	
Beans, navy.....	do.			19.3	14.9	11.7	11.6			17.6	16.3	11.3	11.4	
Potatoes.....	do.	1.6	1.4	2.7	3.0	4.3	3.4	2.1	2.3	4.1	4.3	5.5	5.0	
Onions.....	do.			4.7	3.7	6.2	6.2			4.5	4.5	5.7	5.9	
Cabbage.....	do.					3.3	2.8					4.7	5.0	
Beans, baked.....	( <sup>6</sup> )					16.5	16.3					17.4	17.6	
Corn, canned.....	( <sup>6</sup> )					17.9	18.2					17.4	17.6	
Peas, canned.....	( <sup>6</sup> )					17.8	17.5					18.7	18.4	
Tomatoes, canned.....	( <sup>6</sup> )					17.5	17.0					14.9	14.9	
Sugar, granulated.....	Pound.	5.5	6.8	9.1	10.6	11.1	11.8	5.1	7.2	9.9	10.4	10.9	10.9	
Tea.....	do.	50.0	50.0	58.4	64.5	68.7	68.2	62.1	62.1	62.5	64.1	68.2	67.1	
Coffee.....	do.	27.5	27.5	26.3	26.8	47.5	47.1	25.0	25.0	26.9	27.4	43.3	42.5	
Prunes.....	do.			16.5	15.6	26.0	29.9			17.7	18.1	34.0	33.3	
Raisins.....	do.			14.8	15.0	18.8	20.8			16.3	15.4	18.6	19.2	
Bananas.....	Dozen.					35.7	40.0					20.0	25.0	
Oranges.....	do.					56.5	57.9					66.8	65.0	

<sup>1</sup> The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

OCT. 15, 1913, 1914, 1917, 1918, 1919, AND SEPT. 15, 1919, FOR 19 CITIES—Continued.

New York, N. Y.					Philadelphia, Pa.					Pittsburgh, Pa.							
Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.	Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.	Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918			1913	1914	1917	1918		
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	
26.1	27.3	35.6	43.8	42.5	42.6	31.2	31.3	39.2	50.1	51.3	50.4	27.7	29.2	35.6	46.3	44.6	45.2
25.5	27.1	36.0	45.4	44.4	44.5	26.4	27.2	36.5	47.0	47.3	46.8	23.7	24.0	32.9	42.8	40.0	40.7
21.6	22.2	29.8	37.2	37.5	37.2	22.1	22.4	29.1	37.1	39.4	38.8	21.7	22.5	27.4	35.5	34.0	34.2
16.0	16.9	23.6	30.1	27.8	27.6	18.2	19.0	25.2	32.3	31.1	30.5	17.8	18.7	24.1	31.2	28.4	28.3
14.8	15.6	21.3	27.0	24.0	24.4	11.5	12.2	17.4	21.5	19.6	19.4	12.8	13.3	17.1	22.9	18.3	18.2
22.9	24.7	39.9	46.7	47.4	45.7	23.3	23.1	40.0	44.9	49.8	46.2	23.2	23.5	40.6	46.3	46.2	44.8
25.7	26.5	46.4	55.8	51.3	47.9	27.5	28.1	46.7	57.5	55.5	53.1	30.6	30.9	48.3	60.2	57.1	55.8
29.5	31.3	47.9	58.0	59.3	57.0	31.9	32.0	47.9	57.5	60.5	58.6	29.9	32.5	46.5	58.8	61.9	59.8
15.2	16.3	28.4	30.5	29.6	29.0	19.1	19.8	33.1	36.5	39.9	39.4	20.0	21.3	36.3	38.1	38.0	38.5
21.8	22.1	32.3	41.0	40.3	40.5	23.1	23.8	34.4	42.9	44.9	44.1	25.5	25.0	37.8	43.5	46.1	44.6
.....	.....	33.4	34.8	39.6	39.8	.....	.....	26.0	29.2	30.7	31.4	.....	.....	30.1	32.3	33.6	36.3
9.0	9.0	13.8	15.6	16.0	16.0	8.0	8.0	11.0	14.0	14.0	14.0	8.8	9.0	12.5	14.0	15.0	16.0
.....	.....	.....	.....	15.5	15.5	.....	.....	.....	14.0	15.7	15.8	.....	.....	.....	.....	16.1	16.3
37.5	38.1	51.5	65.6	65.3	72.4	43.1	42.1	56.2	70.5	70.3	77.2	39.5	38.4	52.7	67.5	66.7	74.5
.....	.....	.....	.....	42.7	41.7	.....	.....	.....	.....	45.4	44.5	.....	.....	.....	.....	43.1	42.2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38.0	38.3	.....	.....	.....	.....	.....	36.7
19.8	20.0	34.0	35.9	42.5	42.3	25.0	28.0	36.1	38.0	45.7	44.9	24.5	25.0	35.7	39.7	43.5	43.2
16.3	15.8	31.3	34.1	38.3	37.0	15.6	14.9	32.8	34.2	38.4	35.2	15.7	15.3	32.8	34.3	38.0	36.3
.....	.....	.....	.....	37.8	36.1	.....	.....	.....	.....	38.1	34.8	.....	.....	.....	.....	39.7	37.3
47.9	42.9	62.7	69.2	70.9	80.0	42.5	39.9	54.8	66.3	65.3	75.5	38.0	33.5	52.8	60.7	60.0	70.2
.....	.....	.....	.....	.....	60.5	.....	.....	.....	.....	.....	61.2	.....	.....	.....	.....	.....	59.3
.....	.....	.....	.....	7.8	7.9	.....	.....	.....	.....	8.3	8.3	.....	.....	.....	.....	9.3	9.4
6.0	6.2	9.9	10.0	10.0	10.0	4.8	4.8	8.9	9.5	9.4	9.4	5.5	5.4	10.4	9.8	10.3	10.3
3.2	3.7	7.8	7.3	7.7	7.5	3.2	3.8	7.5	7.0	7.5	7.4	3.2	3.7	7.2	6.8	7.5	7.5
3.5	3.6	8.2	7.7	7.3	7.3	2.8	2.9	7.1	6.9	6.0	6.3	3.0	3.3	8.1	7.4	7.6	7.6
.....	.....	.....	.....	.....	12.0	12.0	.....	.....	.....	12.4	12.4	.....	.....	.....	.....	.....	13.7
.....	.....	.....	.....	.....	24.1	24.1	.....	.....	.....	24.4	24.4	.....	.....	.....	.....	.....	25.1
.....	.....	.....	.....	.....	19.5	20.0	.....	.....	.....	20.4	21.0	.....	.....	.....	.....	.....	17.4
.....	.....	.....	.....	.....	16.5	16.4	9.8	10.0	11.8	14.4	17.1	17.4	9.2	9.2	11.0	14.4	16.9
.....	.....	11.5	14.0	12.6	12.3	.....	.....	18.5	16.3	12.3	12.0	.....	.....	18.8	16.8	12.4	12.3
2.4	2.1	3.8	4.0	4.5	4.1	2.3	2.0	3.8	4.3	4.9	4.4	1.9	1.5	3.2	3.6	4.4	3.9
.....	.....	5.9	4.8	6.8	6.0	.....	.....	5.6	4.5	7.1	6.0	.....	.....	5.2	4.5	6.8	5.9
.....	.....	.....	.....	4.1	3.9	.....	.....	.....	.....	6.8	5.7	.....	.....	.....	.....	4.8	4.9
.....	.....	.....	.....	15.8	15.4	.....	.....	.....	.....	14.3	14.2	.....	.....	.....	.....	16.8	16.6
.....	.....	.....	.....	19.2	19.1	.....	.....	.....	.....	18.7	18.3	.....	.....	.....	.....	18.7	18.9
.....	.....	.....	.....	.....	18.0	18.3	.....	.....	.....	18.2	18.4	.....	.....	.....	.....	18.5	18.5
.....	.....	.....	.....	.....	16.1	16.2	.....	.....	.....	15.3	16.0	.....	.....	.....	.....	15.3	16.1
4.9	6.6	9.7	10.6	10.6	10.8	5.0	6.9	9.4	10.5	10.5	10.7	5.7	7.5	10.1	10.8	11.0	11.1
43.3	43.3	52.1	55.1	55.6	55.8	54.0	54.0	58.3	60.5	61.1	61.0	58.0	60.0	70.2	76.7	82.4	80.7
27.2	26.3	26.5	28.0	45.5	43.9	24.5	24.5	28.3	27.3	44.9	45.0	30.0	29.3	29.9	29.9	48.7	49.2
.....	.....	16.7	19.3	32.7	31.8	.....	.....	16.4	18.1	30.1	31.8	.....	.....	16.5	20.2	27.4	29.7
.....	.....	14.6	15.0	18.5	19.9	.....	.....	13.9	14.6	18.8	20.1	.....	.....	14.8	15.1	19.9	22.0
.....	.....	.....	.....	36.1	37.2	.....	.....	.....	.....	36.5	37.9	.....	.....	.....	.....	41.0	46.8
.....	.....	.....	.....	60.3	61.8	.....	.....	.....	.....	54.1	55.9	.....	.....	.....	.....	52.3	52.4

<sup>1</sup> 15-16 ounce can.    <sup>2</sup> Baked weight.    <sup>3</sup> 8-ounce package.    <sup>4</sup> 28-ounce package.    <sup>5</sup> No. 2 can.

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD ON

Article.	Unit.	St. Louis, Mo.						San Francisco, Calif.						
		Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.	Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.	
		1913	1914	1917	1918			1913	1914	1917	1918			
		<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
Sirloin steak.....	Pound.	26.0	26.0	30.8	37.5	36.6	34.5	21.4	20.7	23.6	32.2	30.0	29.5	
Round steak.....	do.	24.3	24.3	30.1	36.7	36.1	34.4	19.7	20.0	23.1	31.8	28.7	28.5	
Rib roast.....	do.	19.5	20.0	25.6	30.4	29.2	29.5	21.3	21.7	23.2	30.5	29.2	28.6	
Chuck roast.....	do.	15.6	15.9	20.6	25.9	21.9	21.3	15.2	15.5	16.2	23.7	20.7	20.4	
Plate beef.....	do.	11.9	13.1	16.6	21.1	18.1	17.7	14.2	14.7	15.7	21.6	17.7	16.9	
Pork chops.....	do.	19.8	21.3	37.4	42.3	42.0	39.7	24.2	25.3	36.3	44.4	48.6	43.0	
Bacon.....	do.	26.9	26.0	48.6	54.4	52.0	49.4	34.4	35.0	51.9	61.2	63.7	59.2	
Ham.....	do.	27.3	27.5	45.6	53.7	58.2	54.0	34.0	34.0	47.5	56.5	58.7	57.5	
Lamb.....	do.	18.3	19.3	30.8	32.0	33.7	31.1	16.7	18.3	30.6	34.2	33.2	32.4	
Hens.....	do.	16.8	17.8	27.5	32.3	33.6	32.8	24.5	24.5	31.5	43.7	46.3	47.3	
Salmon (canned).....	do.			28.4	31.8	33.0	33.4			24.9	27.5	30.0	31.6	
Milk, fresh.....	Quart.	8.8	8.8	13.2	14.2	16.0	16.0	10.0	10.0	12.1	14.0	14.0	14.2	
Milk, evaporated (unsweet- ened).....	( <sup>1</sup> )					15.7	15.8					15.0	15.1	
Butter.....	Pound.	37.9	36.0	52.6	65.3	64.4	72.1	40.0	37.9	54.5	70.0	70.2	73.5	
Oleomargarine.....	do.					39.2	39.9					37.3	38.8	
Nut margarine.....	do.					35.4	35.5					37.3	35.4	
Cheese.....	do.	19.5	21.7	36.9	39.8	42.3	40.7	21.0	20.0	31.6	37.5	43.3	44.7	
Lard.....	do.	13.1	12.6	29.3	31.7	31.7	32.2	18.0	17.7	30.2	33.7	39.7	37.4	
Crisco.....	do.					37.1	35.8					42.0	38.5	
Eggs, strictly fresh.....	Dozen.	31.0	28.5	46.0	56.5	52.9	60.3	56.4	53.3	60.8	75.6	71.6	79.1	
Eggs, storage.....	do.						54.0						60.7	
Rolled oats.....	Pound.					6.6	6.5					8.2	8.6	
Bread.....	do. <sup>2</sup>	5.6	6.0	10.5	10.0	10.0	10.0	5.9	6.0	9.3	10.0	10.0	10.0	
Flour.....	do.	2.9	3.4	6.3	6.4	6.8	6.8	3.4	3.9	6.4	7.1	7.1	7.1	
Corn meal.....	do.	2.5	2.6	6.6	6.0	6.1	5.7	3.5	3.8	7.4	7.4	7.0	7.1	
Corn flakes.....	( <sup>3</sup> )					13.5	13.4					14.1	14.2	
Cream of Wheat.....	( <sup>4</sup> )					24.4	24.3					24.6	24.7	
Macaroni.....	Pound.					18.3	18.2					15.2	14.7	
Rice.....	do.	8.2	8.7	10.6	13.8	16.5	16.9	8.5	8.5	10.5	14.1	15.1	15.3	
Beans.....	do.			19.2	15.5	12.5	11.9			17.7	15.0	10.1	10.3	
Potatoes.....	do.	1.9	1.6	2.9	3.2	4.2	3.7	1.8	1.7	3.1	3.3	3.2	3.3	
Onions.....	do.			4.7	4.4	5.8	6.1			3.2	2.7	4.1	4.4	
Cabbage.....	do.					5.1	4.3							
Beans, baked.....	( <sup>5</sup> )					15.5	15.1					18.9	18.4	
Corn, canned.....	( <sup>6</sup> )					16.9	16.5					18.8	18.7	
Peas, canned.....	( <sup>6</sup> )					16.6	16.3					18.3	17.9	
Tomatoes, canned.....	( <sup>6</sup> )					14.1	14.5					14.5	13.3	
Sugar, granulated.....	Pound.	5.3	6.4	8.9	10.9	11.2	12.8	5.4	6.7	8.2	10.4	10.5	10.8	
Tea.....	do.	55.0	55.8	62.8	69.8	73.8	73.1	50.0	50.0	53.4	55.9	58.1	59.5	
Coffee.....	do.	24.4	24.8	28.3	27.7	46.5	45.7	32.0	32.0	30.3	30.7	45.1	45.3	
Prunes.....	do.			17.3	19.6	27.9	30.2			15.2	16.6	23.1	23.6	
Raisins.....	do.			16.7	17.3	19.5	21.3			14.3	13.9	17.8	18.3	
Bananas.....	Dozen.					31.0	32.9					42.0	46.0	
Oranges.....	do.					44.3	49.9					55.5	54.2	

<sup>1</sup> 15-16 ounce can.<sup>2</sup> Baked weight.<sup>3</sup> 8-ounce package.<sup>4</sup> 28-ounce package.<sup>5</sup> No. 2 can.

[1838]

OCT. 15, 1913, 1914, 1917, 1918, 1919, AND SEPT. 15, 1919, FOR 19 CITIES—Concluded.

Seattle, Wash.				Washington, D. C.							
Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.	Oct. 15—				Sept. 15, 1919.	Oct. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918		
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
24.3	23.0	26.7	36.7	36.3	35.0	27.4	28.0	35.0	51.4	49.6	48.8
20.7	20.8	25.1	35.4	33.7	33.4	23.5	25.1	33.7	48.4	45.6	44.4
19.3	19.0	22.5	31.3	28.3	29.3	20.7	21.7	27.8	40.2	37.2	36.8
16.0	15.0	18.1	26.1	22.7	22.5	17.3	18.1	24.3	35.3	30.6	29.6
13.0	12.1	15.3	21.6	18.3	18.3	12.7	14.1	19.1	25.5	18.3	18.9
24.3	23.5	40.0	49.5	50.0	48.9	23.5	24.1	41.5	52.3	52.4	49.8
32.5	33.8	49.0	62.0	63.2	61.5	27.1	28.1	49.7	58.4	55.7	52.6
30.0	31.3	43.1	55.3	59.0	58.1	30.0	30.6	43.8	56.2	59.8	58.4
17.7	17.6	28.7	35.9	33.2	32.3	19.1	20.4	36.0	43.8	38.6	38.4
24.3	21.0	27.1	38.5	42.6	42.8	22.5	22.3	32.5	45.3	46.0	45.8
.....	.....	27.7	31.1	34.0	34.1	.....	.....	23.6	33.1	32.3	33.0
9.7	9.3	12.0	14.7	15.0	15.0	9.0	9.0	14.0	17.0	15.0	18.0
.....	.....	.....	.....	15.5	15.4	.....	.....	.....	.....	16.2	16.1
40.0	39.4	54.6	70.3	71.0	73.9	40.3	38.9	53.4	68.9	68.4	74.1
.....	.....	.....	.....	39.0	40.2	.....	.....	.....	.....	42.4	43.0
.....	.....	.....	.....	36.7	36.8	.....	.....	.....	.....	36.2	35.3
22.7	22.4	31.2	36.3	43.7	43.0	23.5	23.5	35.1	37.9	43.5	42.8
17.1	16.2	30.1	34.0	40.7	38.5	15.1	14.3	31.8	35.0	38.5	35.6
.....	.....	.....	.....	42.6	41.2	.....	.....	.....	.....	39.5	37.2
50.0	54.2	65.2	71.6	74.7	82.5	36.9	36.3	54.6	68.6	65.9	71.7
.....	.....	.....	.....	.....	64.8	.....	.....	.....	.....	.....	60.5
.....	.....	.....	.....	8.7	8.7	.....	.....	.....	.....	10.0	10.3
5.2	6.0	10.4	10.3	11.5	11.5	5.7	5.7	10.1	10.3	10.0	10.1
2.9	3.3	6.0	6.6	6.4	6.6	3.8	4.2	7.5	6.9	7.8	7.8
3.3	3.4	7.5	7.5	7.4	7.4	2.7	2.8	6.2	5.9	5.8	5.6
.....	.....	.....	.....	14.9	14.8	.....	.....	.....	.....	13.8	13.9
.....	.....	.....	.....	27.1	27.1	.....	.....	.....	.....	24.7	24.6
.....	.....	.....	.....	16.3	16.5	.....	.....	.....	.....	21.1	19.9
7.7	8.6	10.9	14.5	17.5	18.1	9.4	9.4	11.5	13.3	17.3	18.2
.....	.....	19.0	17.1	12.0	11.8	.....	.....	20.1	15.9	13.0	12.6
1.4	1.5	2.3	2.7	3.3	3.0	2.0	1.6	3.1	3.8	4.2	3.9
.....	.....	4.0	4.2	5.6	5.5	.....	.....	5.4	4.4	6.8	6.6
.....	.....	.....	.....	5.2	4.6	.....	.....	.....	.....	6.1	5.2
.....	.....	.....	.....	21.7	21.5	.....	.....	.....	.....	14.8	14.9
.....	.....	.....	.....	20.1	20.4	.....	.....	.....	.....	19.8	19.1
.....	.....	.....	.....	20.7	21.3	.....	.....	.....	.....	19.1	18.6
.....	.....	.....	.....	16.9	17.7	.....	.....	.....	.....	16.7	16.8
6.4	7.3	8.9	10.8	10.8	10.9	5.1	6.7	9.4	10.5	10.9	11.1
50.0	50.0	54.2	59.8	63.6	63.3	57.5	57.5	59.2	72.6	76.4	77.9
28.0	30.0	31.6	31.7	47.9	47.8	28.8	28.8	28.1	30.0	49.5	48.4
.....	.....	14.6	17.6	27.3	27.3	.....	.....	17.8	19.9	28.4	32.1
.....	.....	14.5	15.1	20.9	21.3	.....	.....	15.4	16.3	17.5	21.2
.....	.....	.....	.....	50.0	50.0	.....	.....	.....	.....	43.0	44.2
.....	.....	.....	.....	54.7	56.1	.....	.....	.....	.....	55.0	56.3

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Bridgeport, Conn.		Butte, Mont.		Charleston, S. C.		Cincinnati, Ohio.		Columbus, Ohio.	
		Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.
Sirloin steak.....	Pound.	Cents. 50.3	Cents. 50.3	Cents. 32.6	Cents. 31.8	Cents. 36.9	Cents. 37.0	Cents. 31.5	Cents. 30.8	Cents. 39.4	Cents. 36.4
Round steak.....	do.	47.8	47.8	27.3	26.7	36.8	36.4	30.6	29.8	37.2	34.4
Rib roast.....	do.	36.4	36.5	25.8	24.9	30.0	30.0	26.5	25.4	31.2	30.0
Chuck roast.....	do.	28.7	28.5	16.9	17.4	24.8	24.2	20.6	19.2	26.3	25.8
Plate beef.....	do.	15.6	15.5	11.6	11.8	18.8	18.8	17.5	17.5	20.5	18.5
Pork chops.....	do.	47.2	47.7	46.3	44.2	45.3	44.4	40.4	40.8	41.4	38.0
Bacon.....	do.	58.3	55.2	62.3	62.0	60.0	56.0	48.3	46.5	53.8	49.2
Ham.....	do.	63.2	60.3	60.0	59.6	54.2	52.3	56.0	52.5	57.7	54.2
Lamb.....	do.	36.1	36.2	28.1	27.7	41.1	39.2	29.4	30.0	27.5	27.5
Hens.....	do.	45.2	44.0	35.9	32.8	49.1	49.2	39.9	38.3	37.5	37.7
Salmon (canned).....	do.	37.3	37.8	43.1	44.0	31.0	32.4	31.4	34.3	32.7	34.3
Milk, fresh.....	Quart.	16.0	16.0	15.6	15.5	20.7	23.5	14.0	14.0	14.0	14.0
Milk, evaporated (unsweet- ened).....	(2).....	16.3	16.8	17.7	17.9	16.6	16.7	15.4	15.5	16.2	16.7
Butter.....	Pound.	63.7	66.3	66.2	68.7	65.1	68.6	64.4	72.1	64.2	73.1
Oleomargarine.....	do.	41.6	41.8	.....	.....	44.8	45.0	42.1	41.1	42.5	42.4
Nut margarine.....	do.	35.2	35.4	.....	.....	45.7	45.7	34.7	34.3	35.0	35.0
Cheese.....	do.	42.6	42.6	45.0	44.7	42.1	41.2	43.8	41.7	42.7	42.2
Lard.....	do.	36.7	35.8	43.2	38.8	40.2	37.3	33.3	32.1	36.3	33.7
Crisco.....	do.	39.1	36.5	44.5	43.7	39.3	37.9	35.7	34.5	36.5	36.2
Eggs, strictly fresh.....	Dozen.	78.8	87.6	69.1	73.9	56.8	56.7	55.3	63.0	52.7	64.2
Eggs, storage.....	do.	.....	60.2	.....	60.0	.....	54.8	.....	55.5	.....	56.2
Roiled oats.....	Pound.	9.1	9.7	9.3	9.3	10.1	10.4	7.7	8.2	9.1	9.4
Bread.....	do. <sup>3</sup>	10.7	10.7	12.5	12.3	10.0	10.0	9.9	9.9	10.3	9.8
Flour.....	do.	7.3	7.3	7.9	8.0	7.6	7.8	7.2	7.1	7.0	6.9
Corn meal.....	do.	7.7	7.9	7.7	7.9	6.1	5.7	6.1	6.0	6.5	6.3
Corn flakes.....	(4).....	13.6	13.5	14.4	14.6	14.9	14.9	13.3	13.8	14.0	14.3
Cream of Wheat.....	(5).....	23.9	23.9	30.3	30.0	25.0	25.0	25.1	24.8	25.0	25.0
Macaroni.....	Pound.	22.1	22.5	19.8	20.0	21.1	21.1	15.5	16.7	18.3	18.6
Rice.....	do.	16.5	16.9	14.8	15.3	14.1	14.4	16.6	17.4	16.5	17.5
Beans.....	do.	11.8	11.8	12.6	13.4	14.3	14.5	11.1	10.9	11.8	11.6
Potatoes.....	do.	3.9	3.4	3.2	2.7	4.9	4.7	4.5	4.3	4.8	4.4
Onions.....	do.	7.1	6.2	6.5	5.7	7.8	7.5	5.1	5.8	7.0	6.8
Cabbage.....	do.	4.0	4.3	5.2	4.8	6.5	6.4	5.7	4.6	6.4	5.7
Beans, baked.....	(6).....	16.6	16.5	23.1	22.4	15.3	15.4	15.3	15.2	16.3	16.7
Corn, canned.....	(6).....	21.8	21.9	18.6	18.4	21.8	21.2	16.9	17.2	16.5	16.4
Peas, canned.....	(6).....	20.8	20.5	18.6	18.6	22.4	22.1	17.1	17.6	16.0	16.4
Tomatoes, canned.....	(6).....	16.6	16.3	17.7	18.0	16.1	15.6	14.6	15.1	14.9	15.3
Sugar, granulated.....	Pound.	11.0	11.0	12.1	12.4	11.0	10.9	11.1	11.4	10.0	11.1
Tea.....	do.	63.3	63.0	75.3	75.0	80.0	81.2	75.8	77.3	82.5	82.1
Coffee.....	do.	46.7	46.7	57.5	58.1	48.0	47.6	43.3	42.4	49.3	50.5
Prunes.....	do.	28.2	29.9	27.9	27.0	28.8	29.2	25.0	26.2	24.8	24.5
Raisins.....	do.	20.6	21.8	18.9	19.4	19.6	21.3	20.2	20.2	19.3	21.8
Bananas.....	Dozen.	37.2	38.7	51.3	47.5	43.3	42.9	35.9	36.4	38.3	39.1
Oranges.....	do.	60.4	61.0	53.2	53.8	56.7	51.5	43.3	46.6	51.1	51.5

<sup>1</sup> The steak for which prices are here quoted is known as "sirloin" in most of the cities included in this report, but in this city it is called "rump" steak.

OF FOOD FOR 31 CITIES ON SEPT. 15 AND OCT. 15, 1919.

Dallas, Tex.		Fall River, Mass.		Houston, Tex.		Indianapolis, Ind.		Jacksonville, Fla.		Kansas City, Mo.	
Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.
<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
35.4	34.2	<sup>1</sup> 60.4	<sup>1</sup> 59.8	34.3	32.5	36.2	33.7	38.9	37.9	36.1	34.8
34.5	32.9	50.0	48.0	33.8	32.5	36.4	33.4	36.6	35.5	33.3	31.9
30.0	29.8	34.9	33.9	27.1	25.8	26.5	25.3	30.0	27.7	26.6	26.0
25.3	24.2	27.8	26.3	23.5	22.4	24.5	22.6	23.8	23.0	21.1	20.5
21.9	21.8	-----	-----	19.3	18.3	17.8	16.7	17.4	16.0	16.5	15.7
40.7	42.3	47.4	46.5	42.7	41.0	44.4	40.5	44.0	42.7	41.8	41.3
59.6	56.9	54.8	49.8	63.3	64.1	55.0	51.1	58.1	55.5	56.3	55.2
56.4	55.0	57.5	54.3	50.8	50.0	59.4	54.7	56.7	52.7	55.0	54.0
37.0	37.0	35.0	33.9	37.5	38.3	39.0	37.5	33.7	34.0	28.4	28.9
35.3	35.0	46.2	46.7	38.3	38.3	36.7	36.0	41.8	43.2	35.5	33.8
32.5	35.5	32.3	33.4	32.0	32.8	27.9	28.2	30.5	34.4	33.1	32.9
18.0	19.0	15.0	15.0	19.4	19.8	13.0	13.7	18.0	20.0	16.0	15.3
17.2	17.2	16.1	16.2	16.5	16.8	16.8	16.9	16.8	16.6	17.2	17.3
64.5	67.1	63.5	66.0	64.7	68.9	64.4	71.5	66.2	72.9	64.5	70.8
38.3	37.5	40.4	40.1	43.5	43.1	45.1	44.3	43.4	43.3	41.8	41.2
36.9	36.9	36.5	36.3	37.5	37.3	35.8	35.2	38.7	38.3	35.6	35.9
43.7	42.8	42.9	42.9	39.4	39.1	43.4	42.3	42.7	40.6	45.1	44.1
38.7	34.9	36.8	35.3	39.0	34.2	36.0	33.4	37.4	35.5	39.4	37.8
39.6	36.1	39.6	37.3	35.6	33.7	39.1	37.3	39.8	37.4	41.6	39.3
55.4	57.5	86.0	91.6	53.2	57.2	52.8	65.6	60.0	68.8	52.1	63.0
-----	-----	-----	60.9	-----	52.5	-----	57.8	-----	57.0	-----	50.0
10.9	10.8	9.7	9.7	9.7	9.8	10.1	9.4	10.7	10.9	11.1	11.1
10.0	10.0	10.9	10.9	8.9	9.2	9.7	9.7	10.0	10.0	10.0	10.0
7.2	7.3	7.8	7.7	7.0	7.3	7.2	7.2	7.9	7.7	6.7	6.7
6.7	6.3	8.7	8.4	6.3	5.9	6.3	6.1	6.2	5.7	7.3	7.0
14.0	13.9	14.3	14.5	14.3	14.5	14.8	14.8	14.9	15.1	15.0	15.0
26.0	26.4	25.1	25.1	24.8	24.8	25.7	25.6	25.5	25.0	25.4	26.1
19.8	20.0	22.1	22.5	19.4	19.6	21.2	20.8	21.0	20.7	19.1	18.7
18.9	18.8	16.0	17.2	16.4	15.9	18.1	19.5	16.1	16.2	18.3	19.1
13.8	13.4	12.0	12.0	12.6	12.6	12.6	12.1	13.7	14.2	13.0	13.0
4.9	5.0	4.1	3.6	4.7	4.4	4.9	3.7	5.2	4.8	4.0	4.1
5.9	6.2	7.6	7.1	5.9	6.3	6.8	7.1	8.4	7.7	7.4	7.6
5.8	5.8	4.4	4.4	5.6	5.5	6.7	4.8	6.5	6.5	4.7	4.4
18.5	18.6	16.5	16.5	18.0	18.2	18.1	18.1	16.9	17.8	17.0	17.0
19.7	20.0	20.4	20.0	18.4	17.9	18.5	18.0	20.1	20.2	16.5	16.4
20.0	20.3	20.9	20.9	19.3	19.6	17.7	17.1	21.8	22.1	17.6	16.4
14.8	15.1	16.1	16.1	14.0	14.4	16.1	16.2	15.2	15.4	15.6	15.8
11.3	11.9	10.9	11.0	11.0	11.3	11.0	11.3	11.1	11.3	11.6	12.7
84.8	85.4	56.3	59.0	66.1	65.4	84.6	84.7	86.3	86.9	81.1	81.7
54.2	53.3	48.1	49.2	46.0	44.5	51.4	51.4	53.8	53.7	47.6	48.3
30.0	31.3	24.9	25.1	27.8	28.2	32.1	30.0	32.5	33.3	27.1	31.9
18.6	21.3	21.9	22.3	17.4	19.1	21.0	24.4	22.6	25.3	22.1	23.3
38.3	39.3	41.6	39.8	36.7	37.1	28.8	30.6	35.0	38.3	42.5	46.0
51.8	50.5	48.1	52.6	47.5	49.3	43.8	49.1	-----	45.0	55.4	56.4

<sup>2</sup> 15-16 ounce can.<sup>3</sup> Baked weight.<sup>4</sup> 8-ounce package.<sup>5</sup> 28-ounce package.<sup>6</sup> No. 2 can.

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Little Rock, Ark.		Louisville, Ky.		Manchester, N. H.		Memphis, Tenn.	
		Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.
Sirloin steak.....	Pound.	Cents. 35.4	Cents. 35.6	Cents. 34.8	Cents. 33.3	Cents. 155.1	Cents. 154.6	Cents. 36.4	Cents. 36.5
Round steak.....	do.	33.5	33.3	33.1	31.3	48.6	49.2	33.8	34.0
Rib roast.....	do.	28.7	30.0	27.3	27.2	31.5	31.6	31.4	29.3
Chuck roast.....	do.	24.0	23.7	23.4	22.8	28.5	28.1	24.7	24.2
Plate beef.....	do.	18.0	17.8	19.6	19.1			19.3	18.8
Pork chops.....	do.	41.6	43.8	43.4	42.1	49.3	48.1	43.3	42.4
Bacon.....	do.	57.1	55.5	58.1	54.8	53.2	50.1	58.5	55.9
Ham.....	do.	55.3	53.5	57.9	53.9	54.1	51.3	55.7	54.1
Lamb.....	do.	33.9	36.9	30.0	30.0	37.4	35.4	37.3	37.5
Hens.....	do.	35.0	36.3	39.4	37.6	47.9	46.4	35.4	37.2
Salmon (canned).....	do.	34.8	34.2	29.5	31.8	33.5	35.5	35.2	36.2
Milk, fresh.....	Quart.	18.0	20.0	15.0	15.0	15.0	15.0	18.0	18.0
Milk, evaporated (unsweetened).....	(2) do.	17.5	18.1	16.9	16.5	17.6	17.7	17.5	17.8
Butter.....	Pound.	62.6	69.7	66.3	72.0	68.7	70.9	64.1	72.7
Oleomargarine.....	do.	44.5	44.5	44.4	44.7	42.9	42.9	45.4	43.1
Nut margarine.....	do.	38.6	38.5	35.8	35.0	35.0	33.5	42.3	42.3
Cheese.....	do.	42.5	41.4	42.0	40.7	42.9	42.9	41.7	41.2
Lard.....	do.	40.1	38.5	35.1	34.7	39.5	36.9	38.0	36.3
Crisco.....	do.	40.5	39.5	35.3	35.0	39.3	38.2	38.7	37.9
Eggs, strictly fresh.....	Dozen.	56.5	59.8	52.9	60.5	76.2	84.4	54.2	63.6
Eggs, storage.....	do.		57.0		55.0		60.9		57.5
Rolled oats.....	Pound.	10.9	11.1	9.2	9.7	9.6	9.7	10.3	10.8
Bread.....	do. <sup>3</sup>	10.0	10.0	10.0	10.0	9.5	9.5	10.0	10.0
Flour.....	do.	7.4	7.4	7.4	7.3	7.6	7.7	7.4	7.4
Corn meal.....	do.	6.0	5.8	6.2	5.5	7.3	7.4	5.7	5.5
Corn flakes.....	(4) do.	14.8	14.8	14.6	14.0	14.9	14.9	14.0	14.3
Cream of Wheat.....	(5) do.	25.0	25.4	25.0	25.7	25.3	25.1	24.2	24.4
Macaroni.....	Pound.	18.6	18.6	18.8	18.0	23.3	23.5	18.3	19.7
Rice.....	do.	17.3	17.4	17.3	18.4	15.7	16.7	16.6	16.6
Beans.....	do.	13.9	13.6	12.8	12.4	12.2	12.4	13.7	13.6
Potatoes.....	do.	4.4	4.1	4.9	3.9	3.7	3.2	5.2	3.1
Onions.....	do.	7.6	7.2	5.5	5.3	6.8	6.3	6.7	6.9
Cabbage.....	do.	6.1	5.3	5.9	4.8	3.8	3.5	5.7	5.3
Beans, baked.....	(6) do.	16.8	17.1	16.5	16.1	18.0	18.2	17.4	18.7
Corn, canned.....	(6) do.	17.9	17.8	18.3	17.9	22.0	21.8	18.2	18.8
Pear, canned.....	(6) do.	18.0	18.2	18.3	17.9	21.0	21.0	18.1	18.8
Tomatoes, canned.....	(6) do.	14.7	15.0	15.4	15.0	16.7	17.5	15.6	16.2
Sugar, granulated.....	Pound.	11.1	12.0	11.1	11.1	11.0	11.2	11.2	11.5
Tea.....	do.	88.3	86.4	80.6	79.1	60.8	61.9	89.8	89.9
Coffee.....	do.	54.1	52.5	49.6	48.1	50.5	51.0	53.5	53.5
Prunes.....	do.	25.0	20.7	25.0	27.2	28.9	27.6	32.5	28.4
Raisins.....	do.	20.7	23.3	18.8	20.5	20.9	23.0	20.3	21.3
Bananas.....	Dozen.	32.1	34.4	38.3	37.1	38.0	40.0	37.5	40.5
Oranges.....	do.	56.9	54.7	46.3	44.5	52.3	56.1	56.1	55.3

<sup>1</sup> The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin steak."



OF FOOD FOR 31 CITIES ON SEPT. 15 AND OCT. 15, 1919—Continued.

Minneapolis, Minn.		Mobile, Ala.		Newark, N. J.		New Haven, Conn.		Norfolk, Va.		Omaha, Nebr.	
Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.
<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
34.9	32.4	33.2	32.9	45.1	44.1	54.1	52.6	46.8	44.1	37.6	36.4
32.5	29.1	32.3	32.3	45.5	45.0	48.6	47.7	41.5	39.9	34.9	32.5
27.6	25.4	30.0	30.0	36.3	35.9	38.7	37.6	36.1	36.6	27.1	26.0
21.9	20.8	24.1	23.9	26.8	27.6	32.5	30.9	27.4	26.6	23.5	22.2
15.0	13.9	20.0	19.8	19.6	18.9	-----	-----	18.3	18.8	16.8	16.2
41.9	40.1	47.3	45.9	49.2	47.2	49.6	48.1	44.5	43.0	43.0	41.1
58.5	55.4	61.0	60.0	49.7	47.6	58.8	54.7	54.5	52.6	58.8	56.3
57.9	54.2	54.5	54.5	55.0	50.0	62.8	57.9	53.0	48.3	59.4	56.5
27.5	27.6	34.2	35.0	37.4	36.6	39.3	37.8	35.8	38.3	31.8	32.0
34.1	30.1	40.0	43.8	42.8	41.5	47.7	46.4	45.7	46.0	35.3	33.5
39.8	42.1	32.2	33.3	34.2	35.4	34.0	36.6	32.2	30.7	35.7	37.1
13.0	13.0	18.3	17.5	16.7	16.7	16.0	16.0	21.0	21.0	15.2	15.2
17.1	17.7	18.1	17.6	15.1	15.7	16.5	16.5	16.0	16.0	17.3	17.5
59.6	66.6	65.8	70.9	67.2	75.3	64.4	66.3	69.1	72.6	63.4	70.9
39.5	41.1	43.8	44.9	42.8	42.7	43.5	42.9	47.3	47.2	44.6	44.2
32.8	33.1	41.6	41.8	35.4	35.7	35.9	36.4	39.5	39.0	36.2	35.3
41.6	40.2	43.0	41.2	44.5	43.9	42.3	42.7	42.9	41.6	44.1	42.5
36.4	35.0	40.1	37.2	40.0	38.6	37.7	35.5	41.1	37.8	39.8	38.1
39.9	38.0	39.3	36.5	39.5	36.4	38.6	35.7	38.6	38.3	41.2	40.0
50.9	62.9	60.5	61.4	71.1	82.7	82.0	84.9	59.6	64.3	50.2	64.3
-----	55.0	-----	58.0	-----	63.1	-----	59.1	-----	57.3	-----	56.4
7.5	7.7	11.1	11.1	8.6	8.9	9.6	9.9	10.5	10.2	9.3	9.0
9.6	9.6	9.6	9.6	9.8	9.8	10.6	10.6	9.9	9.9	10.0	10.0
7.1	7.2	7.3	7.1	7.4	7.4	7.4	7.3	7.6	7.5	6.8	6.8
6.5	6.3	6.6	6.3	7.5	7.5	7.4	7.5	6.0	6.0	6.1	6.6
14.6	14.5	14.6	14.7	12.4	12.4	13.8	13.9	14.8	14.6	15.0	14.7
25.4	25.2	25.9	25.5	23.6	23.9	24.3	24.4	25.4	25.5	25.3	25.6
17.5	17.2	18.9	19.2	19.9	21.0	20.8	20.8	19.3	19.2	20.5	19.5
16.9	17.8	17.1	16.6	16.7	17.1	16.1	17.3	16.6	18.1	15.9	18.2
11.1	11.6	14.3	14.1	12.7	12.7	12.6	12.4	13.3	13.5	13.0	13.4
3.7	3.5	5.7	4.8	4.9	4.5	4.0	3.3	4.7	4.3	4.4	4.2
5.9	5.9	7.8	7.3	7.1	6.8	7.2	6.9	8.3	7.5	6.6	6.6
2.6	2.8	5.6	5.2	4.2	4.8	4.2	3.8	5.5	5.2	4.9	4.1
18.7	18.7	17.3	18.5	15.0	15.0	18.1	17.7	15.0	14.3	20.5	20.1
17.1	17.4	19.9	19.5	20.7	20.7	21.7	21.9	21.8	20.5	17.7	17.8
17.2	17.1	19.2	18.9	19.6	19.9	21.6	21.6	22.4	21.7	18.0	18.4
16.6	16.7	15.0	15.8	14.8	15.2	16.0	16.1	17.8	17.5	17.1	17.2
11.2	12.3	11.3	11.3	10.8	10.9	11.0	11.1	11.1	11.3	11.3	12.1
63.2	64.5	77.4	79.2	56.4	56.4	61.2	61.4	85.1	80.9	76.9	76.6
53.1	53.1	45.9	45.8	45.9	45.8	49.5	50.0	53.3	52.1	53.4	52.2
27.1	27.9	27.0	27.1	29.7	29.9	27.7	29.2	27.5	28.3	28.8	29.4
17.6	18.4	19.0	19.8	17.5	19.9	18.4	20.9	17.0	21.1	19.9	23.9
41.4	41.7	31.1	30.5	38.2	39.1	36.1	35.8	39.2	38.9	46.7	43.8
57.8	57.8	51.9	56.1	61.5	63.8	54.3	56.4	54.8	53.6	56.3	55.9

\* 15-16-ounce can.

\* Baked weight.

\* 6-ounce package.

\* 28-ounce package.

\* No. 2 can.

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF

Article.	Unit.	Peoria, Ill.		Portland, Me.		Portland, Oreg.		Providence, R. I.	
		Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.
		Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
Sirloin steak.....	Pound.	33.6	33.2	<sup>1</sup> 55.1	<sup>1</sup> 56.4	32.1	30.5	<sup>1</sup> 65.6	<sup>1</sup> 66.3
Round steak.....	do.	31.6	31.7	50.2	47.5	30.7	29.8	52.4	55.0
Rib roast.....	do.	25.1	24.8	31.9	31.1	28.6	28.2	41.5	41.2
Chuck roast.....	do.	21.2	21.6	25.6	24.8	21.5	21.6	35.2	35.6
Plate beef.....	do.	16.2	16.0			16.5	15.5		
Pork chops.....	do.	40.8	39.1	48.3	47.6	46.2	44.8	53.8	53.3
Bacon.....	do.	55.0	54.9	52.3	49.9	60.6	58.6	53.9	50.2
Hams.....	do.	55.8	54.9	55.6	54.5	57.9	57.5	66.8	62.7
Lamb.....	do.	33.6	33.6	35.7	34.1	31.8	31.0	40.2	40.9
Hens.....	do.	35.0	34.7	48.3	46.2	38.6	38.3	48.4	48.5
Salmon (canned).....	do.	32.0	32.9	31.6	33.3	39.6	39.1	38.0	37.6
Milk, fresh.....	Quart.	14.3	14.3	14.3	14.5	15.6	15.9	16.0	16.5
Milk, evaporated, unsweet- ened.....	( <sup>2</sup> )	18.0	17.6	17.1	17.3	16.7	17.1	16.9	17.2
Butter.....	Pound.	62.7	69.3	69.3	71.3	71.8	74.1	65.3	67.9
Oleomargarine.....	do.	44.4	44.3	43.9	44.0	42.2	43.1	40.2	41.0
Nut margarine.....	do.	36.1	35.9	35.6	35.9	38.5	38.5	34.5	34.6
Cheese.....	do.	43.6	43.3	44.4	44.4	44.8	42.9	42.3	42.2
Lard.....	do.	37.8	36.7	39.2	36.2	41.2	40.9	37.9	36.4
Crisco.....	do.	39.6	39.5	41.4	38.3	44.6	41.9	40.8	37.4
Eggs, strictly fresh.....	Dozen	52.6	63.2	77.2	81.8	66.0	74.6	79.7	87.7
Eggs, storage.....	do.		57.0		60.9		64.2		61.4
Rollod oats.....	Pound.	9.7	9.5	8.2	8.2	8.8	9.0	8.3	8.9
Bread.....	do.	10.0	10.0	11.0	11.0	9.9	9.9	10.6	10.6
Flour.....	do.	7.8	7.7	7.5	7.4	6.5	6.5	7.9	7.9
Corn meal.....	do.	6.5	6.5	6.9	7.0	7.4	7.7	6.7	6.6
Corn flakes.....	( <sup>4</sup> )	14.8	14.7	14.2	14.3	14.3	14.5	13.9	14.1
Cream of Wheat.....	( <sup>5</sup> )	26.7	26.6	25.0	25.0	27.9	27.9	24.5	24.8
Macaroni.....	Pound.	19.0	19.1	22.7	22.7	18.7	19.1	21.1	21.7
Rice.....	do.	15.4	17.5	15.6	15.7	15.2	17.1	16.8	17.4
Beans.....	do.	12.7	12.4	11.9	12.0	11.8	11.9	12.0	11.9
Potatoes.....	do.	4.2	3.6	3.3	2.9	3.6	3.1	4.3	3.6
Onions.....	do.	8.0	7.3	5.9	6.0	5.2	4.9	6.8	6.2
Cabbage.....	do.	5.2	4.5	2.5	2.3	4.6	3.7	4.1	3.8
Beans, baked.....	( <sup>6</sup> )	18.3	18.5	19.3	19.3	21.8	23.4	16.4	16.8
Corn, canned.....	( <sup>6</sup> )	17.3	17.4	20.9	21.0	22.1	22.3	20.4	20.2
Peas, canned.....	( <sup>6</sup> )	18.8	18.6	20.5	20.7	22.1	22.3	20.2	20.2
Tomatoes, canned.....	( <sup>6</sup> )	15.5	16.3	18.8	19.5	19.9	18.7	17.4	16.8
Sugar, granulated.....	Pound.	11.0	12.0	10.7	10.9	10.9	11.0	10.9	11.0
Tea.....	do.	73.4	73.4	63.9	63.5	63.2	63.2	59.9	59.9
Coffee.....	do.	49.4	48.9	49.9	50.6	48.9	50.7	52.7	52.2
Prunes.....	do.	29.4	30.4	27.0	27.6	22.6	23.9	30.9	30.5
Raisins.....	do.	19.6	21.4	17.9	20.6	18.1	19.7	20.2	21.4
Bananas.....	Dozen.	<sup>7</sup> 10.2	<sup>7</sup> 10.5	38.0	37.1	43.1	43.8	40.0	39.3
Oranges.....	do.	49.4	52.5	60.9	61.5	60.4	53.6	62.6	66.2

<sup>1</sup> The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

FOOD FOR 31 CITIES ON SEPT. 15 AND OCT. 15, 1919—Concluded.

Richmond, Va.		Rochester, N. Y.		St. Paul, Minn.		Salt Lake, Utah.		Scranton, Pa.		Springfield, Ill.	
Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.	Sept. 15, 1919.	Oct. 15, 1919.
<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
43.1	42.2	40.4	38.8	35.5	33.4	34.1	33.2	45.4	44.1	33.8	33.4
39.6	38.9	37.5	36.3	31.4	29.3	30.5	29.6	41.1	38.8	32.9	32.7
34.0	34.7	31.4	30.9	28.2	27.1	26.4	25.4	36.5	34.9	24.8	24.5
28.5	28.8	28.2	27.8	23.4	22.3	21.4	21.3	29.9	28.9	21.8	20.5
23.7	23.2	19.5	18.9	15.9	14.4	15.9	15.8	18.9	18.8	16.9	16.3
44.9	44.4	46.6	44.5	40.8	38.4	47.5	43.5	48.3	48.1	40.7	39.5
53.1	51.5	48.4	43.6	53.6	48.6	58.6	53.7	59.4	57.0	53.0	50.0
52.6	51.8	54.9	50.9	56.9	52.1	57.0	55.8	60.0	55.0	53.9	51.3
39.2	40.4	32.6	32.0	29.3	25.7	28.8	27.3	40.9	41.6	32.8	33.3
42.1	45.0	44.8	43.4	33.7	30.3	37.5	34.4	47.0	46.6	37.0	31.0
26.1	27.2	33.3	33.7	35.3	36.8	32.1	33.8	37.9	37.4	35.0	35.3
15.7	15.7	14.0	14.0	13.0	13.0	12.5	12.5	14.0	14.0	14.3	16.7
17.2	17.1	16.6	16.8	17.2	17.4	17.1	17.0	15.8	15.8	18.4	18.2
69.5	73.6	64.8	69.4	59.4	66.9	70.1	70.3	64.6	66.2	64.3	72.7
42.8	43.9	43.9	43.1	40.4	40.5	43.0	42.8	43.6	43.4	45.3	44.3
36.2	36.8	34.4	34.3	34.7	34.6	40.5	38.4	37.3	36.9	37.3	36.3
43.8	43.5	41.7	41.2	41.9	40.8	43.2	42.9	41.3	41.5	44.2	43.5
38.6	36.4	39.0	35.8	37.3	35.5	41.8	39.7	39.7	37.1	38.7	36.3
40.6	38.6	38.8	36.1	42.4	41.0	45.5	42.9	39.8	37.5	43.0	41.9
60.1	64.0	64.5	74.2	51.8	62.4	63.6	70.4	67.4	72.6	51.9	61.1
10.5	60.2	7.2	58.5	7.1	56.9	9.2	58.9	9.9	59.9	10.5	58.0
10.9	10.6	10.0	10.0	9.5	9.2	10.0	10.1	10.0	10.0	10.0	10.0
7.6	7.6	7.4	7.4	7.3	7.3	6.0	6.1	7.8	7.8	7.3	7.4
6.4	6.3	6.6	6.9	6.5	6.6	7.6	7.3	8.9	9.0	7.1	6.5
14.7	14.8	13.6	13.6	14.5	14.5	15.0	14.8	14.1	14.2	15.0	15.0
25.4	25.7	24.5	24.5	25.8	25.5	26.1	26.4	25.1	25.4	27.2	27.1
18.1	18.6	19.7	20.5	19.2	19.2	19.8	19.5	21.7	21.6	18.4	19.8
17.0	17.8	16.4	17.8	17.5	18.6	16.9	17.7	16.8	18.0	17.7	18.4
14.1	14.0	12.1	12.1	11.3	11.9	12.3	13.0	14.8	15.2	13.2	12.8
5.1	4.8	4.1	2.7	3.5	3.2	3.9	3.1	4.1	3.4	4.2	3.8
6.8	6.5	6.4	6.2	4.8	6.2	5.2	4.6	6.9	6.7	6.6	6.6
6.2	5.7	4.7	3.5	2.2	2.5	5.1	4.6	2.7	2.5	5.3	4.3
14.9	14.7	15.0	14.8	19.4	18.9	20.2	19.4	16.6	16.5	19.0	18.6
18.9	19.2	19.6	19.5	18.1	17.5	18.1	18.1	20.1	20.0	17.7	17.1
22.1	22.1	19.5	19.1	17.1	16.7	18.4	18.1	18.5	18.5	18.9	17.3
16.6	16.9	17.2	17.3	16.2	16.3	17.4	17.5	17.3	17.0	17.4	17.2
11.0	11.2	10.9	10.9	11.2	11.9	11.1	11.8	11.0	11.0	12.0	15.3
79.1	81.9	61.0	61.0	64.3	63.9	77.6	78.5	65.3	64.7	86.5	85.3
47.3	47.1	45.9	45.1	50.4	50.1	55.3	56.4	48.9	49.8	51.3	50.1
27.5	31.7	25.4	27.4	26.1	29.8	20.0	21.0	25.0	28.3	20.0	30.5
17.1	20.1	18.2	19.4	17.8	19.4	19.3	22.3	19.6	20.9	20.9	23.8
43.9	44.7	40.8	40.3	50.0	55.0	45.0	50.0	34.6	34.6	42.5	41.3
53.1	55.4	55.6	57.6	56.8	56.8	57.5	57.5	58.1	57.5	41.7	51.6

<sup>2</sup> 15-16-ounce can. <sup>3</sup> Baked weight. <sup>4</sup> 8-ounce package. <sup>5</sup> 28-ounce package. <sup>6</sup> No. 2 can. <sup>7</sup> Pound.



AVERAGE RETAIL PRICE OF 10 ARTICLES OF DRY GOODS ON OCT. 15, 1918, AND ON FEB. 15, MAY 15, AUG. 15, AND OCT. 15, 1919, IN 50 CITIES—Continued.

Article.	Unit.	Chicago, Ill.					Cincinnati, Ohio.				
		Oct. 15, 1918.	1919				Oct. 15, 1918.	1919			
			Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.246	\$0.195	\$0.181	\$0.198	\$0.216	\$0.238	\$0.194	\$0.160	\$0.233	\$0.233
Percale.....	do.	.350	.310	.348	.430	.425	.319	.295	.290	.365	.400
Gingham, apron, 27 to 28 inch.....	do.	.268	.212	.222	.252	.254	.270	.254	.230	.238	.273
Gingham, dress, 27-inch.....	do.	.363	.323	.330	.348	.368	.314	.298	.275	.323	.327
Gingham, dress, 32-inch.....	do.	.614	.626	.581	.627	.602	.588	.589	.562	.572	.596
Muslin, bleached.....	do.	.343	.300	.294	.363	.385	.303	.268	.256	.351	.346
Sheeting, bleached, 9-4.....	do.	.801	.762	.765	.936	.955	.798	.702	.701	.826	.839
Sheets, bleached, 81 by 90.....	Each.	2.140	1.932	1.831	2.301	2.244	1.999	1.901	1.830	2.019	2.283
Outing flannel, 27 to 28 inch.....	Yard.	.964	.353	.288	.333	.367	.388	.337	.300	.319	.356
Flannel, white, wool, 27-inch.....	do.	.300	.....	.....	.915	1.375	.650	.875	.....	1.095	.....
Blankets, cotton, 66 by 80.....	Pair..	5.433	5.433	5.304	5.830	5.765	6.400	6.375	.....	6.250	5.950
		Cleveland, Ohio.					Columbus, Ohio.				
Calico, 24 to 25 inch.....	Yard.	\$0.233	\$0.155	\$0.150	\$0.200	\$0.180	\$0.230	\$0.180	\$0.176	\$0.196	\$0.225
Percale.....	do.	.387	.315	.339	.431	.420	.383	.348	.343	.412	.420
Gingham, apron, 27 to 28 inch.....	do.	.307	.227	.250	.301	.280	.307	.285	.212	.250	.265
Gingham, dress, 27-inch.....	do.	.352	.297	.329	.358	.369	.371	.368	.354	.367	.383
Gingham, dress, 32-inch.....	do.	.545	.430	.515	.580	.626	.592	.566	.588	.619	.596
Muslin, bleached.....	do.	.358	.253	.290	.374	.384	.348	.267	.263	.405	.389
Sheeting, bleached, 9-4.....	do.	.829	.733	.758	.921	.944	.806	.781	.726	.874	.995
Sheets, bleached, 81 by 90.....	Each.	2.124	1.650	1.777	2.200	2.243	2.047	1.919	1.877	2.114	2.306
Outing flannel, 27 to 28 inch.....	Yard.	.362	.304	.298	.368	.354	.424	.341	.329	.378	.384
Flannel, white, wool, 27-inch.....	do.	1.175	.....	1.350	.....	.....	1.125	.....	.900	.....	.....
Blankets, cotton, 66 by 80.....	Pair..	5.938	5.475	6.542	6.750	6.917	6.567	6.370	5.980	5.717	5.330
		Dallas, Tex.					Denver, Colo.				
Calico, 24 to 25 inch.....	Yard.	\$0.217	\$0.183	\$0.186	\$0.190	\$0.196	\$0.238	\$0.158	.....	\$0.190	\$0.201
Percale.....	do.	.358	.338	.330	.366	.375	.490	.467	.360	.429	.457
Gingham, apron, 27 to 28 inch.....	do.	.250	.233	.197	.250	.250	.342	.250	.250	.333	.333
Gingham, dress, 27-inch.....	do.	.325	.330	.320	.337	.369	.360	.389	.332	.364	.393
Gingham, dress, 32-inch.....	do.	.538	.549	.527	.520	.559	.638	.717	.671	.628	.709
Muslin, bleached.....	do.	.291	.263	.254	.324	.325	.370	.309	.287	.420	.415
Sheeting, bleached, 9-4.....	do.	.756	.704	.658	.800	.855	.953	.955	.839	1.068	1.070
Sheets, bleached, 81 by 90.....	Each.	1.925	1.866	1.656	1.978	2.042	2.359	2.377	2.082	2.673	2.637
Outing flannel, 27 to 28 inch.....	Yard.	.340	.404	.274	.335	.332	.396	.408	.356	.366	.387
Flannel, white, wool, 27-inch.....	do.	.788	.788	.....	.750	.717	1.140	1.067	1.025	1.067	1.067
Blankets, cotton, 66 by 80.....	Pair..	6.483	5.920	5.667	5.960	6.956	5.950	5.958	6.057	6.233	6.381
		Detroit, Mich.					Fall River, Mass.				
Calico, 24 to 25 inch.....	Yard.	\$0.202	\$0.227	\$0.164	\$0.198	\$0.190	\$0.190	\$0.170	\$0.170	\$0.170	.....
Percale.....	do.	.392	.336	.337	.363	.462	.373	.357	.308	.390	\$0.337
Gingham, apron, 27 to 28 inch.....	do.	.287	.257	.241	.250	.260	.290	.277	.223	.270	.250
Gingham, dress, 27-inch.....	do.	.326	.332	.317	.335	.358	.316	.284	.293	.330	.342
Gingham, dress, 32-inch.....	do.	.540	.510	.489	.530	.490	.520	.510	.476	.505	.543
Muslin, bleached.....	do.	.366	.391	.290	.316	.421	.350	.301	.260	.300	.353
Sheeting, bleached, 9-4.....	do.	.840	.793	.760	.849	1.008	.835	.863	.795	.820	.847
Sheets, bleached, 81 by 90.....	Each.	2.188	2.019	1.908	2.079	2.507	2.080	1.883	1.824	1.993	2.110
Outing flannel, 27 to 28 inch.....	Yard.	.361	.336	.337	.317	.364	.373	.303	.297	.290	.338
Flannel, white, wool, 27-inch.....	do.	1.025	.....	.995	.....	1.145	1.057	.....	.....	.....	.890
Blankets, cotton, 66 by 80.....	Pair..	4.696	5.000	5.238	4.930	6.250	5.435	.....	5.980	5.980	5.903
		Houston, Tex.					Indianapolis, Ind.				
Calico, 24 to 25 inch.....	Yard.	\$0.203	\$0.188	\$0.150	\$0.205	\$0.210	\$0.257	\$0.142	\$0.164	\$0.181	\$0.193
Percale.....	do.	.350	.400	.348	.312	.388	.368	.328	.313	.358	.410
Gingham, apron, 27 to 28 inch.....	do.	.268	.270	.225	.245	.260	.304	.228	.263	.253	.270
Gingham, dress, 27-inch.....	do.	.329	.360	.297	.330	.351	.349	.305	.320	.314	.364
Gingham, dress, 32-inch.....	do.	.512	.625	.553	.604	.589	.508	.439	.468	.498	.492
Muslin, bleached.....	do.	.301	.285	.259	.310	.326	.326	.289	.292	.313	.346
Sheeting, bleached, 9-4.....	do.	.755	.713	.608	.792	.815	.829	.767	.780	.855	.894
Sheets, bleached, 81 by 90.....	Each.	1.883	1.695	1.577	1.878	2.037	2.054	1.951	1.897	2.064	2.208
Outing flannel, 27 to 28 inch.....	Yard.	.360	.275	.265	.281	.310	.378	.328	.293	.312	.328
Flannel, white, wool, 27-inch.....	do.	.615	.670	.722	.823	.743	.835	.923	.895	.827	.895
Blankets, cotton, 66 by 80.....	Pair..	7.467	6.125	6.433	7.225	6.472	5.988	5.893	5.495	6.050	6.240



AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON OCT. 15, 1918, AND ON FEB. 15, MAY 15, AUG. 15, AND OCT. 15, 1919, IN 50 CITIES—Continued.

Article.	Unit.	Newark, N. J.					New Haven, Conn.				
		Oct. 15, 1918.	1919				Oct. 15, 1918.	1919			
			Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.260	\$0.173	\$0.177	\$0.198	\$0.238	\$0.233	\$0.240	.....	\$0.145	\$0.227
Percale.....	do.	.430	.325	.330	.366	.408	.393	.346	.....	.346	.370
Gingham, apron, 27 to 28 inch.....	do.	.270	.230	.203	.250	.250	.293	.248	.194	.241	.288
Gingham, dress, 27-inch.....	do.	.373	.284	.290	.340	.355	.338	.324	.257	.333	.362
Gingham, dress, 32-inch.....	do.	.553	.516	.533	.555	.609	.537	.528	.505	.531	.553
Muslin, bleached.....	do.	.330	.291	.317	.345	.391	.351	.286	.269	.334	.374
Sheeting, bleached, 9-4.....	do.	.849	.761	.771	.839	.845	.778	.699	.670	.825	.824
Sheets, bleached, 81 by 90.....	Each.	2.072	1.849	1.916	2.113	2.316	1.975	1.763	1.696	2.003	2.011
Outing flannel, 27 to 28 inch.....	Yard.	.372	.307	.272	.341	.349	.342	.296	.243	.276	.310
Flannel, white, wool, 27-inch.....	do.	1.650	1.450	1.250	1.220	1.220	1.013	.925	.883	.790	.935
Blankets, cotton, 66 by 80.....	Pair..	5.750	4.750	4.958	5.250	5.271	4.688	4.495	4.796	4.872	5.996
<b>New Orleans, La.</b>											
Calico, 24 to 25 inch.....	Yard.	\$0.250	\$0.150	\$0.150	\$0.269	\$0.217	\$0.264	\$0.210	\$0.205	\$0.270	\$0.250
Percale.....	do.	.375	.320	.350	.450	.375	.424	.371	.343	.419	.450
Gingham, apron, 27 to 28 inch.....	do.	.267	.250	.250	.250	.290	.281	.247	.212	.290	.295
Gingham, dress, 27-inch.....	do.	.336	.283	.287	.312	.338	.368	.347	.335	.361	.390
Gingham, dress, 32-inch.....	do.	.459	.520	.508	.552	.584	.552	.777	.616	.625	.659
Muslin, bleached.....	do.	.317	.238	.227	.324	.341	.366	.288	.288	.349	.380
Sheeting, bleached, 9-4.....	do.	.760	.750	.620	.705	.784	.923	.797	.757	.892	.951
Sheets, bleached, 81 by 90.....	Each.	1.888	1.898	1.788	1.795	1.946	2.189	1.909	1.878	2.199	2.326
Outing flannel, 27 to 28 inch.....	Yard.	.339	.350	.300	.296	.308	.388	.324	.307	.304	.338
Flannel, white, wool, 27-inch.....	do.	.....	.500	.....	.590	.....	1.022	.911	1.029	.890	1.070
Blankets, cotton, 66 by 80.....	Pair..	7.000	4.540	5.980	5.500	5.986	5.750	5.686	5.524	5.238	5.975
<b>New York, N. Y.</b>											
Calico, 24 to 25 inch.....	Yard.	\$0.250	\$0.220	\$0.250	.....	\$0.263	\$0.237	\$0.169	\$0.162	\$0.194	\$0.202
Percale.....	do.	.434	.360	.330	\$0.460	.437	.389	.377	.348	.389	.399
Gingham, apron, 27 to 28 inch.....	do.	.295	.270	.250	.266	.305	.287	.270	.232	.270	.277
Gingham, dress, 27-inch.....	do.	.365	.336	.355	.370	.376	.367	.345	.337	.342	.346
Gingham, dress, 32-inch.....	do.	.572	.557	.536	.607	.568	.608	.595	.596	.612	.652
Muslin, bleached.....	do.	.354	.292	.277	.354	.381	.362	.317	.289	.371	.371
Sheeting, bleached, 9-4.....	do.	.782	.791	.792	.870	.873	.776	.726	.726	.888	.895
Sheets, bleached, 81 by 90.....	Each.	2.062	1.916	1.786	2.159	2.174	2.071	1.853	2.013	2.157	2.257
Outing flannel, 27 to 28 inch.....	Yard.	.352	.311	.310	.360	.355	.371	.346	.328	.358	.368
Flannel, white, wool, 27-inch.....	do.	1.000	.875	1.125	1.125	1.125	1.163	1.125	1.150	.945	1.283
Blankets, cotton, 66 by 80.....	Pair..	6.796	5.183	5.990	6.500	7.660	6.667	6.133	6.381	5.886	6.520
<b>Norfolk, Va.</b>											
Calico, 24 to 25 inch.....	Yard.	\$0.250	\$0.213	\$0.180	\$0.169	\$0.186	\$0.211	\$0.159	\$0.207	.....	\$0.250
Percale.....	do.	.343	.330	.336	.330	.340	.376	.307	.304	\$0.382	.414
Gingham, apron, 27 to 28 inch.....	do.	.223	.250	.230	.245	.248	.289	.239	.203	.280	.268
Gingham, dress, 27-inch.....	do.	.307	.335	.328	.350	.356	.367	.290	.320	.343	.344
Gingham, dress, 32-inch.....	do.	.513	.530	.581	.580	.540	.521	.534	.537	.515	.576
Muslin, bleached.....	do.	.350	.307	.277	.342	.347	.329	.283	.288	.348	.377
Sheeting, bleached, 9-4.....	do.	.705	.877	.824	1.007	.991	.866	.761	.754	.829	.865
Sheets, bleached, 81 by 90.....	Each.	2.208	2.126	2.148	2.376	2.363	2.047	1.856	1.813	1.990	2.144
Outing flannel, 27 to 28 inch.....	Yard.	.340	.379	.353	.353	.375	.391	.308	.285	.325	.348
Flannel, white, wool, 27-inch.....	do.	.....	.....	.....	.....	.790	1.022	.938	1.070	.854	.883
Blankets, cotton, 66 by 80.....	Pair..	6.125	5.883	5.700	6.217	5.717	4.836	5.153	5.472	5.376	6.095
<b>Peoria, Ill.</b>											
Calico, 24 to 25 inch.....	Yard.	\$0.276	\$0.209	\$0.167	\$0.173	\$0.199	.....	.....	.....	.....	\$0.390
Percale.....	do.	.361	.326	.310	.350	.385	\$0.398	.....	.....	.250	.250
Gingham, apron, 27 to 28 inch.....	do.	.286	.241	.192	.220	.274	.310	.....	.....	.336	.330
Gingham, dress, 27-inch.....	do.	.339	.305	.309	.340	.332	.390	.....	.....	.550	.519
Gingham, dress, 32-inch.....	do.	.534	.526	.541	.515	.603	.535	.....	.....	.331	.365
Muslin, bleached.....	do.	.338	.281	.267	.298	.361	.338	.....	.....	.785	.814
Sheeting, bleached, 9-4.....	do.	.857	.785	.727	.790	.917	.775	.....	.....	1.990	2.000
Sheets, bleached, 81 by 90.....	Each.	2.090	1.788	1.707	1.797	2.181	1.976	.....	.....	.329	.348
Outing flannel, 27 to 28 inch.....	Yard.	.352	.324	.302	.333	.335	.373	.....	.....	.....	1.250
Flannel, white, wool, 27-inch.....	do.	.800	.760	.785	.875	1.098	1.222	.....	.....	.....	5.400
Blankets, cotton, 66 by 80.....	Pair..	6.536	5.957	5.750	3.750	5.511	5.495	.....	.....	.....	5.625
<b>Pittsburgh, Pa.</b>											
<b>Portland, Me.</b>											

[1849]





AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON OCT. 15, 1918, AND ON FEB. 15, MAY 15, AUG. 15, AND OCT. 15, 1919, IN 50 CITIES—Concluded.

Article.	Unit.	* Springfield, Ill.					Washington, D. C.				
		Oct. 15, 1918.	1919				Oct. 15, 1918.	1919			
			Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.
Calico, 24 to 25 inch.....	Yard.	\$0.233	\$0.168	\$0.160	\$0.192	\$0.238	\$0.198	\$0.200	.....	\$0.175	\$0.250
Percale.....	do.	.400	.314	.335	.330	.366	.420	.348	.338	.354	.478
Gingham, apron, 27 to 28 inch.....	do.	.283	.250	.240	.247	.257	.281	.244	.243	.263	.297
Gingham, dress, 27-inch.....	do.	.368	.321	.320	.341	.349	.390	.353	.381	.371	.419
Gingham, dress, 32-inch.....	do.	.529	.571	.499	.435	.475	.510	.559	.534	.587	.572
Muslin, bleached.....	do.	.316	.266	.262	.311	.322	.346	.268	.278	.344	.365
Sheeting, bleached, 9-4.....	do.	.778	.698	.737	.820	.829	.813	.801	.740	.858	.930
Sheets, bleached, 81 by 90.....	Each.	1.803	1.780	1.967	2.081	2.095	2.144	1.890	1.876	2.347	2.348
Outing flannel, 27 to 28 inch.....	Yard.	.341	.292	.284	.321	.329	.398	.315	.304	.339	.348
Flannel, white, wool, 27-inch.....	do.	.....	.....	.875	.....	.....	1.195	1.380	.....	1.250	1.250
Blankets, cotton, 66 by 80.....	Pair..	5.483	4.000	4.650	5.196	5.495	5.556	6.500	7.500	6.156	6.408

## Comparison of Retail Food Costs in 50 Cities in the United States.

THE table following shows for 39 cities the percentage of increase or decrease in the retail cost of 22 food articles,<sup>1</sup> combined, in October, 1919, as compared with the average cost in the year 1913, in October, 1918, and in September, 1919. For 11 other cities, comparisons are given for the one-year and the one-month periods. These cities have been scheduled by the Bureau at different dates since 1913.

The average family expenditure is based on the prices sent to the Bureau each month by retail dealers, and on the average family consumption of these articles in each city.

The amounts given as the expenditures in October, 1918, and in September and October, 1919, represent the amounts necessary to buy a year's supply of these 22 food articles when purchased at the average retail prices charged in the months specified. This method makes it easier to compare the increase with the year 1913. This year has been selected for the comparison because it was the last year before the war when prices were normal.

No attempt should be made in this table to compare one city with another, as the average number of persons in the family varies according to the city, and these 22 food articles represent a varying proportion of the entire food budgets according to locality. This table is intended to show merely comparisons in the retail cost of these 22 food articles for each city. Effort is made to secure prices

<sup>1</sup> Sirloin steak, round steak, rib roast, chuck roast, plate boiling beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

on similar grades of commodities in all cities. Local customs, however, must be taken into consideration. For example:

1. In Boston, Mass.; Fall River, Mass.; Manchester, N. H.; New Haven, Conn.; Portland, Me.; and Providence, R. I., very little fresh plate beef is sold, and prices are not secured from these cities for this article.

2. The cut of beef known as "sirloin" in Boston, Mass.; Manchester, N. H.; Philadelphia, Pa.; and Providence, R. I., would be known as "porterhouse" in other cities. In these four cities, owing to the method of dividing the round from the loin, there is no cut that corresponds to "sirloin" in other cities. There is also a greater amount of trimming demanded by the trade in these cities.

3. The most of the sales in Newark, N. J., are on whole ham instead of the sliced as in other cities.

While it is advised that comparisons should not be made as between cities, without taking these and other facts relative to local customs and transportation into consideration, the figures do represent a trend in the retail cost of these articles to the average family in each individual city.

RETAIL COST OF 22 FOOD ARTICLES,<sup>1</sup> COMBINED, IN OCTOBER, 1919, COMPARED WITH THE COST IN SEPTEMBER, 1919, OCTOBER, 1918, AND WITH THE AVERAGE COST IN THE YEAR, 1913, BY CITIES.

City.	Average family expenditure for 22 food articles, combined.				Percentage increase October, 1919, compared with—		Percentage increase (+) or decrease (-), October, 1919, compared with September, 1919.
	1913.	October, 1918. <sup>2</sup>	1919		1913	October, 1918.	
			September. <sup>2</sup>	October. <sup>2</sup>			
Atlanta.....	\$361.00	\$658.44	\$683.89	\$680.22	88	3	-1
Baltimore.....	335.15	675.90	674.41	662.23	98	<sup>3</sup> 2	-2
Birmingham.....	377.53	707.83	734.14	741.97	97	5	+1
Boston.....	388.16	691.01	718.93	722.61	86	5	+1
Bridgeport.....	.....	664.83	672.70	675.71	.....	2	( <sup>4</sup> )
Buffalo.....	318.15	604.14	626.93	612.83	93	1	-2
Butte.....	.....	467.79	468.33	464.87	.....	<sup>3</sup> 1	-1
Charleston.....	348.60	665.52	683.46	679.34	95	2	-1
Chicago.....	336.48	591.85	646.90	637.74	90	8	-1
Cincinnati.....	338.26	604.83	619.66	626.39	85	4	+1
Cleveland.....	354.01	622.12	672.77	676.58	91	9	+1
Columbus.....	.....	624.31	650.67	648.88	.....	4	( <sup>5</sup> )
Dallas.....	395.41	694.38	720.48	716.30	81	3	-1
Denver.....	247.36	438.35	447.63	452.35	83	3	+1
Detroit.....	335.02	616.21	664.20	658.91	97	7	-1
Fall River.....	375.51	673.78	704.04	697.84	86	4	-1
Houston.....	.....	673.78	702.71	695.74	.....	4	-1
Indianapolis.....	345.23	593.33	645.48	635.58	84	7	-2
Jacksonville.....	377.10	661.69	682.08	682.08	81	3	( <sup>6</sup> )
Kansas City, Mo.....	340.12	615.91	636.46	647.28	90	5	+2
Little Rock.....	390.14	697.89	707.18	716.01	84	3	+1
Los Angeles.....	284.84	461.82	464.12	467.83	64	1	+1
Louisville.....	363.85	672.29	702.81	687.50	89	2	-2
Manchester.....	366.01	675.84	687.05	687.16	88	2	( <sup>4</sup> )

<sup>1</sup> See footnote on page 187.

<sup>2</sup> Cost of year's supply at prices charged in specified month.

<sup>3</sup> Decrease.

<sup>4</sup> Increase of less than five-tenths of 1 per cent.

<sup>5</sup> Decrease of less than five-tenths of 1 per cent.

<sup>6</sup> No change.

RETAIL COST OF 22 FOOD ARTICLES, COMBINED, IN OCTOBER, 1919, COMPARED WITH THE COST IN SEPTEMBER, 1919, OCTOBER, 1918, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES—Concluded.

City.	Average family expenditure for 22 food articles, combined.				Percentage increase October, 1919, compared with—		Percentage increase (+) or decrease (—), October, 1919, compared with September, 1919.
	1913.	October, 1918.	1919		1913	October, 1918.	
			September.	October.			
Memphis.....	\$368.46	\$682.15	\$716.76	\$706.07	92	4	—1
Milwaukee.....	327.25	589.38	647.78	639.78	96	9	—1
Minneapolis.....	319.98	564.45	612.18	614.70	92	9	(1)
Mobile.....	.....	696.15	732.98	720.88	.....	4	—2
Newark.....	364.92	652.02	662.07	670.31	84	3	+1
New Haven.....	376.96	693.85	710.13	696.85	85	(1)	—2
New Orleans.....	369.29	685.53	705.40	703.62	91	3	(2)
New York.....	355.36	647.23	660.10	665.95	87	3	+1
Norfolk.....	.....	690.63	698.47	688.19	.....	8	—1
Omaha.....	334.52	608.32	643.85	653.20	95	7	+1
Peoria.....	.....	586.54	624.40	632.97	.....	8	+1
Philadelphia.....	352.19	646.24	669.25	672.20	91	4	(1)
Pittsburgh.....	350.35	634.65	653.18	667.06	90	5	+2
Portland, Me.....	.....	672.67	683.48	679.22	.....	1	—1
Portland, Ore.....	266.03	453.68	468.80	469.53	77	3	(1)
Providence.....	380.85	710.79	736.09	739.95	94	4	+1
Richmond.....	346.40	656.83	682.61	684.19	98	4	(1)
Rochester.....	.....	608.78	627.40	617.77	.....	1	—2
St. Louis.....	326.36	608.89	631.34	634.37	94	4	(1)
St. Paul.....	.....	574.93	608.10	607.05	.....	6	(2)
Salt Lake City.....	261.87	438.45	457.58	450.10	72	3	—2
San Francisco.....	271.48	464.37	463.98	467.00	72	1	+1
Scranton.....	335.98	628.34	659.97	650.96	88	4	—1
Seattle.....	265.35	469.08	481.83	484.99	83	5	(1)
Springfield, Ill.....	.....	601.84	632.38	648.79	.....	8	+3
Washington, D. C.....	354.82	695.82	705.85	708.01	100	2	(1)

<sup>1</sup> Increase of less than five-tenths of 1 per cent.

<sup>2</sup> Decrease of less than five-tenths of 1 per cent.

As may be seen in the table, the average family expenditure for these 22 foods changed but little in October. For the United States as a whole there was a decrease of two-tenths of 1 per cent. In 9 cities the retail cost increased less than one-half of 1 per cent, and in 4 cities there was a decrease of approximately this amount. In Jacksonville the retail cost was the same as in September. Two cities increased 2 per cent each and 8 cities decreased 2 per cent each. Thirteen cities increased 1 per cent and 12 cities showed the same amount of decrease. The greatest increase, or 3 per cent, was shown in Springfield, Ill. This city, however, decreased 3 per cent in September as compared with August.

## Index Numbers of Wholesale Prices in the United States, 1913 to October, 1919.

WHOLESALE prices in the United States reacted during October from the level reached in the preceding month, the Bureau's weighted index number standing at 223 as compared with 221 for September. Articles included in the cloths and clothing group showed the greatest increases, the index number rising from 306 to 313. The groups of farm products, lumber and building materials, house-furnishing goods, and miscellaneous commodities showed smaller increases. Slight increases took place in the metals and metal products and chemicals and drugs group, while no appreciable change occurred in the groups of food, etc., and fuel and lighting.

Among the important articles whose wholesale prices averaged higher in October than in September were cotton, barley, oats, wheat, alfalfa hay, goatskins, hides, hops, cattle, sheep, tobacco, butter, eggs, wheat flour, lemons, lard, fresh beef, mutton, molasses, tallow, onions, carpets, print cloth, cotton and worsted yarns, silk, wool, coke, pig lead, lead pipe, nails, cast-iron pipe, bar silver, steel plates, spelter, plate glass, lath, hemlock and pine lumber, grain alcohol, quinine, caustic soda and nitrate of soda, cottonseed oil, and rubber. Flaxseed, corn, rye, timothy hay, hogs, poultry, beans, coffee, prunes, glucose, corn meal, bacon, salt beef, hams, lamb, salt pork, veal, oleomargarine, oleo oil, rice, potatoes, vinegar, ingot copper, linseed oil, turpentine, shingles, muriatic acid, cottonseed meal, and bran were cheaper in October than in September, while canned goods, cheese, fish, rye flour, raisins, milk, olive oil, salt, sugar, tea, shoes, underwear, leather, hosiery, women's dress goods, anthracite and bituminous coal, gasoline, matches, crude and refined petroleum, iron and steel products, alum, glycerine, furniture, earthen and glass tableware, jute, lubricating oil, paper, rope, and soap were practically unchanged in prices.

In the period from October, 1918, to October, 1919, the index number of farm products increased from 224 to 230, that of food articles from 202 to 212, and that of cloths and clothing from 256 to 313. During the same period the index number of fuel and lighting increased from 167 to 181, that of lumber and building material from 158 to 231, and that of house-furnishing goods from 226 to 264. The index number of miscellaneous commodities, including such important articles as cottonseed meal and oil, jute, malt, lubricating oil, news-print paper, rubber, rope, starch, soap, plug tobacco and wood pulp, increased from 196 to 220. In the groups of metals and metal products and chemicals and drugs the index number decreased from

187 to 161 and from 218 to 174, respectively, from October, 1918, to October, 1919.

INDEX NUMBERS OF WHOLESALE PRICES IN SPECIFIED MONTHS, 1913, TO OCTOBER, 1919, BY GROUPS OF COMMODITIES.

[1913=100.]

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Chemicals and drugs.	House furnishing goods.	Miscellaneous.	All commodities.
1913.										
Average for year.....	100	100	100	100	100	100	100	100	100	100
January.....	97	99	100	103	107	100	101	100	100	100
April.....	97	96	100	98	102	101	101	100	98	98
July.....	101	102	100	99	98	101	99	100	101	100
October.....	103	102	100	100	99	98	100	100	100	101
1914.										
January.....	101	102	98	99	92	98	100	99	99	100
April.....	103	95	99	98	91	99	100	99	101	98
July.....	104	104	99	95	85	97	99	99	97	100
October.....	103	107	97	93	83	96	105	99	96	99
1915.										
January.....	102	106	96	93	83	94	103	99	100	99
April.....	107	105	99	89	91	94	102	99	99	100
July.....	108	105	99	90	102	93	108	99	98	101
October.....	105	104	103	96	100	93	124	99	99	102
1916.										
January.....	108	114	110	105	126	99	150	105	107	111
April.....	114	113	119	108	147	102	172	108	110	117
July.....	118	122	126	108	145	99	156	121	120	120
October.....	136	141	138	133	151	101	150	124	132	134
1917.										
January.....	148	151	161	176	183	106	159	132	138	151
February.....	151	160	162	185	190	108	160	132	141	156
March.....	163	161	164	188	199	110	165	132	143	161
April.....	181	183	169	184	208	114	170	139	149	173
May.....	197	192	173	194	217	117	179	139	150	182
June.....	197	188	179	201	239	127	180	144	152	185
July.....	199	182	187	192	257	132	198	152	153	187
August.....	205	181	193	165	249	133	209	152	156	186
September.....	204	180	193	160	226	134	223	152	155	183
October.....	208	184	193	146	182	134	252	152	163	181
November.....	212	185	198	155	174	134	240	155	166	183
December.....	205	186	202	158	174	135	238	155	170	183
1918.										
January.....	207	188	211	157	174	136	232	161	178	185
February.....	208	187	216	157	176	138	232	161	181	187
March.....	212	179	223	158	176	144	232	165	184	187
April.....	217	180	232	157	177	146	229	172	191	190
May.....	214	179	237	160	178	148	223	173	194	191
June.....	217	180	245	159	178	150	219	198	196	193
July.....	224	186	249	166	184	154	216	199	190	198
August.....	230	193	252	166	185	157	222	221	191	203
September.....	237	200	254	167	184	159	220	226	194	207
October.....	224	202	256	167	187	158	218	226	196	205
November.....	221	208	255	171	188	164	215	226	203	206
December.....	222	212	250	171	184	164	195	227	204	207
1919.										
January.....	222	209	234	170	172	161	191	218	212	203
February.....	218	197	223	169	168	163	185	218	208	197
March.....	228	205	216	168	162	165	183	218	217	201
April.....	235	212	217	167	152	162	178	217	216	203
May.....	240	216	227	167	152	164	179	217	213	207
June.....	231	206	258	170	154	175	174	233	212	207
July.....	246	218	282	171	158	186	171	245	221	219
August.....	243	228	304	175	161	208	172	259	225	226
September.....	226	212	306	181	160	227	173	262	217	221
October.....	230	212	313	181	161	231	174	264	220	223

<sup>1</sup> Preliminary.

# Price Changes, Wholesale and Retail, in the United States.

**E**XACT comparison of wholesale with retail prices is not attempted in the following tables. Some food products—fresh meats, for example—are not sold by the retailer in the same form in which they leave the wholesaler, hence strictly comparable prices are not obtainable. It was found impracticable also to obtain both wholesale and retail prices for the same date, the retail prices being those prevailing on the 15th of the month, while the wholesale prices are for a variable date, usually several days prior to the 15th. The figures in the table are therefore to be considered as merely indicative of price variations in the retail as compared with the wholesale markets.

To assist in comparing the fluctuations at wholesale and at retail, the differential between the two series of quotations at successive dates is given. It should not be assumed, however, that this differential in any case represents the margin of profit to the retailer, since, in addition to a possible difference of grade between the articles shown at wholesale and retail, the various items of handling cost to both the wholesaler and retailer are included in the figure.

## WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES.

[The initials W=wholesale; R=retail. The wholesale price is the mean of the high and low quotation on the date selected, as published in leading trade journals. The retail price is the average of prices reported to the Bureau of Labor Statistics by dealers.]

Article and city.	Unit.	1913: Av- erage for year.	July—			1917		1918		1919				
			1914	1915	1916	Jan.	July.	Jan.	July.	Jan.	July.	Aug.	Sept.	Oct.
<b>Beef, Chicago:</b>														
Steer loin ends.....W.	Lb..	Cts. 16.8	Cts. 17.5	Cts. 16.0	Cts. 20.5	Cts. 20.0	Cts. 19.0	Cts. 20.0	Cts. 34.0	Cts. 32.0	Cts. 27.0	Cts. 32.0	Cts. 33.0	Cts. 33.0
Sirloin steak.....R.	Lb..	23.2	26.0	25.8	28.1	26.5	30.2	30.2	37.7	37.5	39.3	41.1	38.4	36.6
Price differential.....		6.4	8.5	9.8	7.6	6.5	11.2	10.2	3.7	5.5	12.3	9.1	5.4	3.6
<b>Beef, Chicago:</b>														
Steer rounds, No. 2..W.	Lb..	13.1	14.5	14.3	14.5	12.0	17.0	16.5	25.0	22.0	22.0	25.0	23.0	21.0
Round steak.....R.	Lb..	20.2	23.3	22.8	24.1	22.7	26.6	27.3	35.0	34.0	35.5	36.1	34.1	32.5
Price differential.....		7.1	8.8	8.5	9.6	10.7	9.6	10.8	10.0	12.0	13.5	11.1	11.1	11.5
<b>Beef, Chicago:</b>														
Steer ribs, No. 2.....W.	Lb..	15.7	16.5	14.5	17.5	16.0	20.0	20.0	28.0	30.0	24.0	32.0	30.0	28.0
Rib roast.....R.	Lb..	19.5	21.2	21.3	22.9	22.3	24.6	25.4	31.8	31.3	31.9	32.5	30.7	28.9
Price differential.....		3.8	4.7	6.8	5.4	6.3	4.6	5.4	3.8	.....	7.9	5	7	9
<b>Beef, New York:</b>														
No. 2, loins, city.....W.	Lb..	15.8	18.3	17.0	20.0	18.0	19.0	23.5	28.0	37.0	28.5	36.0	35.0	37.0
Sirloin steak.....R.	Lb..	25.9	27.4	28.2	29.4	28.4	33.7	34.4	43.9	44.8	44.4	44.0	42.5	42.6
Price differential.....		10.1	9.1	11.2	9.4	10.4	14.7	10.9	15.9	7.8	15.9	8.0	7.5	5.6
<b>Beef, New York:</b>														
No. 2, rounds, city..W.	Lb..	12.1	13.5	13.5	14.5	13.0	17.5	18.0	28.0	25.0	22.0	24.0	22.0	22.0
Round steak.....R.	Lb..	24.9	27.0	27.1	28.9	27.5	33.7	35.2	46.3	47.3	46.2	45.6	44.4	44.5
Price differential.....		12.8	13.5	13.6	14.4	14.5	16.2	17.2	18.3	22.3	24.2	21.6	22.4	22.5
<b>Beef, New York:</b>														
No. 2, ribs, city.....W.	Lb..	15.1	16.5	16.0	18.0	16.0	19.0	23.5	28.0	35.0	27.5	29.0	28.0	30.0
Rib roast.....R.	Lb..	21.8	22.5	22.7	24.3	23.8	27.9	29.4	37.5	35.2	37.5	38.6	38.3	37.5
Price differential.....		6.7	6.0	6.7	6.3	7.8	8.9	5.9	9.5	5.9	11.1	9.3	9.5	7.2
<b>Pork, Chicago:</b>														
Loins.....W.	Lb..	14.9	16.5	15.0	16.5	16.5	25.0	27.0	29.0	27.0	37.0	37.0	38.0	35.0
Chops.....R.	Lb..	19.0	20.4	20.1	21.7	22.7	29.2	31.6	35.5	35.2	41.7	44.7	43.9	41.0
Price differential.....		4.1	3.9	5.1	5.2	6.2	4.2	4.6	6.5	8.2	4.7	7.7	5.9	6.0
<b>Pork, New York:</b>														
Loins, western.....W.	Lb..	15.2	16.3	15.3	16.5	17.0	23.5	26.5	30.5	33.0	37.0	38.0	38.0	39.0
Chops.....R.	Lb..	21.7	23.0	21.7	23.9	24.8	32.6	34.8	40.6	43.5	47.5	47.8	47.4	45.7
Price differential.....		6.5	6.7	6.4	7.4	7.8	9.1	8.3	10.1	10.5	10.5	11.8	9.4	6.7

<sup>1</sup> Price is for different quality of beef from that quoted at wholesale.

[1856]

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES—Continued.

Article and city.	Unit.	1913: Average for year.	July—			1917		1918		1919				
			1914	1915	1916	Jan.	July.	Jan.	July.	Jan.	July.	Aug.	Sept.	Oct.
<b>Bacon, Chicago:</b>														
Short clear sides.....W.	Lb.	12.7	13.9	11.3	15.9	15.8	24.7	30.1	27.4	29.4	33.1	33.4	28.6	23.3
Sliced.....R.	Lb.	29.4	31.8	31.5	32.8	31.6	43.9	49.8	54.7	61.6	61.5	61.7	58.6	54.6
Price differential.....		16.7	17.9	20.2	16.9	15.8	19.2	19.7	27.3	32.2	28.4	28.3	30.0	31.3
<b>Ham, Chicago:</b>														
Smoked.....W.	Lb.	16.6	17.5	16.3	19.0	18.8	24.3	29.8	30.1	35.3	38.3	38.3	35.0	29.3
Smoked, sliced.....R.	Lb.	26.6	33.8	32.8	34.9	33.2	41.4	42.8	49.1	55.3	58.8	59.8	57.9	54.0
Price differential.....		10.0	16.3	16.5	15.9	14.5	17.1	13.0	19.0	20.0	20.5	21.5	22.9	26.7
<b>Lard, New York:</b>														
Prime, contract.....W.	Lb.	11.0	10.4	8.0	13.3	15.9	20.1	24.6	26.2	24.2	35.8	32.0	26.6	29.0
Pure, tub.....R.	Lb.	16.1	16.6	15.1	16.8	21.3	27.4	30.6	32.2	33.1	42.5	41.6	38.3	35.7
Price differential.....		5.0	5.2	7.1	3.5	5.4	7.3	8.4	6.0	8.9	6.7	9.6	11.7	6.7
<b>Lamb, Chicago:</b>														
Dressed, round.....W.	Lb.	14.9	17.0	19.0	19.0	20.0	26.0	24.0	31.0	28.0	29.0	28.0	26.0	24.0
Leg of, yearling.....R.	Lb.	19.8	21.9	20.8	23.1	23.2	28.7	32.6	35.7	34.2	36.2	35.8	34.1	33.1
Price differential.....		4.9	4.9	1.8	4.1	3.2	2.7	6.6	4.7	6.2	7.2	7.8	8.1	9.1
<b>Poultry, New York:</b>														
Dressed fowls.....W.	Lb.	18.2	18.8	17.5	21.5	22.0	24.8	29.8	36.0	35.5	34.5	37.0	37.3	37.8
Dressed hens.....R.	Lb.	21.4	22.0	21.9	25.6	26.1	28.7	32.6	41.0	40.8	41.5	41.8	40.3	40.5
Price differential.....		3.2	3.2	4.4	4.1	4.1	3.9	2.8	5.0	5.3	7.0	4.8	3.0	2.7
<b>Butter, Chicago:</b>														
Creamery, extra.....W.	Lb.	31.0	26.5	26.5	27.5	37.0	37.5	49.0	42.5	66.0	52.0	53.0	55.3	63.5
Creamery, extra.....R.	Lb.	36.2	31.2	32.2	33.5	43.8	43.3	54.4	48.0	71.3	57.1	58.4	60.3	67.8
Price differential.....		5.2	4.7	5.7	6.0	6.8	5.7	5.4	5.5	5.3	5.1	5.4	5.0	4.3
<b>Butter, New York:</b>														
Creamery, extra.....W.	Lb.	32.3	28.0	27.0	28.5	39.5	39.5	51.0	44.4	67.0	51.0	54.0	58.3	66.8
Creamery, extra.....R.	Lb.	38.2	32.8	33.6	34.6	46.0	45.3	57.0	51.4	75.5	61.3	63.0	65.3	72.4
Price differential.....		5.9	4.8	6.6	6.1	6.5	5.8	6.4	7.0	8.5	10.3	9.0	7.0	5.6
<b>Butter, San Francisco:</b>														
Creamery, extra.....W.	Lb.	31.7	24.5	26.5	25.5	35.5	38.5	53.0	50.0	64.5	56.5	56.0	64.0	66.0
Creamery, extra.....R.	Lb.	38.8	32.9	33.8	33.3	42.5	45.5	60.2	58.6	72.3	64.7	63.9	70.2	73.5
Price differential.....		7.1	8.4	7.3	7.8	7.0	7.0	7.2	6.6	7.8	8.2	7.9	6.2	7.5
<b>Cheese, Chicago:</b>														
Whole milk.....W.	Lb.	14.2	13.3	14.5	14.5	21.8	21.6	23.3	22.7	36.3	30.9	30.0	28.8	27.4
Full cream.....R.	Lb.	.....	.....	22.9	24.2	32.1	33.9	37.5	34.5	43.9	44.1	44.6	44.8	44.4
Price differential.....		.....	.....	8.4	9.7	10.3	12.3	14.2	11.8	7.6	13.2	14.6	16.0	17.0
<b>Cheese, New York:</b>														
Whole milk, State.....W.	Lb.	15.4	14.4	14.6	15.1	22.0	23.8	23.0	23.9	36.8	31.5	30.8	29.8	30.3
Full cream.....R.	Lb.	.....	.....	22.9	22.8	30.1	32.8	34.4	33.2	42.7	42.8	42.8	42.5	42.3
Price differential.....		.....	.....	8.3	7.7	8.1	9.0	11.4	9.3	5.9	11.3	12.0	12.7	12.0
<b>Cheese, San Francisco:</b>														
Fancy.....W.	Lb.	15.9	12.5	11.5	13.5	18.0	20.0	25.5	26.0	33.2	32.0	35.5	35.5	33.0
Full cream.....R.	Lb.	.....	.....	20.0	22.9	24.2	29.7	33.5	32.3	41.9	41.2	44.2	43.3	44.7
Price differential.....		.....	.....	8.5	9.4	6.2	9.7	8.0	6.3	8.4	9.2	8.7	7.8	11.7
<b>Milk, Chicago:</b>														
Fresh.....W.	Qt.	3.8	3.6	3.7	3.6	4.5	4.7	7.0	5.3	8.4	6.8	7.9	8.1	8.2
Fresh, bottled.....R.	Qt.	8.0	8.0	8.0	8.1	10.0	10.0	11.9	12.0	14.0	14.0	15.0	15.0	15.0
Price differential.....		4.2	4.4	4.3	4.5	5.5	5.3	4.9	6.7	5.6	7.2	7.1	6.9	6.8
<b>Milk, New York:</b>														
Fresh.....W.	Qt.	3.5	3.0	3.0	3.1	5.1	5.0	8.1	5.4	9.2	7.1	7.3	7.5	7.3
Fresh, bottled.....R.	Qt.	9.0	9.0	9.0	9.0	11.4	15.0	12.7	16.0	16.0	16.0	16.0	16.0	16.0
Price differential.....		5.5	6.0	6.0	5.9	4.9	6.4	6.9	7.3	6.8	8.9	8.7	8.5	8.7
<b>Milk, San Francisco:</b>														
Fresh.....W.	Qt.	3.8	3.9	3.8	3.8	3.8	4.3	6.6	5.9	7.4	7.4	7.4	7.4	7.4
Fresh, bottled.....R.	Qt.	10.0	10.0	10.0	10.0	10.0	10.0	12.1	12.1	14.0	14.0	14.0	14.0	14.2
Price differential.....		6.1	6.1	6.2	6.2	6.2	5.7	5.5	6.2	6.6	6.6	6.6	6.6	6.8
<b>Eggs, Chicago:</b>														
Fresh, firsts.....W.	Doz.	22.6	18.8	16.8	21.8	48.5	31.0	56.5	36.5	58.8	42.0	42.5	45.0	56.8
Strictly fresh.....R.	Doz.	29.2	26.1	24.8	29.6	52.5	40.6	65.1	45.7	69.5	53.2	54.9	56.1	65.6
Price differential.....		6.6	7.3	8.0	7.8	4.0	9.6	8.6	9.2	10.7	11.2	12.4	11.1	8.8
<b>Eggs, New York:</b>														
Fresh, firsts.....W.	Doz.	24.9	21.5	20.0	24.1	50.5	35.0	64.5	40.0	61.3	44.5	47.5	49.0	61.0
Strictly fresh.....R.	Doz.	39.7	35.3	32.6	37.2	66.7	47.7	80.8	57.3	78.1	66.4	68.5	70.9	80.0
Price differential.....		14.8	13.8	12.6	13.1	16.2	12.7	16.3	17.3	16.8	21.9	21.0	21.9	19.0
<b>Eggs, San Francisco:</b>														
Fresh.....W.	Doz.	26.8	23.0	22.0	24.0	38.0	32.0	61.0	44.0	53.0	45.0	52.5	57.5	59.5
Strictly fresh.....R.	Doz.	37.3	33.8	31.0	33.3	48.0	39.2	71.0	51.4	65.7	56.6	62.4	71.6	79.1
Price differential.....		10.5	10.8	9.0	9.3	10.0	7.2	10.0	7.4	12.7	11.6	9.9	14.1	9.6
<b>Meal, corn, Chicago:</b>														
Fine.....W.	Lb.	1.4	1.6	.....	1.9	2.4	4.5	5.1	5.4	3.6	4.6	4.7	4.0	3.6
Fine.....R.	Lb.	2.9	2.8	3.1	3.1	4.2	5.8	7.0	6.8	5.8	6.1	6.1	6.8	6.7
Price differential.....		1.5	1.2	.....	1.2	1.8	1.3	1.9	1.4	2.2	1.5	1.4	2.8	3.1
<b>Beans, New York:</b>														
Medium, choice.....W.	Lb.	4.0	4.0	5.8	9.8	10.8	15.4	14.1	11.9	9.9	7.5	9.0	8.5	7.9
Navy, white.....R.	Lb.	.....	.....	8.1	11.3	14.9	18.8	18.5	17.5	15.3	12.2	12.5	12.6	12.3
Price differential.....		.....	.....	2.3	1.5	4.1	3.4	4.4	5.6	5.4	4.7	3.5	4.1	4.4

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES—Concluded.

Article and city.	Unit.	1913: Average for year.	July—			1917		1918		1919				
			1914	1915	1916	Jan.	July.	Jan.	July.	Jan.	July.	Aug.	Sept.	Oct.
Potatoes, Chicago:														
White <sup>1</sup> .....W.	Lb.	1.0	2.4	0.7	1.6	2.9	4.4	2.0	1.5	1.9	1.4	4.4	2.1	2.2
White.....R.	Lb.	1.5	2.7	1.2	2.3	3.9	5.0	2.8	3.7	2.7	5.0	5.2	4.4	3.4
Price differential.....		.5	.3	.5	.7	1.0	.6	.8	2.2	.8	3.6	.8	2.3	1.2
Rice, New Orleans:														
Head.....W.	Lb.	5.0	5.4	4.9	4.6	4.8	7.1	8.8	9.3	9.1	10.5	14.3	12.3	12.4
Head.....R.	Lb.			7.5	7.4	7.4	10.1	10.6	11.9	12.0	14.2	15.1	15.2	14.8
Price differential.....				2.6	2.8	2.6	3.0	1.8	2.6	2.9	3.7	.8	2.9	2.4
Sugar, New York:														
Granulated.....W.	Lb.	4.3	4.2	5.9	7.5	6.6	7.4	7.3	7.4	8.8	8.8	8.8	8.8	8.8
Granulated.....R.	Lb.	4.9	4.6	6.3	7.9	7.4	8.4	9.7	8.8	10.1	10.0	10.6	10.6	10.8
Price differential.....		.6	.4	.4	.4	.8	1.0	2.4	1.4	1.3	1.2	1.8	1.8	2.0

<sup>1</sup> Good to choice.

The following table of wholesale and retail prices, expressed as percentages of the average money prices for 1913, will enable the reader to follow more readily the trend of price fluctuations of food articles at wholesale and retail. A few articles included in the preceding table are omitted from the following one, owing to lack of satisfactory data for 1913. The table shows that, as compared with the 1913 base price, the wholesale prices of most of the commodities in recent months were relatively higher than the retail prices. This is particularly noticeable in the case of pork, lard, beef, poultry, butter, milk, and corn meal. The preceding table shows, however, that the margin between the wholesale and the retail price of many of the articles was greater in recent months than in 1913.

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES (AVERAGE FOR 1913=100).

[The initials W=wholesale; R=retail.]

Article and city.	Average for year.	July—			1917		1918		1919					
		1914	1915	1916	Jan.	July.	Jan.	July.	Jan.	July.	Aug.	Sept.	Oct.	
Beef, Chicago:														
Steer loin ends (hip)....W.	100	104	95	122	119	113	119	202	190	161	190	196	196	196
Sirloin steak.....R.	100	112	111	121	114	130	130	163	162	169	177	166	158	
Beef, Chicago:														
Steer rounds, No. 2.....W.	100	111	109	111	92	130	126	191	168	168	191	176	160	
Round steak.....R.	100	115	113	119	112	132	135	173	168	176	179	169	161	
Beef, Chicago:														
Steer ribs, No. 2.....W.	100	105	92	111	102	127	127	178	191	153	204	191	178	
Rib roast.....R.	100	109	109	117	114	126	130	163	159	164	167	157	148	
Beef, New York:														
No. 2 loins, city.....W.	100	116	108	127	114	120	149	177	234	180	228	222	234	
Sirloin steak.....R.	100	106	109	114	110	130	130	170	173	171	170	164	164	
Beef, New York:														
No. 2 rounds, city.....W.	100	112	112	120	107	145	149	231	207	182	198	182	182	
Round steak.....R.	100	108	109	116	110	135	141	186	190	186	183	178	179	
Beef, New York:														
No. 2 ribs, city.....W.	100	109	106	119	106	126	156	185	232	182	192	185	199	
Rib roast.....R.	100	103	104	111	109	128	135	172	188	177	176	172	171	
Pork, Chicago:														
Loins.....W.	100	111	101	111	111	168	181	195	181	248	248	255	235	
Chops.....R.	100	107	106	114	119	154	166	187	185	219	235	231	216	

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## RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES (AVERAGE FOR 1913=100)—Concluded.

Article and city.	Average for year.	July—			1917		1918		1919					
		1914	1915	1916	Jan.	July.	Jan.	July.	Jan.	July.	Aug.	Sept.	Oct.	
Pork, New York:														
Loin, western..... W..	100	107	101	109	112	155	174	201	217	243	250	250	257	
Chops..... R..	100	106	100	110	114	150	160	187	200	219	220	218	211	
Bacon, Chicago:														
Short clear sides..... W..	100	109	89	125	124	194	237	216	232	261	263	225	183	
Sliced..... R..	100	108	107	112	107	149	169	186	210	209	210	199	186	
Ham, Chicago:														
Smoked..... W..	100	105	98	114	113	146	180	181	213	231	231	211	177	
Smoked, sliced..... R..	100	127	123	131	125	156	161	185	208	221	225	218	203	
Lard, New York:														
Prime, contract..... W..	100	95	73	121	145	183	224	238	220	325	291	242	264	
Pure, tub..... R..	100	98	94	105	133	171	206	201	207	266	260	239	223	
Lamb, Chicago:														
Dressed, round..... W..	100	114	128	128	134	174	161	208	188	195	188	175	161	
Leg of, yearling..... R..	100	111	105	117	117	145	155	180	173	183	181	172	167	
Poultry, New York:														
Dressed fowls..... W..	100	103	96	118	121	136	164	198	195	190	203	205	208	
Dressed hens..... R..	100	103	103	120	122	134	152	192	191	194	195	188	189	
Butter, Chicago:														
Creamery, extra..... W..	100	85	85	89	119	121	158	137	213	168	171	178	205	
Creamery, extra..... R..	100	86	89	93	121	119	150	133	197	158	161	167	187	
Butter, New York:														
Creamery, extra..... W..	100	87	84	88	122	122	158	137	207	158	167	181	207	
Creamery, extra..... R..	100	96	88	91	120	119	150	135	198	160	165	171	190	
Butter, San Francisco:														
Creamery, extra..... W..	100	77	84	80	112	121	167	158	203	178	177	202	208	
Creamery, extra..... R..	100	85	87	86	110	117	155	146	186	167	165	181	189	
Milk, Chicago:														
Fresh..... W..	100	95	97	95	118	124	184	139	221	179	208	213	216	
Fresh, bottled, delivered..... R..	100	100	100	101	125	125	149	150	175	175	188	188	188	
Milk, New York:														
Fresh..... W..	100	86	86	89	146	143	231	154	263	203	209	214	209	
Fresh, bottled, delivered..... R..	100	100	100	100	111	127	167	141	178	178	178	178	178	
Milk, San Francisco:														
Fresh..... W..	100	100	97	97	97	110	169	151	190	190	190	190	190	
Fresh, bottled..... R..	100	100	100	100	100	100	121	121	140	140	140	140	142	
Eggs, Chicago:														
Fresh, firsts..... W..	100	83	74	96	215	137	250	162	260	186	188	199	251	
Strictly fresh..... R..	100	89	85	101	180	139	223	137	238	182	188	192	225	
Eggs, New York:														
Fresh, firsts..... W..	100	86	80	97	203	141	259	161	246	179	191	197	245	
Strictly fresh..... R..	100	89	82	94	168	120	204	144	197	167	173	179	202	
Eggs, San Francisco:														
Fresh..... W..	100	86	82	90	142	119	228	164	198	168	196	215	222	
Strictly fresh..... R..	100	91	83	89	129	105	190	138	176	152	167	192	212	
Meal, corn, Chicago:														
Fine..... W..	100	114	.....	136	171	321	364	386	257	329	336	286	257	
Fine..... R..	100	97	107	107	145	200	241	234	200	210	210	234	231	
Potatoes, Chicago:														
White, good to choice..... W..	100	237	66	160	286	429	200	150	190	140	440	210	220	
White..... R..	100	182	78	151	263	331	187	247	180	333	347	293	227	
Sugar, New York:														
Granulated..... W..	100	98	137	174	153	172	170	172	205	205	205	205	205	
Granulated..... R..	100	94	129	161	151	171	198	180	206	204	216	216	220	

## Wholesale Prices in the United States and Foreign Countries, 1890 to September, 1919.

IN THE following table the more important index numbers of wholesale prices in the United States and several foreign countries, as compiled by recognized authorities, have been reduced to a common base in order that the trend of prices in the several countries may be directly compared. The results here shown have been obtained by merely shifting the base for each series of index numbers to the year 1913, i. e., by dividing the index for 1913 on the

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original base into the index for each year or month on that base. These results are therefore to be regarded only as approximations of the correct index numbers in the case of series constructed by averaging the relative prices of individual commodities.<sup>1</sup> This applies to the index numbers of the Annalist, the Economist, Sauerbeck, the Department of Labor of Canada, the Statistique Générale of France, and, presumably, the Monthly Statistical Bulletin of New South Wales, Australia. The index numbers of the U. S. Bureau of Labor Statistics, Bradstreet, Dun, Gibson, and the Bureau of Census and Statistics of Australia are built on aggregates of actual money prices, or relatives made from such aggregates of actual prices, and therefore can be readily shifted to any desired base. In cases where no index numbers for years are shown in the original sources, the figures here presented have been obtained by averaging the 12 monthly index numbers.

WHOLESALE PRICES IN THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES.

[Index numbers expressed as percentages of the index number for 1913. See text explanation.]

Year and month.	United States.					United Kingdom.		Canada.	Australia.		France.
	Bureau of Labor Statistics: 326 commodities (variable).	Annalist: 25 commodities.	Bradstreet: 96 commodities.	Dun: 200 commodities.	Gibson: 22 commodities.	Economist: 44 commodities.	Sauerbeck: 45 commodities.	Department of Labor: 272 commodities (variable).	Commonwealth Bureau of Census and Statistics: 92 commodities.	New South Wales Monthly Statistical Bulletin: Number of commodities, not shown.	Statistique Générale: 45 commodities.
1890.....	81	78	.....	a 75	75	b 83	85	81	97	.....	.....
1895.....	70	68	70	a 67	72	72	73	71	70	.....	.....
1900.....	80	71	86	77	76	82	88	80	82	.....	.....
1905.....	85	79	88	83	81	81	85	84	84	84	85
1910.....	99	98	98	98	102	90	92	92	92	88	93
1913.....	100	100	100	100	100	100	100	100	100	100	100
1914.....	100	104	97	101	105	99	100	100	106	95	102
1915.....	101	106	107	105	110	123	127	110	147	114	140
1916.....	124	126	128	123	129	160	160	134	138	137	188
1917.....	176	187	170	169	191	204	205	174	153	153	262
1918.....	196	205	203	190	211	225	226	205	.....	162	933
1914.											
January.....	100	102	97	103	100	97	98	101	b 100	98	b 100
April.....	98	101	95	99	99	96	96	101	b 102	102	b 100
July.....	100	104	94	99	101	95	104	99	b 109	101	b 101
October.....	99	107	100	102	108	101	106	102	b 113	95	b 107
1915.											
January.....	99	108	99	103	111	112	118	103	b 127	101	b 124
April.....	100	109	106	103	117	124	125	108	b 153	109	b 135
July.....	101	105	107	103	111	122	126	111	b 167	115	b 142
October.....	102	101	108	105	103	125	134	112	b 142	117	b 158
1916.											
January.....	111	110	119	114	113	143	149	127	b 138	123	b 179
April.....	117	118	128	121	123	156	157	132	b 137	137	b 190
July.....	120	121	125	120	124	156	157	132	b 138	134	b 186
October.....	134	136	131	126	141	171	175	138	b 139	140	b 198

a Average for January and July.

b Quarter beginning in specified month.

<sup>1</sup> For a discussion of the defects of index numbers constructed according to this method, see Bulletin No. 181 of the Bureau of Labor Statistics, pp. 245-252.

WHOLESALE PRICES IN THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES—  
Concluded.

Year and month.	United States.					United Kingdom.		Canada.	Australia.		France.
	Bureau of Labor Statistics: 326 commodities (variable).	Annalist: 25 commodities.	Bradstreet: 96 commodities.	Dun: 200 commodities.	Gibson: 22 commodities.	Economist: 44 commodities.	Sauerbeck: 45 commodities.	Department of Labor: 272 commodities (variable).	Commonwealth Bureau of Census and Statistics: 92 commodities.	New South Wales monthly Statistical Bulletin: Number of commodities not shown.	Statistique Générale: 45 commodities.
1917.											
January . . .	151	151	149	140	150	184	187	154	<sup>1</sup> 140	150	215
February . . .	156	159	151	146	156	188	193	160	.....	151	225
March . . .	161	170	154	154	166	197	199	163	.....	151	230
April . . .	173	188	158	157	188	200	203	169	<sup>1</sup> 146	150	248
May . . .	182	203	164	172	204	201	205	177	.....	153	256
June . . .	185	198	168	176	197	210	211	179	.....	152	266
July . . .	187	189	175	175	200	208	208	179	<sup>1</sup> 158	152	268
August . . .	186	190	178	181	203	210	207	181	.....	156	270
September . . .	183	195	181	178	206	209	207	179	.....	152	280
October . . .	181	200	184	182	207	212	212	179	<sup>1</sup> 166	147	284
November . . .	183	199	185	183	206	215	214	183	.....	163	293
December . . .	183	200	191	182	209	215	218	187	.....	166	304
1918.											
January . . .	185	200	195	184	205	215	219	190	<sup>1</sup> 173	161	313
February . . .	187	204	196	188	210	216	220	194	.....	165	315
March . . .	187	204	196	189	217	218	222	199	.....	156	329
April . . .	190	207	200	191	225	221	223	199	.....	155	337
May . . .	191	207	205	188	216	223	225	204	.....	164	337
June . . .	193	201	206	186	211	227	226	207	.....	163	329
July . . .	198	203	208	192	212	228	227	210	.....	160	337
August . . .	203	207	208	192	210	233	230	210	.....	170	350
September . . .	207	210	207	193	212	231	232	211	.....	164	355
October . . .	205	203	207	193	205	231	233	214	<sup>1</sup> 181	160	360
November . . .	206	205	205	191	204	231	230	215	180	159	358
December . . .	207	208	207	191	208	226	231	213	180	163	353
1919.											
January . . .	203	211	201	190	206	217	224	211	.....	160	348
February . . .	197	201	192	182	201	216	221	205	.....	151	340
March . . .	201	209	187	180	212	212	217	205	.....	157	337
April . . .	203	222	188	182	223	214	217	206	.....	150	332
May . . .	207	226	187	184	220	222	229	210	.....	157	325
June . . .	207	216	196	189	212	230	235	210	.....	168	330
July . . .	219	219	205	193	220	240	243	217	.....	.....	.....
August . . .	226	220	217	200	218	242	250	222	.....	.....	.....
September . . .	221	202	211	197	201	245	253	223	.....	.....	.....

<sup>1</sup> Quarter beginning in specified month.

## Retail Price Changes in Great Britain.

THE following table gives for Great Britain the increase in the cost of food and general family expenditure for January to October, 1919, over July, 1914. The food items included in this report are: Ribs and thin flank of beef, both British and chilled or frozen; legs and breast of mutton, British and chilled or frozen; bacon; fish; flour; bread; tea; sugar; milk; butter, fresh and salt; cheese; margarine; eggs; and potatoes.

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The table gives percentages of increase, and is not one of relative prices, as is the table given for the United States. When making comparisons this should be borne in mind, and to obtain the relative price it is necessary to add 100 to the percentage as given; i. e., January, 1919, the increase is 130, the relative price being 230.

The figures represent two comparisons:<sup>1</sup> First, the increase in price based on the same quantities as used in July, 1914; second, the increase in the cost of living, based on the change in the quality of the standard of living. In other words, the increase in the first figure column of the table shows what the wage earner paid for the same quantities of food, while the figures in the second column give the change that results from a substitution of one kind of food for another to meet war-time conditions.

The same method is used in family expenditures, the third column showing percentage of increase of all articles and the last column giving approximate figures, based on the increase in cost of all other articles and the estimated changed consumption of food.

PERCENTAGE INCREASE IN COST OF FOOD AND ALL ITEMS, IN GREAT BRITAIN, OCTOBER, 1914, 1915, 1916, 1917, AND 1918, AND JANUARY TO OCTOBER, 1919, OVER JULY, 1914.

[Compiled from the British Labor Gazette.]

Year and month.	Food.		All items in family budget.	
	Retail prices (assuming same quantities).	Expenditures (allowing for estimated change in consumption).	Retail prices (assuming same quantities).	Expenditures (allowing for estimated change in consumption).
October, 1914.....	12			
October, 1915.....	40			
October, 1916.....	<i>a</i> 68	<i>b</i> 45-50		
October, 1917.....	97	56	<i>c</i> 80	
October, 1918.....	129	89	<i>d</i> 115-120	95
1919.				
January.....	130	79	<i>d</i> 120	90
February.....	130	77	<i>d</i> 120	90-95
March.....	120	79	<i>d</i> 115	90
April.....	113	87	<i>d</i> 110	95
May.....	107	81	<i>d</i> 105	90
June.....	104	87	<i>e</i> 105	95
July.....	109	97	105-110	100
August.....	117	108	115	110
September.....	116	103	115	105
October.....	122	113	120	110-115

*a* Including tax on sugar and tea.

*b* Not including taxes.

*c* Including taxes.

*d* The increase, excluding additional taxation, is 7 per cent less.

*e* The increase, excluding additional taxation, is 6 per cent less.

<sup>1</sup> For a more complete explanation, see article by Prof. W. F. Ogburn in the MONTHLY LABOR REVIEW for May, 1919, pp. 169, 170.

## History of Prices During the War.

**A** BULLETIN<sup>1</sup> giving the history of prices during the war was recently issued by the War Industries Board as the first number of a series of 57 publications dealing with price movements during the war period. The remaining numbers of the series have appeared from time to time during the past few months. In all, 50 classes of commodities, comprising 1,474 series of price quotations, are covered by these bulletins. It is stated that—

The primary purpose of this series of bulletins is to provide systematic and unbiased information about price fluctuations during the war and to make that information available as promptly as possible. This purpose has controlled the scope of the investigation, the rate at which it was pushed and the manner of analyzing and publishing the results.

To make the investigation widely serviceable it was desired to include as many industries and commodities as possible. But it was also desired to publish the result as soon as possible. Some compromise between these conflicting desires had to be made.

A list of 50 important classes of commodities was drawn up, following as closely as feasible the lines separating different industries. Each class was assigned to a "special expert" and made the subject of detailed investigation. The man in charge of each industry treated tried to select the most representative products sold, the leading raw materials bought, and to secure monthly price quotations from 1913 to 1918, inclusive, for both materials and products.

This plan made it necessary to quote a much larger number of commodities than has been included in other price investigations. Several of the best-accredited index numbers have less than 50 commodities; few of the food indexes have over 25; the series compiled by the Bureau of Labor Statistics, one of the largest, has 350. The shortest of these lists is adequate for certain purposes, but even the longest is not long enough to show the relative fluctuations of prices in each of 50 industries. Such an undertaking really requires the construction of 50 separate index numbers. If the average number of commodities included in each index is kept down to 25, the total number of commodities quoted rises to 1,250. Such was the scale of work marked out at the beginning of the inquiry, and it has not been materially altered in execution.

\* \* \* The field of inquiry was strictly limited to the prices of material goods. No effort was made to compile prices of labor, land, securities, or public utilities. Retail prices also were omitted. And within the wholesale-commodity field the survey is by no means exhaustive. Among the important lines of business not represented here as industries are printing, mineral-water bottling, and the making of artificial ice, confectionery, ready-to-wear clothing, millinery, jewelry, machinery, heating apparatus, automobiles, railway rolling stock, agricultural implements, planing-mill products, musical instruments, and ships. However, the chief raw materials or partially fabricated products used in almost all of these industries are quoted in some one of the 50 classes treated.

The chief obstacle in the way of carrying out the program lay in finding fabricated articles suitable for statistical use. Raw materials as a rule are sufficiently standardized at some stage of their progress toward consumers to give assurance that the articles quoted under a given description are substantially uniform from year to year. But highly fabricated goods are usually subject to frequent changes in material, style,

<sup>1</sup> W. I. B. Price Bulletin No. 1. History of prices during the war. Summary, by Wesley C. Mitchell. 96 pp. Washington, Government Printing Office, 1919.

design, workmanship, or size—changes which men assert make impracticable price comparisons covering six years. A special effort was made in the present inquiry to overcome this difficulty. The effort has not been without success; yet manufactured goods are less adequately represented in the bulletins than materials in raw and slightly modified form. It is, of course, this difficulty that forced the omission of the important industries mentioned above, such as the manufacture of automobiles, agricultural implements, machinery, and millinery.

The following table shows the 50 classes of commodities treated and the number in each class. The numbers assigned to the classes are those of the bulletins in which the classes are treated.

FIFTY CLASSES OF COMMODITIES COVERED BY THE HISTORY OF PRICES DURING THE WAR AND THE NUMBER OF COMMODITIES INCLUDED IN EACH CLASS.

Class.	Number of commodities.	Number of averages.	Class.	Number of commodities.	Number of averages.
<i>Food group.</i>			<i>Building materials group.</i>		
8. Feed and forage.....	29		38. Clay products.....	30	
9. Wheat and wheat products...	20		39. Sand and gravel.....	10	
10. Corn and corn products.....	21		40. Quarry products.....	20	
11. Oats, rice, buckwheat, and their products.....	15		41. Cement.....	10	
12. Barley, hops, rye, and their products.....	8		42. Glass.....	10	
13. Sugar and related products.....	10		43. Lumber.....	65	
14. Vegetables and truck.....	21		44. Paints and varnishes.....	32	
15. Edible vegetable oils.....	18		Total.....	177	
16. Fruits, nuts, and wine.....	20		<i>Chemicals group.</i>		
17. Spices and condiments.....	10		45. Mineral acids.....	12	
18. Tea, coffee, and cocoa.....	20		46. Heavy chemicals.....	13	
19. Tobacco and tobacco products.....	14	1	47. Miscellaneous inorganic chemicals.....	20	
20. Live stock, meats, and fats.....	58		48. Fertilizers.....	28	
21. Poultry and dairy products.....	48		49. Soaps and glycerin.....	34	1
22. Fish and oysters.....	20		50. Essential oils, flavoring and perfumery materials.....	20	
Total.....	332	1	51. Wood distillation products and naval stores.....	11	
<i>Clothing group.</i>			52. Natural dyestuffs and tanning chemicals.....	19	
23. Cotton and cotton products...	91		53. Coal-tar crudes, intermediate, and dyes.....	38	
24. Wool and wool products.....	66		54. Drugs and pharmaceuticals.....	27	
25. Silk and silk products.....	54	13	55. Proprietary preparations.....	24	
26. Hides and skins and their products.....	157	32	56. Explosives.....	21	
27. Hatter's fur and fur felt hats...	10		57. Miscellaneous organic chemicals.....	14	
28. Hair, bristles, and feathers.....	22		Total.....	281	1
29. Buttons.....	20		<i>Recapitulation.</i>		
Total.....	420	45	Food group.....	332	1
<i>Rubber, paper, and fibers.</i>			Clothing group.....	420	45
30. Rubber and rubber products..	34	4	Rubber, paper, and fibers group..	104	19
31. Paper.....	25	5	Metals group.....	117	1
32. Fiber and fiber products.....	45	10	Fuels group.....	65	1
Total.....	104	19	Building materials group.....	177	1
<i>Metals group.</i>			Chemicals group.....	281	1
33. Iron, steel, and their products.	89		Total.....	1,496	68
34. Ferro-alloys, nonferrous and rare metals.....	28	1	Less duplications.....	22	
Total.....	117	1	Number of commodities quoted.....		
<i>Fuels group.</i>				1,474	
35. Coal and coke.....	26	1			
36. Petroleum and petroleum products.....	30				
37. Matches.....	9				
Total.....	65	1			

[1864]

Standard trade journals, newspapers making a specialty of market reports, merchants, manufacturers, produce exchanges, boards of trade, trades associations, and Government bureaus are the principal sources from which price quotations were obtained. All sources were carefully scrutinized and no data were accepted that were not believed to reflect faithfully the trend of price fluctuations. In some instances interpolation was resorted to in order to fill gaps in the quotations, and occasionally splicing two series together, with allowance for a price differential, became necessary.

Referring to the explanations of price fluctuations given in the various bulletins, it is stated that—

The explanations offered do not pretend to be exhaustive. The factors influencing prices in every industry are exceedingly complex, and no known method of analysis is subtle and powerful enough to disentangle the crossing lines of cause and effect and measure the influence of each factor. The result aimed at is merely to show what influences are thought to have exercised the controlling influence over the prices of important groups of commodities and the direction in which these influences have worked.

This part of the work is a venturesome experiment, undertaken in the belief that the immediate results will prove useful and in the hope that the beginning here made will be bettered by others. Many of the price changes that are shown by the tables, indeed, would scarcely be credited without an explanation. To give but one example, few would believe that smokeless powder cost less in 1918 than in 1913, unless the reason as well as the fact was stated. Explanation of price changes, however, usually involves an element of speculation. Hence all the bulletins possible have been submitted for criticism to men familiar with the industries discussed. But business men themselves often disagree about the causes of price movements, and it is not probable that the explanations suggested will command universal assent.

One general limitation of the commercial histories should be noted—they do not endeavor to explain the violent rise of the whole price level. Of course, the price of every commodity—not excepting commodities that fell in price between 1913 and 1918—was affected by the dwindling power of the dollar. That factor is taken for granted in every bulletin, but nowhere analyzed. It is rather the deviation of the prices of particular commodities from the general trend that is discussed. As matters have gone in the last six years, an increase of 100 per cent in price calls for less notice than a failure to rise.

An adequate discussion of the controverted question: What controls the fluctuations of the general level of prices? would require the compilation and analysis of a vast amount of data in addition to the material contained in these bulletins. Statistics of gold stocks and gold movements; bank notes, bank deposits, and bank reserves; railway and marine freights; retail prices, wages, interest rates, real-estate prices, security prices; the volume of speculation and of trade in commodities; the amount of Government loans, "capital issues" by corporations, and savings—all these matters would have to be canvassed, and at that the list is incomplete. Nor could the fundamental changes brought by the war in the organization and control of industry, marketing, transportation, and methods of finance be left out of account. The investigation would have to extend to foreign countries, because the course of American prices was profoundly affected by the earlier and more rapid rise in Europe. This history of prices during the war contains an indispensable part of the materials needed to treat this general problem, but it contains only a part. To add the rest of the materials and analyze them would delay unduly the appearance of data needed

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as a basis for action. The theoretical question of broadest interest is therefore put aside. Fortunately, private investigators may be trusted to attack this problem when the fundamental data are made available to them.

Charts are freely used to present graphically the fluctuations of prices over the period of years covered by the bulletins. All charts, except those relating to coal-tar crudes, intermediates, and dyes (contained in bulletin No. 53) are drawn to the same scale and are strictly comparable one with another. The average price of each commodity in the 12 months from July, 1913, to June, 1914, taken as 100, forms the base in charts and in tables. A few miscellaneous charts, drawn to varying scales, are used to show actual money prices, production changes, sources of supply, proportions of cost, and other technical matters requiring graphic illustrations.

Concerning the method used in constructing the index numbers designed to show price movements of the 50 classes of commodities the bulletin states that—

The index numbers show the average fluctuations of all the commodities quoted to represent an industry. To make averages which fairly reflect business conditions, it is obviously necessary to give each commodity included in an index number an influence upon the result proportioned to its industrial importance. The meaning of the figures can best be grasped by noting the process by which they are made.

First, the monthly prices of all the commodities to be included in the industry were entered in parallel columns on large sheets. Second, an estimate was made for each commodity showing the quantity produced in the United States in 1917, plus the quantity imported in that calendar year. These estimates are technically called "weights." Third, the price of each commodity each month was multiplied by its respective weight. Fourth, the products of the different commodity prices times commodity weights were cast up separately for each of the 72 months from January, 1913, to December, 1918. Finally, the resulting aggregates in dollars and cents were turned into relatives on the plan followed in converting actual commodity prices into relative prices for charting. That is, the average of the aggregates for the industry in the 12 months July, 1913, to June, 1914, was called 100, and the aggregates for each month from January, 1913, to December, 1918, was turned into a relative figure on that scale.

One deviation from the standard practice should be noted. The materials bought by any industry were weighted, not by production plus imports, but by the estimated quantity consumed in that particular branch of trade.

The year 1917 was chosen as the base year for weighting because the inquiry aims to show prices under war-time conditions. Data for 1918 might have been still more appropriate, but they could not be had for many commodities at the time these bulletins were being compiled. It was often difficult to find or make estimates of domestic production even for 1917, and many of the weights are subject to a wide margin of uncertainty. Whenever it was necessary to choose between guessing a weight or omitting a commodity, a guess was made and the commodity included.

There is an element of unreality in multiplying 1913 prices by quantities produced and imported in 1917. But it is clearly desirable to keep the weights constant for the whole period covered. If one desires to know how prices have changed, then prices must be the only variable admitted into his computations. If he changes the weights each year as well as the prices, then he can not tell what part of the results reached is due to alterations in production and imports and what part is due to price fluctuations.



As matters stand, the results are unambiguous—they show the changes in prices and nothing but that.

Made in the fashion described, the index numbers for the 50 classes of commodities are strictly comparable not only among themselves, but also with the relative prices of single commodities shown by the charts. The particular form of index adopted—the weighted aggregate of actual prices reduced to relatives at the end of the computation—is like the relative prices of single commodities even in this respect, that it can be shifted about from one base to another without a tacit alteration of the weights.<sup>1</sup> Thus, the reader who so desires can make his comparisons in terms of prices in 1918 or any other year or month covered, by taking the relative figure for his desired base as 100 and converting the other figures into new relatives on the new base.<sup>2</sup>

The foregoing explanation relates to the manner in which the index numbers for the 50 classes of commodities were obtained. To obtain the index numbers for the 7 industry groups and for all commodities combined a system of "class weights" was employed. These class weights were arrived at by dividing the estimated value of the goods represented in each class in 1917 by the class aggregate, i. e., the total found by adding the products of commodity prices times commodity weights. The quotients thus found were used to multiply the class aggregates in each month from January, 1913, to December, 1918, and the results were then added together to make totals for the 7 groups and for all commodities. The index numbers for the 7 groups and for all commodities combined were made like the index numbers for the 50 classes by treating the average totals for July, 1913, to June, 1914, as 100 and turning the totals for the 72 months covered into relatives on that scale.

A chapter of the summary bulletin presents a comparison of price movements in the United States, England, France, and Canada during the war period. A short comparison is also made with prices during the Civil War. A review of the causes of the price revolution of 1915–1918 is included, together with a comparison of the behavior of controlled and uncontrolled prices.

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## Survey of Price Levels in Waterbury, Conn.

A COMMITTEE appointed by the Chamber of Commerce of Waterbury, Conn., has just published a report of an investigation of prices in Waterbury compared with those in other cities.<sup>3</sup> Information was secured for Waterbury similar to that published for 50 cities in the MONTHLY LABOR REVIEW of the United

<sup>1</sup> For a discussion of this somewhat technical point see *The Making and Using of Index Numbers*, Bulletin No. 173 of the Bureau of Labor Statistics, pp. 36–44, 91.

<sup>2</sup> Of the 1,474 different commodities quoted in the class bulletin, 108 are not included in the index numbers, because they are not in the market at certain seasons of the year, or for other reasons. Attention is called to all such omissions in the appropriate places.

<sup>3</sup> Waterbury Chamber of Commerce. *Survey of price levels in Waterbury compared with other cities for various dates in 1919*. Report. Waterbury, September, 1919. 64 pp.

States Bureau of Labor Statistics.<sup>1</sup> Comparisons were made of the prices of food, coal, gas, and dry goods in the 50 cities and in certain groups of cities with prices of the same articles in Waterbury. In obtaining prices for Waterbury and the other Connecticut cities which do not report to the United States Bureau of Labor Statistics the committee followed the grade and standard established by this Bureau. Prices were secured from both cash and delivery stores, although those which appeared to be exclusive in patronage, quality of goods, or range of price were excluded.

In addition, the committee undertook certain further investigations:

1. A survey of seven other Connecticut cities and a comparison of their prices for certain standard articles of domestic use with the prices in Waterbury.

2. An examination of the business of various representative stores in Waterbury with a view to determining the cost price and the retail price of typical articles, and thus the general percentage of gross profit.

3. Investigation of similar character in the case of wholesale supply houses dealing with articles of food.

4. Investigation of a municipal market in Waterbury.

5. Investigation of price levels of stores in outlying localities of the city as compared with those nearer the city center.

6. Investigation into prices charged for sugar by wholesalers within the period of stringency.

7. Investigation to determine the kind of house, whether single, double, triple, or apartment, and the average rental of tenants. The number of rooms occupied and the increases in rent during occupancy are also shown in the report.

The major part of the work of the committee was on foods, a smaller part on clothing, with only incidental references to fuel, light, and rent, and none to housefurnishings, taxes, transportation, or the numerous other sundries of family expenditure. This selection of expense items, necessitated by the limited time and means at the disposal of the committee, covered the principal items of the cost of living. Previous studies of the United States Bureau of Labor Statistics, the United States Railroad Wage Commission, and others, show that about 40 per cent of the total family expenditure is made for food, from one-seventh to one-fifth for shelter, while the amount spent for clothing is about one-sixth of the total, and for fuel and light only one-twentieth part of the total.

From observations made during the survey, the committee has offered the following conclusions:

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<sup>1</sup> See pp. 166 to 181 of this issue of the REVIEW.

1. About 35 or 45 per cent of the price paid by the Waterbury consumer for foodstuffs represents the gross profits of our local wholesalers and retailers. Of this, 25 or 30 per cent is attributable to gross profits of retailers. These wholesalers and retailers use a method of distribution of foodstuffs which is convenient to the customer but is expensive. The present system of food distribution offers few opportunities for the public to get large bargains in foodstuffs.

2. There is no doubt that much of the cost of goods as distributed under the present system is due to an insistent demand on the part of the public for convenience, a convenience that they pay high for because the merchants pay high to furnish it. The telephone charge-and-deliver system, the neighborhood store, and the huckster are such conveniences.

It is also a fact that a large number of the housewives of Waterbury lack the necessary knowledge to—

- (a) Buy most economically, quality considered; or
- (b) Buy intelligently, a properly balanced diet considered; or
- (c) Prepare the food well and attractively.

The result, therefore, of demand for convenience, and lack of knowledge on the part of the housewives, is again a higher price paid for the food consumed.

3. The prices of coal in Waterbury averaged during the past year higher than in other cities no more favorably situated.

4. The price of gas is shown to be high in Waterbury.

5. Street hucksters in Waterbury are virtually unlicensed and uncontrolled. In many cases they are irresponsible people who buy inferior goods and misrepresent them to the customer.

6. Certain speculators have taken advantage of the present shortage of sugar by selling sugar to retailers in urgent need of it at prices distinctly above those charged by reliable wholesalers.

7. In order that the public of Waterbury may know from time to time how the prices it pays compare with those elsewhere, the committee recommended that Waterbury be included in the list of cities for which the United States Bureau of Labor Statistics compiles price statistics.

8. Eggs, fruits, and vegetables should be sold by weight.

9. Misrepresentative advertising should be guarded against.

In regard to rent, the committee did not undertake to make a street survey or to approach landlords. It was assumed that a representative survey might be made by obtaining, first, schedules of rent paid by factory employees of the grade of foremen; and, second, a record of rents paid in 125 selected cases coming under the observation of the rent commission of Waterbury in the last nine months. Approximately 300 schedules were obtained.

The report shows the percentage of tenants living in single, double, triple, or apartment houses, and the average rental. It also shows the percentage of tenants occupying certain numbers of rooms; the total amount of rent charged; and the rent per room. The increase in rent during occupancy is also shown.

The following is an extract of the summary of the report:

The results of these comparisons \* \* \* show that Waterbury does not stand especially high in its price level; that it compares neither very favorably nor very unfavorably with its Atlantic and New England neighbors, but is on an average level with them. As regards its own neighbors in this State, it stands neither at the top nor at the bottom, though rather better than the average between them. In some items, it appears to be in an especially favorable position; in others, it appears to be at a marked disadvantage; in general, however, it may be taken as fairly and favorable representative of this section of the country.

# WAGES AND HOURS OF LABOR.

## Wages and Hours of Labor in the Coal Mining Industry in 1919.

THIS article presents in a summary form the facts as to hours of labor and earnings of employees in the coal mining industry in 1919. The gathering of the data on which the article is based formed a part of the industrial survey referred to in the August MONTHLY LABOR REVIEW.

No attempt was made to secure data from all mines or even all mining States. In the anthracite fields the survey was confined to 22 mines operated by 10 different mining companies. All these mines were located in the State of Pennsylvania. Approximately one-tenth of the employees in the anthracite coal region are employed in these mines. Due care was taken that the mines to be included in the survey should be so selected that the results would be fairly typical of the entire anthracite field.

In the bituminous territory the survey covered 201 mines located in 18 of the most important producing States; it included a total of 40,508 employees in the industry.

The following table shows the number of bituminous mines which furnished data and the number of employees included in each State. The third column shows the total number of employees in the State as given by "Coal in 1917," published by the Bureau of Mines for the year 1917.

TABLE 1.—NUMBER OF MINES FURNISHING DATA AND NUMBER OF EMPLOYEES INCLUDED IN THE SURVEY.

State.	Number of mines.	Employees.	
		Number included.	Total, 1917.
Alabama.....	5	1,394	28,386
Colorado.....	18	2,936	14,231
Illinois.....	16	5,925	84,090
Indiana.....	11	2,574	26,528
Iowa.....	11	1,476	14,266
Kansas.....	12	1,879	10,680
Kentucky.....	19	2,867	34,926
Maryland.....	5	812	5,919
Missouri.....	11	1,437	9,668
New Mexico.....	6	1,131	4,126
Ohio.....	13	3,083	45,509
Oklahoma.....	8	857	8,495
Pennsylvania <sup>1</sup> .....	31	9,772	173,968
Tennessee.....	7	930	10,421
Utah.....	7	857	3,485
Virginia.....	4	618	11,168
West Virginia.....	13	1,739	88,422
Wyoming.....	4	421	7,358
<b>Total.....</b>	<b>201</b>	<b>40,508</b>	<b>581,646</b>

<sup>1</sup> Bituminous mines only.

The ideal method of arranging the field work of a survey of this kind would be to have all the schedules cover the same pay-roll period. It was possible to carry this out in the anthracite field. All schedules in that branch of the industry are for the pay-roll period ending January 31, 1919. In the bituminous field, however, owing to the wide extent of territory to be covered and the limited amount of time available for the work, this method was found impracticable. The pay-roll periods for bituminous mining are distributed over a period of time extending from the last half of January to the last half of May, 1919.

In ordinary years the extension of the time of the field work would make comparatively little difference, as the entire period is usually one of sustained productive activity. During 1919, however, conditions were very different. Under the stimulus of war-time requirements production had been pushed to the utmost during the latter half of 1918, and both industrial plants and domestic consumers had laid in unusually large supplies. With the signing of the armistice industrial demand for coal fell off, and the mild winter enabled domestic consumers to carry over considerable supplies into the new year. For these and other reasons the demand for coal was much below normal during the first half of 1919, and the activity of the mines was correspondingly curtailed.

Not only was the period of the survey one of abnormally low productive activity but the rate of production was not constant throughout the period. In January mines were still running full time, though with diminished intensity. Thus all the mines included in the anthracite field were running full time on the date of the survey. In the bituminous field the rate of production fell off constantly during the first quarter of the year and was on the increase during April and May. As the survey was carried on State by State, the conditions found in any State depended to a considerable extent upon the time when that State was reached. The condition of the industry in the different States at the time of the survey was as follows:

One-fourth to three-fourths time—Utah.

One-fourth to full time—Colorado, Illinois, Indiana, Iowa, Kentucky.

One-half to full time—Alabama, Kansas, Maryland, Missouri, Pennsylvania, Tennessee, Virginia, West Virginia, Wyoming.

Three-fourths to full time—New Mexico, Ohio, Oklahoma.

These variations in operating conditions must obviously affect the figures for hours worked by mine employees in different States so profoundly as to make them practically useless for purposes of comparison between the States, whether the figures are presented in the form of "hours worked in the pay-roll period," or "hours worked per week day." The same statement applies fully to earn-

ings in the form of "actual earnings for the pay-roll period," but only to a limited extent to the figures for "average hourly earnings." There was no change in wage rates during the period of the survey; therefore any change in hourly earnings caused by the partial suspension of operations must have been limited to occupations paid on a tonnage basis, and have been due either to the depressing effect of slack conditions of operation or to the stimulative effect of diminished opportunity for work.

The material on which this article is based was obtained directly from the pay rolls of the companies by agents of the Bureau, sent out for that purpose. In the case of occupations paid on the tonnage basis arrangements were made in advance with the management of the companies to keep a time record for the employees in those occupations for the selected pay-roll period. Because of the fact that the working places of the miners are widely distributed and at unequal distances from the bottom of the shaft, the time checked was the time when the miner entered and left the mine. Consequently all figures relating to the hours of those miners and miners' laborers who work on a tonnage basis represent the time spent in the mine. It is estimated that in general it takes the miners from 15 minutes to 1 hour to get from the bottom of the shaft to their working places. In new mines the time may be less than 15 minutes and in old mines occasionally somewhat more than an hour.

So far as possible the essential facts about the hours and earnings of employees in anthracite mines and of those in bituminous mines are presented in tables of the same form. In some respects, however, dissimilar conditions in the two branches of the industry have made it necessary to use tables of different forms to present essentially the same body of information. Each table is preceded by a brief statement of the method by which it was compiled and the uses to which it may be put.

Table 2 presents various items of information concerning the hours and earnings of employees in the coal-mining industry. The data for anthracite and for bituminous mines are given separately. Each part is given in two sections, one dealing with outside laborers, that is, men working outside the mine, and the other with inside laborers. The information is given for each occupation separately.

For each occupation, following the columns indicating the number of employees in the occupation and the number of mines in which they were found, is given the following information: The average hours actually worked during the pay-roll period, the average hours per week day worked by the employees in that occupation, and full-time hours for the pay-roll period; the average amount actually earned during the pay-roll period, the average earnings per hour actually worked, and the full-time earnings for the period. At the foot of each

division of the table, inside and outside, respectively, are shown the hours and earnings of the entire number of employees working, and at the bottom of the table are shown the figures for all outside and inside occupations combined. A word of explanation may be needed as to how the figures in some of the columns were obtained.

The average hours actually worked were obtained by adding the hours actually worked by all employees in the occupation and dividing the sum by the number of employees in the occupation. The figures in the column headed "Average hours worked per week day" were obtained by ascertaining for each employee in the occupation the full number of hours worked by him during the period and dividing that aggregate by the number of week days in the pay-roll period. The result represents the number of hours per day that would have been worked by the employee if the work had been distributed uniformly over the week days of the pay-roll period. By dividing the sum of the hours of all employees in an occupation by the total number of employees in that occupation the average number of hours per week day in the occupation is ascertained.

By full-time hours is meant the number of hours which are regarded by employer and employee as constituting a day's work. The average full-time hours of the pay-roll period given in column 5 were obtained by multiplying the regular daily working hours in each occupation by the number of days constituting the full half-month pay-roll period. The aggregate of such hours for all the employees in each occupation was divided by the total number of employees in the occupation. The quotient is the average full-time hours of all employees in the occupation.

The average earnings actually received were computed by dividing the aggregate earnings for all the employees in each occupation by the number of employees in that occupation. The average hourly earnings were obtained by dividing the aggregate hourly earnings of all the employees in an occupation by the number of employees in the occupation. The average full-time earnings is the product of the average earnings per hour and the number of hours in the pay-roll period. The figure represents the amount that would have been earned by an employee in any occupation, if he had worked the full-time hours of the occupation and received the average hourly earnings of his occupation for each hour that he worked.



TABLE 2.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS MADE IN ONE-HALF-MONTH PAY-ROLL PERIOD, AND AVERAGE FULL-TIME HOURS AND EARNINGS, BY OCCUPATION.

*Anthracite.*

Occupation.	Number of establishments.	Number of employ-ees.	Average hours.			Average earnings.		
			Hours actu-ally worked in half month.	Hours worked per week day. <sup>1</sup>	Full-time hours in half month.	Earn-ings actu-ally received in half month.	Earn-ings per hour.	Corre-spond-ing full-time earn-ings in half month.
<b>Inside:</b>								
Blacksmiths.....	13	30	124.7	8.9	112.0	\$73.56	\$0.592	\$66.26
Brattice men.....	17	116	111.9	8.0	112.0	62.80	.561	62.83
Cagers.....	22	234	126.9	9.1	112.8	65.78	.517	58.24
Car runners.....	17	342	109.9	7.9	112.1	55.62	.507	56.85
Company miners.....	19	656	94.1	6.7	112.0	54.79	.581	65.12
Company miners' laborers.....	19	632	102.9	7.4	112.0	54.26	.526	58.92
Consideration miners.....	10	498	101.4	7.2	112.0	64.24	.636	71.19
Contract miners.....	22	4,887	94.5	6.8	112.0	79.56	.842	94.29
Contract miners' laborers.....	21	1,855	78.7	5.6	112.0	49.99	.639	71.57
Door tenders (boys).....	20	247	106.8	7.6	112.0	33.66	.315	35.13
Drivers.....	22	479	105.3	7.7	112.0	52.66	.499	55.86
Engineers.....	17	121	130.9	9.2	117.9	70.34	.542	63.25
Laborers.....	22	1,200	107.3	7.6	113.9	55.13	.519	58.80
Machinists.....	11	67	113.1	8.1	119.8	64.29	.568	69.80
Masons.....	12	41	112.0	8.0	112.0	64.56	.577	64.59
Motormen.....	19	247	130.4	9.3	112.0	72.78	.558	62.47
Motor brakemen.....	18	190	119.3	8.5	112.0	59.84	.502	56.20
Pumpmen.....	21	104	174.2	12.4	179.6	70.42	.413	73.09
Timbermen.....	17	170	92.4	6.6	112.0	59.50	.695	77.87
Trackmen.....	22	463	114.5	8.2	112.0	65.44	.570	63.89
Total, inside occupations.....	22	12,279	98.6	7.1	112.9	65.17	.673	75.70
<b>Outside:</b>								
Ashmen.....	19	72	129.0	9.1	123.8	56.82	.444	54.47
Blacksmiths.....	22	60	127.0	9.1	112.0	71.96	.572	64.02
Cagers.....	22	119	132.4	9.5	113.3	60.65	.458	51.81
Carpenters.....	22	250	132.4	9.5	112.8	74.29	.560	63.22
Car runners.....	15	83	109.8	7.8	112.0	49.73	.454	50.81
Dumpers.....	19	88	111.1	7.9	112.0	49.83	.449	50.27
Engineers.....	22	248	140.0	10.1	120.8	73.80	.532	63.00
Firemen.....	22	314	128.6	9.0	127.3	64.62	.503	63.98
Laborers.....	22	1,211	120.0	8.5	114.9	51.94	.434	49.69
Loaders.....	21	199	122.6	8.8	112.0	54.92	.448	50.14
Machinists.....	20	112	141.9	10.1	112.0	72.81	.517	57.85
Oilers.....	21	77	129.7	9.3	112.0	56.58	.434	48.58
Repairmen.....	10	113	123.5	8.8	112.0	59.90	.485	54.31
Timber cutters.....	19	115	130.3	9.3	112.0	58.91	.452	50.67
Trackmen.....	14	28	115.7	8.3	112.0	55.26	.477	53.40
<b>Outside, breaker:</b>								
Jig runners.....	18	81	129.1	9.2	112.0	53.70	.410	45.93
Platenmen.....	21	180	118.7	8.2	112.0	51.13	.430	48.18
Slaters (boys).....	21	580	99.9	7.1	112.0	29.95	.298	33.41
Total, outside occupations.....	22	3,930	121.5	8.6	115.0	54.37	.442	50.81
Grand total, inside and outside occupations.....	22	16,209	104.1	7.4	113.4	62.54	.617	69.67

<sup>1</sup> See explanation on p. 210.

TABLE 2.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS MADE IN ONE-HALF-MONTH PAY-ROLL PERIOD, AND AVERAGE FULL-TIME HOURS AND EARNINGS, BY OCCUPATION—Concluded.

*Bituminous.*

Occupation.	Number of establishments.	Number of employees.	Average hours.			Average earnings.		
			Hours actually worked in half month.	Hours worked per week day. <sup>1</sup>	Full-time hours in half month.	Earnings actually received in half month.	Earnings per hour.	Corresponding full-time earnings in half month.
<i>Inside:</i>								
Brakemen.....	146	1,005	76.1	5.9	105.0	\$44.22	\$0.577	\$60.69
Brattice men and timbermen.....	163	932	84.9	6.6	103.6	51.78	.606	62.97
Cagers.....	90	220	82.6	6.6	100.2	51.72	.631	63.20
Drivers.....	165	2,372	73.1	5.8	102.3	44.33	.605	62.16
Laborers.....	164	2,319	74.9	5.8	103.9	43.86	.575	60.17
Loaders.....	128	13,345	65.3	5.0	104.7	50.51	.802	81.23
Miners, hand.....	143	11,379	60.0	4.7	102.5	47.11	.784	80.84
Miners, machine.....	120	1,721	73.2	5.6	104.3	67.75	.947	98.45
Motormen.....	154	894	86.5	6.7	105.3	53.51	.619	60.00
Pumpmen.....	117	344	104.1	8.1	118.0	61.01	.577	68.35
Trackmen.....	187	1,122	82.4	6.4	104.1	49.23	.593	61.84
Trappers (boys).....	103	536	71.5	5.7	101.6	24.26	.339	34.64
Total, inside occupations.....	201	36,189	67.5	5.3	103.8	49.04	.744	76.36
<i>Outside:</i>								
Blacksmiths.....	187	376	100.4	7.8	109.0	62.47	.621	67.54
Carpenters.....	110	260	96.5	7.4	110.1	56.43	.582	64.10
Engineers.....	150	380	116.0	9.1	121.3	69.67	.607	72.77
Firemen.....	122	443	112.2	8.9	124.6	60.26	.539	66.88
Laborers.....	198	2,860	83.7	6.5	106.3	42.00	.500	53.22
Total, outside occupations.....	201	4,319	91.7	7.2	110.0	48.96	.529	58.24
Grand total, inside and outside occupations.....	201	40,508	70.1	5.5	104.4	49.03	.721	74.43

<sup>1</sup> See explanation on p. 210.

Most of the information about hours and earnings contained in the table can be easily interpreted without comment. Thus the data given for blacksmiths among the inside occupations in anthracite mining show that they were found to the number of 30 distributed among 13 establishments; that they worked on an average 8.9 hours per week day; that while their full-time hours for the half month were 112 they actually worked during the half month an average of 124.7 hours. The average amount of money earned by these 30 blacksmiths was \$73.56 per person, which shows earnings at the rate of 59.2 cents per hour. Any blacksmith who earned that rate per hour and worked the full-time hours of his occupation and no more would have earned during the pay-roll period \$66.26, the amount shown as full-time earnings.

Attention may be called to the relative hours of contract miners and contract miners' laborers in the anthracite mines. As will be seen from the part of the table for inside employees, the 4,887 contract miners included in the survey worked on an average 6.8 hours per

day, while the average of 1,855 contract miners' laborers was only 5.6 hours. It would naturally be expected that the hours of the miners would be less than those of the miners' laborers. It has been the general practice in the past for a miner to work until he has brought down enough coal to keep his laborers busy for the rest of the day and then to leave the mine. Apparently the shortage of contract miners' laborers, which has prevailed for some time, has brought about a change in the practice in this respect. This shortage of laborers may be inferred from the fact that whereas formerly each miner employed one or more laborers to load the coal that he brought down, the figures in the survey show more than two and one-half times as many contract miners as contract miners' laborers. From this it is to be inferred that a large proportion of the miners remain in the mine and load their own coal; that they spend so many additional hours in loading coal that even when their hours are combined with the shorter hours of miners who depend upon laborers to load their coal, the average for the whole group of miners is very considerably increased and, in fact, exceeds the average hours worked by the contract miners' laborers. It is probable that the relatively short hours of the contract miners' laborers in comparison with the hours of the miners was in part due to the restless spirit prevailing among the laborers at the time of the survey. This restlessness caused much shifting of laborers from mine to mine and from district to district in search of working places where either better conditions could be found or more money could be made.

In bituminous mines, however, no such excess in the number of miners as compared with loaders appears. It must be borne in mind that loaders work after machine miners only, and therefore that the 13,345 loaders shown in the bituminous table are to be correlated with the 1,721 machine miners in the same table. The discrepancy between the number of mines for which these two occupations are tabulated is due to the fact that in an occasional mine record was not kept of the time of the miners but was kept for the loaders. In such cases the information that was available was used in making up the tables.

In Table 3 is shown in greater detail for certain selected occupations the same data presented in summary form in Table 2. For anthracite mining the information is given for each colliery separately for the two most important occupations, contract miners and contract miners' laborers. For bituminous mining the information is given for each State separately for six inside occupations, in which nearly 90 per cent of all inside employees are found, and for one outside occupation comprising nearly two-thirds of all outside employees.

TABLE 3.—AVERAGE HOURS WORKED, AVERAGE EARNINGS MADE, AND AVERAGE FULL-TIME HOURS AND EARNINGS FOR SELECTED OCCUPATIONS FOR ONE-HALF-MONTH PAY-ROLL PERIOD.

*Anthracite.*

Occupation, establishment, and colliery.	Number of employees.	Average hours.			Average earnings.		
		Hours actually worked in half month.	Hours worked per week day.	Full-time hours in half month.	Earnings actually received in half month.	Earnings per hour.	Corresponding full-time earnings in half month.
<i>Contract miners.</i>							
Establishment A—							
Colliery 1.....	227	89.8	6.4	112	\$84.57	\$0.956	\$107.07
Colliery 2.....	261	98.9	7.1	112	78.96	.809	90.61
Colliery 3.....	44	111.0	7.9	112	92.81	.859	96.20
Colliery 4.....	502	98.9	7.1	112	73.40	.737	82.54
Establishment B—Colliery 1.....	145	101.5	7.3	112	83.81	.840	94.08
Establishment C—Colliery 1.....	335	96.8	6.9	112	78.70	.812	90.94
Establishment D—Colliery 1.....	131	96.8	6.9	112	77.05	.808	90.61
Establishment E—Colliery 1.....	155	94.2	6.7	112	88.36	.943	105.62
Establishment F—							
Colliery 1.....	351	98.5	7.0	112	72.78	.716	80.19
Colliery 2.....	111	73.8	5.3	112	66.88	.972	108.76
Colliery 3.....	189	87.2	6.2	112	70.79	.831	93.07
Colliery 4.....	157	79.2	5.7	112	79.20	.983	110.10
Establishment G—							
Colliery 1.....	294	99.8	7.1	112	76.80	.774	86.59
Colliery 2.....	214	90.7	6.5	112	74.39	.822	92.06
Establishment H—							
Colliery 1.....	211	94.8	6.8	112	75.97	.788	88.16
Colliery 2.....	216	86.0	6.1	112	66.89	.964	107.97
Establishment I—Colliery 1.....	235	105.4	7.5	112	74.84	.718	80.42
Establishment J—							
Colliery 1.....	376	102.0	7.3	112	104.04	1.041	116.59
Colliery 2.....	133	68.6	6.9	112	101.44	1.077	120.52
Establishment K—							
Colliery 1.....	225	84.3	6.0	112	66.62	.766	85.79
Colliery 2.....	174	84.9	6.1	112	76.18	.891	99.79
Colliery 3.....	201	108.7	7.9	112	80.24	.725	81.30
<i>Contract miners' laborers.</i>							
Establishment A—							
Colliery 1.....	241	70.7	5.1	112	50.70	.715	80.11
Colliery 2.....	184	82.3	5.9	112	52.88	.640	71.68
Colliery 3.....	176	98.4	7.0	112	55.36	.571	63.95
Colliery 4.....	216	72.2	5.2	112	41.44	.564	63.17
Establishment B—Colliery 1.....	77	84.0	6.0	112	56.01	.680	76.16
Establishment C—Colliery 1.....	82	85.0	6.1	112	58.72	.691	77.39
Establishment D—Colliery 1.....	115	85.2	6.1	112	53.08	.626	70.11
Establishment E—Colliery 1.....	95	89.4	6.4	112	68.62	.760	85.12
Establishment F—							
Colliery 1.....	75	82.9	5.9	112	49.73	.595	66.64
Colliery 3.....	18	61.8	4.4	112	33.22	.547	61.26
Colliery 4.....	65	63.2	4.5	112	46.36	.731	81.87
Establishment G—							
Colliery 1.....	119	68.6	4.5	112	39.86	.627	70.22
Colliery 2.....	128	72.1	5.2	112	52.42	.727	81.42
Establishment H—							
Colliery 1.....	24	71.1	5.1	112	38.60	.541	60.59
Colliery 4.....	23	84.6	6.0	112	46.82	.555	62.16
Establishment I—Colliery 1.....	80	82.6	5.9	112	46.82	.617	69.10
Establishment J—							
Colliery 1.....	15	76.7	5.5	112	41.30	.536	60.03
Colliery 2.....	11	79.1	5.7	112	42.31	.533	59.70
Establishment K—							
Colliery 1.....	51	73.2	5.2	112	39.22	.556	62.27
Colliery 2.....	38	72.8	5.2	112	41.73	.573	64.18
Colliery 3.....	22	101.0	7.2	112	50.99	.505	56.56

TABLE 3.—AVERAGE HOURS WORKED, AVERAGE EARNINGS MADE, AND AVERAGE FULL-TIME HOURS AND EARNINGS FOR SELECTED OCCUPATIONS FOR ONE-HALF-MONTH PAY-ROLL PERIOD—Continued.

*Bituminous.*

State and occupation.	Number of establishments.	Number of employees.	Average hours.			Average earnings.		
			Hours actually worked in half month.	Hours worked per week day.	Full-time hours in half month.	Earnings actually received in half month.	Earnings per hour.	Corresponding full-time earnings in half month.
<b>Alabama:</b>								
Drivers.....	5	180	67.7	5.9	93.9	\$29.80	\$0.441	\$41.44
Laborers, inside.....	5	107	59.3	5.4	88.7	24.82	.402	35.80
Laborers, outside.....	5	140	75.2	6.4	94.9	28.18	.373	35.40
Loaders.....	2	307	62.3	4.8	104.0	45.88	.724	75.33
Miners, hand.....	4	455	59.5	5.5	87.9	40.41	.682	59.53
Miners, machine.....	1	12	71.6	5.5	104.0	80.89	1.157	120.35
Trackmen.....	5	18	72.7	6.0	98.7	34.20	.469	46.24
<b>Colorado:</b>								
Drivers.....	17	212	71.2	5.5	104.0	47.11	.662	68.89
Laborers, inside.....	11	125	82.8	6.4	104.0	54.20	.656	68.21
Laborers, outside.....	18	257	86.4	6.7	115.3	43.58	.503	58.16
Loaders.....	8	389	65.4	5.0	104.0	50.65	.789	82.07
Miners, hand.....	16	1,268	61.4	4.7	104.0	47.42	.777	80.85
Miners, machine.....	11	66	69.5	5.4	104.0	73.73	1.028	106.89
Trackmen.....	17	57	81.6	6.3	104.0	54.47	.668	69.44
<b>Illinois:</b>								
Drivers.....	16	380	64.7	5.0	104.0	40.43	.625	65.00
Laborers, inside.....	16	404	60.2	4.6	104.0	36.03	.598	62.29
Laborers, outside.....	16	251	82.6	6.4	104.0	45.54	.550	57.22
Loaders.....	9	2,049	57.4	4.4	104.0	51.03	.889	92.52
Miners, hand.....	8	1,669	62.2	4.8	104.0	47.72	.761	79.20
Miners, machine.....	10	280	56.6	4.4	104.0	61.02	1.089	113.26
Trackmen.....	15	190	73.9	5.7	104.0	46.20	.625	64.98
<b>Indiana:</b>								
Drivers.....	9	142	55.9	5.6	80.0	35.17	.628	50.25
Laborers, inside.....	9	150	71.9	7.2	80.0	45.10	.625	50.10
Laborers, outside.....	10	122	74.3	7.4	80.0	40.73	.549	43.93
Loaders.....	7	1,098	45.7	4.6	80.0	40.02	.837	67.00
Miners, hand.....	4	525	56.6	5.7	80.0	36.47	.633	50.68
Miners, machine.....	7	136	47.2	4.7	80.0	55.79	1.156	92.47
Trackmen.....	9	72	70.8	7.1	80.0	44.28	.625	50.00
<b>Iowa:</b>								
Drivers.....	11	99	79.3	6.1	104.7	49.48	.623	65.22
Laborers, inside.....	10	64	82.5	6.3	104.0	49.70	.603	62.73
Laborers, outside.....	11	72	81.4	6.3	104.0	43.25	.531	55.20
Loaders.....	2	67	60.2	4.6	104.0	34.17	.564	58.71
Miners, hand.....	11	962	61.5	4.7	104.0	43.37	.704	73.23
Miners, machine.....	2	12	71.3	5.5	104.0	52.55	.755	78.49
Trackmen.....	11	30	89.6	6.9	104.0	56.09	.627	65.16
<b>Kansas:</b>								
Drivers.....	12	119	75.4	5.8	104.0	47.28	.627	65.20
Laborers, inside.....	8	30	88.1	6.7	105.6	55.06	.625	60.01
Laborers, outside.....	12	48	89.4	6.9	104.0	49.08	.550	57.20
Loaders.....	12	1,482	53.7	4.1	104.0	42.75	.794	82.62
Miners, hand.....	12	31	72.1	5.5	104.0	45.69	.633	65.83
Miners, machine.....	12	31	72.1	5.5	104.0	45.69	.633	65.83
Trackmen.....	12	31	72.1	5.5	104.0	45.69	.633	65.83
<b>Kentucky:</b>								
Drivers.....	14	135	79.4	6.1	103.6	39.13	.491	50.96
Laborers, inside.....	13	182	71.2	5.5	103.3	32.03	.450	46.55
Laborers, outside.....	19	245	80.8	6.3	103.0	35.23	.432	44.58
Loaders.....	17	1,391	58.9	4.5	104.0	40.42	.684	71.18
Miners, hand.....	10	192	53.8	4.6	93.5	34.49	.625	59.13
Miners, machine.....	14	130	76.2	5.9	104.0	58.62	.736	76.54
Trackmen.....	19	148	77.3	6.0	103.8	40.07	.516	53.63
<b>Maryland:</b>								
Drivers.....	4	32	70.9	5.4	104.0	42.15	.595	61.83
Laborers, inside.....	5	51	70.6	5.5	104.0	42.74	.595	61.85
Laborers, outside.....	5	57	87.3	6.7	104.0	45.98	.524	54.51
Loaders.....	5	491	53.5	4.1	104.0	50.57	.961	99.98
Miners, hand.....	5	491	53.5	4.1	104.0	50.57	.961	99.98
Miners, machine.....	5	14	83.0	6.4	104.0	51.73	.623	64.81
Trackmen.....	5	14	83.0	6.4	104.0	51.73	.623	64.81
<b>Missouri:</b>								
Drivers.....	8	90	63.8	5.0	103.2	39.98	.625	64.50
Laborers, inside.....	9	120	54.4	4.2	102.2	34.19	.566	64.28
Laborers, outside.....	10	62	66.0	5.1	103.7	36.07	.545	56.56
Loaders.....	6	283	56.9	4.0	104.0	42.86	.773	80.34
Miners, hand.....	8	629	57.3	4.5	102.9	36.42	.624	64.20
Miners, machine.....	6	112	65.0	5.0	104.0	43.27	.667	69.38
Trackmen.....	9	20	76.8	5.9	104.3	48.27	.628	65.46

[1879]

TABLE 3.—AVERAGE HOURS WORKED, AVERAGE EARNINGS MADE, AND AVERAGE FULL-TIME HOURS AND EARNINGS FOR SELECTED OCCUPATIONS FOR ONE-HALF-MONTH PAY-ROLL PERIOD—Concluded.

## Bituminous—Concluded.

State and occupation.	Number of establishments.	Number of employ-ees.	Average hours.			Average earnings.		
			Hours actu-ally worked in half month.	Hours worked per week day.	Full-time hours in half month.	Earn-ings actu-ally re-ceived in half month.	Earn-ings per hour.	Corre-spond-ing full-time earnings in half month.
<b>New Mexico:</b>								
Drivers.....	6	118	69.0	5.3	104.0	\$45.71	\$0.663	\$68.93
Laborers, inside.....	5	41	83.4	6.4	104.0	55.41	.665	69.20
Laborers, outside.....	6	114	89.3	6.9	117.2	41.52	.463	54.26
Loaders.....	5	132	77.4	5.9	104.0	50.80	.649	67.50
Miners, hand.....	6	528	71.7	5.5	104.0	52.12	.719	74.74
Miners, machine.....	5	35	74.7	5.7	104.0	76.45	1.002	104.22
Trackmen.....	6	27	86.2	6.6	104.0	57.08	.603	68.98
<b>Ohio:</b>								
Drivers.....	12	208	91.4	7.3	104.0	56.74	.625	65.07
Laborers, inside.....	11	97	82.6	6.4	104.0	49.24	.623	64.81
Laborers, outside.....	13	146	93.5	7.4	104.0	52.47	.562	58.48
Loaders.....	13	1,970	76.8	5.9	104.0	58.40	.756	78.65
Miners, hand.....	2	13	82.9	6.4	104.0	63.56	.777	80.79
Miners, machine.....	13	245	89.5	6.9	104.0	86.96	1.003	104.32
Trackmen.....	13	67	109.9	8.5	104.0	68.67	.625	64.97
<b>Oklahoma:</b>								
Drivers.....	8	103	84.1	6.5	104.0	52.54	.625	65.00
Laborers, inside.....	3	26	105.2	8.1	104.0	65.43	.621	64.63
Laborers, outside.....	8	47	97.1	7.5	104.0	53.08	.546	56.79
Loaders.....	2	135	68.0	5.2	104.0	48.53	.702	72.97
Miners, hand.....	7	354	64.9	5.0	104.0	53.82	.822	85.52
Miners, machine.....	2	12	75.6	5.8	104.0	50.66	.666	69.28
Trackmen.....	4	11	78.4	6.0	104.0	48.98	.625	65.00
<b>Pennsylvania:</b>								
Drivers.....	18	354	82.2	6.0	110.3	52.19	.634	69.89
Laborers, inside.....	30	635	89.5	6.5	112.3	53.07	.599	67.13
Laborers, outside.....	31	804	89.6	6.6	113.1	46.11	.516	58.19
Loaders.....	28	4,117	73.3	5.4	112.2	55.21	.835	84.67
Miners, hand.....	28	1,859	64.0	4.7	109.2	57.49	.902	98.60
Miners, machine.....	26	546	81.0	6.0	110.8	72.02	.913	101.64
Trackmen.....	29	210	96.3	7.1	111.6	60.65	.628	70.08
<b>Tennessee:</b>								
Drivers.....	6	52	64.6	6.1	85.1	27.07	.415	35.37
Laborers, inside.....	5	66	63.5	5.3	97.5	26.82	.423	41.36
Laborers, outside.....	6	117	62.1	5.7	87.4	22.58	.359	31.68
Loaders.....	4	119	46.0	4.2	87.1	33.36	.704	62.67
Miners, hand.....	7	367	49.6	4.6	88.2	34.08	.690	62.96
Miners, machine.....	3	15	56.0	5.2	84.8	28.25	.490	41.87
Trackmen.....	6	28	69.8	5.9	93.7	33.31	.475	44.53
<b>Utah:</b>								
Drivers.....	7	62	64.2	4.9	104.0	44.10	.687	71.49
Laborers, inside.....	7	44	69.2	5.3	104.0	45.93	.665	69.21
Laborers, outside.....	7	129	75.5	6.3	104.0	44.38	.586	60.96
Loaders.....	5	235	61.4	4.7	104.0	57.95	.953	99.14
Miners, hand.....	5	206	61.9	4.8	104.0	57.66	.940	97.75
Miners, machine.....	7	22	73.4	5.6	104.0	92.07	1.282	133.34
Trackmen.....	7	26	76.8	5.9	104.0	53.16	.693	71.99
<b>Virginia:</b>								
Drivers.....	2	8	53.1	4.1	104.0	20.32	.394	40.95
Laborers, inside.....	3	30	45.2	3.5	104.0	19.48	.442	45.97
Laborers, outside.....	7	42	74.8	5.8	104.0	29.68	.396	41.15
Loaders.....	4	230	62.1	4.8	104.5	38.93	.634	66.16
Miners, hand.....	1	42	48.8	3.8	104.0	54.04	1.086	112.95
Miners, machine.....	4	27	72.9	5.6	104.0	52.66	.707	73.52
Trackmen.....	4	62	61.9	4.8	104.0	29.08	.470	48.83
<b>West Virginia:</b>								
Drivers.....	6	46	69.1	5.3	105.1	38.62	.561	58.87
Laborers, inside.....	10	116	78.6	6.0	106.9	49.26	.521	55.49
Laborers, outside.....	13	162	83.5	6.4	112.4	36.42	.445	49.59
Loaders.....	13	749	61.1	4.7	108.3	47.53	.812	88.05
Miners, hand.....	5	168	58.0	4.5	111.4	52.58	.910	101.41
Miners, machine.....	8	62	89.0	6.8	109.5	71.90	.853	90.67
Trackmen.....	12	98	88.1	6.8	110.6	46.72	.529	59.07
<b>Wyoming:</b>								
Drivers.....	4	32	69.7	5.4	104.0	47.21	.678	70.50
Laborers, inside.....	4	33	72.7	5.6	104.0	48.41	.667	69.32
Laborers, outside.....	4	45	81.8	6.3	104.0	47.60	.600	62.43
Loaders.....	3	74	56.7	4.4	104.0	45.85	.783	81.42
Miners, hand.....	4	169	54.6	4.2	104.0	57.09	1.056	109.88
Miners, machine.....	1	9	66.8	5.1	104.0	83.58	1.365	141.95
Trackmen.....	4	13	81.6	6.3	104.0	55.29	.678	70.48

[1880]

In anthracite mines, as a general rule, high earnings are found in the same mines in which short hours are worked. In order to determine to what extent that relation holds, the mines have been brought together into three groups based upon the average number of hours per day worked by the miners in the different mines. Thus there are 8 mines with hours of miners exceeding 7 per day, 7 mines with hours from  $6\frac{1}{2}$  to 7, inclusive, and 7 mines with hours below  $6\frac{1}{2}$ . In the following table is shown for each of these groups the number of employees, the average hours worked per day, and the average earnings per hour:

TABLE 4.—HOURS AND EARNINGS OF CONTRACT MINERS.

Item.	Number of mines.	Number of employees.	Average hours worked per day.	Average earnings per hour.
Group 1.....	8	2,058	7.3	\$0.813
Group 2.....	7	1,530	6.7	.824
Group 3.....	7	1,299	6.0	.902

From this table it appears that in the 8 mines in which miners worked on the average more than 7 hours per day average earnings were 81.3 cents per hour; that in the 7 mines in which the average hours were 6.7 per day the average hourly earnings were 82.4 cents; that in the 7 mines in which hours averaged 6 per day, earnings averaged 90.2 cents per hour. As these figures are based on the records of 4,887 miners, they suggest the inference that the relation between high earnings and low hours is not altogether accidental.

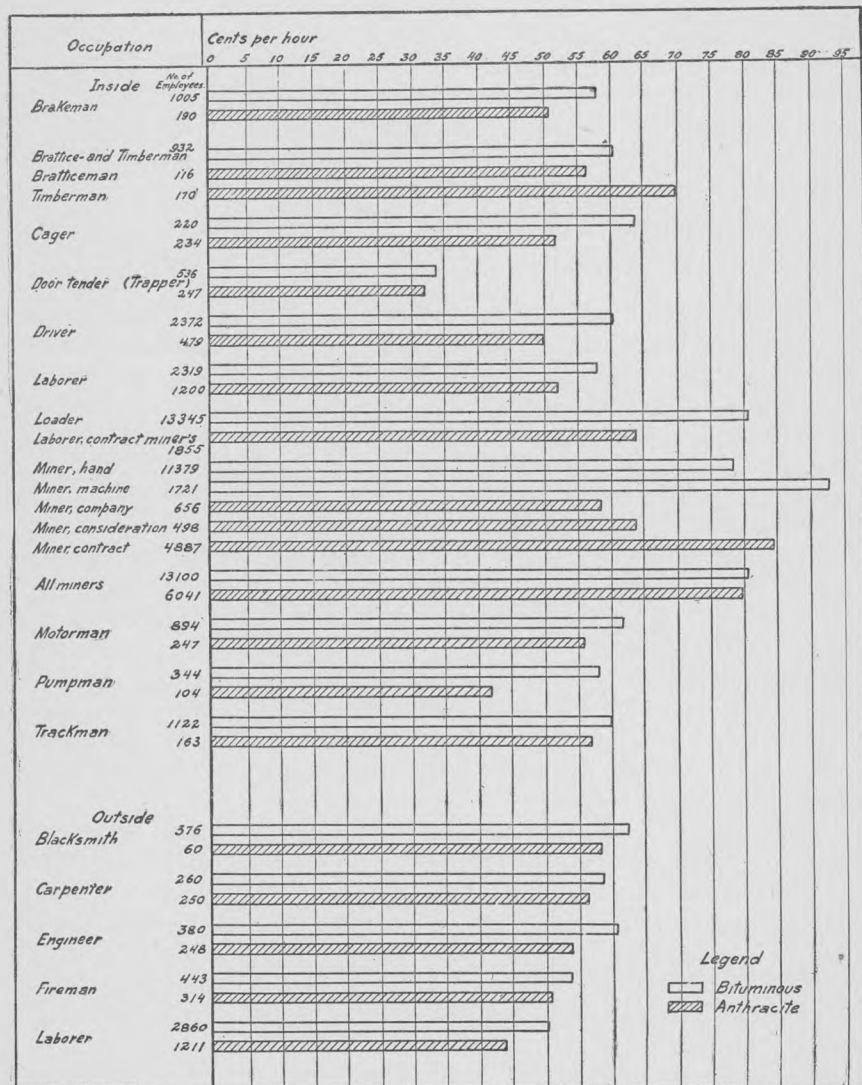
In the bituminous mines it will be noticed that as a rule the three actual mining occupations, hand miners, machine miners, and loaders show higher average earnings per hour than any of the other occupations. With very few exceptions these three occupations are paid on a tonnage basis, while all other occupations are paid at a time rate. Hence the hourly earnings of miners and loaders are limited only by their ability to get out coal, while the hourly earnings of other employees can not exceed the amount per hour for which they have contracted to work.

Occasionally, however, a mine is found in which one or more of these occupations are paid at a time rate. Thus in Virginia fully 50 per cent of the machine miners work at an hourly rate, and in Oklahoma practically all of them are paid on that basis. That is the probable explanation of the fact that in the latter State loaders made higher average earnings per hour than machine miners, the miners cutting sufficient coal to enable the loaders to obtain the higher earnings.

For some purposes, it may be interesting to compare the earnings of employees in the same or similar occupations in the two divisions of the coal mining industry. The opportunity for such a comparison

[1881]

is presented in the accompanying diagram. Only occupations which are fairly comparable are included in it. It will be noticed that bratticemen and timbermen in bituminous mines are grouped together whereas for anthracite mines each is given separately. This difference in method of treatment reflects the fact that in bituminous mines the duties of the two occupations are so nearly alike that the same employee often performs both kinds of work, whereas in anthracite mines the duties of the two positions are quite distinct.



COMPARATIVE HOURLY EARNINGS FOR SIMILAR OCCUPATIONS IN ANTHRACITE AND BITUMINOUS COAL MINING.

[1882]



In addition to the lines representing separately the earnings of each of the two varieties of miners in bituminous mining and the three varieties in anthracite mining, lines are also given for all bituminous miners combined and for all anthracite miners combined. The effect of making this combination is to bring the two averages more closely together than the several separate averages would seem to justify. This result is due to the fact that in bituminous mining by far the larger group, hand miners, is the group with comparatively low hourly earnings, while the largest group of anthracite miners, the contract miners, has hourly earnings much in excess of the earnings of company miners or consideration miners. The comparison for all miners combined shows earnings remarkably close together in the two branches of the industry.

An examination of any one of the tables already presented will show discrepancies between the full-time hours of many occupations and the hours actually worked, and corresponding differences between actual earnings for the pay-roll period and full-time earnings, or the amount that would have been earned if the employees had worked the full-time hours of the occupation. The facts as to irregularity of work are presented in the following table. Employees in each occupation are grouped according to the percentage of full time actually worked by them. In the first part of the table the number of employees in each group is shown, and in the second part the percentage which that number constitutes of the total number of employees in the occupation.

TABLE 5.—NUMBER AND PER CENT OF EMPLOYEES WORKING EACH SPECIFIED PER CENT OF FULL TIME, BY OCCUPATION.

*Anthracite.*

Occupation.	Number of establishments.	Number of employees.	Number of employees working each classified per cent of full time.						Per cent of employees working each classified per cent of full time.						
			Under 25.	25 and under 50.	50 and under 75.	75 and under 100.	100.	Over 100.	Under 25.	25 and under 50.	50 and under 75.	75 and under 100.	100.	Over 100.	
Inside:															
Blacksmiths.....	13	30	1	1	.....	2	1	25	3	3	.....	7	3	83	
Brattice men.....	17	116	1	4	7	9	27	24	50	1	3	9	23	21	43
Cagers.....	22	234	5	7	9	33	19	161	2	3	4	14	8	69	
Car runners.....	17	342	11	15	23	69	51	173	3	4	7	20	15	50	
Company miners.....	19	656	70	71	71	134	75	235	11	11	11	20	11	36	
Company miners' laborers.....	19	632	31	34	53	180	108	226	5	5	8	28	17	36	
Consideration miners.....	10	498	23	22	61	124	107	161	5	4	12	25	21	32	
Contract miners.....	22	4,887	141	237	697	2,731	406	675	3	5	14	56	8	14	
Contract miners' laborers.....	21	1,855	255	209	353	740	149	149	14	11	19	40	8	8	
Door tenders (boys).....	20	247	4	9	15	67	70	82	2	4	6	27	28	33	
Drivers.....	22	479	20	18	25	123	105	188	4	4	5	26	22	39	
Engineers.....	17	121	2	.....	1	13	17	88	2	.....	1	11	14	73	
Laborers.....	22	1,200	51	73	86	266	247	477	4	6	7	22	21	40	
Machinists.....	11	67	3	5	7	18	.....	34	4	7	10	27	.....	51	
Masons.....	12	41	.....	1	1	8	.....	15	.....	2	2	20	39	37	
Motormen.....	19	247	3	6	9	20	5	204	1	2	4	8	2	83	

[1883]

TABLE 5.—NUMBER AND PER CENT OF EMPLOYEES WORKING EACH SPECIFIED PER CENT OF FULL TIME, BY OCCUPATION—Concluded.

## Anthracite—Concluded.

Occupation.	Number of establishments.	Number of employees.	Number of employees working each classified per cent of full time.						Per cent of employees working each classified per cent of full time.					
			Under 25.	25 and under 50.	50 and under 75.	75 and under 100.	100.	Over 100.	Under 25.	25 and under 50.	50 and under 75.	75 and under 100.	100.	Over 100.
<b>Inside—Concluded.</b>														
Motor brakemen.....	18	190	5	4	9	38	12	122	3	2	5	20	6	64
Pumpmen.....	21	104	1	5	4	9	51	34	1	5	4	9	49	33
Timbermen.....	17	170	19	17	17	39	18	60	11	10	10	23	11	35
Trackmen.....	22	163	2	3	11	35	22	90	1	2	7	21	13	55
Total, inside occupations.....	22	12,279	648	741	1,462	4,676	1,503	3,249	5	6	12	38	12	26
Total, mining occupations.....	22	8,528	520	573	1,235	3,909	845	1,446	6	7	14	46	10	17
Total, all other inside occupations.....	22	3,751	128	168	227	767	658	1,803	4	4	6	20	18	48
<b>Outside:</b>														
Ashmen.....	19	72	2	1	2	16	11	40	3	1	3	22	15	56
Blacksmiths.....	22	60	3	3	4	3	7	40	5	5	7	5	12	67
Cagers.....	22	119			3	12	20	84			3	10	17	71
Carpenters.....	22	250	6	15	17	16	6	190	2	6	7	6	2	76
Car runners.....	15	83	2	4	8	23	9	37	2	5	10	28	11	45
Dumpers.....	19	88	5	5	4	21	4	49	6	6	5	24	5	56
Engineers.....	22	248	2	4	5	19	35	183	1	2	2	8	14	74
Firemen.....	22	314	10	5	16	73	75	135	3	2	5	23	24	43
Laborers.....	22	1,211	40	48	79	235	142	667	3	4	7	19	12	55
Loaders.....	21	199	4	5	8	38	19	125	2	3	4	19	10	63
Machinists.....	20	112	3	6	4	10	3	86	3	5	4	9	3	77
Oilers.....	21	77	1	1	1	17	8	49	1	1	1	22	10	64
Repairmen.....	10	113	2	4	6	13	17	71	2	4	5	12	15	63
Timber cutters.....	19	115	2	1	2	10	13	87	2	1	2	9	11	76
Trackmen.....	14	28	1	1	2	3	6	15	4	4	7	11	21	54
Jig runners.....	18	81	3	2	1	11	11	53	4	2	1	14	14	65
Platemen.....	21	180	8	4	10	41	22	95	4	2	6	23	12	53
Slaters (boys).....	21	580	14	21	50	269	92	134	2	4	9	46	16	23
Total, outside occupations.....	22	3,930	108	130	222	830	500	2,140	3	3	6	21	13	54

## Bituminous.

<b>Inside:</b>														
Brakemen.....	146	1,005	72	101	314	384	28	106	7	10	31	38	3	11
Brattice men and timbermen.....	163	932	47	62	192	372	77	182	5	7	21	40	8	20
Cagers.....	90	220	8	8	67	80	8	49	4	4	30	36	4	22
Drivers.....	165	2,372	177	223	839	802	89	242	7	9	35	34	4	10
Laborers.....	164	2,319	257	258	612	698	135	359	11	11	26	30	6	15
Loaders.....	128	13,345	816	2,273	6,578	3,266	295	117	6	17	49	24	2	1
Miners, hand.....	143	11,379	639	2,444	6,325	1,786	107	78	6	21	56	16	1	1
Miners, machine.....	120	1,721	74	192	727	551	82	95	4	11	42	32	5	6
Motormen.....	154	894	39	63	213	349	40	190	4	7	24	39	4	21
Pumpmen.....	117	344	23	22	44	101	43	111	7	6	13	29	13	32
Trackmen.....	187	1,122	64	102	274	388	86	208	6	9	24	35	8	19
Trappers (boys).....	103	536	32	43	228	159	48	26	6	8	43	30	9	5
Total, inside occupations.....	201	36,189	2,248	5,791	16,413	8,936	1,038	1,763	6	16	45	25	3	5
Total, mining occupations.....	201	26,445	1,529	4,909	13,630	5,603	484	290	6	19	52	21	2	1
Total, all other inside occupations.....	201	9,744	719	882	2,783	3,333	554	1,473	7	9	29	34	6	15
<b>Outside:</b>														
Blacksmiths.....	187	376	13	13	45	127	23	155	3	3	12	34	6	41
Carpenters.....	110	260	11	7	48	88	27	79	4	3	18	34	10	30
Engineers.....	150	380	5	11	41	92	115	116	1	3	11	24	30	31
Firemen.....	122	443	14	22	45	132	110	120	3	5	10	30	25	27
Laborers.....	198	2,860	157	233	755	1,040	141	534	5	8	26	36	5	19
Total, outside occupations.....	201	4,319	200	286	934	1,479	416	1,004	5	7	22	34	10	23

[1884]

An examination of the table brings out the fact that a very small percentage of the employees in either outside or inside groups worked exactly full time. Of all inside employees in anthracite mines, 12 per cent are recorded as working full time and no more, while of all outside employees the corresponding number is 13 per cent. If the figures for the miners and the miners' laborers, that is, the employees who are engaged directly in mining and getting out the coal, are segregated and compared with the figures for the remaining employees of the mine, an interesting situation is revealed. It is found that of the 8,528 miners and miners' laborers only 27 per cent worked full time or over, whereas of all the employees in the remaining inside occupations 66 per cent worked full time or over and in outside occupations 67 per cent are found in the same class. The largest group of miners and laborers, constituting 46 per cent of the entire number, is found in the class which worked between 75 per cent and 100 per cent full time, while only 20 per cent of laborers in other inside occupations and 21 per cent of laborers in outside occupations are in that group. Further computation would show that the 8,528 miners and miners' laborers worked on the average 82.5 per cent of full time while the 7,681 employees in other occupations, outside and inside, worked 102.2 per cent of full time.

Whatever may have been the cause of the failure of employees in the anthracite mines to work full-time hours, that failure can not be attributed to short hours of operation of the mines, since no mines working less than full time were included in the survey. Among the bituminous mines, however, many short-time pay rolls were included, that is, pay rolls for periods in which mines were in operation only a part of the full-time hours of the period. For these mines, therefore, Table 5 furnishes no basis for apportioning the responsibility for the failure to work full time as between employees, the management of the mine, and causes independent of either. The figures may be taken, however, as an indication of the social waste involved in the inefficient use of economic resources due to irregularity of operation.

The amount of lost time found in the bituminous division of the coal-mining industry at the time of the survey is very strikingly brought out by the figures in Table 5. Thus of all employees working inside the mines only 8 per cent worked full time or over, while 67 per cent, two-thirds of the entire number, worked less than 75 per cent of full time. Outside employees show better conditions, 33 per cent working full time or over, and only 34 per cent less than 75 per cent of full time.

A comparison of the hours of employees directly engaged in getting out coal, namely, hand miners, machine miners, and loaders, with the hours of employees in other occupations, indicates that condi-

tions in the bituminous mines are in this respect much like those in anthracite mines. For only 3 per cent of the employees in the mining occupations worked full time or over, as against 21 per cent for other inside occupations and 33 per cent for outside occupations. If it were necessary for the hours of other occupations to increase *pari passu* with those of the mining occupations, full-time hours for the miners and loaders would call for a very large amount of overtime work on the part of those in other occupations.

As was pointed out above, numerous part-time pay rolls were included in the survey of bituminous mining, and it is consequently impossible to determine from the table just given where the responsibility lies for the broken time. To assist in apportioning the immediate responsibility as between the failure of employers to operate their mines and the failure of employees to work when the mines are in operation the following table (Table 6) has been prepared. It deals only with hand miners, machine miners, and loaders. These three occupations were selected because the hours of employees in these occupations are usually limited by the hours of operation of the mines, whereas employees in other occupations may, and frequently do, perform work on days when the mines are not in operation.

Table 6 sets forth in parallel columns average full-time hours of the pay-roll period, average hours of operation of the mines during the period, and average hours actually worked by the employees; average full-time earnings (what would have been earned if all employees had worked full time), average possible earnings during the hours of operation of the mines (what would have been earned if all employees had worked all the hours the mines were in operation), and average actual earnings. The last three columns show for each of the two groups of facts, that relating to hours and that relating to earnings, the ratio of column (5) to column (4), of column (6) to column (5), and of column (6) to column (4). These ratios are practically the same for both series.

A few details of the table may need explanation. Thus, a comparison of the three occupations in the same State will show that in some cases the hours of operation are not the same for all three occupations. This is due to the fact that the mines are not identical for all occupations. For example, loaders were reported at only 2 mines in Iowa, their average hours of operation being 78.9 for the half month, while 11 mines in the same State reported hand miners with an average of 71.5 hours of actual operation during the half month. Thus, including the hours of operation of the 9 mines reporting hand miners and no loaders reduces the average of the hand miners below that of the loaders.

TABLE 6.—AVERAGE FULL-TIME HOURS, HOURS OF OPERATION OF MINES, AND HOURS WORKED BY EMPLOYEES; AND AVERAGE FULL-TIME EARNINGS, POSSIBLE EARNINGS DURING TIME OF OPERATION, AND ACTUAL EARNINGS, IN BITUMINOUS MINES IN ONE-HALF-MONTH PAY-ROLL PERIOD, BY STATES.

*Miners, hand.<sup>1</sup>*

State.	Number of establishments.	Number of employees.	Average hours.			Average earnings.			Per cent.		
			Full-time hours in half month.	Hours of operation in half month.	Hours employees actually worked in half month.	Full-time earnings in half month.	Possible earnings during time of operation.	Actual earnings during half month.	Column 5 is of column 4.	Column 6 is of column 5.	Column 6 is of column 4.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Alabama.....	4	455	87.9	88.0	59.5	\$59.53	\$59.59	\$40.41	100.1	67.6	67.7
Colorado.....	16	1,288	104.0	73.6	61.4	80.85	57.24	47.42	70.8	83.4	59.0
Illinois.....	8	1,669	104.0	76.2	62.2	79.20	58.05	47.72	73.3	81.6	59.8
Indiana.....	4	525	80.0	70.1	56.6	50.68	44.40	36.47	87.6	80.7	70.8
Iowa.....	11	962	104.0	71.5	61.5	73.23	50.38	43.37	68.8	86.0	59.1
Kansas.....	12	1,482	104.0	68.9	53.7	82.62	54.78	42.75	66.3	77.9	51.6
Kentucky.....	10	192	93.5	69.5	53.8	59.13	43.93	34.49	74.3	77.4	57.5
Maryland.....	5	491	104.0	79.6	53.5	59.98	76.48	50.57	76.5	67.2	51.4
Missouri.....	8	629	102.9	70.1	57.3	64.20	43.72	36.42	68.1	81.7	55.7
New Mexico.....	6	528	104.0	76.2	71.7	74.74	54.78	52.12	73.3	94.1	68.9
Ohio.....	2	13	104.0	104.0	82.9	80.79	80.79	63.56	100.0	79.7	79.7
Oklahoma.....	7	354	104.0	94.8	64.9	85.52	77.99	53.82	91.2	68.5	62.4
Pennsylvania.....	28	1,859	109.2	80.0	64.0	98.60	72.27	57.49	73.3	80.0	58.6
Tennessee.....	7	367	88.2	61.7	49.6	62.96	44.07	34.08	70.0	80.4	56.2
Utah.....	5	206	104.0	51.8	61.9	99.75	49.68	57.66	49.8	119.5	59.5
West Virginia.....	5	108	111.4	71.4	58.0	101.41	65.00	52.58	64.1	81.2	52.1
Wyoming.....	4	199	104.0	68.2	54.6	109.88	72.08	57.09	65.6	80.1	52.5
Total.....	142	11,337	102.5	71.1	60.0	80.83	56.10	47.12	69.4	84.5	58.6

*Miners, machine.<sup>2</sup>*

Colorado.....	11	66	104.0	76.2	69.5	\$106.89	\$78.35	\$73.73	73.3	91.2	66.8
Illinois.....	10	280	104.0	68.3	56.6	113.26	74.41	61.02	65.7	82.9	54.4
Indiana.....	7	136	80.0	50.5	47.2	92.47	58.35	55.79	63.1	93.5	59.0
Iowa.....	2	12	104.0	79.0	71.3	78.49	59.65	52.55	76.0	90.3	68.6
Kentucky.....	14	130	104.0	70.9	76.2	76.54	52.20	58.62	68.2	107.5	73.3
Missouri.....	6	112	104.0	83.2	65.0	69.38	55.50	43.27	80.0	78.1	62.5
New Mexico.....	5	35	104.0	70.1	74.7	104.22	70.24	76.45	67.4	106.6	71.8
Ohio.....	13	245	104.0	94.5	89.5	104.32	94.83	86.96	90.9	94.7	86.1
Oklahoma.....	2	12	104.0	92.0	75.6	69.28	61.31	50.66	88.5	82.2	72.7
Pennsylvania.....	26	546	110.8	85.5	81.0	101.64	78.47	72.02	77.2	94.7	73.1
Tennessee.....	3	15	84.8	65.7	56.0	41.87	32.45	28.25	77.5	85.2	66.0
Utah.....	7	22	104.0	58.1	73.4	133.34	68.14	92.07	51.1	138.2	70.6
Virginia.....	4	27	104.0	93.3	72.9	73.52	65.95	52.66	89.7	78.1	70.1
West Virginia.....	8	62	109.5	65.4	89.0	90.67	54.13	71.90	59.7	136.1	81.3
Total.....	118	1,700	104.3	77.9	73.2	98.06	73.25	67.58	74.7	94.0	70.2

*Loaders.*

Alabama.....	2	307	104.0	95.9	62.3	\$75.33	\$69.45	\$45.88	92.2	65.0	59.9
Colorado.....	8	389	104.0	81.8	65.4	82.07	64.59	50.65	78.7	80.0	62.9
Illinois.....	9	2,049	104.0	68.0	57.4	92.52	60.51	51.03	65.4	84.4	55.2
Indiana.....	7	1,098	80.0	54.2	45.7	67.00	45.43	40.02	67.8	84.3	57.1
Iowa.....	2	67	104.0	78.9	60.2	58.71	44.56	34.17	75.9	68.3	57.9
Kentucky.....	17	1,391	104.0	86.5	58.9	71.18	59.22	40.42	83.2	68.1	56.6
Missouri.....	6	283	104.0	81.2	56.9	80.34	62.75	42.86	78.1	70.1	54.7
New Mexico.....	5	132	104.0	84.1	77.4	67.50	54.61	50.80	80.9	92.0	74.4
Ohio.....	13	1,970	104.0	93.1	76.8	78.65	70.39	58.40	89.5	82.5	73.8
Oklahoma.....	2	135	104.0	95.1	68.0	72.97	66.69	48.53	91.4	71.5	65.4
Pennsylvania.....	28	4,117	112.0	87.8	73.3	84.67	66.30	55.21	78.3	83.5	65.3
Tennessee.....	4	119	87.0	60.1	46.0	62.67	43.24	33.36	69.0	76.5	52.8
Utah.....	5	235	104.0	47.9	61.4	99.14	45.70	57.95	46.1	128.2	59.0
Virginia.....	4	230	104.5	93.8	62.1	66.16	59.41	38.93	89.8	66.2	59.4
West Virginia.....	13	749	108.3	80.5	61.1	88.05	65.42	47.53	74.3	75.9	56.4
Wyoming.....	3	74	104.0	85.3	56.7	81.42	66.76	45.85	82.0	66.5	54.5
Total.....	128	13,345	104.7	81.2	65.3	81.24	63.04	50.51	77.6	80.4	62.4

<sup>1</sup> One mine in Virginia omitted.<sup>2</sup> One mine each in Alabama and Wyoming omitted.

[1887]

In a few States it will be seen that employees worked more hours than hours of operation of the mines. This is to be accounted for partly by the fact that miners worked overtime on days when the mines were in operation and partly by the fact that in a few cases miners were allowed to work in the mine getting down coal even on days when the mine was nominally not in operation. The latter practice is very unusual in a great majority of the coal-mining States.

From the figures given in Table 6 the immediate responsibility for idle time may be roughly apportioned between the management and the employees. Thus, the average full-time hours of all mines in which hand miners were found were 102.5 for the half month. Hand miners actually worked an average of 60 hours. The difference, 42.5 hours, was the amount of lost time on the part of the hand miners. But of these 42.5 idle hours there were on the average 31.4 hours during which the mines were not in operation. For that amount of idleness, therefore, the operators were immediately responsible. The remaining 11.1 hours of idleness represent the time during which the mines were in operation and opportunity for work was given of which the employees failed to take advantage. For that much idleness, therefore, the miners were immediately responsible.

For all machine miners combined the figures show average hours of idleness 31.1, of which the operators were responsible for 26.4 hours and the miners for 4.7 hours. The corresponding figures for loaders are 39.4, 23.5, and 15.9, respectively. The apportionment of responsibility in any particular State may be ascertained by a similar computation based on the averages given for that State.

In making the statement that operators or miners are immediately responsible for a certain number of hours of idleness there is no intention of implying that blame for failure to work attaches to either party. The figures given in the table furnish no clue as to how much of the idleness on either side was avoidable and how much unavoidable. They can not legitimately be interpreted to imply more than the facts they profess to set forth.

It is unfortunate that no figures showing actual earnings of employees in the coal-mining industry during earlier years are in the possession of the Bureau. For lack of such material, it is impossible for the Bureau to follow its usual method and compute index numbers in the coal-mining industry on the basis of actual earnings. The only method by which an estimate can be made of the changes that have taken place in recent years in the economic situation of employees in the industry is through an analysis of the increases in pay that have been granted as a feature of the various agreements entered into between the operators and the employees.

The following statement shows the effect upon the wages of contract miners in the anthracite field of the various increases that have been granted, beginning with the award made by the Anthracite Coal

[1888]

Strike Commission which settled the strike of 1902. The figures are given in the form of relatives, with the rate prevailing before the strike of 1902 as 100:

*Relative Wage Rates of Anthracite Contract Miners.*

1902.....	100.00	1912.....	121.00
1903.....	114.40	1913.....	121.00
1904.....	114.95	1914.....	121.00
1905.....	114.31	1915.....	121.00
1906.....	114.58	1916.....	129.50
1907.....	114.22	May, 1917.....	142.50
1908.....	114.40	December, 1917.....	161.90
1909.....	114.49	November, 1918.....	181.30
1910.....	114.40	1919.....	181.30
1911.....	114.95		

The award of the Anthracite Coal Strike Commission gave these employees a 10 per cent increase in rates. It also provided that for each 5-cent advance in the wholesale price of coal at New York City the miners should have a 1 per cent increase in rate over the new base established by the Commission.

This agreement remained in effect 9 years. During that time the sliding scale was responsible for increases in rate above the 1902 rate varying from 4.22 per cent in 1907 to 4.95 per cent in 1904 and 1911. The average increase for the 9 years was 4.2 per cent. A new agreement was entered into on May 20, 1912. Under this agreement the sliding scale was abolished and in its place was granted an increase of 10 per cent over the rate of 1911. This increased the basic relative from 110, which it had been from 1903 to 1911, to 121. The basic rate for 1911 plus the additional wage received under the sliding scale made the index number for that year 114.95. Therefore, the actual increase brought about by the agreement of 1912 was 6.05 points. The wage of 1912, therefore, shows an increase of 5.2 per cent over that of 1911 and a total increase of 21 per cent over the pre-strike rate of 1902. On May 5, 1916, a new agreement was entered into under which tonnage rates were raised 7 per cent above the rates in 1915. This made a total increase of 29.5 per cent over the rate of 1902. Since 1916 three new voluntary agreements have been entered into, each of which provided an increase in rates. These increases, however, were given not in the form of rate increases but in the form of additions to gross earnings. Thus the agreement effective May 1, 1917, provided for the addition of 10 per cent to the gross earnings of each miner as determined by the agreement of May 5, 1916. On December 1, 1917, this was superseded by an agreement giving a 25 per cent increase on gross earnings, based on the agreement of 1916. Finally, on November 15, 1918, the percentage bonus was raised to 40 per cent. Under these last three agreements it will be seen that the net increase in miners'

[1889]

rates above the 1902 base has been 42.5, 61.9, and 81.3 per cent. The agreement of November 15, 1918, according to its terms, was to remain in effect until the declaration of peace, or until March 31, 1920, if peace was not declared before that day. By a subsequent agreement entered into September 29, 1919, the conditional clause was eliminated and the duration of the agreement until March 31, 1920, made unconditional.

The following table of relatives for bituminous pick or hand miners is based on the rates in the Hocking Valley district of Ohio, as established by the various agreements between the operators' and the miners' associations. The Hocking Valley was selected because that district is the basing district of the central competitive field, constantly used in establishing rates in other bituminous fields.

*Relative Wage Rates of Bituminous Pick Miners, Hocking Valley District, Ohio.*

[Rate for 1902=100.]

1902.....	100.00	1912.....	125.00
1903.....	112.50	1913.....	125.00
1904.....	106.25	1914.....	130.00
1905.....	106.25	1915.....	130.00
1906.....	112.50	1916.....	130.00
1907.....	112.50	1917 (April).....	149.32
1908.....	112.50	1917 (November).....	168.50
1909.....	112.50	1918.....	168.50
1910.....	118.75	1919.....	168.50
1911.....	118.75		

Most of the changes in rates indicated in the above table have been reached as the result of collective bargaining carried on between the operators' and the miners' associations. In normal times new rates took effect on the 1st of April of any year in which they were introduced. In 1906, however, the new rates were adopted only at the end of a protracted strike, and in 1917 the second increase went into effect in the month of November.

All these relatives in both anthracite and bituminous mining are based on tonnage rates and not on actual earnings. It can not be assumed that earnings will vary from year to year exactly in proportion to changes in rates. But in a general way some indication of the variations in hourly rates from year to year may be obtained by applying the relatives in the last two tables to the earnings of anthracite contract miners and bituminous pick or hand miners in 1919. Reference to the figures in Table 2 will show that the hourly rates of the former in 1919 were 84.2 cents, while for the latter they were 78.4 cents. For the Hocking Valley district for the same year average hourly earnings of pick miners were 77.7 cents.

It must be borne in mind that the index numbers given in any year for the two divisions of the mining industry can not be used as a measure of relative rates for that year as between the two fields. The



significance of the numbers in any year lies only in the indication they afford of the percentage of increase that has been granted in the one or the other branch of the industry over the rate prevailing in 1902. They show neither absolute rates in either field, nor relative rates as between the two fields. The only comparison that can be legitimately made between the two series is a comparison of the relative rates of increase from year to year.

The relatives just given apply only to hand or pick miners. Under the existing conditions considerable interest attaches to the question of the changes in rates of wages in other occupations in the bituminous mining industry. In the following table are presented relatives for various groups of occupations and for all occupations combined, based on the figures for 1913 as 100. So far as occupations were given the same rates of increases in the successive agreements they have been grouped together in the following table. The relative for each group has then been weighted in proportion to the number of employees in that group as found on the pay roll of the companies in Ohio and western Pennsylvania visited by the Bureau during the survey. By combining these weighted relatives and dividing by the aggregate of the weights, the relatives for all groups combined, presented at the end of the table, are ascertained. No direct comparison can be made between the figures in this table and those shown for pick miners in the previous table, since the latter relatives are based on the rates for 1902 as 100 while these are based on 1913 as 100.

TABLE 7.—INDEX NUMBERS OF RATES OF WAGES OF INSIDE EMPLOYEES IN BITUMINOUS MINES.

[Rates for 1913=100.]

Occupation group, and year.	Index number.	Weight number.	Occupation group, and year.	Index number.	Weight number.
1. Machine mining—loaders and cutters:			5. Trappers (boys):		
1913.....	100.0	6,878	1913.....	100.0	120
1914.....	104.8		1914.....	100.0	
1915.....	104.8		1915.....	100.0	
1916.....	111.5		1916.....	106.1	
1917, April.....	133.8		1917, April.....	143.9	
1917, October.....	156.1		1917, October.....	200.8	
2. Hand mining—pick miners:			6. Tracklayers, cagers, drivers, trip riders, haulers, timbermen, wiremen, motor-men:		
1913.....	100.0	1,872	1913.....	100.0	1,913
1914.....	104.0		1914.....	100.0	
1915.....	104.0		1915.....	100.0	
1916.....	104.1		1916.....	104.9	
1917, April.....	119.4		1917, April.....	126.8	
1917, October.....	134.8		1917, October.....	177.0	
3. Tracklayers' helpers:			All groups combined:		
1913.....	100.0	440	1913.....	100.0	
1914.....	100.0		1914.....	103.6	
1915.....	100.0		1915.....	103.6	
1916.....	105.0		1916.....	108.8	
1917, April.....	127.9		1917, April.....	130.0	
1917, October.....	181.3		1917, October.....	157.6	
4. Pipemen:					
1913.....	100.0	110			
1914.....	100.0				
1915.....	100.0				
1916.....	105.0				
1917, April.....	126.6				
1917, October.....	177.0				

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From the annual reports of the Geological Survey on the coal industry it is possible to ascertain the average annual value per ton of the anthracite and bituminous coal produced year by year in the United States. The method followed by the survey in computing this value is indicated in the following paragraph quoted from "Coal in 1917":

The value of coal given in this report is the realization value at the mine f. o. b. cars, and the average value per ton is the average realization price obtained by dividing the total value by the number of tons sold or produced. The coal used at the mine, the coal coked by the producing company and the coal used in some other industry by the company operating the mine—an appreciable proportion of the whole—is never sold, and the value placed upon it is either an estimate or the figure at which it is carried on the books, either of which is supposedly based on what the coal would have brought if sold or what other fuel for the respective purpose would have cost if its purchase had been necessary. In other words, the values given represent returns to the operators for coal sold, plus estimated exchange value of that not sold. These figures do not necessarily show prices or even an average of the prices of coal at the mine.

From these absolute values index numbers have been computed by the Bureau of Labor Statistics for both anthracite and bituminous coal with the values for 1902 as a base. These values and the index numbers based upon them are presented in the following table. For purposes of comparison the index numbers already given for the tonnage rates of contract miners and pick miners are here repeated.

TABLE 8.—INDEX NUMBERS OF THE VALUE PER NET TON OF COAL AT THE MINE AND OF MINERS' RATES OF WAGES PER TON, 1902 TO 1919.

[Figures for 1902=100.]

Year.	Value of coal.				Rates of wages.	
	Anthracite.		Bituminous.		Anthracite contract miners.	Bituminous pick miners.
	Value per ton.	Index number.	Value per ton.	Index number.		
1902.....	\$1.84	100.0	\$1.12	100.0	100.00	100.00
1903.....	2.04	110.9	1.24	110.7	114.40	112.50
1904.....	1.90	103.3	1.10	98.2	114.95	106.25
1905.....	1.83	99.5	1.06	94.6	114.31	106.25
1906.....	1.85	100.5	1.11	99.1	114.58	112.50
1907.....	1.91	103.8	1.14	101.8	114.22	112.50
1908.....	1.90	103.3	1.12	100.0	114.40	112.50
1909.....	1.84	100.0	1.07	95.5	114.49	112.50
1910.....	1.90	103.3	1.12	100.0	114.40	118.75
1911.....	1.94	105.4	1.11	100.5	114.95	118.75
1912.....	2.11	114.7	1.15	102.7	121.00	125.00
1913.....	2.13	115.8	1.18	105.4	121.00	125.00
1914.....	2.07	112.5	1.17	104.5	121.00	130.00
1915.....	2.07	112.5	1.13	100.9	121.00	130.00
1916.....	2.30	125.0	1.32	117.9	129.50	130.00
1917.....	2.85	154.9	2.26	201.8	142.50	149.32
1917 <sup>a</sup> .....					161.90	168.50
1918.....	3.40	184.8	2.58	230.4	181.30	168.50
1919.....					181.30	168.50

<sup>a</sup> November.

<sup>1</sup> Coal in 1917, Part A, Production, p. 952. United States Geological Survey.

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It must be borne in mind that comparisons can legitimately be made on the basis of these index numbers only between the percentage of increase from year to year in the value of coal on the one hand and the rates of wages on the other hand. Thus we see that the value of anthracite coal increased 84.8 per cent between 1902 and 1918, and the tonnage rates of contract miners increased 81.3 per cent during the same period; meantime the value of bituminous coal increased 130.4 per cent, while the tonnage rates of pick miners increased 68.5 per cent.

## Compensation of Railroad Employees, 1915-1919.

THE figures for 1915, 1916, and 1917 in the table following are taken from the annual reports of the Interstate Commerce Commission and cover Class I railroads. The figures for 1918 and 1919 are based on compilations made by the United States Railroad Administration, covering Class I railroads in Federal operation. The table has been prepared by the Director General at the request of this Bureau.

It will be noted that some of the classes are reported on an hourly basis in 1915 and on a daily basis thereafter. This is due to a change in the Interstate Commerce Commission classification, effective July 1, 1915. Complete figures for the calendar year 1919 are not, of course, available, and the figures given are based on the month of July, which are the latest statistics obtainable. These figures, however, do not include the increases granted in September, 1919, to shop employees, which were made retroactive to May 1, 1919.

The wage compilations made by the Interstate Commerce Commission for years prior to 1915 were on a daily basis, with no accompanying figures as to hours worked. Hence, no comparable figures can be given in this table for earlier years.

It is important to point out that the individual railroad employee did not get in the month of July, 1919, an actual increase in his earnings equal to the increase in his rate of pay indicated by the table. This was due chiefly to the introduction of the eight-hour day, as a result of which the employee did not on an average work as many hours per month in July, 1919, as he did during 1917 and previous years.

It is also important to remark that the subject of wage statistics is a matter of more recent development in railroad accounting than other sorts of statistics which have been compiled for a long period and with greater care.

For example: The month of December, 1917, was the first month for which the compilation of wage statistics was required, all former requirements of the Interstate Commerce Commission having been based on annual requirements. There has been a gradual improvement in the accuracy with which these monthly reports have been

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made, and it is believed that the reports for July, 1919, are substantially more accurate than the reports for the year 1917 or previous years with which comparisons are made in the following table:

HOURLY COMPENSATION OF RAILROAD EMPLOYEES, 1915-1919.

Occupation.	Year ending June 30, 1915.	1916	1917	1918	July, 1919.
General officers, \$3,000 per annum and upward.....	\$2.517	<sup>1</sup> \$20.841	<sup>1</sup> \$20.452	<sup>1</sup> \$18.06	<sup>1</sup> \$15.72
General officers, below \$3,000 per annum.....	.691	1 5.679	1 5.618	1 6.19	1 6.46
Division officers, \$3,000 per annum and upward.....	1.197	1 11.190	1 11.074	1 11.30	1 10.47
Division officers, below \$3,000 per annum.....	.523	1 5.023	1 5.138	1 6.30	1 6.78
Clerks, \$900 per annum and upward (except No. 37).....	.416	.428	.428	.504	.529
Clerks, below \$900 per annum (except No. 37).....	.224	.235	.241	.284	.298
Messengers and attendants.....	.140	1 1.381	1 1.502	1 2.22	1 2.51
Assistant engineers and draftsmen.....	.404	1 3.487	1 3.698	1 4.59	1 5.22
M. W. & S. foremen (excluding Nos. 10 and 28).....	.329	.335	1 3.552	1 4.78	1 5.24
Section foremen.....	.233	.237	1 2.592	1 3.57	1 3.83
General foremen, M. E. department.....	.429	1 4.480	1 4.274	1 7.32	1 8.63
Gang and other foremen, M. E. department.....	.347	.358	1 3.661	1 6.46	1 6.88
Machinists.....	.387	.410	.462	.728	.690
Boiler makers.....	.386	.409	.462	.724	.695
Blacksmiths.....	.372	.393	.446	.712	.681
Masons and bricklayers.....	.279	.315	.327	.486	.571
Structural-iron workers.....	.322	.327	.357	.510	.653
Carpenters.....	.276	.290	.322	.509	.584
Painters and upholsterers.....	.297	.309	.347	.556	.611
Electricians.....	.285	.288	1 3.073	1 5.11	1 5.33
Air-brake men.....	.266	.286	.327	.577	.611
Car inspectors.....	.232	.247	.289	.571	.610
Car repairers.....	.265	.284	.338	.556	.591
Other skilled laborers.....	.283	.305	.345	.560	.621
Mechanics' helpers and apprentices.....	.227	.238	.276	.453	.457
Section men.....	.150	.164	.192	.289	.373
Other unskilled laborers.....	.182	.194	.224	.336	.408
Foremen of construction gangs and work trains.....	.275	.283	.309	.451	.582
Other men in construction gangs and work trains.....	.168	.181	.206	.310	.398
Traveling agents and solicitors.....	.567	1 4.974	1 5.188	1 5.87	1 6.87
Employees in outside agencies.....	.387	.398	1 3.490	1 4.76	1 5.07
Other traffic employees.....	.423	.480	1 4.391	1 4.95	1 6.12
Train dispatchers and directors.....	.528	.556	.594	.792	.942
Telegraphers, telephoners, and block operators.....	.264	.282	.310	.430	.553
Telegraphers and telephoners operating interlockers.....	.287	.302	.323	.444	.567
Levermen (nontelegraphers).....	.213	.220	.244	.357	.522
Telegrapher-clerks.....	.241	.254	.276	.398	.544
Agent-telegraphers.....	.224	.233	.260	.384	.573
Station agents (nontelegraphers).....	.253	1 2.652	1 2.799	1 3.62	1 4.74
Station masters and assistants.....	.306	1 3.393	1 3.486	1 4.58	1 5.32
Station service employees (except Nos. 5, 6, 37, 38, 39, 40, and 66).....	.187	.203	.226	.328	.419
Yardmasters.....	.400	1 4.440	1 4.794	1 6.60	1 8.15
Yardmasters' assistants (not yard clerks).....	.368	1 4.167	1 4.466	1 6.07	1 7.27
Yard engineers and motormen.....	.425	.434	.585	.670	.737
Yard firemen and helpers.....	.261	.272	.338	.462	.546
Yard conductors (or foremen).....	.386	.385	.474	.627	.678
Yard brakemen (switchmen or helpers).....	.349	.353	.433	.583	.632
Yard switch tenders.....	.188	.197	.223	.323	.505
Other yard employees.....	.167	.157	.176	.286	.380
Hostlers.....	.246	.259	.311	.484	.553
Engine-house men.....	.176	.188	.218	.324	.419
Road freight engineers and motormen.....	.598	.610	.691	.812	.924
Road freight firemen and helpers.....	.382	.391	.447	.594	.673
Road freight conductors.....	.498	.500	.564	.694	.760
Road freight brakemen and flagmen.....	.336	.335	.381	.529	.582
Road passenger engineers and motormen.....	.824	.899	.914	.994	1.167
Road passenger firemen and helpers.....	.506	.560	.569	.705	.854
Road passenger conductors.....	.669	.710	.737	.852	.962
Road passenger baggagemen.....	.364	.402	.412	.549	.676
Road passenger brakemen and flagmen.....	.381	.401	.421	.563	.668
Other road train employees.....	.291	.286	.302	.401	.502
Crossing flagmen and gatemen.....	.115	.120	1 1.423	1 2.30	1 2.60
Drawbridge operators.....	.168	.173	1 1.738	1 2.80	1 3.18
Floating equipment employees.....	.214	.231	.252	.347	.513
Express service employees.....	.176	.096	.145	.249	.....
Policemen and watchmen.....	.191	1 2.140	1 2.377	1 3.15	1 3.90
Other transportation employees.....	.203	.207	1 2.115	1 3.34	1 3.83
All other employees.....	.194	.188	1 1.960	1 2.48	1 2.94
All classes for which hourly pay is shown.....	.270	.275	.318	.459	.532
All classes for which daily pay is shown.....	.....	1 4.411	1 3.334	1 4.42	1 4.93

<sup>1</sup> Average compensation per day for employees reported on daily basis.

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In response to a request from the Senate for information relating to the amount of railroad labor, its rates of pay and average compensation in December, 1917, and each month from January to July, 1919, the Director General of Railroads submitted the following statement, dated November 14, 1919:

PRESIDENT OF THE UNITED STATES SENATE,  
Washington, D. C.

DEAR SIR: I have the honor to submit this letter and its accompanying statements in response to the Resolution of the Senate of the United States of August 20, 1919, relating to the amount of railroad labor, its rates of pay and its average compensation in December, 1917, and in each month from January to July, 1919.

The amount of labor, measured by the time worked and paid for, for which the United States Railroad Administration has paid in months from January to July, 1919, as compared with the month of December, 1917, is as follows:

Year and month.	Total number of hours worked.	Per cent of increase (+) or decrease (-) as compared with December, 1917.
1917.		
December.....	434,252,656	
1919.		
January.....	440,699,731	+ 1.5
February.....	375,204,721	-13.6
March.....	398,689,315	- 8.2
April.....	393,578,428	- 9.4
May.....	409,674,681	- 5.7
June.....	396,385,011	- 8.7
July.....	417,182,290	- 3.9

In considering this comparison, it is important to bear in mind that the amount of labor paid for in December, 1917, was reduced because of the extreme cold weather, which resulted in the suspension of much outside work and because the competition of war industries, generally paying higher wages, and the demands of military and naval service created a scarcity of labor which prevented the obtaining of all the labor which could be worked even in such cold weather. On the contrary, in January, 1919, the winter was exceptionally mild and made practical the prosecution of an unusual amount of outside work and the labor supply was relatively greater because of the cessation of war activities and because of higher wages.

The total number of employees in December, 1917, and in the months of 1919 from January to July is as follows:

Year and month.	Total number of employees.	Per cent of increase as compared with December, 1917.
1917.		
December.....	1,793,748	
1919.		
January.....	1,848,774	8.5
February.....	1,840,197	8.0
March.....	1,823,220	7.0
April.....	1,830,093	7.4
May.....	1,864,561	9.4
June.....	1,863,741	9.4
July.....	1,894,287	11.2

It will be observed that while the amount of labor which the Government has paid for, as measured by the hours paid for, has decreased, there has been an increase in the number of employees. This is due to the fact that the general establishment of the eight-hour basis has necessitated a larger number of employees to perform the same number of hours of service. In December, 1917, prior to the adoption of this basis, many employees worked unduly long hours. This is brought out by the attached comparison between hours worked per employee, by classes, in December, 1917, and July, 1919.

A comparison as to the increase in the average compensation of employees in December, 1917, as compared with conditions established up to July, 1919, is given below:

	July, 1919.	December, 1917.
Number of employees.....	1, 894, 287	1, 703, 748
Days worked.....	6, 122, 435	5, 819, 486
Hours worked.....	368, 202, 810	387, 696, 788
Total compensation.....	\$226, 140, 935	\$153, 039, 988
Average compensation per day for employees reporting on a daily basis.....	\$4. 93	\$3. 52
Average compensation per hour for employees reporting on an hourly basis.....	\$0. 532	\$0. 342
The average increase in the unit of compensation is 53 per cent.		

It is only fair to point out that this showing does not completely reflect the condition as it exists at this date, because in order to equalize the shop crafts with what has been done for other classes of railroad employees, it was found necessary in August, 1919, to make increases in their wages effective May 1, 1919. These, however, could not be included in August or the preceding months affected, but it is believed that if they could have been included in the accounts for July, 1919, the average percentage of increase in the unit compensation for all railroad employees for the month of July, 1919, as compared with the month of December, 1917, would have been 56 per cent instead of 53 per cent.

It is important to point out, however, that the individual railroad employee did not get in the month of July, 1919, an actual increase in his earnings equal to the increase above indicated in his rate of pay. This is due chiefly to the introduction of the eight-hour day, as a result of which the employee did not on an average work as many hours in July, 1919, as he did in December, 1917. This is emphasized by the attached statement, above referred to, showing by classes of employees the average hours per employee worked in December, 1917, and in July, 1919.

On the other hand a comparison with December, 1917, is not conclusive, because in that month employees were working a great deal more overtime than they were working on an average during the year 1917, and also many employees had received increases in the latter part of the year 1917, which were not enjoyed throughout the year.

In order to bring out these comparisons (and taking into consideration, as far as it can be done at present upon an estimate, the readjustments recently made to the shop crafts—which were retroactive to May 1, 1919), a comparison of average monthly compensation is as follows:

Average monthly compensation per employee for all employees, including an estimate of the effect of the increases recently granted to the shopmen.....	July, 1919.	December, 1917.	Calendar year 1917.
.....	\$121. 50	\$89. 83	\$83. 64
Per cent of increase for July, 1919, over 1917.....	.....	35. 3	45. 3

The figures as they actually appear in the accounts, without taking into consideration the readjustments with the shop crafts, are as follows:

Average monthly compensation per employee for all employees.....	July, 1919.	December, 1917.	Calendar year 1917.
.....	\$119.38	\$89.83	\$83.64
Per cent of increase for July, 1919, over 1917.....	.....	32.9	42.7

While the above comparisons and those in the attached statements are made for the periods specified in the Senate resolution, it is important to remark that the view is generally held both by railroad officers and by employees that the wage statistics of the past are not entirely reliable. This is due to the fact that the subject of wage statistics is a matter of more recent development in railroad accounting than other sorts of statistics which have been compiled for a longer period and with greater care. For example, the month of December, 1917, was the first month for which the compilation of wage statistics was required, all former requirements of the Interstate Commerce Commission having been based upon annual requirements. There has been a gradual improvement in the accuracy with which these reports have been made and it is believed that the most recent reports are substantially more accurate than the reports for December, 1917, or for the calendar year 1917, with which comparisons are here attempted.

The Senate resolution calls for the information stated separately as to different classes of railroad employees, and statements as below enumerated are attached hereto. It is very important, however, to call attention to the fact that the comparisons between the average compensation for individual classes of employees in 1919 with the single month of December, 1917, or, indeed, with the entire year of 1917, is misleading. To a considerable extent some classes of employees had, prior to December, 1917, obtained reductions in hours (which resulted in their average compensation per hour being substantially increased) or increased in rates of pay, or both, whereas other classes of employees secured corresponding treatment only after December, 1917, so that the disparity in the rates of increase of pay for the different classes of employees is not nearly so great as this restricted comparison suggests. The records do not indicate the amount of "punitive" overtime, i. e., for which "time and a half" or more was paid, but it is probably true that in December, 1917, numerous classes of employees were working punitive overtime to a larger extent than in July, 1919, and consequently, the increase in rates of pay for these particular classes of employees has been somewhat more than this restricted comparison would indicate. There have also been numerous reclassifications of employees which materially affect the comparisons mentioned.

The statements attached hereto are as follows:

Schedule 1.—Statement for Class I railroads in Federal operation showing the number of employees for the months of December, 1917; January, 1919; February, 1919; March, 1919; April, 1919; May, 1919; June, 1919; July, 1919.

Schedule 2.—Statement for Class I railroads in Federal operation showing the total compensation of employees for the same periods covered by Schedule 1.

Schedule 3.—Statement for Class I railroads in Federal operation showing the number of days of employees reported on a daily basis and the number of hours of employees reported on an hourly basis for the same periods covered by Schedule 1.

Schedule 4.—Statement for Class I railroads in Federal operation showing the average daily compensation for employees reported on a daily basis and the average hourly compensation of employees reported on an hourly basis for the same periods covered by Schedule 1.<sup>1</sup>

<sup>1</sup> For averages for the years 1915 to 1918 and for the month of July, 1919, see the first table in this article.

Schedule 5.—Statement for Class I railroads in Federal operation showing the number of employees; number of days worked for employees reported on a daily basis; number of hours worked for employees reported on an hourly basis; total compensation; average compensation per day for employees reported on a daily basis; average compensation per hour for employees reported on an hourly basis for the average of the months of May, June, and July, 1919, and for the month of December, 1917, and showing the percentage of increase in the hourly or daily rates comparing the average for the months of May, June, and July, 1919, with December, 1917.

Schedule 6.—Statement for Class I railroads in Federal operation showing the number of employees for the average of the months of May, June, and July, 1919; the average monthly compensation per employee for the average for the months of May, June, and July, 1919; for December, 1917; and for the calendar year 1917, together with the percentage of increase for the average of May, June, and July, 1919, over the month of December, 1917, and the monthly average for the calendar year 1917.

Schedule 7.—Statement for Class I railroads showing comparison by classes of employees and hours worked per employee in December, 1917, and in July, 1919.

In addition to the schedules named above, I also inclose copies of all orders making advances in wages, and of all schedules explanatory thereof, as requested in the last clause of the resolution.

Sincerely yours,

(Signed) WALKER D. HINES,  
*Director General of Railroads.*

Space does not permit the publication of all the schedules referred to in this communication, but Schedule 6 is reproduced in full.

This schedule was compiled from reports submitted by Class I roads (those whose operating revenues exceed \$1,000,000 per annum) under Federal control. Employees are counted as of the 16th day of the month except when that day falls on a Sunday or a holiday, in which case the count is made as of the last preceding business day, and the classification is that prescribed by the Interstate Commerce Commission in accordance with the act to regulate commerce, which classification has been the prescribed form since July 1, 1915. This classification subdivides items 1 and 2, general officers, and items 3 and 4, division officers, as between those receiving over and under \$3,000 per annum, and subdivides items 5 and 6, clerks, as between those receiving over and under \$900 per annum. As the subdivision of these classes on such a basis is purely arbitrary and has no relation to the class of work performed, the subdivisions are omitted from these reports. The classification of employees prescribed by the Interstate Commerce Commission and used in the reports does not correspond with the classification of employees used in the wage orders of the Railroad Administration, with the result that employees in a given class (of wage orders) receiving either higher or lower wages may be included with the employees of another class (of the Interstate Commerce Commission classification). Generally speaking, the averages of a single month present such a restricted view that such figures should be used with the greatest caution. Schedule 6 follows:

[1898]



AVERAGE MONTHLY COMPENSATION PER EMPLOYEE OF CLASS I ROADS UNDER FEDERAL CONTROL, JULY, 1919, DECEMBER, 1917, AND MONTHLY AVERAGE FOR CALENDAR YEAR 1917.

Item No.	Class of employee.	Number of employees, July, 1919.	Average monthly compensation per employee.			Per cent of increase July, 1919, over—	
			July, 1919.	December, 1917.	Calendar year 1917.	December, 1917.	Monthly average for calendar year 1917.
1-2	General officers.....	7,432	\$359.60	\$390.26	\$379.84	17.9	15.3
3-4	Division officers.....	12,511	245.47	178.23	174.92	37.7	40.3
5-6	Clerks (except No. 37).....	216,764	111.83	79.58	77.63	40.5	44.1
7	Messengers and attendants.....	10,122	70.44	44.26	42.86	59.2	64.3
8	Assistant engineers and draftsmen.....	10,370	138.96	104.74	95.40	32.7	45.7
9	M. W. & S. foremen (excluding Nos. 10 and 28).....	8,119	142.68	106.90	99.74	33.5	43.1
10	Section foremen.....	40,899	108.18	78.21	73.84	38.3	46.5
11	General foremen—M. E. department.....	1,707	259.51	135.69	138.37	91.3	87.5
12	Gang and other foremen—M. E. department.....	23,592	195.41	122.26	112.64	59.8	73.5
13	Mechanists.....	59,067	142.18	126.11	116.20	12.7	22.4
14	Boiler makers.....	18,413	147.74	127.67	118.76	15.7	24.4
15	Blacksmiths.....	9,898	136.35	110.92	104.84	22.9	30.1
16	Masons and bricklayers.....	1,186	115.37	80.88	77.64	42.6	48.6
17	Structural-iron workers.....	673	131.58	86.17	84.53	52.7	55.7
18	Carpenters.....	50,854	117.30	81.70	78.35	43.6	49.7
19	Painters and upholsterers.....	12,632	118.64	85.89	79.22	38.1	49.8
20	Electricians.....	13,200	143.97	93.59	85.84	53.8	67.7
21	Air-brake men.....	7,781	132.37	100.59	90.53	31.6	46.2
22	Car inspectors.....	24,258	145.71	106.03	95.02	37.4	53.3
23	Car repairers.....	80,417	123.33	87.77	82.81	40.5	48.9
24	Other skilled laborers.....	56,307	132.15	95.00	88.77	39.1	48.9
25	Mechanics' helpers and apprentices.....	107,263	95.13	74.17	68.52	28.3	38.8
26	Section men.....	286,300	77.80	53.48	50.09	45.5	55.3
27	Other unskilled laborers.....	118,932	87.60	63.77	57.94	37.4	51.2
28	Foremen of construction gangs and work trains.....	1,910	128.04	101.71	85.91	25.9	49.0
29	Other men in construction gangs and work trains.....	30,306	81.84	59.24	51.95	38.1	57.5
30	Traveling agents and solicitors.....	1,355	177.60	154.29	136.82	15.1	29.8
31	Employees in outside agencies.....	927	140.85	119.72	88.85	17.6	58.5
32	Other traffic employees.....	426	165.40	125.16	110.83	32.2	49.2
33	Train dispatchers and directors.....	5,413	228.13	155.66	150.13	46.6	52.0
34	Telegraphers, telephoners, and block operators.....	20,859	129.46	80.59	76.39	60.6	69.5
35	Telegraphers and telephoners operating interlockers.....	8,243	131.43	85.48	79.71	53.8	64.9
36	Levermen (nontelegraphers).....	3,926	125.23	74.24	70.99	68.8	76.5
37	Telegrapher-clerks.....	11,362	129.23	80.23	74.35	61.1	73.8
38	Agent-telegraphers.....	19,065	139.64	87.51	79.06	59.6	76.6
39	Station agents (nontelegraphers).....	13,898	139.50	92.36	86.52	51.0	61.2
40	Station masters and assistants.....	605	161.01	109.07	107.66	47.6	49.6
41	Station service employees (except Nos. 5, 6, 37, 38, 39, 40, and 66).....	115,255	93.52	64.75	59.14	44.4	58.1
42	Yardmasters.....	3,905	247.39	157.98	150.19	56.6	64.7
43	Yardmasters' assistants (not yard clerks).....	3,122	216.17	136.02	142.12	58.9	52.1
44	Yard engineers and motormen.....	19,153	175.14	148.62	149.16	17.8	17.4
45	Yard firemen and helpers.....	19,559	126.03	92.15	91.10	36.8	38.3
46	Yard conductors (or foremen).....	18,785	159.09	129.68	132.03	22.7	20.5
47	Yard brakemen (switchmen or helpers).....	47,815	141.51	111.85	110.55	26.5	28.0
48	Yard switch tenders.....	6,129	120.76	75.44	70.52	60.1	71.2
49	Other yard employees.....	4,705	132.12	60.70	55.54	51.8	65.9
50	Hostlers.....	10,687	132.73	110.80	103.73	19.8	28.0
51	Enginehouse men.....	68,685	104.55	76.83	69.56	36.1	50.3
52	Road freight engineers and motormen.....	30,405	223.86	100.09	175.55	17.8	27.5
53	Road conductors (or foremen).....	31,608	156.72	113.20	106.11	37.2	47.7
54	Road freight conductors.....	24,581	194.73	163.90	154.50	36.8	26.0
55	Road freight brakemen and flagmen.....	60,525	145.70	106.52	100.13	36.8	45.5
56	Road passenger engineers and motormen.....	12,761	256.41	201.50	186.02	27.3	37.8
57	Road passenger firemen and helpers.....	12,413	184.19	124.85	112.79	47.5	63.3
58	Road passenger conductors.....	10,649	226.20	171.47	163.82	31.9	38.1
59	Road passenger baggagemen.....	5,669	162.33	102.96	97.92	57.7	65.8
60	Road passenger brakemen and flagmen.....	15,636	151.43	98.97	91.09	53.0	76.5
61	Other road train employees.....	3,415	120.09	74.72	68.05	60.7	76.5
62	Crossing flagmen and gatemen.....	23,069	78.68	48.29	44.59	62.9	76.5
63	Drawbridge operators.....	1,669	98.75	69.94	63.43	41.2	55.7
64	Floating equipment employees.....	9,288	135.66	92.57	77.36	46.5	75.4
65	Express service employees.....						
66	Policemen and watchmen.....	11,541	117.79	78.44	74.66	50.2	57.8
67	Other transportation employees.....	5,470	97.52	77.82	70.41	28.3	35.3
68	All other employees.....	20,876	82.91	58.29	55.23	42.2	50.1
69	Total.....	1,894,287	119.38	89.83	83.64	30.9	42.7

<sup>1</sup>Decrease.

[1899]

## Rates for Sleeping and Parlor Car Conductors.

The following rates of pay for sleeping and parlor car conductors were established by the Director General of Railroads in an order (Amendment No. 1 to Supplement No. 17 to General Order No. 27) issued on September 3, 1919, the rates being effective as of May 1, 1919. The new rates take the place of those established in Supplement No. 17 to General Order No. 27, as published in the MONTHLY LABOR REVIEW for June, 1919 (p. 154). For comparative purposes the rates in effect January 1, 1918, prior to the operation of General Order No. 27 and the rates fixed by Supplement No. 17 are also given in the table:

MINIMUM MONTHLY RATES OF PAY FOR SLEEPING AND PARLOR CAR CONDUCTORS.

Length of service.	Basic minimum Jan. 1, 1918, prior to applica- tion of General Order No. 27.	Minimum fixed by Supplement No. 17 to General Order No. 27.	New rate.	
			Minimum per month, effec- tive May 1, 1919.	Overtime per hour.
First year.....	\$90.00	\$115.00	\$125.00	\$0.52
Over 1 year to 2 years.....	100.00	125.00	135.00	.56½
Over 2 years to 5 years.....	105.00	130.00	142.50	.59½
Over 5 years to 10 years.....	110.00	135.00	150.00	.62½
Over 10 years to 15 years.....	115.00	140.00	155.00	.64½
Over 15 years.....	120.00	145.00	160.00	.66½
Extended special tours.....	.....	.....	160.00	.66½

The amendment to Supplement No. 17 further provides that 240 hours or less in regular assignment shall constitute a basic month's work.

## Increases in Salaries of Post Office Employees.

**A**FTER much discussion and debate Congress has finally passed House joint resolution 151, by which increases in the compensation of postal employees is made. The resolution is designed to lessen the difficulty the Post Office Department has been experiencing in securing and retaining competent employees necessary to the effective operation of the department. It is essentially emergency legislation and is based on the existing classifications with the declared object in view of granting the largest increases to those persons receiving the lowest salaries. It is said that these people constitute from 90 to 95 per cent or more of all the employees of the department, and the relief granted them by this resolution is declared to be absolutely necessary in order that they may retain their positions in the department.

The increases are made retroactive to July 1, 1919, but are to be paid only to those employees who have remained in the service. For those employees who have entered the service since July 1, 1919, the increases are to take effect from the date of their entry into the service. The retroactive feature of the law does not apply to temporary employees nor to employees who have received increases in their compensation of more than \$300 during the current fiscal year. The object in making the law retroactive is declared to be to deal justly with the employees who had practically been assured of an increase and because of this assurance have remained in the service.

The joint commission of the two Houses of Congress is now at work readjusting all postal salaries, and it is hoped that its report will be made by the beginning of the next session, when it is expected that Congress will enact permanent legislation adjusting intelligently and equitably the many inequities and inequalities in the existing postal salaries.

The resolution was presented to the President for approval on October 27, 1919, and has since become law without his signature. The increases provided in the law are here presented:

(a) Postmasters at offices of the third class; assistant postmasters, and clerks, including clerks at division headquarters of post-office inspectors; special clerks, finance clerks, bookkeepers, printers, mechanics, skilled laborers, watchmen, messengers, laborers, and other employees of offices of the first and second class; letter carriers in the City Delivery Service; employees in Government automobile service; supervisory officials, inspectors, railway postal clerks, including substitutes, superintendents, requisition fillers, packers, and laborers; the agent in charge, clerks and messengers at the United States stamped envelope agency at Dayton, Ohio; and employees of the mail-equipment shop are to receive increases in their salaries according to the following schedule:

INCREASES IN SALARIES OF CERTAIN POST-OFFICE EMPLOYEES RECEIVING EACH SPECIFIED SALARY.

Former salary.	Amount of increase.
\$1,000 to \$1,200.....	\$200
Over \$1,200 to \$1,600.....	150
Over \$1,600 to \$2,000.....	125
Over \$2,000 to \$2,500.....	100

It is further provided, however, that third class postmasters may not receive a greater compensation than \$2,000. The increases are also not to have the effect of raising lower-grade post offices to higher grades.

(b) The salaries of those in the village delivery service who are receiving less than \$1,000 are to be increased 20 per cent.

(c) Rural letter carriers (including daily and those having two triweekly routes) and rural letter carriers having triweekly routes are to receive increases based on the mileage of their routes according to the following schedule:

INCREASES IN SALARIES OF RURAL LETTER CARRIERS BASED ON LENGTH OF ROUTE AND FREQUENCY OF SERVICE.

Length of route.	Service daily and on two triweekly routes.	Service on triweekly route.
11 miles or less.....	\$75	\$87.50
Over 11 miles and under 20 miles.....	100	50.00
20 miles and under 24 miles.....	150	75.00
24 miles and over.....	200	100.00

(d) Fourth class postmasters are to receive a 15 per cent increase over their present compensation.

(e) Substitute, auxiliary, and temporary employees hereafter and until June 30, 1920, will be paid 60 cents per hour instead of 40 cents, the present rate.

With regard to the salaries increased under (a) it should be stated that some employees in the Postal Service are not paid salaries in even hundreds of dollars—printers, mechanics, and skilled laborers receive fractions of hundreds. In such cases the basic salary increases were used as stated and from such increases was deducted whatever fractional sum of \$100 the employee received.

Four members of the Senate Committee on Post Offices and Post Roads rendered a minority report opposing the resolution on the ground that it did not provide sufficiently large increases. They, however, declared themselves in favor of the resolution rather than run the risk of a failure to pass any legislation affording relief to the employees of the Post Office Department.

## Teachers' Salaries in Relation to the Cost of Living.

Compiled by MRS. V. B. TURNER.

**A**MONG the many revelations which the war has made to the American people probably none is more important or more amazing than that regarding the status of the public schools, particularly in the matter of teachers' salaries as related to the cost of living.

In a report upon the subject of teachers' salaries, prepared under the chairmanship of Prof. Joseph Swain, of Swarthmore College, and published last year by the National Education Association of the United States, emphasis is laid upon the already well-recognized fact that the shortage of teachers in the United States is a subject of national apprehension. "Apart from the prosecution of the war itself," in the opinion of the committee, "there is no more urgent problem now before the American people than that created by the threatened collapse of the teaching profession." According to an estimate made by the Bureau of Education and based on a nationwide investigation there were, in the fall of 1918, 50,000 vacancies in the public schools, one county in Pennsylvania reporting 53 rural schools without teachers. Moreover the bureau found that there were 120,000 untrained, inexperienced persons trying to lead American youth along the mythical "flowery path of knowledge."

On December 31, 1918, vacancies in the teaching force in New York City from all causes numbered 1,170.<sup>1</sup> Such a shortage as this resulted in thousands of children being deprived of full-time instruction and in a lamentable disorganization of the regular school routine. Similar reports are being made from numerous towns and cities throughout the United States.

This is a condition which has resulted from various causes, chief of which is the inability of the teacher to meet the present high cost of living with a slender, prewar purse. Although the value of education, the superior training demanded of a teacher, the deteriorating effects of poverty upon the profession, and the harmful effect of low salaries upon the child are ethical phases of the situation never absent from a consideration of the teaching profession, they are merely truisms which any sensible, interested person concedes without discussion. When, however, salaries fall below the level of subsistence, when teachers, as has occurred in some cases, are obliged to go into

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<sup>1</sup> Teachers' pay in New York, by Oswald W. Knauth. *Nation*, Aug. 30, 1919, p. 284.

actual bankruptcy in order to exist, the ethics of the situation vanish, and only the bare fact remains that teachers, notwithstanding the high motives by which they are really actuated, are quite human after all, and like the rest of mankind must by some means pay their bills in order to live and preserve their self-respect and assure themselves of the respect of a discriminating and critical public.

The committee calls attention to the advance in prices from 1897 to 1915 and from 1915 to 1917. The figures of the Bureau of Labor Statistics show an increase in wholesale prices from 1897 to 1915 of 53 per cent, and an increase in the yearly level of 1917 over that of 1915 of 74.3 per cent. This increase has particularly affected certain articles, such as food, clothing, fuel, furniture, etc. The general level of retail prices of 22 principal articles of food was 50 per cent higher in December, 1917, than in the corresponding month of 1915.<sup>1</sup>

In order to approximate the amount of money necessary to meet the emergency in the matter of teachers' salaries the committee adopted the recommendations of the Railroad Wage Commission of the United States in its report of April 30, 1918, relating to the wages of railroad employees and the cost of living.

Commenting upon these recommendations the commission says: "We have had a most exhaustive study made of the cost of living to-day, as contrasted with the cost of living in the latter part of 1915. \* \* \* To our mind it conclusively establishes two things: (1) That the cost of living has increased disproportionately among those of small incomes, and (2) that there is a point up to which it is essential that the full increased cost shall be allowed as a wage increase, while from this point on the increase may be gradually diminished."<sup>2</sup>

From this study the commission prepared a table in which the rates of increase in all wages up to \$250 a month, the amount taken as a vanishing point so far as wage increases are concerned, are shown. According to this table men with certain monthly wages should receive increases as follows:<sup>3</sup>

Monthly wages:	Percentage of increase.
Under \$46.....	103 to 44
\$46 and under \$80.....	43 to 41
\$80 and under \$100.....	40.44 to 31.75
\$100 and under \$200.....	31.29 to 8.375
\$200 and under \$250.....	8.26 to 0

In order to calculate what increases were necessary to make the teachers' financial status in 1918 as good as it was in 1915, the committee applied these schedules to teachers' salaries, basing their

<sup>1</sup> MONTHLY LABOR REVIEW of the Bureau of Labor Statistics, February, 1918, p. 92.

<sup>2</sup> Report of the Railroad Wage Commission, Apr. 30, 1918. Washington, pp. 15-16.

<sup>3</sup> Idem, pp. 20-26.

estimates, however, upon yearly rather than upon monthly wages. In the following table, quoted from the committee's report (p. 49), the estimates arrived at are given by States:

ESTIMATED SALARIES AND EXPENDITURES NECESSARY FOR TEACHERS' SALARIES TO MEET THE ADVANCE IN COST OF LIVING IN 1918, BY STATES.

State.	Average salaries of teachers, 1914-15. <sup>1</sup>	Estimated salaries to meet the advance in cost of living, 1918. <sup>2</sup>	Per cent of increase.	Total expenditures for teachers' salaries, 1914-15. <sup>1</sup>	Estimated expenditures to meet the advance in cost of living, 1918. <sup>2</sup>
Maine.....	\$411.13	\$651.13	58	\$2,240,982	\$3,540,752
New Hampshire.....	472.34	712.34	51	1,200,110	1,812,166
Vermont.....	418.77	658.77	57	1,246,816	1,957,501
Massachusetts.....	810.72	1,143.11	41	14,789,286	20,852,893
Rhode Island.....	714.37	1,007.26	41	1,807,332	2,548,338
Connecticut.....	619.36	878.80	41	4,363,034	6,183,728
New York.....	975.13	1,365.18	40	46,690,195	65,366,273
New Jersey.....	861.86	1,215.22	41	12,301,576	17,345,222
Pennsylvania.....	465.72	705.72	52	25,687,143	39,044,457
Ohio.....	537.52	777.52	44	18,789,778	27,057,280
Indiana.....	592.69	847.55	43	11,168,718	15,971,267
Illinois.....	713.84	1,006.51	41	23,179,650	32,683,306
Michigan.....	557.71	797.53	43	11,931,113	17,061,492
Wisconsin.....	542.02	782.02	44	8,850,051	12,744,073
Minnesota (1914).....	469.28	709.28	51	10,375,297	15,666,698
Iowa.....	506.09	746.09	47	11,174,716	16,426,833
Missouri.....	533.59	773.59	43	10,767,962	15,398,186
North Dakota.....	574.76	821.91	43	3,695,051	5,283,923
South Dakota.....	457.27	697.27	52	2,987,437	4,540,904
Nebraska.....	454.67	694.67	53	6,217,797	9,513,229
Kansas.....	635.34	895.83	41	7,933,519	11,186,262
Delaware.....	* 558.31	598.31	67	263,608	440,225
Maryland.....	561.83	803.42	43	3,495,724	4,998,885
District of Columbia.....	1,019.08	1,426.71	40	1,700,067	2,464,934
Virginia.....	332.19	572.19	72	4,156,959	7,149,969
West Virginia.....	320.29	560.29	75	3,545,573	6,204,763
North Carolina.....	251.31	491.31	96	3,487,204	6,835,116
South Carolina.....	282.68	522.68	85	2,281,249	4,226,311
Georgia.....	305.97	545.97	78	4,383,259	7,805,761
Florida (1914).....	327.00	567.00	73	1,644,481	2,844,052
Kentucky.....	342.96	582.96	70	4,270,554	7,259,942
Tennessee.....	335.20	575.20	72	4,185,097	7,198,367
Alabama.....	345.00	585.00	70	3,579,199	6,094,638
Mississippi (1913).....	233.64	473.64	103	2,173,717	4,412,646
Louisiana.....	437.19	677.19	55	3,451,226	5,349,400
Texas.....	428.20	668.20	56	11,373,280	17,742,317
Arkansas.....	334.94	574.94	72	3,567,461	6,136,033
Oklahoma.....	438.69	678.69	55	6,179,928	9,578,888
Montana.....	640.07	902.50	41	2,775,290	3,913,159
Wyoming.....	494.06	734.06	49	856,059	1,275,528
Colorado.....	560.58	801.63	43	4,402,243	6,295,207
New Mexico.....	507.54	747.54	47	974,608	1,432,674
Arizona.....	738.96	1,041.93	41	943,525	1,330,370
Utah.....	691.66	975.24	41	2,572,114	3,626,681
Nevada.....	725.08	1,022.36	41	484,855	683,646
Idaho.....	665.16	927.88	41	2,094,875	2,963,774
Washington.....	808.42	1,139.87	41	7,854,843	11,075,329
Oregon.....	506.35	746.35	47	3,786,684	5,566,419
California.....	951.27	1,340.05	40	17,062,504	24,035,949
United States.....	543.31	788.43	45	345,006,445	511,100,656

<sup>1</sup> Taken from Report of the United States Commissioner of Education for 1917, Pt. II, pp. 50 and 54.

<sup>2</sup> Based on the table found on p. 20 of the Report of the Railroad Wage Commission for 1918, Washington, D. C.

<sup>3</sup> Exclusive of Wilmington.

The report points out that in 1915 the average salary for all public-school teachers in the United States was \$543.31; that is, \$1.73 per working day throughout the year, or \$1.48 per living day. Not a

[1905]

State in the Union paid an average salary of \$1,000; 2 States, California and New York, paid an average salary exceeding \$900; 3, Washington, New Jersey, and Massachusetts, from \$800 to \$900; and 4, Nevada, Arizona, Illinois, and Rhode Island, between \$700 and \$800.

As against these 9 States in which the average salary of teachers might be considered barely a minimum wage there were 29 States in which the average was below the average for the United States; 23 in which the average was below \$500; 12 in which it was below \$400; 3 in which it was less than \$300; and 1 State in which the average daily wage was 64 cents. And it must be remembered that these are general averages in which the salaries of principals and superintendents are included and that they do not, therefore, actually represent the worst conditions relative to teachers' salaries.

In considering the estimates in the second column of the above table, it should be noted that they are based upon a cost of living study made by the Railroad Wage Commission covering a period from January, 1916, to April, 1918. The recommendation of the commission was that the increases be retroactive to January 1, 1918. Hence the estimates in this column are evidently intended to apply to January 1, 1918. The commission recommended wage increases on a sliding scale starting with a flat increase of \$20 a month on salaries under \$46 a month, and 43 per cent on salaries from \$46.01 to \$50, and continuing with the percentages of increase decreasing inversely with the salary up to a vanishing point at a salary of \$250 a month.

From the table of cost of living index numbers made by the United States Bureau of Labor Statistics appearing on page 193 of the MONTHLY LABOR REVIEW for November, 1919, it may be seen that there was an increase from an index of 104 in December, 1915, to 142 in December, 1917, an increase of 38 points in the index, or 37 per cent. Hence it will be seen that the commission recommended an increase greater than the advance in the cost of living to the lower grades and less to the higher grades.

During the months of 1918 there was a decided increase in the cost of living in the United States, and the estimates in the above table fixed for January 1, 1918, are too low for the year as a whole. From December, 1917, to December, 1918, the cost of living index number increased from 142 to 174, an advance of 32 points or approximately 23 per cent. And to carry the comparison still further, in June, 1919, the index number had mounted to 177, an advance of 35 points, or about 25 per cent as compared with December, 1917. so that a salary of \$788.43, which was considered warranted on January 1, 1918, must be increased to \$969.77 in December, 1918, and to \$985.56 in June, 1919, in order to keep up with the skyrocketing of prices during this period.

[1906]



## Action Taken in 1918 to Increase Teachers' Salaries.

Since the publication of the report under discussion regarding teachers' salaries, the National Education Association has through a questionnaire endeavored to secure the most recent information and to ascertain what is actually being done by the several States to improve the situation.<sup>1</sup> Through blanks sent to county and city superintendents in various places and sections of the country, information was sought relative to salaries, number of teachers leaving during the year, schedules of salaries in operation, standards of preparation set, and cost of living. A blank was sent at the same time to individual teachers to secure information in greater detail on the same items. Four hundred and twenty-three city superintendents<sup>2</sup> representing all parts of the country sent in replies, while filled-in blanks were received from 15,000 individual teachers.

As a matter of convenience the cities, 392 in number, from which the results of this investigation were obtained have been arranged in six groups according to size.<sup>3</sup> The median salaries received during 1918-19 are as follows:

MEDIAN SALARIES RECEIVED BY PUBLIC-SCHOOL TEACHERS IN 1918-19 AS SHOWN BY THE CITIES REPORTING.

	Group I.	Group II.	Group III.	Group IV.	Group V.	Group VI.	Total.
Elementary.....	\$936	\$889	\$866	\$774	\$677	\$693	\$856
Intermediate.....	1,226	1,007	1,007	943	775	738	951
High school.....	1,513	1,288	1,242	1,097	944	918	1,224
All schools.....	1,013	943	928	841	750	741	917

Although the report shows that the salaries of all classes of teachers are glaringly inadequate to meet the cost of living, the wage status of the elementary teachers has been made largely the basis of comparison in this article, since they must maintain practically the same standard of living as the better paid teachers.

It is evident from the table that elementary teachers receive a median salary of \$856 per year, but this estimate does not include salaries of teachers in rural schools, which if given would doubtless make the average considerably lower.

<sup>1</sup> Teachers' salaries and salary schedules in the United States, 1913-19, by E. S. Evenden. National Education Association, Washington, 1919. 169 pp.

<sup>2</sup> As only 10 replies were received from county superintendents and these involved very few teachers, conditions in rural schools are not quoted in the study.

<sup>3</sup> Group I, cities with population over 100,000; Group II, cities with population between 50,000 and 100,000; Group III, cities with population between 25,000 and 50,000; Group VI, cities with population between 10,000 and 25,000; Group V, cities with population between 5,000 and 10,000; Group VI, cities with population below 5,000.

According to a geographical grouping also made, the lowest salaries are paid in the Southern States, while the cities of the extreme West pay the highest salaries. This is the group average, however, and is not altogether true of individual cities.

For the purpose of securing information regarding the relation of teachers' salaries to their actual expenses the superintendents were asked to state the minimum and maximum salaries of teachers under their supervision and also what good board and a comfortable room would cost an elementary teacher in their community for a 12-month period.

The following table gives the situation in this respect for the cities of the United States as shown by the medians for elementary teachers of the different groups:

	Group I.	Group II.	Group III.	Group IV.	Group V.	Group VI.	Total.
Minimum salary <sup>1</sup> .....	\$731	\$600	\$650	\$610	\$570	\$613	\$614
Per cent below \$800.....	74	89	82	86	95	89	88
Per cent below \$500.....	11	28	16	12	29	18	19
Board and room <sup>1</sup> .....	\$500	\$513	\$433	\$440	\$414	\$402	\$426
Maximum salary <sup>1</sup> .....	\$1,125	\$1,045	\$1,000	\$896	\$800	\$781	\$867
Per cent below \$1,000.....	33	24	50	73	90	78	71
Per cent below \$800.....		6	7	32	50	57	37

<sup>1</sup> These amounts are medians for the groups, 352, 360, and 334 cities reporting, respectively.

Even a casual examination of this table reveals the "lure for ambitious recruits" which the profession of teaching will have, when the minimum salary in 88 per cent of the cities reporting is below \$800, and the maximum salary is below that amount in 37 per cent of them. According to the author of the report the cost of board and room should not represent more than 50 per cent of a teacher's necessary expenses. In the light of this standard it is possible to measure the adequacy of established salary schedules by doubling the cost of board and room for a particular city and comparing that sum with the minimum and maximum salaries existing in that city.

Such a comparison based upon the foregoing summarization indicates that the teacher is not expected to meet her yearly expenses on the minimum salary, or if so, for only part of the year, while if perchance her span of life is such that she ultimately reaches the maximum limit she can meet her necessary expenses with a generous margin of \$15 remaining to provide for the future, and to indulge in occasional travel, special study, or additional comforts.

Another indication of the inadequacy of teachers' salaries lies in the fact that an average of 66 per cent of the teachers resigning their positions, without regard to cause, received less than the median

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salaries for their respective groups, while the percentage of those who left teaching to take up other lines of work reached an average of 70.

A tabulation of the returns made by 15,000 individual teachers substantiates the fact that only one teacher in five has any additional income and for this one-fifth the median amount is less than \$100 in most groups. It is also shown that 46 per cent of the elementary teachers, 43 per cent of the intermediate teachers, and 42 per cent of the high-school teachers have others dependent upon them for support, either wholly or in part, and that individual teachers support more dependents in large cities than in the smaller towns. As a majority of the teachers, especially of the elementary and intermediate schools, are unmarried women, such a finding constitutes an additional refutation of the world-old theory, that woman workers should receive less than men because they have no families to support.

### Teachers' Salaries as Compared with the Wages of Other Workers.

While no one would deny to any worker his right to a generous living wage, a comparison of the salaries paid teachers, who are expected to give at least six years to preparation for their profession beyond the intermediate grades and much additional study from year to year, with the wages of workers who need make little or no preparation for their work, furnishes an interesting study and food for serious thought. The effect upon the teaching force is evident. What will be the effect upon the incentive which the average boy or girl of the future will have to complete even a high-school course is problematical. Numerous examples might be cited of young people leaving high school to work in mines, machine shops, and shipbuilding yards, where they received higher average wages than did the teachers in the schools which they left. High school boys employed during the summer of 1919 as machinists' helpers in the shipyards of a Virginia city received more per day than did the elementary teachers of that city.

According to the estimates of the United States Commissioner of Education,<sup>1</sup> teachers' salaries increased from \$543.31 in 1915 to \$630.64 in 1918, a gain of about 16 per cent, making their average monthly salary about \$53. As this is the latest estimate available, comparison of this estimate with the wages of other workers will be based largely upon statistics for that year.

In the recommendations of the Railroad Wage Commission for wage increases in 16 of the lowest paid branches of the service only two, "messengers and attendants" and "section men," were to receive less than \$700 a year and they were rated at \$56.17 and \$57.68 per

<sup>1</sup> National Education Association Bulletin, April, 1919, p. 14.

month, respectively. In the estimates for these branches of the service, which included crossing flagmen, yard employees, men in construction gangs and work trains, etc., actual increases in wages during 1918 were not taken into account. It is apparently more remunerative, as some one has lightly said, "to mind trains than to train minds." An intensive study of the statistics obtained from a typical New York draft board reveals the fact that elementary teachers in New York City—where teachers' salaries are relatively very high—receive practically the same wage as butchers, chauffeurs, clerks, waiters, etc., almost none of whom require any special preparation for their work.

The author of the report on teachers' salaries and salary schedules shows that according to the union scale of wages operative in 1918 in a geographical district in which Cleveland and Chicago were selected as representative industrial cities, head bakers received \$363 more per year than the elementary teachers of the same district, blacksmiths \$890 more, and machinists \$1,138 more. He pertinently suggests that it is worth more to mold dough for bread than to mold boys and girls into citizens, to hammer hot iron than to hammer ideals, and to construct machines than to build character.

A comparison of teachers' salaries with incomes in other professions in the business world reveals like discrepancies. For instance the report finds that a teacher's chances of securing an income of \$3,000 or over would be  $1\frac{1}{2}$  times greater on the stage, 3 times greater in the clergy (never considered an overpaid profession), 9 times greater in storekeeping, commercial traveling or the real estate business, and 14 to 20 times greater in publishing, medicine, military service, and insurance.

Though the 16 per cent increase in teachers' salaries between 1914-15 and 1918 is, of course, entirely inadequate to meet the advance in the cost of living, it is, nevertheless, encouraging as indicative of an awakening public sentiment in a matter of vital importance to the future welfare of this country. With 5,500,000 persons in the United States over 10 years of age who can neither read nor write, and an Americanization problem of startling proportions awaiting solution, the nation can not afford to have 50,000 vacancies in the teaching profession. It must in some manner rescue its schools.

Some of the cities have made an effort during 1918-19 to meet the situation by granting increases of from \$5 to \$10 a month to flat increases of several hundred dollars per year, and a number of the States also have made increases through recent State legislation. Among them Virginia increased its appropriation for teachers' salaries by \$800,000 to aid the rural schools in matters of salary and length of school term. Texas appropriated \$2,000,000 for 1919-20 and an equal amount for 1920-21 to provide better salaries

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and longer school terms in its rural schools, and provided equal pay for men and women. The minimum salary for high-school teachers in South Carolina was increased from \$55 to \$75 per month, a gain of about 36 per cent. Oregon placed its minimum monthly salary for any public-school teacher at \$75. In Indiana the salaries of four classes of teachers have been increased from 25 to 30 per cent according to class. College graduates in Iowa now receive a minimum salary of \$100 per month, and graduates of a two years' normal, \$80. The New York law, the most important salary law passed recently, provides that "all cities in the State of the first and second class shall pay minimum salaries of \$800 for elementary teachers, and shall provide at least eight annual increments." Kentucky has established a \$50 minimum salary for first class rural schools. Legislation dealing with teachers' salaries is also pending in Massachusetts, Georgia, Connecticut, and Illinois.

Only one or two of the States reporting had enacted any legislation looking toward the relief of the rural schools which have the greatest need of financial help. There is, however, a distinct realization of this need and a growing appreciation of the fact that until the rural schools are able to compete successfully with those in larger towns and cities, they must continue to attract only such teachers as are either poorly trained or merely seeking experience of a temporary character.

It must however be emphasized that notwithstanding these efforts to improve teachers' salaries there has been no real increase in 1918-19 over 1917-18 because, as stated before, the increases given teachers during this period were not even sufficient to meet the increases in their living expenses.

### Salary Schedules.

The shortage of teachers, the inadequacy of teachers' salaries and the lack of uniformity shown in methods of fixing them lead to a consideration of the necessity of adopting uniform salary schedules upon which the teachers can depend.

In the first place a salary schedule should be adjusted to the cost of living. Many of the existing schedules appear to have been adopted as matters of expediency, as safeguards against advancing salaries above certain fixed limits, and for many reasons other than the very serious problem of the decent and comfortable maintenance of the teaching force. It should moreover guarantee a career. An attractive salary schedule offers an inducement to well-trained men and women to adopt teaching as a life work and will thus eventually help to counteract the present transient character of tenure.

Such schedules should also prove an incentive to more thorough preparation. The promised rewards must represent some return upon investment or the more capable, businesslike men and women

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will not enter the teaching profession. While the application of salary schedules should, if possible, be a measure of the teachers' efficiency and progress in their work, there should be an element of flexibility in the maximum limit, at least, which will operate to retain specially efficient teachers where their work is of greatest value.

Elementary, intermediate, and high-school teachers should be placed upon the same salary schedule if and when they meet the same standards of preparation and efficiency. A standardization of schedules should be effected whereby experience could be accepted year for year, where comparable, thus enabling teachers to reap the benefit of the work they had actually done. Such an arrangement would tend to unite the teachers into a profession, and what is equally as important, would give the smaller communities the advantage of the more competent, experienced teachers, and remove the restrictions upon moving into other positions which exist at present in many systems.

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## Coal Miners' Wage Increases in Wales During the War.<sup>1</sup>

CALCULATIONS as to miners' wages in the South Wales coal field are highly technical, are based on an obsolete standard of production which included only large coal and ignored small coal, and are expressed by percentage increases calculated on an artificially chosen basis. The following statement as to wages was issued by the Coal Owners' Association of South Wales:

The cost of labor in the South Wales coal field has increased from about \$2.84 per ton, based on the output of large coal, to approximately \$6.37 per ton, and that of stores from about \$0.89 to nearly \$2.15 per ton. In May, 1915, the miners in the coal field were granted a war bonus of 17½ per cent, and in August, 1915, a further advance of 12½ per cent. In December, 1915, there was a reduction of 5 per cent, but in June, 1916, there was an increase granted of 15 per cent; in December, 1916, another increase of 15 per cent; in September, 1917, the Coal Controller granted a special war wage of \$0.36 per day to adults and of \$0.18 per day to boys under 16, and in July, 1918, increased that special war wage to \$0.73 per day in the case of men, and to \$0.36 per day in the case of boys, both these special war wages being payable whether the men worked or not, so long as they were willing to work; and in October, 1918, a further concession was made of payment of the war wage on overtime.

The effect of these increases has been to secure for the highest-paid day wage men a minimum weekly wage 87 per cent higher than they had before the war, for the medium-paid, underground, day wage men an increase of 134 per cent, and for the lowest-paid day wage men an increase of 200 per cent. In addition to these advantages, the miners since 1914 had been given a standard minimum percentage equal to the prewar maximum percentage; a bonus turn previously paid to only a number of men employed on the afternoon and night shifts has been extended to all men em-

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<sup>1</sup> From Supplement to Commerce Reports, Sept. 25, 1919, pp. 8-10, United States Department of Commerce, Washington.

ployed on those shifts; the wages of all the lower-paid day-wage men have been leveled up; and the miners have continued to receive their supplies of house coals at the low nominal pit-head, average price of about \$1.46 per ton, and have been exempted from the increased prices charged to other consumers, as well as from the rationing provisions of the Household Fuel Order, 1918.

Official figures given out by the South Wales Coal Owners' Association show the weekly (48 hours) wages paid to 40,000 skilled miners, from which it appears that about 27,000 received less than \$14.60 per week in July, 1914, but that all except about 700 were earning more than this in November, 1918, and that nearly 26,000 were in receipt of a weekly wage exceeding \$21.90 at that time. These figures appear in the following table:

NUMBER OF EMPLOYEES RECEIVING EACH CLASSIFIED WEEKLY WAGE IN JULY, 1914, AND NOVEMBER, 1918.

Weekly wage.	Employees receiving each classified wage in—		Weekly wage.	Employees receiving each classified wage in—	
	July, 1914.	November, 1918.		July, 1914.	November, 1918.
\$9.73 to \$12.16.....	16,993	177	\$34.06 to \$36.49.....	22	1,476
\$12.16 to \$14.60.....	10,481	504	\$36.49 to \$38.93.....	17	946
\$14.60 to \$17.03.....	6,519	1,168	\$38.93 to \$41.36.....	10	650
\$17.03 to \$19.47.....	3,202	2,077	\$41.36 to \$43.80.....	5	364
\$19.47 to \$21.90.....	1,608	9,834	\$43.80 to \$46.23.....	1	233
\$21.90 to \$24.33.....	780	6,298	\$46.23 to \$48.67.....	1	171
\$24.33 to \$26.76.....	379	5,479	Over \$48.67.....	2	330
\$26.76 to \$29.20.....	151	4,377			
\$29.20 to \$31.63.....	101	3,384	Total.....	40,311	39,736
\$31.63 to \$34.06.....	39	2,268			

When the war broke out in August, 1914, the general wage rate was at the old maximum of 60 per cent above the standard rates of 1879. The following table summarizes the war-time percentage wage advances over the standard wages of 1915 and of 1879:

WAR-TIME PERCENTAGES OF WAGE ADVANCES OVER THE STANDARD WAGES OF 1915 AND 1879.

Date of advance.	Advance.	Percentage advance over standard of—	
		1879	1915
1915:			
May 3.....	17.5 per cent.....	77.5	
Aug. 21.....	12.5 per cent.....	96.2	30.8
Dec. 1.....	5 per cent <sup>1</sup> .....	88.7	25.8
1916:			
June 1.....	15 per cent.....	111.2	40.8
Dec. 1.....	do.....	133.7	55.8
1917, Sept. 17.....	\$0.36 and \$0.18 <sup>2</sup> .....		
1918, July 1.....	do.....		

<sup>1</sup> Reduction.

<sup>2</sup> War bonus granted by the Coal Controller to adults and boys, respectively.

The following table expresses the above percentage advances over the previous standards in actual wages, and shows the weekly wages received by the different classes of mining employees. The bonus turn referred to in the table was a payment made by agreement to certain classes for an extra unworked shift. The concession really placed the wages of the afternoon and night men, who did no work on Saturdays, on the same basis as the day men who worked six days (eight-hour shifts) per week:

WAR-TIME WAGE INCREASES BY CLASS OF WORKMEN.

Class of workmen.	July, 1914.		July, 1913.
	Exclusive of bonus turn.	Inclusive of bonus turn.	
Timbermen (day wages).....	\$8.84	\$10.60	\$19.86
Rippers.....	8.09	9.71	18.55
Assistant timberman.....	6.67	8.01	16.07
Assistant rippers.....	6.67	8.01	16.07
Roadmen.....	7.18	8.62	16.96
Riders (over 18 years).....	7.52	9.02	17.55
Hauliers (day rate).....	7.58	9.10	17.73
Hauliers (night rate).....	7.26	8.72	17.73
Trammers (over 18 years).....	6.33	7.58	15.78
Laborers (over 18 years).....	5.76	6.91	15.75
Hostlers.....	5.92	7.10	15.75
Underground enginemen:			
Main haulage (adults).....	6.54	7.75	15.75
Subsidiary haulage (adults).....	6.00	7.22	15.75
Underground pump men:			
Main pumps (adults).....	6.39	7.58	15.75
Small pumps (adults).....	5.78	6.93	15.75
Fitters.....	6.57	7.89	15.91
Electricians.....	6.77	8.13	16.25
Rope splicers.....	7.62	9.14	17.73
Masons.....	8.35	10.02	19.61
Pitmen.....	8.27	9.91	18.87
Shacklers and sprag men.....	5.68	6.81	15.75
Lamp lockers.....	5.25	6.31	15.75
Lamp lighters.....	5.37	6.45	15.75
Oilers (oiling sheaves, rollers, etc.).....	5.37	6.45	15.75
Coal cutter men.....	6.33	10.52	19.74
Airway men.....	7.60	9.12	17.69
Water men (watering roads).....	5.90	7.08	15.75
Cog cutters.....	6.73	8.09	16.19
Timber drawers.....	7.46	8.94	17.45
Bottom cutters:			
Cutting hard bottom.....	7.91	9.49	18.24
Cutting soft bottom.....	7.06	8.48	16.76
Assistant bottom cutters.....	6.18	7.42	15.75
Sheaf men, roller men, and pulley men.....	6.93	8.31	16.54
Underground banksmen:			
Leading.....	7.36	8.82	17.27
Assistant.....	6.81	8.19	16.33
Underground winding enginemen.....	7.79	9.33	18.02
Pipemen.....	6.51	7.81	15.79
Rope changers.....	7.38	8.86	17.33
Slummers (at pit bottom).....	6.24	7.50	15.75
Jig hitchers (at top and bottom of incline).....	6.81	8.19	16.33
Walls in working face.....	6.04	7.26	15.75

## Coal Prices.

The official price for best, large, Admiralty coal, reserved exclusively for Government use, was throughout the year 1918, \$8.02 per long ton, f. o. b. Cardiff. The price of best smokeless coal and of best household coal was \$8.02 per ton to France and Italy for the

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first half of 1918, and \$8.63 to other allied and home buyers. After July 5 the price to all Allies, including France and Italy, was \$9.72. To neutrals the premium price was \$12.15 and as much as the seller could obtain, conditional on securing permit for the sale. Prices for home consumption were fixed in 1916 at \$1.57 per ton above the prewar price at the particular pit mouth, and in July, 1918, this allowed increase was doubled, making it \$3.14. Individual pit-mouth prices varied greatly in accordance with the quantity of coal, but a fair estimate of the average for good domestic coal at the pit mouth for the last part of 1918 is \$7.77. Adding to this the cost of railway transportation and immediate profits, the final cost to the consumer, delivered, was about \$10.22 per ton.

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## Methods of Reducing Hours of Work in Great Britain.

IN HIS annual report<sup>1</sup> the chief inspector of factories shows that prior to 1914 there had been a growing tendency to shorten hours, but upon England's entrance into the war and her consequent need of greatly increased production an order was promulgated considerably extending hours of work in practically all establishments producing munitions of war.

The immediate effect of this extension was an increase in output, but eventually the continued and excessive overtime reacted unfavorably upon both the health and the efficiency of the workers, and the movement to reduce hours was revived. After the signing of the armistice this demand became more insistent and the movement grew so rapidly that reports upon what schemes were being adopted to shorten hours and with what results were called for by the Government. These reports showed that the reduction in hours was being effected in three ways:

- (1) The one-break day system, under which work commences after breakfast and only one mealtime is allowed.
- (2) The two day-shift system, under which work is carried on by two shifts of workpeople each working from six to eight hours daily.
- (3) The five-day week system, under which no work is done on Saturday.

### The One-Break Day System.

The practice of the one-break day system which had been followed for years in certain industries, especially by many of those in London, gradually increased during the past year, being adopted in numerous

<sup>1</sup> Great Britain. Home Office. Factory department. Annual report of the chief inspector of factories and workshops for the year 1918. London, 1919. xiii, 83 pp. Cmd. 340.

industries of a varied character. Some of the engineering trades had adopted the shorter hour schedule before the trade-union agreement with the Government in 1914. The general opinion seems to be that the adoption of the one-break day has resulted in better time keeping and better health on the part of the workers and that the output has not been affected much.

Among the cases cited is that of a firm manufacturing large amounts of textile machinery, which gives some interesting information on the application of the eight-hour day. In 1918 this firm reduced its hours from 53 to 48 and adopted the one-break day system. From a trial of this system they found that "molders on practically all jobs have made the same number of boxes per blow, that machinists (men and women on piecework) have, with one or two exceptions, earned the same wages in the reduced period, that, though it is difficult to compare results, time workers were doing as much work as before. As regards time keeping they state that in June, July, and August, 1917 (53-hour week), 14 to 17 per cent of the men and 17 to 25 per cent of the women arrived late, while in the same three months in 1918 only 1 to 1½ per cent of the men and 1 to 1½ per cent of the women arrived late." The report furthermore states that no engineering firm was found which, having adopted the one-break day system, reverted to the old system.

In the textile trades the employers generally favor the one-break day on the ground that work time before breakfast is the least satisfactory period of the day. As much of the work is piecework, the cost of production has remained practically the same. Some of the individual workers in this industry object to the early breakfast hour and to the curtailment of their evening leisure; but even on their part there has been no general desire to return to the old system.

In the woolen industry opinions regarding the advantages of the new system vary, but most of the employers feel that output has not varied much, though one firm reported a slight loss during the winter months. The effect of shorter hours in the flax spinning and weaving industry differs greatly with the character of the work. The output of a spinning mill depends so largely upon the continuous operation of the machinery that, in one operator's opinion, the reduction in output "will be almost pro rata to the number of hours lost." Cost of production, they maintain, will also be increased. In the weaving factories, on the contrary, the human element plays a much larger part, the effective working of the loom being dependent upon the efficiency of the worker. The weavers are paid by the piece and can make up lost time by speeding up a little.

A curious phase of the situation is that though most of the workers favor the system the objections to this method of shortening hours come from them rather than the employers, who almost without

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exception favor it. The chief objections of the workers are: (1) Breakfast before starting means an increased consumption of coal and gas; (2) the interval between breakfast and dinner is too long (this difficulty, however, is easily met in establishments having canteens); (3) domestic arrangements are thrown into confusion, and the hardships of the housewife, especially if she is also a worker, are increased.

To the manifest advantages of the system, namely, an increase in the efficiency of the worker, an appeal to a better class of workers, better time keeping, and less sickness, the inspector for Scotland calls attention to two others not generally recognized: (1) Increased comfort in the workrooms, especially in the winter, when opportunity is given for properly heating them before work is begun; and (2) the additional rest which workpeople secure.

### The Two Day-Shift System.

By the second method of reducing hours, known as the two day-shift system, the day is divided into two shifts of six or eight hours each, between 6 a. m. and 10 p. m. Usually there is a break between the two shifts which gives opportunity for airing workrooms, adjusting machinery, and other changes which produce safer and more hygienic conditions.

While this system is not permissible for women and young people under the ordinary provisions of the factory law, it was allowed during the war and adopted by a considerable number of firms. Safeguards were thrown around women and young people in the matter of too early or too late employment, Sunday employment, long work periods before breakfast, employment of girls between 14 and 16 on the late shift, etc. The inspector heard very few objections to this system on the part of the workers, and employers would favor a continuation of it if it were likely to be made permanent under the Factory Acts.

A summarization of the advantages of the system include the following:

- (1) It increases the volume of available employment which at the present time is most urgently necessary, particularly in the case of women. In several cases the adoption of the system has enabled a firm on ceasing war contracts to avoid discharging numbers of its workers, to absorb its demobilized men without discharging other workers, or to take on numbers of women discharged from neighboring munition factories.
- (2) It affords a means of increasing the total national production which is essential to the restoration and maintenance of the national prosperity.
- (3) At the same time it decreases the cost of production.
- (4) It obviates overtime.

### The Five-Day Week System.

The five-day week with no work on Saturday has been adopted in individual establishments of various industries. The length of the work period differs in different industries. Usually the periods of

employment are equal during the five days, but in some instances an arrangement is effected whereby one period, consisting in a large majority of works of 10 or 11 hours, is worked on three days, while a shorter period is worked on the remaining two days.

No report is made of the effect of this system upon time keeping, health of workers, etc., but one textile factory in which the 5-day week was tried reported such a remarkable falling off in output upon the adoption of this system that a six-day week was adopted with better results. Generally speaking, this method of reducing hours does not seem to be attractive to either employers or workers.

## Wages and Hours of Labor in Germany During the War.<sup>1</sup>

THE Reichs-Arbeitsblatt, the monthly bulletin of the Division for Labor Statistics in the German Statistical Office, in its issue of August 27, 1919, publishes statistical data on the wages and hours of labor of male and female adult industrial workers. These data cover a 4½-year period beginning with March, 1914, and ending with September, 1918, and are reproduced here in part.

### Wages.

In the following table are shown the average daily wages of male and female adult industrial workers for March and September of each of the years 1914 to 1918, the index numbers of these wages, assuming that the wage rates for March, 1914, are equal to 100, and the per cent of increase in these rates from period to period.

AVERAGE DAILY WAGES, INDEX NUMBERS, AND PER CENT OF INCREASE OF WAGES OF ADULT INDUSTRIAL WORKERS IN GERMANY, BY SEX, IN MARCH AND SEPTEMBER OF EACH YEAR, 1914 TO 1918.

Item.	Last two full weeks of—									
	March, 1914.	September, 1914.	March, 1915.	September, 1915.	March, 1916.	September, 1916.	March, 1917.	September, 1917.	March, 1918.	September, 1918.
Average daily wage rate, in marks: <sup>a</sup>										
Male.....	5.17	5.12	5.88	6.56	7.00	7.56	9.10	10.82	11.68	12.46
Female.....	2.28	1.94	2.25	2.55	3.02	3.52	4.06	4.87	5.45	6.01
Index numbers (March, 1914=100):										
Male.....	100	99.0	113.7	126.9	135.4	146.2	176.0	209.3	225.9	241.0
Female.....	100	85.1	98.7	111.8	132.5	154.4	178.1	213.6	239.0	263.6
Per cent of increase from period to period:										
Male.....		b 1.0	14.8	11.6	6.7	8.0	20.4	18.9	7.9	6.7
Female.....		b14.9	15.9	13.3	18.4	16.6	15.3	19.9	11.9	10.3

<sup>a</sup> Owing to the great depreciation and fluctuation of the German mark the wage rates have not been converted into American money.

<sup>b</sup> Decrease.

<sup>1</sup> See MONTHLY LABOR REVIEW for December, 1917, pp. 40 to 50, and October, 1918, pp. 173 to 176 for articles on the same subject.

[1918]

According to the preceding table the average daily wage of adult male workers in September, 1918, was 12.46 marks and that of adult female workers 6.01 marks as against average daily earnings of 5.17 and 2.28 marks, respectively, in March, 1914. The index numbers show that in the 4½-year period covered by the table the per cent of increase of the wages of male workers amounted to 141 and that of female workers to 163.6. Hence the wages of men have increased in a lesser ratio than those of women, a fact that has generally been overlooked in public discussions of the wage movement during the war. Further, the table shows that after a small decrease (1 per cent) in the wages of men and a considerable decrease (14.9 per cent) in those of women in September, 1914, the wages of both groups of workers have steadily increased, though not at the same rate. In the case of men the largest increase of wages occurred in the period September, 1916, to March, 1917 (20.4 per cent) and in the case of women in the period March, 1917, to September, 1917 (19.9 per cent). After these two periods of maximum increases the rate of wage increases became gradually smaller in the case of workers of both sexes. In March, 1914, men's wages and women's wages were in the relation of 100 to 44 and in September, 1918, in that of 100 to 48. Thus at the end of the war the difference between men's and women's wages had become less marked.

The development of wages in the individual industry groups during the war is illustrated by the following table:

AVERAGE DAILY WAGES OF ADULT INDUSTRIAL WORKERS IN GERMANY, BY SEX AND INDUSTRY GROUPS, IN MARCH AND SEPTEMBER OF EACH YEAR, 1914 TO 1918.

Industry group.	Average daily wages for the last two full weeks of the month of—										Per cent of increase, Sept., 1918, over Mar., 1914.
	Mar., 1914.	Sept., 1914.	Mar., 1915.	Sept., 1915.	Mar., 1916.	Sept., 1916.	Mar., 1917.	Sept., 1917.	Mar., 1918.	Sept., 1918.	
<i>Male workers.</i>											
	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>	
Stones and earths.....	4.48	4.00	4.13	4.66	4.98	5.41	6.12	7.07	7.78	8.79	96.20
Metal working.....	5.54	5.67	6.29	6.93	7.47	8.02	9.88	11.81	12.01	12.94	133.57
Machinery.....	5.32	5.22	6.41	7.01	7.39	7.91	9.19	10.79	12.93	13.04	145.11
Electrical industry.....	4.52	4.02	4.99	5.31	5.76	7.44	9.25	10.93	12.06	13.46	197.78
Chemical industry.....	5.16	4.97	5.37	6.07	6.43	6.93	8.09	10.01	10.50	11.95	131.58
Textiles.....	3.64	3.19	3.67	4.05	4.00	4.17	4.45	5.18	5.79	6.47	77.74
Paper.....	3.93	4.17	4.49	4.88	5.08	5.56	6.29	7.37	8.27	9.43	139.94
Leather and rubber.....	5.07	4.45	4.94	5.78	5.85	6.37	7.30	7.81	8.21	8.78	73.17
Woodworking.....	4.22	4.30	4.56	4.60	5.20	5.61	6.22	7.80	7.77	9.96	136.01
Food.....	5.69	5.78	5.94	5.96	5.88	6.14	6.47	7.51	7.81	8.52	49.73
Clothing.....	3.79	2.72	3.58	3.70	4.00	3.68	4.94	5.98	6.82	8.17	115.56
Printing, etc.....	6.65	2.95	6.74	7.24	7.51	7.69	9.23	9.10	9.59	11.68	75.63
<i>Female workers.</i>											
	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	<i>Mks.</i>	
Stones and earths.....	1.67	1.49	1.62	1.87	1.96	2.19	2.57	2.87	3.10	3.87	131.73
Metal working.....	2.05	1.66	2.22	3.02	3.46	4.11	4.68	5.67	5.88	6.65	224.39
Machinery.....	2.28	1.96	2.87	3.20	3.63	3.88	4.31	4.88	6.01	6.26	174.56
Electrical industry.....	2.75	2.09	3.01	3.40	3.91	4.80	5.24	6.18	6.58	7.35	167.27
Chemical industry.....	2.36	1.92	2.35	2.62	3.08	3.55	4.11	5.21	5.93	6.60	179.66
Textiles.....	2.30	2.05	2.22	2.32	2.41	2.33	2.57	3.31	3.92	4.29	86.52
Paper.....	2.15	2.23	2.29	2.53	2.64	2.85	3.65	4.09	4.57	5.37	149.76
Leather and rubber.....	2.82	2.37	2.49	2.77	3.05	3.18	3.79	4.15	4.18	4.82	70.92
Woodworking.....	1.89	1.78	2.31	1.95	2.21	2.59	3.17	3.81	4.36	5.45	173.86
Food.....	2.10	1.89	2.09	2.31	2.40	2.89	2.84	3.72	4.04	4.24	101.90
Clothing.....	2.25	1.50	2.14	1.79	2.24	2.13	2.81	3.50	3.94	4.92	118.66
Printing, etc.....	2.56	2.30	2.29	2.64	2.82	2.93	3.22	3.77	4.27	5.10	99.21

[1919]

In commenting upon the data shown in the preceding table the following facts should be emphasized. In all industrial groups wages of male and female workers, with very few exceptions, have continuously risen during the war. Wages in the individual industry groups increased more or less rapidly and steadily, the total increase in most groups amounting to over 100 per cent and in one instance even to 200 per cent and over.

In the case of men the highest wages in September, 1918, were paid in the electrical industry (13.46 marks), the machinery industry (13.04 marks), and the metal industry (12.94 marks). Average wages in these three industry groups were higher than the general average (12.46 marks). Wages in the chemical industry (11.95 marks) and in the printing trades (11.68 marks) came up very near to the general average. As in prewar times, so also during the war textile workers received the lowest wages (6.47 marks), but still their wages for September, 1918, show an increase of 77.74 per cent as compared with their prewar wages. Workers in the food industries received the smallest wage increase (49.73 per cent). Further, it should be pointed out that the relatively largest wage increases were granted during 1916, 1917, and 1918.

The wages of female labor increased in a still greater measure than those of male workers, as can be seen from the percentage figures of the table. Women's wages were highest, in September, 1918, in the electrical industry (7.35 marks), the metal industry (6.65 marks), the chemical industry (6.60 marks) and the machinery industry (6.26 marks). In these four industry groups the wages exceed the general average rate of 6.01 marks. The lowest wages were paid in the industry of stones and earths (3.87 marks), the food industry (4.24 marks), and the textile industry (4.29 marks).

If the relative increase of wages in the individual industry groups during the war as compared with peace-time wages is considered, it is found that in the case of male workers increases in excess of 100 per cent have taken place in the electrical industry (197.78 per cent), the machinery industry (145.11 per cent), the paper industry (139.94 per cent), the woodworking industry (136.01 per cent), the metal industry (133.57 per cent), and the chemical industry (131.58 per cent). In the case of woman workers the following industries show the largest wage increases: The metal industry (224.39 per cent), chemical industry (179.66 per cent), machinery industry (174.56 per cent), woodworking industry (173.86 per cent), electrical industry (167.27 per cent), and the paper industry (149.76 per cent).

In conclusion the Reichs-Arbeitsblatt emphasizes that the wage data shown represent mere nominal wages, which can not be correctly interpreted without knowledge of their actual purchasing power.

## Hours of Labor.

In connection with the investigation of the wages of industrial workers the German Statistical Office has also inquired as to their daily net hours of labor, i. e., the daily hours of labor after deduction of rest periods and overtime.

The investigations covering the last two weeks of March and September, 1918, have shown that in September the regular working-day in stone quarries was 10 hours, and in March and September in the paper industry, 10 hours, 35 minutes, and in flour mills, 10 hours. The lowest daily hours of labor during March and September, 1918, were found to have been in force in the chocolate and candy industry ( $7\frac{1}{2}$  hours) and in lingerie and clothing factories (7 hours, 49 minutes). In most industries the prevailing daily hours of labor varied between 9 and 10 hours. In addition to the two industries named above, a day of less than 9 hours prevailed in the precious metals industry, in woolen, linen, and hosiery mills, passementerie works, woodworking, cigar, and shoe factories, and printing establishments.

Compared with working conditions in March, 1914, the following essential changes in the hours of labor have occurred during the war: The daily hours of labor have increased in stone quarries (by 15 minutes) and in paper factories (by 11 minutes). The working day was shortened in the chocolate and candy industry (2 hours), lingerie and clothing factories ( $1\frac{1}{2}$  hours), linen mills (1 hour, 10 minutes), hosiery and cotton mills (1 hour, 5 minutes), woolen mills (56 minutes), passementerie industry (52 minutes), shoe factories (38 minutes), hemp-spinning mills and twine factories (34 minutes), manufacture of artificial flowers (17 minutes), and in printing establishments (11 minutes). All these are industry groups which suffered from a shortage of raw materials.

In surveying the data on hours of labor for the entire period of the war it is found that a regular working-day of 10 hours and over was effective during the entire period in flour mills, in which even 11 hours were worked per day during the period March, 1915 to September, 1917, and in the paper industry (with the exception of September, 1914). A working day of 10 hours or over was also effective in stone quarries in September, 1916, 1917, and 1918, and in the iron and metal industries in March, 1916. A working-day of less than seven hours was in force in the lingerie and clothing industry in September, 1916 (6 hours, 54 minutes), cotton mills in September, 1916 (6 hours, 36 minutes), hosiery mills in September, 1916 (6 hours, 30 minutes), and in the passementerie industry in September, 1914 (6 hours, 21 minutes). The following industry groups operated with a working-day of 7 and under 8 hours: Iron and metal works

[1921]

in September, 1914 (7 hours, 38 minutes); the precious metals industry in September, 1914 (7 hours, 30 minutes), and in March, 1915 (7 hours, 53 minutes); cotton mills in September, 1915 (7 hours, 13 minutes), and in March, 1916 (7 hours, 6 minutes); linen mills in September, 1916 (7 hours, 42 minutes); hosiery mills in March, 1916 (7 hours, 27 minutes); chocolate and candy factories beginning with March, 1917 (7 hours, 30 minutes); lingerie and clothing industry in September, 1914 (7 hours, 46 minutes), and in March, 1917, and March and September, 1918 (7 hours, 49 minutes); shoe factories in September, 1914 (7 hours, 47 minutes), and in September, 1916 (7 hours, 55 minutes); manufacture of artificial flowers in September, 1914 (7 hours); and printing establishments in September, 1914 (7 hours, 40 minutes).

In summing up the results of the above investigations the Reichs-Arbeitsblatt points out that the data shown are insufficient to allow deductions to be made as to the relation of wages and output. The lines on which the investigations were conducted were too arbitrary and crude to permit of such use of the results, the investigation being merely intended to show the movement of wages and hours of labor. Moreover, the wage movement, as well as the changes in the hours of labor, was too much influenced by general conditions during the war. Valid conclusions can, therefore, not be drawn from the steady rise of the former and the gradual shortening of the latter.

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## Legislation Affecting Seamen's Wages in the Scandinavian Countries.

**F**OLLOWING an extensive investigation of the conditions surrounding the employment of seamen, the Swedish Government, early in October, 1919, passed a comprehensive statute regulating the work of the seamen. It may be observed in passing that some of the provisions of this new seamen's code were anticipated in a wage agreement of July, 1919, between the Swedish shipowners and seamen's and firemen's organizations which resulted from the mediation efforts of the Government Seamen's Wage Commission.<sup>1</sup> There are about 25,000 persons employed in the Swedish merchant marine, out of a total employed population (not including commercial and agricultural pursuits) of 827,000.

In form the new legislation is an amendment of certain sections of the Swedish Maritime Code. The law covers all the different occupations on shipboard, together with fishing and harbor crafts of various kinds.

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<sup>1</sup> See MONTHLY LABOR REVIEW, October, 1919, pp. 145, 146.



The usual hours of work at sea are to be divided into shifts, if the passage exceeds 24 hours. The hours of work may not exceed 24 hours within two consecutive days, but if the vessel carries 3 or more mates, engineers, oilers, coal or oil passers, the hours of work may not exceed 16 within two consecutive days. This latter is also the case for firemen on vessels above 250 horsepower draft.

Holiday work is greatly reduced and is confined to only the most necessary work of navigation.

Ordinary seamen may not be required to work over 9 hours per day. If the vessel is in port over 24 hours, the hours of work are reduced to 8. Stewards and other workers in the galley can not be required to work over 12 hours a day.

Every seaman or member of the ship's crew is to be given shore leave averaging at least one afternoon per month. This provision is to permit the members of a crew to attend to their individual purchases while in port. If, however, the ship's stay in port does not exceed 48 hours, such leave need not be granted if it would delay the departure in any way.

Exceptions to the provision of the law are allowed in the case of jeopardy to life and property and other exceptional hazards.

Overtime in general is limited to 6 hours within the 24, while at sea, as well as in port, and to 18 hours within the week. Overtime work on holidays must be so limited that the workday shall not exceed 8 hours. If the vessel is in a tropical port, holiday overtime work must be such that the workday will not exceed 7 hours.

No seaman may be employed on holidays in the unloading of other than the effects of the passengers or mail or goods subject to deterioration by delay. Extra compensation of 50 per cent of the ordinary pay is stipulated in the case of overtime on the regular workdays, and 75 per cent on holidays.

The wage agreement already mentioned fixed the following rates of pay for the different occupations on shipboard:

WAGE SCALE AGREED TO BY SHIPOWNERS AND SEAMEN'S AND FIREMEN'S ORGANIZATIONS IN SWEDEN, JULY, 1919.

Occupation.	Monthly rates on ship of specified tonnage.		
	Under 700 tons gross.	700 but less than 3,000 tons gross.	3,000 tons gross and over.
	<i>Crowns.</i>	<i>Crowns.</i>	<i>Crowns.</i>
Donkey man.....	270.00 (\$72.36)	300.00 (\$80.40)	320.00 (\$85.76)
Oil passer (first grade).....	270.00 ( 72.36)	300.00 ( 80.40)	320.00 ( 85.76)
Oil passer (second grade).....	270.00 ( 72.36)	255.00 ( 68.34)	275.00 ( 73.70)
Fireman (first grade).....	250.00 ( 67.00)	277.50 ( 74.37)	297.50 ( 79.73)
Fireman (second grade).....	225.00 ( 60.30)	255.00 ( 68.34)	275.00 ( 73.70)
Coal passer (age 18 and over).....	180.00 ( 48.24)	190.00 ( 50.92)	210.00 ( 56.28)
Coal passer (under 18 years of age).....	.....	137.50 ( 36.85)	.....
Carpenter (first grade).....	270.00 ( 72.36)	300.00 ( 80.40)	320.00 ( 85.76)
Carpenter (second grade).....	250.00 ( 67.00)	277.50 ( 74.37)	297.50 ( 79.73)
Boatswain.....	270.00 ( 72.36)	300.00 ( 80.40)	320.00 ( 85.76)
Able-bodied seaman (3 years at sea).....	250.00 ( 67.00)	277.50 ( 74.37)	297.50 ( 79.73)
Ordinary seaman (2 years at sea).....	.....	180.00 ( 48.24)	.....
Ordinary seaman (12 months at sea).....	.....	135.00 ( 36.18)	.....
Seaman.....	.....	75.00 ( 20.10)	.....

[1923]

In the adjustment of seamen's wages and conditions of employment, the three Scandinavian Governments are working in close cooperation and have set up a General Scandinavian Committee on the Revision of the Maritime Code which is charged with the formulation of a uniform code for the three Scandinavian countries.

Representatives of the shipowners, crew, insurers, and the Governments of the three Scandinavian countries recently took part in a conference in Norway. It was there tentatively resolved that everything in the maritime code concerning the relations of the crew, officers, and shipowners should be repealed forthwith and that the Governments of the three countries should undertake to enact a special law dealing with those subjects.

Everyone, including the shipowners, crew, and others interested, together with the captains, was agreed that imprisonment for desertion should be abolished, and that the officer in charge should be deprived of the right to exercise the powers of a judicial tribunal on shipboard. If a seaman, while at sea, commits a disciplinary offense which in the judgment of the officer in charge is punishable, such seaman may have a hearing of his case on board. All the crew should be given opportunity to testify at this hearing. A record should be kept of the hearings and if the commander still holds that the accused has made himself liable to punishment, he may appeal the proceedings to a shore court in the home port. The officer in charge, therefore, may never pass sentence or inflict punishment on board. It is not unlikely therefore, that imprisonment for leaving a ship, as well as the court powers of an officer in charge, will be completely wiped out of existence in Scandinavia in another year.

## MINIMUM WAGE.

### Effect of Minimum Wage Orders in California.

THE effect of minimum wage orders issued by the Industrial Welfare Commission of California, applicable to the mercantile industry and to laundries, is briefly presented in the third biennial report of the commission for 1917-18<sup>1</sup> recently received by this Bureau. The report states that 85 per cent of females working in industrial life in California are now under the protection of the industrial welfare commission, and that pay-roll returns show an addition, by the commission's rulings, of over \$1,000,000 to the wages of women in the mercantile, laundry, and canning industries, to say nothing of the gain to office workers and to those engaged in fish canning, fruit packing, and unskilled occupations, of which comparative pay rolls are not available.

The minimum wage order affecting the mercantile industry became effective early in September, 1917, and that affecting the laundry workers on January 14, 1918.<sup>2</sup>

Speaking generally the report shows that the "minimum wage is a beneficial measure," the effect of the orders being to eliminate the lowest wage groups and to increase the number of workers in the industries. In the mercantile industry the lowest wage permitted under the order is \$6 per week, with a minimum of \$10 for experienced adults.<sup>3</sup>

For the State as a whole the report shows that the proportion of females receiving under \$10 decreased from 51 per cent in 1914 to 40 per cent in April, 1917, and to 20 per cent in September, 1917. In the 5 and 10 cent stores, which are treated separately, the decrease in the proportion receiving under \$10 is even more noticeable in the period from April to September, dropping from 91 per cent to 25. In 1914, 70 per cent received less than \$6; in April, 43 per cent received under \$6, and 73 per cent under \$7. In September none received less than \$6 and only 8 per cent between \$6 and \$7, whereas 75 per cent received \$10 or over.

<sup>1</sup> Third biennial report of the Industrial Welfare Commission of the State of California, 1917-18. Sacramento, 1919. 112 pp.

<sup>2</sup> These orders were noted, respectively, in the MONTHLY REVIEW for September, 1917 (pp. 115, 117), and January, 1918 (pp. 119, 120).

<sup>3</sup> This order has been superseded by an order effective June 22, 1919, fixing \$13.50 as the minimum wage for experienced adults, with \$8 as a minimum for learners. See MONTHLY LABOR REVIEW for August, 1919, pp. 200-203.

In the laundry industry the lowest wage allowed, even by special license, is \$8 and the minimum wage for experienced adults is fixed at \$10.<sup>1</sup> The report states that the effect of this order was most noticeable in the low-wage groups. In October, 1917, the proportion receiving under \$10 was 56 per cent; in January, 1918, under the order, the per cent fell to 22. In 1914, 64 per cent had received under \$10. This indicates a drop of only 8 per cent from 1914 to 1917, while during the three months from October, 1917, to January, 1918, the drop was 34 per cent. Even including the special licensed wages there was an elimination of the lowest wage groups, that is, of under \$4, \$5, and \$6, respectively, and attention is called to the fact that, as in the mercantile industry, the reduction of the low-wage groups was accomplished by the promotion to better rates rather than through the discharge of any employees.

### Summary of Effect of Minimum Wage Orders.

The report gives the following summaries of the effect of orders in the mercantile and laundry industries:

Summing up the accomplishments of the mercantile order, the effects were found to be:

1. That no establishment was forced out of existence by the order.
2. That the number of employees was not decreased, but increased 10 per cent.
3. That the minimum wage does not become the standard. In California it did raise the wage representing the largest number of employees from the \$9 to the \$10 group.
4. That the minimum wage does not become the maximum, for the number in the high-pay groups increased. Other conditions that are entirely separate from the minimum wage very definitely limit the size of the higher-pay groups.
5. That the minimum wage is a real remedial measure. The lowest-pay groups were eliminated entirely. The percentage in the other low groups was restricted to 25 per cent of the number of employees. The changes were not brought about by general industrial conditions. There was no noticeable movement toward an advance in wages of women at any time in the three years from 1914 to 1917. There were no new factors introduced in the few months from April to September, 1917, that would cause such an advance.

A summary of the effects of the order of the industrial welfare commission in the laundry industry leads to the same conclusions as in the mercantile industry:

1. No establishment was forced out of existence by the order.
2. Employees did not lose their positions because of the order.
3. The minimum wage does not become the standard. It is true that in October 56 per cent of the laundry workers received a rate less than \$10. This decreased in January to 22 per cent, or by 34 per cent. In October, there were only 15 per cent in the \$10 group. This increased in January to 47 per cent or by 32 per cent. It is equally true that 27 per cent received \$9 in October and this was the standard wage then, with 56 per cent receiving \$9 and under. The minimum does not become the standard but does better the standard wage.

<sup>1</sup>This order has been superseded by an order effective Aug. 21, 1919, fixing \$13.50 as the minimum wage for experienced adults and \$10 as the minimum for learners.

4. As to the effect of the minimum wage upon the highest paid groups, the same comment already made in regard to the minimum wage becoming the maximum may be repeated. Those receiving the highest wages are those employed on the few highly skilled operations. The need for this group does not increase in direct proportion with the business, but at a slower ratio. Better pay promotes general efficiency of the management as well as the worker, and the need of supervisory employees is decreased rather than increased. This is offset to a certain extent in the total of wages paid by the fact that the minimum pushes up the wages along the whole line. The minimum may not increase the number of the highest paid positions. It is certain that the minimum does not become the maximum.
5. The minimum wage is a beneficial measure. The lowest-pay groups have been eliminated. The number in the other low-pay groups have been restricted. This has been accomplished without adversely affecting the number of employees, or the wages of the higher paid groups.

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## Recent Minimum Wage Orders in the United States and Canada.

### Oregon.

THE Industrial Welfare Commission of the State of Oregon recently issued 10 orders, effective October 14, 1919, fixing the hours of labor and a minimum wage for minors and women in mercantile, manufacturing, personal service, laundry, telephone and telegraph, and public housekeeping occupations.<sup>1</sup> The hours and wages for each class of employees mentioned in the orders are given in the table here given.

These orders also provide that no woman in the State of Oregon shall be employed as messenger in the telegraph, telephone, or public messenger service, and forbid the employment of women as elevator operators before 7 a. m. and after 11 p. m.

Order No. 46, effective October 14, 1919, fixes the hours and wages for minors (under 16). No minor girl may be employed for more than 9 hours per day and 48 hours per week, no minor boy for more than 10 hours per day. No child under 16 may be employed, under any circumstances, unless he or she has acquired the ordinary branches of learning taught in the first eight years of the public schools. Employment of girls is prohibited after 6 p. m. Continuous employment of minors for more than 6 hours between 7 a. m. and 6 p. m. without a rest period of at least 45 minutes is forbidden.

A minimum wage for minors between 14 and 15 years is fixed at \$6 per week; between 15 and 16 at \$7.20 per week; for minors from 16 to 18 years \$8.50 is the minimum fixed for the first 6 months, with an increase of \$1 per week for every six months of employment until the age of 18 is reached, when the adult wage shall be paid.

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<sup>1</sup>I. W. C. Orders Nos. 37 to 46.

RATES OF WAGES AND HOURS OF LABOR OF WOMEN PROVIDED IN RECENT  
 ORDERS ISSUED BY OREGON MINIMUM WAGE COMMISSION.

Occupation.	Maximum hours.		Days per week.	Hours not later than which women may be employed (p. m.).	Minimum weekly wage.					Length of apprenticeship.	Remarks.
	Per week.	Per day.			Experienced workers.	Apprentices.					
						1st period.	2nd period.	3rd period.	4th period.		
Mercantile (Portland).	48	9	1 6	6.00	\$13.20	\$9.00	\$10.50	\$12.00	.....	8 mos..	Not more than 6 hours of continuous labor without a rest period of at least 45 minutes.
Mercantile (State)	48	9	6	8.30	13.20	9.00	10.50	12.00	.....	8 mos..	Do.
Manufacturing....	48	9	6	8.30	13.20	9.00	10.50	12.00	.....	1 yr...	Do.
Laundry.....	48	9	6	8.30	13.20	9.00	10.50	12.00	.....	1 yr...	Do.
Personal service..	48	9	6	.....	13.20	9.00	10.50	12.00	.....	1 yr...	Not more than 6 hours of continuous labor between the hours of 7 a. m. and 8.30 p. m. without a rest period of at least 45 minutes.
Telephone and telegraph (Portland).	48	9	6	.....	13.20	9.00	10.00	11.00	\$12.00	1 yr...	Do.
Telephone and telegraph (State at large).	48	9	( <sup>4</sup> )	.....	13.20	9.00	10.00	11.00	12.00	1 yr...	Do.
Public housekeeping.	48	9	.....	.....	13.20	9.00	10.50	12.00	.....	1 yr...	Do.
Office.....	48	.....	6	.....	<sup>5</sup> 60.00	9.00	10.50	12.00	.....	1 yr...	Do.

<sup>1</sup> Confectionery stores and cigar stands in hotels are excepted.

<sup>2</sup> The average weekly rates for women employed at piece rates shall be not less than \$13.20 and at least 75 per cent shall be paid this rate. Not more than 25 per cent shall be paid less than \$13.20 and after 3 weeks' work such workers must be paid not less than \$9 per week, even if the amount earned at piece rate be less than that sum.

<sup>3</sup> The commission may, upon terms it deems proper, release any applicant employing less than 10 operators from compliance with this rule, but no woman may be employed for more than 7 consecutive days without allowing 1 day during which the hours of employment shall not exceed 6 hours.

<sup>4</sup> This order forbids employment for more than 7 consecutive days without allowing 1 day during which hours of employment shall not exceed 6. The commission reserves the right to release applicant from this rule.

<sup>5</sup> Per month.

### British Columbia.<sup>1</sup>

THE British Columbia Minimum Wage Board recently issued five additional orders fixing minimum wages for females employed as theater ushers, in the manufacturing industry, in personal service occupations, and as telephone and telegraph operators.

The order relating to females in the manufacturing industry is effective from September 1, 1919, and includes women engaged in making, preparing, and adapting for use or sale any article or commodity except in the canning, preserving, or packing of fish, fruit, and vegetables. Experienced workers 18 years of age or over must receive a minimum of \$14 a week of 48 hours, and girls under 18 years of age a weekly wage of not less than \$10 to begin with, and an additional \$1

<sup>1</sup> From Canadian Labor Gazette, October, 1919, pp. 1238-1239. Cf. article in the MONTHLY LABOR REVIEW for November, 1919, pp. 219, 220.

every 6 months until the wage amounts to \$14. No rates for apprentices in manufacturing have been set up by the board, but in any branch of the manufacturing industry in which apprentices are not usually employed the employer may pay a female 18 years of age or over a minimum wage of \$12 a week during the first three months of her employment.

An order relating to personal service occupations became effective on September 15. These occupations include the work of females in manicuring, hairdressing, barbering, and other work of like nature, ushers in theaters, attendants at public places of amusement, garages and gasoline service stations, or drivers of motor cars and other vehicles. The minimum wage of these workers is fixed at \$14.25 for a week of 48 hours for experienced adults, and for girls under 18 years of age not less than \$10 for the first six months, \$11 for the second, \$12 for the third, \$13 for the fourth, and \$14.25 thereafter. All apprentices coming under this head shall begin with \$10 a week, with \$1 a week increase every three months until the end of a year, after which \$14.25 shall be paid.

Theater ushers working from 18 to 36 hours a week must be paid a weekly wage of not less than \$10.80. These ushers may be employed only between the hours of 1.30 p. m. and 11 p. m. Ushers employed from 37 hours to 48 hours per week must be paid a weekly wage of not less than \$14.25. Female ushers engaged after 6 p. m. on legal holidays and for special matinées are to receive not less than 30 cents an hour with a minimum payment of 75 cents.

Two orders were issued on September 23, and gazetted on October 2, which relate to telephone and telegraph operators and all females employed in either of these industries who are not covered by any other minimum wage order of the board. Experienced workers 18 years of age or over are granted a minimum wage of \$15 a week. Girls under 18 years of age must be paid a weekly wage of not less than \$11 with an increase of \$1 a month every six months, until \$15 a month is reached. Apprentices must be paid a weekly wage of not less than \$11, increasing by \$1 every 3 months up to \$15. The hours of labor are fixed at 48 per week, 8 hours a day for 6 days, but where the employees are customarily on duty between 10 p. m. and 8 a. m. 10 hours shall be construed as the equivalent of 8 hours of work in computing the number of hours of employment a week. Skilled relief operators shall be paid at the rate of \$15 per week of 48 hours, fewer hours than this being paid proportionately. These orders become effective 60 days from their date of issue.

Saskatchewan.<sup>1</sup>

THE Minimum Wage Board of Saskatchewan, which was created under an act of the legislature of last February, has issued three orders which came into effect on October 1.

Order No. 1 relates to employees in shops, and provides for a payment of not less than \$15 per week to experienced women who are defined as those who have been employed in the industry for 18 months or more. The minimum weekly rate of wages for learners in shops is fixed at \$9.50 per week for the first six months, \$11 for the second, and \$13 for the third. Every employer is required to keep a record of the name, address, hours of work, and amount earned by each female employee. The maximum number of hours per week is fixed at 48, unless a special permit has been obtained from the minimum wage board.

At recent sittings of the board it was shown that the average weekly wages of 577 adult women employed in shops was \$15.40. In 1914, however, according to the Public Service Monthly, issued by the Saskatchewan Department of Agriculture, the average weekly wages of female workers in shops were as follows: 16 years and under, \$7.90; 16 to 21 years, \$9.20; 21 years and over, \$11.93.

Order No. 2 relates to woman employees in laundries and factories. It provides for a weekly wage of \$14 for experienced women as defined in the previous order. The minimum weekly rate prescribed for learners is \$9.50 for the first six months, \$11 for the second, and \$12.50 for the third, after which time they shall be considered experienced workers. The hours of labor in these establishments are governed by the provisions of the Factories Act.

Order No. 3 relates to mail-order houses. It provides for a minimum weekly wage of \$14 for experienced females. The minimum weekly rate for learners is \$8 for the first six months, \$10 for the second, and \$12 for the third, after which time they are considered experienced workers. No woman may be employed for more than 48 hours per week except by permit from the minimum wage board.

These orders also contain regulations with regard to conditions of labor, requiring the provision of fresh drinking water, sufficient lighting, ventilation, and warmth, and adequate sanitary arrangements.

<sup>1</sup> From Canadian Labor Gazette, October, 1919, p. 1249.



# COOPERATION.

## Agreement Between English Cooperative Societies and their Employees.<sup>1</sup>

**A**N agreement signed in August, 1919, by the cooperative societies of northwest England and the Amalgamated Union of Cooperative Employees clears up a somewhat anomalous situation. The cooperative movement is, in essence, the attempt of workers, in their capacity as consumers, to eliminate the middleman and save his profits for themselves. The growth of the British movement has led to the development of a business on a very large scale, and thus the worker has, as cooperator, himself become an employer.

The relation between the cooperative employer and his employee has always been a matter of discussion and of more or less contention. Notwithstanding the fact that probably the majority of the members of cooperative directing committees are trade-unionists and that the cooperative movement as a whole has always stood for fair wages, hours, and conditions of employment, their employees have found it necessary to join craft or trade unions, and have even brought about local strikes. When the bakers called a general strike in the trade, early in August of this year, the bakers in about 5,000 cooperative bakeries also struck.

About the middle of August the employees in Lancashire and the Airedale district of Yorkshire presented to the cooperative societies a demand for a new scale of wages, a 44-hour week, and six weeks' annual sick leave with pay. A few days later strike notices were served on the societies, in support of this demand. The societies retaliated by giving a week's notice to approximately 30,000 employees in Lancashire, Yorkshire, Cheshire, and North Wales.

The dispute resolved itself into a contest over the claim of the Amalgamated Union of Cooperative Employees to negotiate on behalf of members of trade-unions employed by the cooperative societies who were also members of the Amalgamated Union. This claim the hours and wages board of the societies refused to recognize, maintaining that the societies had agreements with the various craft unions and that their employees in these occupations must abide by the terms of the trade agreements. Two types of unionism were thus in conflict—the trade-union and the union of wage earners as such, regardless of craft.

After some days, during which the offer by the societies to arbitrate the matter was refused by the employees, the parties were brought together in conference by the Manchester and Salford Trades and

<sup>1</sup> The information on which this article is based was obtained from the Manchester (England) Guardian, issues of Aug. 5-25, 1919, and The Producer (Manchester), Sept. 15, 1919.

Labor Council. The result was an agreement,<sup>1</sup> signed August 25, after a continuous session of 24 hours.

The agreement establishes the following scale of wages, retroactive to the pay day of the week ending August 2, but does not affect cases where higher wages or better conditions already prevail.

WAGES ESTABLISHED BY AGREEMENT BETWEEN COOPERATIVE SOCIETIES OF LANCASHIRE, CHESHIRE, YORKSHIRE, AND NORTH WALES AND THEIR EMPLOYEES, BY OCCUPATION, SEX, AND AGE.

Occupation and age.	Males.	Fe- males.	Occupation and age.	Males.	Fe- males.
Junior employees:			Clerks:		
14 years.....	\$3.89	\$3.89	21 years.....	\$14.60	\$10.71
15 years.....	4.38	4.38	22 years.....	15.82	11.44
16 years.....	5.11	5.11	23 years.....	17.04	.....
17 years.....	5.84	5.84	Charge clerks.....	\$18.25	(8)
18 years.....	8.52	7.30	Skilled warehousemen:		
19 years.....	9.73	8.52	21 years.....	14.60	.....
20 years.....	10.95	9.73	22 years.....	15.82	.....
Assistants:			23 years.....	16.42	.....
21 years.....	14.60	10.71	Head warehousemen.....	\$18.25	.....
22 years.....	15.82	.....	Branch managers (all depart- ments).....	\$18.25	\$12.17
23 years.....	16.42	.....	Porters, caretakers, etc., 21 years..	\$14.60	.....
First assistants.....	(1)	(1)	Transport workers.....	(6)	.....

<sup>1</sup> 73 cents per week over rate for age where not less than 3 persons (in addition to manager) are employed; \$1.22 over rate for age where not less than 5 persons (in addition to manager) are employed.

<sup>2</sup> Minimum; increases to be negotiated.

<sup>3</sup> Not less than \$1.22 per week over rate for age.

<sup>4</sup> Minimum, for shops having weekly sales of less than \$486.65; for shops having sales of over \$486.65, a graduated rate, based either on turnover or length of service, to be negotiated.

<sup>5</sup> Minimum; if buyers, \$13.38.

<sup>6</sup> Wages established by trade-union agreement; but in no case less than \$15.82 for drivers of motor trucks nor \$14.60 for drivers of teams and stable and garage hands. Drivers handling cash to receive 60.8 cents extra per week.

The agreement contains the following provisions with regard to hours of labor, vacation, and wages for overtime and during absence on account of sickness:

*Hours of labor.*—The general employees' normal working week shall not exceed 48 hours, and the clerical employees' normal working week shall not exceed 40 hours.

*Overtime.*—For all time worked beyond the normal number of hours, the following extra rates shall be paid: For the first two hours, time and a quarter rate; for all additional hours, time and a half rate.

For Sundays and all statutory holidays, double-time rate, provided that in any district where it is the practice to work on the statutory holiday another day shall be substituted by arrangement and paid for.

Where it is necessary to clear the shops of customers after the usual hour for closing, 15 minutes shall be allowed free from any overtime payment.

*Wages during sickness.*—Wages to be paid as below during periods of sickness where absence from duty is properly vouched for by medical evidence: A total of three weeks' full wages and three weeks' half wages in the aggregate in any one year.

*Annual holidays.*—Annual holidays shall be allowed on the following scale: Under six months' service, three working days; six months' service, six working days.

This agreement is binding upon all the cooperative societies at the date of this settlement affiliated to the hours and wages boards in the northwestern section of the Cooperative Union (Ltd.), and upon all the branches of the Amalgamated Union of Cooperative and Commercial Employees and Allied Workers situate within the said section, by the signatures appended hereto.

<sup>1</sup> The Producer, Sept. 15, 1919, pp. 310, 311.

Interesting in this connection is a statement appearing in the August 29 issue of *The Common Cause*:

We are so thoroughly convinced that equal pay for equal work is the only solution of the difficulties which beset the relations of men and women in industry at this time that we can not hear without grave anxiety of the settlement of industrial disputes on a different basis. Such a settlement can not, we believe, be permanent. It is therefore with mixed feelings that we view the agreement arrived at by the cooperative societies and their employees at the end of last week. All war bonuses and war wage advances are to be merged in a scale for "junior males," beginning at 16s. [\$3.89] weekly, at 14 years of age, and rising to 45s. [\$10.95] weekly, at 20. The girls are to begin at the same rate, but are only to rise to 40s. [\$9.73] when they are 20. The minimum wage for adults is 60s. [\$14.60] for men and 44s. [\$10.71] for women. Branch managers are to get a minimum of 75s. [\$18.25] weekly if they are men, 50s. [\$12.17] weekly if they are women. Male clerks rise from 60s. [\$14.60] at 21 to 72s. 6d. [\$17.64] at 23; girl clerks receive 44s. [\$10.71] at 21 and 47s. [\$11.44] at 22. These are striking differences and we observe them with great regret. We are glad to see that the paper which represents trade-unionists takes the same line as we do in this matter. In a leading article on August 27, the *Daily Herald* says: "We call attention to these facts, not to belittle the settlement arrived at, but to record our protest against the action of cooperators and trade-unionists in accepting the discrimination against women involved in these settlements. Organized labor and the cooperators are simply making trouble for the future and lowering their own standard of life by allowing sex disqualification to be used to the disadvantage of women."

## Cooperative Movement in South Africa.<sup>1</sup>

THE cooperative movement in South Africa has been confined to producers' associations among the agricultural and pastoral industries, and to two consumers' retail societies, although the producers' associations have also extended their cooperation to the purchase of necessary supplies.

The development of cooperative societies among the farming population in South Africa has been comparatively slow, due to the environment and the sparseness of the population and to the fact that South Africa is populated by two races speaking different languages. These conditions have engendered a sense of independence and a lack of desire for mutual help, instead of the cooperation found where farms are small and the struggle for existence more severe. The failure of many cooperative schemes through lack of understanding of cooperative principles and improper organization and administration has also had a retarding effect on the growth of this movement.

There are now two kinds of cooperative associations among farmers—those that have unlimited liability and are assisted by the National Land and Agricultural Bank, and limited-liability associations that are entirely independent of governmental assistance.

<sup>1</sup> Extracted from Commerce Reports of May 13, Aug. 25, Oct. 4, and Oct. 27, 1919.

The limited-liability associations are principally in the Cape Province and in Natal. They are engaged in cheese making, bacon curing, fruit drying, curing and selling Turkish tobacco, selling agricultural produce and purchasing supplies, in the manufacture of wine, the slaughter and export of meat, the wattle-bark industry, and the holding of stock sales. As might be expected, they vary greatly in the extent of their operations.

While many of these associations were successful in a pecuniary way, strictly cooperative principles could not be put into practice because of the limited field to which each individual society was restricted, as well as the limited capital at their command. To obviate these difficulties, the Federated Farmers' Cooperative Associations of South Africa (Ltd.), was formed, in December, 1918, with a capital of £100,000 (\$486,600). The number of farmers now represented by the federation is about 35,000. The federation will deal with all classes of produce, will have power, within limits, to supply the requirements of all classes of producers, will establish its own buying and selling agencies in any part of the world, and, if necessary, charter its own shipping. It will exercise the functions of an organizing and intelligence bureau, will issue cooperative literature, and will arbitrate in disputes arising between constituent bodies. While this federation was originally formed exclusively by the cooperative organizations operating on a limited-liability basis, it is designed equally to serve the needs of the older cooperative societies founded on special legislation, whose liability is unlimited. Commercial concerns in which farmers do not have a preponderant share and a controlling voice are, however, excluded from its plan.

Since the beginning of the war, the federated trades-unions of the Transvaal, organized under the name of the South African Industrial Federation, have established a chain of cooperative stores and have organized the South African Industrial Federation Cooperative Development Co. (Ltd.). This company is authorized to engage in any business or transaction, as cooperative producers, manufacturers, and distributors, in all its branches, that may seem to the company directly or indirectly conducive to its interests. The capital of the association is placed at £10,000 (\$48,665), and the membership consists of such individuals and trades-unions or industrial organizations of workers as the directors deem fit to admit.

The society now has in operation 25 branch stores. There is also a cooperative printing establishment in Johannesburg, where the head office and wholesale warehouse is located. Up to the present very little of its merchandise has been imported direct from manufacturers. Most of it has been purchased locally through wholesale importing houses. However, as shipping becomes normal again,

and the finances of the company permit, direct importations will be made. The society has not yet entered into any productive enterprise, but as soon as the membership warrants it, cooperative bakeries, meat markets, etc., will be put into operation. At present the society has arrangements with several bakeries, butcher shops, boot and shoe dealers, etc., who allow members of the society a discount of 10 per cent on all purchases made. Half of this discount is received directly by the purchaser and the other half goes to the society to the credit of the collective funds. Nonmembers are allowed to make purchases at any of the company's stores, but only members enjoy the privilege of opening accounts up to the limit of their paid-up stock in the society. The federation sells its merchandise at as near cost as possible. It has already had to appeal to the Government for financial assistance.

The other consumers' cooperative movement is that of the Salt River Cooperative Society (Ltd.), in Cape Town. This society has been in existence for 24 years and its field of endeavor has been entirely local. This society is a member of the Cooperative Wholesale Society (Ltd.) of England, whence it obtains the bulk of its stock. The association handles a general line of merchandise and has also made contracts with bakeries, meat markets, chemists, furniture dealers, music stores, and opticians, where members are granted a discount on all purchases made. Its policy is to sell at prevailing market prices.

There is now in the course of organization in the Union of South Africa an insurance company to conduct insurance on a cooperative basis, underwriting such risks as life, fire, sickness, marine, and live stock. The new company will be known as the South African Cooperative Insurance Corporation, and will have an initial capital of £20,000 (\$97,330). At first attention is to be given to life insurance only, until such time as the position of the company warrants the underwriting of other risks. The whole of the profits, less a reserve fund, will be allocated to the policyholders after an actuarial valuation has been made and 10 per cent paid to the shareholders of the first £20,000 subscribed. Provision is also made whereby policyholders may borrow money on their policies. Whole life and endowment policies, as well as 10, 15, 20, 25, and 30 year policies, will be issued. This is the first experiment in cooperative insurance in South Africa.

# EMPLOYMENT AND UNEMPLOYMENT.

## Employment in Selected Industries in October, 1919.

THE Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in October, 1919, from representative establishments in 13 manufacturing industries. Comparing the figures of October of this year with those of identical establishments for October, 1918, it appears that in 10 industries there was an increase in the number of people employed and in 3 a decrease. Automobile manufacturing, cotton manufacturing, and boots and shoes show the largest increases—29.3, 19.5, and 16 per cent, respectively; while the greatest decrease, 42.9 per cent, is shown in iron and steel.

Eleven of the thirteen industries show an increase in the total amount of the pay roll for October, 1919, as compared with October, 1918. The most important increases—48.3, 45.8, and 36.1 per cent—are shown in automobile manufacturing, men's ready-made clothing, and boots and shoes, respectively. In studying these increases consideration should be given to the epidemic of influenza last year. Increases of 33.7 and 28.5 per cent are shown in cotton manufacturing and leather, respectively. The decreases, 47.2 and 37.6 per cent, appear in iron and steel and car building and repairing.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN OCTOBER, 1918, AND OCTOBER, 1919.

Industry.	Estab- lish- ments report- ing for Octo- ber, both years.	Period of pay roll.	Number on pay roll in October—		Per cent of increase (+) or de- crease (-).	Amount of pay roll in October—		Per cent of increase (+) or de- crease (-).
			1918	1919		1918	1919	
Automobile manufacturing	48	1 week..	123,358	159,531	+29.3	\$3,497,842	\$5,188,607	+48.3
Boots and shoes.....	73	..do....	56,501	65,518	+16.0	1,080,254	1,469,956	+36.1
Car building and repairing.....	55	½ month	76,229	54,160	-29.0	5,073,819	3,167,060	-37.6
Cigar manufacturing.....	55	1 week..	18,305	16,120	-11.9	267,067	312,905	+17.2
Men's ready-made clothing.....	38	..do....	19,461	19,601	+ .7	363,267	529,489	+45.8
Cotton finishing.....	17	..do....	13,253	14,794	+11.6	251,154	321,872	+28.2
Cotton manufacturing.....	59	..do....	48,359	57,804	+19.5	744,658	995,873	+33.7
Hosiery and underwear.....	64	..do....	30,765	33,359	+ 8.4	453,871	569,868	+25.6
Iron and steel.....	108	½ month	191,084	109,027	-42.9	13,694,014	7,233,838	-47.2
Leather manufacturing.....	35	1 week..	16,460	18,111	+10.0	348,202	447,544	+28.5
Paper making.....	57	..do....	29,247	30,353	+ 3.8	644,522	747,763	+16.0
Silk.....	48	2 weeks.	14,430	15,366	+ 6.5	487,286	604,991	+24.2
Woolen.....	49	1 week..	44,252	49,486	+11.8	805,647	1,004,822	+24.7

The next table shows the number of persons actually working on the last full day of the reported pay period in October, 1918, and October, 1919. The number of establishments reporting on this question is small, and this fact should be taken into consideration when studying these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON THE LAST FULL DAY'S OPERATION IN OCTOBER, 1918, AND OCTOBER, 1919.

Industry.	Establishments reporting for October, both years.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (-).
			October, 1918.	October, 1919.	
Automobile manufacturing.....	29	1 week....	74,701	110,574	+ 48.0
Boots and shoes.....	26	do.....	9,846	12,455	+ 26.5
Car building and repairing.....	53	½ month....	65,498	50,071	- 23.6
Cigar manufacturing.....	22	1 week....	5,737	5,433	- 5.3
Men's ready-made clothing.....	6	do.....	3,259	3,910	+ 20.0
Cotton finishing.....	14	do.....	9,012	10,862	+ 20.5
Cotton manufacturing.....	37	do.....	21,189	28,610	+ 34.6
Hosiery and underwear.....	24	do.....	12,105	14,159	+ 17.0
Iron and steel.....	94	½ month....	146,667	85,057	- 42.0
Leather manufacturing.....	20	1 week....	12,591	13,737	+ 9.1
Paper making.....	25	do.....	14,172	14,376	+ 1.4
Silk.....	26	2 weeks....	8,182	8,322	+ 1.7
Woolen.....	42	1 week....	33,356	39,710	+ 19.0

In comparing the reports of the same industries for October, 1919, with those for September, 1919, 10 show an increase in the number of persons on the pay roll and 3 a decrease. The greatest increase, 6.8 per cent, appears in cigar manufacturing, while the largest decrease, 33.4 per cent, appears in iron and steel.

Nine of the thirteen industries reporting show an increase and four a decrease in the total amount of the pay roll in October, 1919, as compared with September, 1919. Increases of 11.6, 9.1, 7.3, and 7 per cent are shown, respectively, in automobile manufacturing, silk-paper making, and cigar manufacturing. The most important decrease, 32.2 per cent, shown in iron and steel, is due mainly to the fact that many of these plants were affected by strikes and labor troubles during this pay-roll period.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1919.

Industry.	Establishments reporting for September and October.	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 (-).
			Sep-tember, 1919.	October, 1919.		September, 1919.	October, 1919.	
Automobile manufacturing.....	45	1 week....	134,444	136,969	+ 1.9	\$3,963,713	\$4,422,907	+11.6
Boots and shoes.....	71	do.....	62,090	62,756	+ 1.1	1,371,003	1,400,423	+ 2.1
Car building and repairing.....	48	½ month....	50,832	48,473	- 4.6	2,936,876	2,868,770	- 2.3
Cigar manufacturing.....	55	1 week....	15,147	16,182	+ 6.8	293,483	314,074	+ 7.0
Men's ready-made clothing.....	47	do.....	18,903	19,603	+ 3.7	510,851	516,664	+ 1.1
Cotton finishing.....	17	do.....	14,362	14,794	+ 3.0	317,311	321,872	+ 1.4
Cotton manufacturing.....	51	do.....	50,496	50,772	+ .5	903,857	865,176	- 4.3
Hosiery and underwear.....	64	do.....	31,625	32,854	+ 3.9	540,996	568,718	+ 5.3
Iron and steel.....	108	½ month....	176,704	117,736	-33.4	11,738,125	7,954,014	-32.2
Leather manufacturing.....	33	1 week....	17,313	17,246	- .4	414,176	424,765	+ 2.6
Paper making.....	55	do.....	29,093	29,186	+ .3	668,052	716,662	+ 7.3
Silk.....	48	2 weeks....	14,337	14,850	+ 3.6	533,532	582,229	+ 9.1
Woolen.....	48	1 week....	46,998	47,082	+ .2	1,022,737	959,853	- 6.1

[1937]

A comparatively small number of establishments reported as to the number of persons working on the last full day of the reported pay periods. The following table gives in comparable form the figures for September, 1919, and October, 1919. The small number of establishments represented should be noted when using these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON THE LAST FULL DAY'S OPERATION IN SEPTEMBER AND OCTOBER, 1919.

Industry.	Establishments reporting for September and October.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (-).
			September 1919.	October 1919.	
Automobile manufacturing.....	26	1 week....	90,008	90,614	+ 0.7
Boots and shoes.....	28	..do.....	14,568	14,397	- 1.8
Car building and repairing.....	45	½ month....	45,240	44,287	- 2.1
Cigar manufacturing.....	23	1 week....	5,508	5,700	+ 3.5
Men's ready-made clothing.....	7	..do.....	3,706	3,927	+ 6.0
Cotton finishing.....	14	..do.....	10,484	10,862	+ 3.6
Cotton manufacturing.....	31	..do.....	22,040	22,146	+ .5
Hosiery and underwear.....	23	..do.....	12,791	13,441	+ 5.1
Iron and steel.....	95	½ month....	143,827	93,950	-34.7
Leather manufacturing.....	17	1 week....	12,620	12,534	- .7
Paper making.....	27	..do.....	15,547	16,033	+ 3.1
Silk.....	32	2 weeks....	9,727	10,205	+ 4.9
Woolen.....	45	1 week....	37,731	38,316	+ 1.6

### Changes in Wage Rates.

During the period September 15, 1919 to October 15, 1919, there were establishments in 12 of the 13 industries which reported increases in wage rates. Of the establishments reporting, many did not answer the inquiry relative to this item, but in such cases it is not likely that changes were made.

*Automobile manufacturing.*—An increase of 12½ per cent was granted to 20 per cent of the employees by one establishment. Two plants gave increases of approximately 8 per cent, affecting 25 per cent of the employees in each plant, and another establishment reported an average increase of 8 per cent to 8.3 per cent of the force. Two concerns granted a 5 per cent increase, which affected 4 per cent of the employees in one plant and 1 per cent of the force in the other, while an increase of 4 per cent was given to 8 per cent of the employees in a third concern. An increase of 1.78 per cent to 44.1 per cent of the force was reported by one company, and an increase was given to 3 per cent of the employees by another firm but no further data were given.

*Boots and shoes.*—An increase of 24 per cent was given in one plant to 15 per cent of the pieceworkers and of 12 per cent to 9 per cent of the day help, and an increase of 15 per cent to 3 per cent of the employees



in another plant. One establishment granted an increase of 10 per cent to 10 per cent of the force. Fifty per cent of the employees in one plant were granted an advance of  $6\frac{1}{2}$  per cent, and one plant reported a 5 per cent increase, affecting all of the employees. Nine and 7 per cent of the force in two plants received an increase of 3 per cent. Two establishments reported increases, which affected all of the employees in one plant; no further data were given.

*Car building and repairing.*—Some increases were reported by the railroads in accordance with the national agreement promulgated by the Director General of Railroads.

*Cigar manufacturing.*—The selectors and strippers in two factories received increases of 100 per cent and 50 per cent, respectively. One plant granted 5 per cent of the employees a 25 per cent increase, and another concern gave 90 per cent of the employees a 20 per cent increase. An increase of about 19 per cent to  $59\frac{1}{2}$  per cent of the force and an increase of 10 per cent to  $24\frac{1}{4}$  per cent of the force was granted by one firm. Two establishments reported an increase of 15 per cent, affecting 85 per cent of the employees in the first plant, while the second plant did not give the number of employees affected, and an increase of 13 per cent to 90 per cent of the force was reported by another establishment. Three plants granted an increase of 10 per cent, affecting all of the employees in one plant, 67 per cent of the force in the second, while the third failed to make any statement as to the number of employees receiving the increase.

*Men's ready-made clothing.*—Two concerns granted an increase of 20 per cent, affecting the entire force in one plant and 75 per cent of the employees in the second plant. An increase of 19.6 per cent was given by one firm, but the number of employees affected was not given. The entire force in one plant received a 12 per cent increase. A 10 per cent increase was reported by two establishments, which affected 20 per cent of the men in one plant and 14 per cent of the employees in the second, while a third plant reported an increase of about 10 per cent, but failed to give any further data. An increase of approximately 8 per cent was given to 75 per cent of the force in one establishment. One concern granted an increase of 5 per cent to 85 per cent of the men. An increase to the entire force was reported by one plant, which failed to make any statement as to the percentage of the increase.

*Cotton finishing.*—One mill granted an increase of 15 per cent to 5 per cent of the employees.

*Cotton manufacturing.*—The entire force in one plant received a 15 per cent increase. One establishment granted a 10 per cent increase to all of the employees, and another concern gave a 10 per cent bonus to all full-time workers. An increase of 6 per cent, affecting 5 per cent of the employees, was given by one establishment.

*Hosiery and underwear.*—One plant reported a 35 per cent increase, but failed to give the number of employees receiving the increase. Ten per cent of the force in one mill received an increase of 15 per cent. All of the employees in one establishment received increases ranging from 10 to 20 per cent; the entire force in two plants received an increase of 10 per cent; while two other concerns granted a 10 per cent increase, affecting 50 per cent of the men in one plant and 16 per cent of the employees in the fourth plant. Ninety per cent of the employees in one plant were given an increase of 6 per cent and approximately 5 per cent of the force in another establishment received an increase of about 6 per cent. One company granted an increase of about 5 per cent to all of the employees.

*Iron and steel.*—Sixty-five per cent of the employees in one establishment were given a 5 per cent increase. In one mill, 14.2 per cent of the employees received an increase of  $2\frac{1}{2}$  cents per hour, and all of the laborers in another mill were increased 2 cents per hour.

*Leather manufacturing.*—One establishment gave a 7 per cent increase to 90 per cent of the employees.

*Paper making.*—Ten per cent of the employees in one mill received a 10 per cent increase. One firm granted an increase of 7.1 per cent to 14.56 per cent of the employees. An increase of 6.7 per cent was given to 5.9 per cent of the men in one plant. An increase of 50 cents per day to the entire force was made by one concern. One establishment reported a 5 per cent increase in the weekly salaries, but failed to give any further data.

*Silk.*—An increase of 30 per cent was given to 90 per cent of the force in one establishment. Two firms granted increases of 10 per cent, affecting 50 per cent of the men in one plant and 10 per cent of the employees in the other mill. One plant reported increases ranging from 5 to 10 per cent, but made no further statement.

## Seventh Annual Meeting of American Association of Public Employment Offices.

By WILBUR F. MAXWELL.

THE seventh annual meeting of the American Association of Public Employment Offices convened in Washington, D. C., on October 14 and 15, 1919. The program gave opportunity for discussion of the progress achieved in the United States, Canada, and England in organizing and maintaining systems of public employment offices.

Mr. John B. Densmore, president of the association and Director General of the United States Employment Service, opened the meeting with a review of public employment activities in the United States during the war. It was brought out that, in spite of repeated failure to secure appropriations and in spite of the mistakes incident to organization under the pressure of war conditions, sentiment in favor of public employment offices has been developed in a surprising manner in the United States, as indicated by ready cooperation of cities and States in maintaining employment offices necessarily abandoned by the Federal Government.

The many costly experiments which the United States Employment Service was forced to undertake have advanced the development of public employment office work at least 20 years. Never again will it be possible for those interested in this field of service to be satisfied with a narrow vision of the possibilities of their work. They will instead profit greatly by the war-time experience, building wisely, having in mind the inevitable development of a national employment office system.

Dr. Royal Meeker, Commissioner, Bureau of Labor Statistics, who has been interested in the development of public employment offices since the early days of their organization, gave a historical review of the American Association of Public Employment Offices, which was formed to provide a medium of exchange of information about public employment office work, to evolve standards of organization and operation of employment offices, and to promote the organization of a national system of employment offices. Dr. Meeker emphasized the necessity of the development of a national system of employment offices not only to place workers and to fill jobs, but to provide a means of studying the industrial situation so that plans may be evolved to stabilize employment. He brought out the point that there is vast unemployment in industry because of seasonal employment of workers. Dr. Meeker contended that this unemployment might be avoided to a large extent by readjustment so that much work which is now

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seasonal might be distributed through the year and much work that is necessarily seasonal might be arranged to follow the cessation of other seasonal work so that steady employment would result. He pointed out that we can no longer afford to train workers for a specific task which will give them employment for only a few weeks or months of the year and allow them to suffer because of unemployment during the balance of the time. Only by the organization of a national employment service will it be possible to develop the dovetailing of one industrial activity with another so that unemployment may be largely eliminated.

Shelby M. Harrison, director of the department of surveys and exhibits, Russell Sage Foundation, outlined the survey of public employment offices on which he is now engaged. Tremendous advantage may be expected from this survey, which represents the first effort to consider public employment offices from a disinterested viewpoint. Mr. Harrison's report, when issued, may be expected to discuss the fundamentals of public employment office work, and the methods employed at present, in a way that will point clearly toward the lines of best development in the future.

Among many interesting and instructive addresses on the program were those outlining the public employment office systems of England and of Canada. Hon. H. B. Butler, assistant secretary of the Ministry of Labor of Great Britain and secretary to the organizing committee of the International Labor Conference, outlined the work of the British labor exchanges during the war and since the signing of the armistice.

The work of these exchanges is particularly interesting because of the tremendous responsibility laid on them during the war in combing industry for man power and after the armistice in administering "out-of-work benefits." Undoubtedly their great success lay in the splendid work of the councils of workmen and employers that were formed as an adjunct and controlling factor for each labor exchange. The full responsibility of deciding questions of withdrawal of workers from industry for military service during the war and the payment of out-of-work benefits after the armistice devolved upon these councils so that they became vitally interested in the work of the labor exchanges and have done much to direct them properly. Undoubtedly England has led the world in the establishment and operation of a complete system of public employment offices reaching every corner of the country.

The address of Mr. Brice M. Stewart, director of the Employment Service of Canada, aroused particular interest because of the comparison it induced between the Canadian system and the system in England. Canada with its narrow strip of country extending across

the continent presents quite different problems from those of England with its closely settled, compact country, or even the United States with its many centers from which labor may be distributed in any direction. Canada's employment service must deal largely with the unskilled worker and is faced with a tremendous problem of seasonal labor, which can be solved only by transferring men across the country. It is necessary to use two distributing centers in handling this clearance work, rather than to attempt to centralize control in one place as was done by the United States Employment Service.

The Canadian service is well launched on a reasonable program of public employment office work, financed jointly by the Government and the Provinces, and can be expected to make steady progress. Advisory boards are being appointed for each employment office, composed of local labor and employer representatives, along the lines of the British councils and the United States community labor boards. In fact, the Canadians have taken every possible advantage of the experience in both countries in framing a law that promises exceedingly well. Already the Canadian offices are well established in their fundamental work with skilled and unskilled labor and are contemplating more extensive work in placing highly trained workers.

Many subjects were taken up in the discussions during the meeting, including the placement of juveniles, professional and technically trained workers, skilled and unskilled labor and the physically handicapped. The splendid work which is being done toward the development of each of these specialized features, as evidenced by the discussions, can only mean successful development of the whole problem of public employment offices in the future.

At the business session the most important discussion was relative to development of the association to include in its membership every one interested in employment problems so that district organizations may be perfected with frequent district conferences and a more generally attended annual meeting for the whole country. This development is to be set forth in a definite plan to be presented at the next annual meeting.

The association elected the following officers for the coming year:

President: Bruce M. Stewart, director, Employment Service of Canada, Ottawa, Canada.

Secretary-Treasurer: Richard A. Flinn, 112 West Forty-sixth Street, New York City.

Vice Presidents: L. E. Woodcock, Russell Sage Foundation, New York City; Mrs. May L. Cheney, University of California, Berkeley, Calif.; John S. B. Davie, Commissioner of Labor, Concord, N. H.; and E. N. Ellis, State Employment Service, Oklahoma City, Okla.

The next annual meeting is to be held in Ottawa, Canada, on the third Thursday in September, 1920.

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## WOMEN IN INDUSTRY.

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### First International Congress of Working Women, Washington, D. C.

By MARY T. WAGGAMAN.

AS no express provision was made for women delegates to the First International Labor Conference to be held in Washington, D. C., under the terms of the Treaty of Peace, the National Women's Trade Union League of America at the seventh biennial convention, held last June in Philadelphia, decided to call an international congress of working women to meet immediately preceding the labor conference, such congress to make recommendations concerning those portions of the agenda in the Treaty of Peace dealing with questions relating to women and children.

Invitations were sent to 37 countries. The congress opened in Washington, D. C., on October 28, 1919, and adjourned on November 6. There were 31 delegates representing the following countries: Argentina, Belgium, Canada, Czecho-Slovakia, Great Britain, Denmark, France, India, Italy, Norway, Poland, Sweden, and the United States. Women from Cuba, Holland, Japan, Serbia, Spain, and Switzerland were also in attendance, besides representatives from various important social groups in the United States and a corps of translators. Many of the delegates to the industrial conference called by the Young Women's Christian Association, which met earlier in October, remained over for this congress.

In her opening address Mrs. Raymond Robins, president of the National Women's Trade-Union League of America, outlined the program for the congress, the principal topics of which were: (1) Care of mothers and babies; (2) protection of children; (3) the eight-hour day; (4) hazardous occupations; (5) night work; (6) control of unemployment. Mrs. Robins remarked that "The creation of new values of life is in process," and that it is fitting "that the women of the world should choose this time to accept and assume their full responsibilities." She declared that "in the very simplicity of the program lies its significance. Certain preliminaries of civilization, must be achieved before the democratic purpose of life can find expression."

Mr. Luther C. Steward, president of the National Federation of Federal Employees, Washington, D. C., welcomed the delegates, stating that these women who had gathered together from distant lands had come to express woman's viewpoint on many vital problems—"Woman's viewpoint and not man's view as to what woman's view should be."

The Secretary of War, Newton D. Baker, was one of the distinguished speakers at the Congress. "Men and women in the world are no longer divided into racial groups," said the Secretary, "except by traditional and imperative modes of distinction. \* \* \* The identity of economic interests and the identity of justifiable aspirations among the children of men have now been established by reason of the absorption of the separated distances which used to divide us." Secretary Baker declared that the object of progress is to attain more perfectly and distribute more widely the real satisfactions of life, and defined the perfect society as one which we would have to form out of a sense of humanity, a state of just relations with the rest of mankind, in which we might say "my labor gets its just return," and that the institutions which are arranged for the common benefit are adjusted so that the benefit is common.

In a brief talk to the delegates Miss Jane Addams, of Hull House, Chicago, said that it was high time that the working women of various countries should meet to discuss the problems that affect them, such as labor problems, and added: "We are only too greedy—those of us who have met in other international conventions—only too greedy for your findings, only too happy to follow the lines which you indicate."

Before the congress proceeded to the formulation and discussion of such resolutions as it should decide to submit to the International Labor Conference, the delegates listened to an address by Miss Mary Van Kleeck, former chief of the United States Women in Industry Service, and now director of industrial studies of the Russell Sage Foundation.

Miss Van Kleeck spoke of the spirit of democracy which is a living, moving, growing thing, which we must translate into great programs which will fit our own country, our own time, and our own place. "We are tired of seeing economic power used by a few instead of for the benefit of the many," she said. "The new standard of life will demand a changed relation of the workers to industry and to industrial production and its management and control." Suggesting that the holding of the congress showed how thoroughly established was women's industrial position throughout the world, Miss Van Kleeck added that since the signing of the armistice women have had no direct share in the terms of the Peace Treaty. She called it

a man-made peace, stating that women have no direct share in the labor platform and its international conference with its emphasis on the participation of women in plans to protect themselves, which is significant of the attitude of men, even in the labor movement, toward women. We seek not the protection of men against the evils of industry, but we seek such a position in industry, such a position in relation to the controlling forces of industry, as will enable women to remove the evils of industry as they affect either men or women workers." Miss Van Kleeck also spoke in favor of the principle of equal pay for equal work and urged giving greater attention to method and technique in the study of industrial problems, declaring that the big topic ahead is how industry can be so changed as to yield not only wealth for society, but a new standard of life for all its members.

### Maternity Benefits.

Miss Julia Lathrop, Chief of the Children's Bureau, United States Department of Labor, called attention to the tremendous preventable waste of life shown in the recorded death rate from causes incident to maternity, which rate indicates no diminution in our country during a period in which typhoid fever has been reduced one-half and other contagious diseases greatly lessened, and stated that at present more women between 15 and 45 die from causes incident to childbirth than from any other cause save for tuberculosis. Yet the causes incident to childbirth are found to be largely preventable. It is estimated that for the year 1917 about 17,000 women died thus.

Miss Lathrop said she believed that reasonable protection of maternity is impossible except by public action. She described in detail the maternity bill before the Federal Congress, and declared that women must look forward to instituting an hour which will make either needless or ridiculously narrow such provisions as those anticipated in the recommendation for maternity benefits made by the organizing committee for the International Labor Conference.

Miss Lathrop referred to the fact that Australian experience proves that cash benefits, unsupported by State activities, for furnishing skilled medical, hospital, and teaching care, do not reach the desired results.

In concluding, Miss Lathrop said that a wage scale for men which compels a mother to leave home and children who need her care, in order to earn their bread is abhorrent at any time in any country.

There was considerable diversity of opinion among the delegates in regard to whether or not maternity benefits should be included in State insurance plans.



The discussions over the resolution regarding maternity benefits, in which various delegates took part, brought out a variety of viewpoints, some involving fundamental philosophies as to individual rights and the relations of the child to the State. Some of the delegates were in favor of limiting maternity benefits to women actually employed in industry; other delegates wished to include the wives of workingmen, while others contended that all women should receive the benefit so there would be no stigma of charity connected with the matter. Otherwise, it was thought some women would be too proud to avail themselves of the provision of such a law.

Protracted discussion of the resolution on maternity insurance, which is given here as finally adopted, failed to result in complete agreement as may be seen from the vote of the minority on sections 2 and 3.

### *Maternity Insurance.*

1. No woman shall be employed for six weeks before or six weeks after childbirth.
2. Every woman shall be entitled during maternity to free medical, surgical, and nursing care, either in a hospital or at home, and also to a monetary allowance.<sup>1</sup>
3. The monetary allowance given to mothers shall be adequate for the full and healthy maintenance of mother and child during the aforesaid period.<sup>2</sup>
4. In each country government commissions should be created to study the best methods of maternity and infant care, and to devise and put in operation effective methods of securing such care.
5. A bureau shall be established in the labor office of the League of Nations to collect information on the best methods of maternity and infant care, said information to be furnished countries represented in the Labor Congress.

### Child Labor.

Miss Grace Abbott of the Federal Children's Bureau was emphatic in pointing out that both women and children have suffered by being linked together in labor legislation. "In so far as we have proceeded on this theory that we must have the same legislation for women and children, it has held us back." She said that it might be necessary for us to amend the Constitution in order to get a Federal child labor law, adding that no amendment will be more welcome to the American public than one which opens the door of the National Government to an opportunity to protect its children.

She stressed the necessity of having a physical and educational minimum as well as an age minimum below which the child should not be permitted to work. Regarding suggestions in the peace treaty that exemptions be made in favor of climatic conditions and

<sup>1</sup> A minority of the delegates voted that section 2 should read as follows:

Every working woman (either a wage earner or the wife of a working man) shall receive free medical and surgical care, either in a hospital or at home, and also a monetary allowance.

<sup>2</sup> A minority of the delegates voted that section 3 should read as follows:

The indemnity given mothers shall be based on the living wage in the district.

nations which are industrially backward, Miss Abbott said she was quite adverse to such exemptions. It was never so necessary as at the present time to conserve the health and strength of children.

Mlle. Berthe de Lalieux, secretary of the Federation of Women's Trade-Unions for the Province of Brabant, Belgium, described a recently created medical commission in her country, one of the functions of which is the examination of children at work. This commission also makes periodic inspections in the schools of children about to reach the working age.

A number of other delegates gave brief accounts of the conditions surrounding the employment of children in their different countries. Madame Louisa Landova-Stychova, delegate from the Syndicate of Working Women of the National Socialist Party of Czecho-Slovakia stated that one of the first things brought about by her new Republic was the separation of the laws applying to children from those applying to women. She declared that she considered it a shame and disgrace of the century that adults should be unemployed or not employed in useful occupations when there are children working out their young lives in industry.

Dr. Alma Sundquist described the continuation schools in Sweden which working children are compelled to attend up to the age of 18 years. Dr. Sundquist said none of these schools is exclusively vocational.

The provisions of a resolution adopted by the Congress on the subject of child labor are as follows:

#### *Employment of Children.*

(a) *Minimum age.*—No child shall be employed or permitted to work in any gainful occupation unless he is 16 years of age, has completed the elementary school, and has been found by a school physician or other medical officer especially appointed for that purpose to be of normal development for a child of his age and physically fit for the work at which he is to be employed. No young person under 18 years of age shall be employed in or about a mine or quarry. The legal work day for young persons between 16 and 18 years of age shall be shorter than the legal work day for adults.

(b) *During the night.*—No minor shall be employed between the hours of 6 p. m. and 7 a. m.

(c) *In unhealthy processes.*—Prohibition of the employment of minors in dangerous or hazardous occupations or at any work which will retard their proper physical development.

#### *Administration.*

(1) *Work permits.*—A yearly medical inspection by a medical officer appointed for that purpose by the authorities, records of which inspections shall be kept.

(2) Lists of employed minors with their hours of work shall be posted in all work-rooms in which they are employed.

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(3) The number of inspectors, and especially women inspectors, employed by the factory or labor commission shall be sufficient to insure regular inspection of all establishments in which children are employed and such special inspections and investigations as are necessary to insure the protection of the children.

(4) We further recommend compulsory continuation schools for minors until the age of 18.

### The Eight-Hour Day.

Mrs. Betsey Kjerlsberg, of Christiana, Norway, and Miss Hesselgren of Sweden, both reported the passage of eight-hour laws in their respective countries within the last six months. Mlle. Victoire Cappe, Secretary of the National Women's Trade-Unions for Belgium, said that during the war there was no discussion in Belgium of the limiting of the working hours, as there was no industry, but following the war the opinion of the working class in Belgium has been very decidedly expressed in favor of the eight-hour day, which is now applied to the mines, to all metal work, and to all textile work. This is due to the efforts of the industrial commission organized under the Ministry of Labor and Industry.

Mlle. Cappe emphasized the importance of inspection in connection with the administration of the law and pointed out how women are tempted to undertake other work outside of their regular eight-hour employment. She added that in many Provinces in Belgium, commissions had been appointed to oversee education in housekeeping and house management. She expressed the opinion that the woman worker should be helped to carry out her maternal duties in the spiritual and intellectual development of her children. She was also in favor of an hour of rest at least in every eight-hour period of work.

Miss Mary Anderson, Chief of the Women's Bureau of the United States Department of Labor, took the position that often workers in large cities preferred half an hour or three-quarters of an hour to one hour's lunch period so they might go home earlier in the evening.

Signora Casartelli Cabrini, of Italy, said that since last February they had won the eight-hour day through national collective contracts and that an eight-hour bill is now in the Parliament. This bill does not include small industries or home work. Madame Cabrini advocated the establishment of four shifts in continuous industries.

Madame Jeanne Bouvier, member of the supreme council of the French Federation of Labor, expressed the belief that the women workers of the world should cooperate in getting a 44 hour week as it is indispensable to all working women and to the mothers in the homes.

Dr. Tomo Inouye, of Japan, stated that the workers of her country were in favor of an eight-hour day.

The Czecho-Slovakia delegation stood for a 44 hour week and Madame Marie Majerova, delegate from the women's labor unions of the Social Democratic Party and member of the Municipal Council of Prague, declared that the very first law the Czecho-Slovak Republic gave to the nation was that establishing the eight-hour working day. She said that now they have an eight-hour day for men and women in manufactures, agriculture, and business in all departments. Madame Majerova urged justice in the matter of hours for all women workers in the home, and said that there must be no shackles of slavery for the modern Eve. She must be a thoroughly healthy spiritual mother of a freed and just generation.

Mrs. Katherine Derry, delegate from the Trades and Labor Assembly of Canada announced that Canada had declared through its Trades and Labor Congress for a six-hour work day, and that many women in different trades in Toronto had a 40 hour week with an eight-hour day.

Miss Agnes Nestor, one of the United States delegates, president of the Chicago Women's Trade-Union League, said that our States in considering eight-hour legislation have not considered the right to leisure and the social features. They have only considered the health question and how long can we work and still be efficient, and the question of the effect of the long hours of the women workers of to-day on the future of the race. She declared that a maximum of a six-hour day and a five-day week was to be hoped for eventually for everybody.

Miss Mary MacArthur, secretary of the British Women's Trade-Union League, regarded it as unfortunate that agriculture and domestic workers were excluded from a bill recently introduced in the British Parliament. She said that during the last year 755,000 workers had had a reduction of 6.6 hours per week in her country. Taking up what she thought was an implication by a delegate that the laboring class might not make good use of leisure, Miss MacArthur said:

I have sufficient confidence in the working people to feel that when they get the leisure they will possibly make much better use of this leisure and certainly not worse use of their leisure than the more privileged sections of the community have done.

There were differences of opinion on the matter of including agricultural workers under eight-hour laws. Dr. Sundquist, of Sweden, spoke of the impossibility of enforcing an eight-hour law for agricultural workers in Scandinavia. It was reported by Madame Constanca Olschewska, delegate from the Textile Workers' Union, Lodz, Poland, that the Polish Agricultural Trade-Union has adopted a resolution to put before the Parliament an eight-hour bill for agricultural workers. In connection with the discussion on the eight-

hour day, the question of home work was taken up. Miss Mary Anderson, Mlle. Georgette Bouillot, and Miss Felixa Konopska of Poland, advocated the abolition of home work.

The resolution on the eight-hour day as adopted by the Congress is as follows:

The first International Congress of Working Women requests the First International Congress of Labor of the League of Nations that an international convention establish:

1. For all workers a maximum eight-hour day and a forty-four hour week.
2. That the weekly rest period shall have an uninterrupted duration of at least one day and a half.
3. That in continuous industries a minimum rest period of one-half hour shall be accorded in each eight-hour shift.

### Hazardous Occupations.

Dr. Alice Hamilton, expert investigator for the United States Bureau of Labor Statistics and assistant professor of industrial medicine at Harvard University, delivered an address on Women in dangerous trades. She said very few women in this country are employed in poisonous trades but that many are employed in such trades in Europe. Lead is by far the most important industrial poison. Women are employed in potteries. They also work in litho transfer for pottery decoration, in soldering and making cans, in molding metallic lead, and in the manufacture of electric accumulators. Dr. Hamilton would not state positively that she thought women were more susceptible to lead poisoning than men, although she admitted that British authorities hold very strongly to the view that women are more likely to get lead poisoning and to have it in a more severe form than men are. She quoted some striking statistics resulting from an investigation made by Dr. T. M. Legge of Great Britain as to miscarriages and stillbirths in the case of mothers who had been exposed to lead poisoning.

If we know positively that lead does affect the offspring through the mother and if we know alcoholism affects the offspring through the mother, we are justified in concluding that the great majority of industrial poisons will act in this way. Although we do not know yet as regards the individual ones that this is true, we are justified in concluding that it is.

Dr. Hamilton was of the opinion that if an occupation is attended with a danger that can not be reduced to a very slight one, women should not be employed in such occupation. If the danger can be made very slight, she thought women might be employed because she did not see practically the possibility of ruling them out of all occupations in which there is a slight danger.

Miss Margaret Bondfield, secretary of the National Federation of Women Workers of Great Britain, said that a resolution had been carried by the International Trade Union Congress at Berne to the effect that the prohibition from any dangerous trade was only to be considered if that trade could not be made healthy.

Dr. Alma Sundquist of Sweden and Mrs. Betsy Kjerlsberg of Norway reported that there were very few cases of lead poisoning in their respective countries.

The following resolution on hazardous occupations was passed by the congress:

The first International Congress of Working Women requests the first International Congress of Labor of the League of Nations that an international convention establish:

1. Prohibition of home work in occupations involving the use of poisonous material.
2. No exception of small factories from the regulations governing the industry.
3. Prohibition of the employment of women only in the trades which can not be made healthy for women as potential mothers.
4. An international inquiry to be instituted in order to ascertain the scope of measures which have been adopted in different countries to control dangerous occupations and to publish the results, with the object of making clearly known which countries fall short of the standards already established in the more advanced countries.
5. The appointment of a committee including women under the League of Nations, international in personnel, to coordinate the work of national research in the dangerous trades, with a view to eliminating poisonous substances through the substitution of nonpoisonous, and where this is impossible to devise new and efficient methods of protection.

### Night Work.

Dr. Sundquist presented a resolution on behalf of the Swedish Social Democratic Women Workers against the passage of any international special protective laws for women except in case of pregnancy and nursing of infants. Mrs. Kjerlsberg of Norway supported this resolution. The other delegates, however, would not agree to it.

Miss Margaret Bondfield, speaking for England, said: "We are no longer thinking of night work in terms of sex, but just in terms of using every effort to get rid of night work for everybody." Mlle. Bouvier was in favor of prohibiting night work for women in commerce, but Miss Rose Schneidermann, president of the New York Women's Trade-Union League, and one of the United States delegates, counseled against making international prohibition of night work too inclusive.

The adopted resolution on night work reads as follows:

This congress adheres to the Berne Convention of 1906 prohibiting night work for all women in industrial employment.

It further urges that night work shall be prohibited by law for men except in so far as it may be absolutely necessary through the special nature of, or the continuity of the occupation, or in the case of essential public service.

Night work shall be defined as the hours between 9 p.m. and 6 a.m.

### Other Resolutions Adopted by the Congress.

The congress unanimously adopted a resolution expressing the wish that the article in the Peace Treaty concerning the representation of each country at the International Labor Conference be amended to include one woman government delegate and one woman labor delegate.

The resolution on unemployment follows:

*Resolved*, That the first International Congress of Working Women adopt the following recommendations:

1. That a special bureau of employment be established in the International Labor Office to act as the International Bureau of Information between nations on all matters relating to employment and unemployment.

2. That the International Labor Congress recommend to each nation in the League of Nations the establishment of a free employment service in all cities and industrial towns in the nation; and that a system of unemployment insurance be made effective in each country in cooperation with the labor unions.

3. That the International Labor Office shall coordinate the research work to be undertaken by the national labor departments into the possible causes of unemployment, including the maldistribution of raw material, migration, labor turnover, and bad management. The results of such research to form the basis of international law for the prevention of unemployment.

4. That with a view to the prevention of unemployment each nation be required to provide for the allocation of public contracts in such way as to minimize protracted periods of unemployment for both men and women.

5. That no propaganda of misrepresentation for the exportation of foreign labor be carried on by transportation companies or private corporations.

6. That in the International Labor Office and in the national and local labor offices there must be a woman as director of the departments specifically relating to women.

Among other resolutions passed were: One dealing with the subject of immigration, one with the Russian blockade, and another with the distribution of raw materials.

The following resolution was also adopted:

For the purpose of calling another congress that there be a provisional committee elected by this congress consisting of a president, five vice presidents, and a secretary-treasurer, and that the present members of the executive committee, or alternates nominated by trade-union groups of the various nations, be corresponding members of this provisional committee.

1. The basis of representation for the next congress shall be the same as the basis for this congress.

2. That the officers be empowered to transact any necessary business.

3. That the international business office be in the United States.

Mrs. Raymond Robins was elected president of this provisional committee and Mrs. Maud Schwartz, recording secretary of the New York Women's Trade Union League, was elected as secretary-treasurer. The four vice presidents are: Miss Mary MacArthur, England; Mrs. Betsy Kjelsberg, Norway; Madame Louisa Landova-Stychova, Czecho-Slovakia; Mlle. Jeanne Bouvier, France. The fifth vice presidency was left open to be filled by a representative of the Central Powers.

### Conclusion.

Whether or not the greater number of the resolutions adopted by the First International Congress of Women Workers will be embodied in the near future in international treaties, the dynamic fact remains that these working women delegates have ably voiced their realization of the challenging call for more enlightened legislation for women and children, and have set up before the world international labor standards which they and the multitude of women workers whom they represent hope to make prevail and eventually lead to higher international ideals of social justice.

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## Women in Transportation in New York City.<sup>1</sup>

**I**N TRANSPORTATION, as in many other industries, women came to be employed in very large numbers during the war as guards, conductors, ticket agents, etc. Because the women engaged in this sort of work in New York were not protected by the existing laws which applied to women employees in factories and department stores, and because numerous investigations, both official and unofficial, showed the need of similar protective legislation for these workers, the women's joint legislative conference initiated and fostered a bill in the 1919 session of the legislature, which became a law on May 12, 1919.

This act prohibits the employment of any woman under 21 years of age on any street, surface, electric, subway, or elevated railway; provides that women shall not be employed more than nine hours a day nor more than six days or 54 hours a week, nor between 10 o'clock in the evening and 6 o'clock in the morning; that the hours of labor shall be consecutive, except that one hour be allowed for meals; and that at stations, terminals, or car barns where women are employed provisions of the law regarding drinking water, toilet facilities, and dressing rooms shall be applicable.

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<sup>1</sup> Based upon an article in *The Bulletin*, issued monthly by the New York State Industrial Commission. September, 1919, p. 237.



Though little opposition seems to have been manifested while the bill was being considered, once it was about to become effective, a cry went up from the women employees that rigid enforcement of the law would cause most of them to lose their positions. The fact that the law was to go into effect immediately without giving the employers time for adjustment or employees time to find other positions was regarded as unfortunate.

In order to ascertain the real conditions of the employment of women in the transportation companies, the bureau of women in industry of the New York State Industrial Commission undertook a careful study of the probable effects of the enforcement of the law and the previous policy of the transportation companies regarding the employment of women. It was found that on May 1, 1919, shortly after the passage of the bill, the street, subway, and elevated lines of Greater New York employed 2,924 women, 490, or 16.8 per cent, of whom were employed without violation of any section of the law; 1,427, or 48.8 per cent, were employed in direct violation of the night work law; 498 (17 per cent) violated the 9-hour day provision; 260 (8.9 per cent), the nine-hour day and consecutive hours provision; and 249 (8.5 per cent), the consecutive-hours ruling alone.

With regard to the policy of the railway companies, it is stated that—

The employment of women in the transportation companies, from the point of view of the employers, has been very satisfactory. In the handling of money the employers claim that they are more honest than men; there is less absenteeism among women, and their labor turnover is somewhat lower than that of the men. It was the claim of the companies that they wished to retain women as far as possible in conformity with the law.

It was discovered that the greatest opposition came from the women themselves, because they were receiving higher pay than they could command elsewhere, and because, being paid on an hourly basis they would suffer a considerable reduction of wages, anywhere from \$3 to \$5 per week were they compelled to work only 9 instead of the usual 12 hours per day. Therefore they asked that the law be enforced as liberally as possible so that they might retain their positions.

It was found that the seniority system did not prove so great a hindrance to giving the women day runs as might be expected. Because of the high labor turnover which exists in practically all New York City transportation companies, the seniority lists change rapidly and approximately one-half of the women conductors had day shifts indicating seniority rights.

It seemed most difficult for the employers to meet the consecutive-hour requirement, because the high peaks in their service coming during the rush hours in the morning and afternoon necessitated

having the high peaks of their employment during these two times. Investigation showed that it was very difficult not to have broken time for those women who stood last on the seniority lists. Some of the women, however, preferred to split trick because it enabled them to go home or have some sort of recreation during the middle of the day.

In spite of all the opposition and entreaties of the women employees of the transportation companies, the provisions of the law were enforced and, as a result, it is reported that most of the women employees were discharged in June, or were taken from the trains and sent to booths as ticket sellers at reduced wages.

In conclusion it may be said that, in the opinion of the Bureau of Women in Industry, "the labor policy in the transportation companies is handled in a hit and miss way, and there is little regard for the human element. This act, undoubtedly, will bring about greater care and thought in the handling of labor problems, which would mean not only the retention of the majority of the women, but under healthful and more sanitary conditions."

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## Post-War Employment of British Women.

THE number of recent Government reports relating to women in industry in Great Britain indicates the importance and significance of the subject treated, as well as the reiteration of the demand for new adjustments. Feminine labor forces must be reckoned with as never before. New industrial energies which call for utilization have been set free. It is estimated that from July, 1914, to July, 1918, there were approximately 1,200,000 "new entrants" in industry exclusive of 400,000 women who came in from domestic service and small work shops.

The Women's Employment Committee of the British Ministry of Reconstruction,<sup>1</sup> which was directed to study and make recommendations upon women's opportunities and conditions of employment after the war in clerical, commercial, agricultural, and industrial occupations, seems to have realized acutely the size and intricacy of the problem.

At the outset the conferees found themselves seriously handicapped because they could not forecast, with any degree of certainty, the fate of the national factories or the manner in which the Government pledges of restoration of trade-union workshop conditions would be carried out—both being matters having a special and direct

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<sup>1</sup> Great Britain. Ministry of Reconstruction. Report of the Women's Employment Committee. London, 1919. [Cd. 9239.] 116 pp. Price, 6d net.

bearing on women's industrial future. As a working hypothesis, however, the committee assumed "a favorable state of trade."

The committee declares that no accurate comparable data exist on the subject of the industrial capabilities of men and women, as the conditions under which they have hitherto worked have been so dissimilar. It is conceded that there are differences between men and women in physiological constitution and muscular power, that marriage in the greater number of instances cuts short the woman's industrial career, and that the prospect of marriage deters her from attempting to improve her industrial status and from promoting trade-unionism. In the opinion of the committee, however, the organization of women, combined with State action through the Ministry of Munition orders and the legalized minimum rate established by trade boards, has resulted in stabilizing and increasing the wages of women and consequently changing in a marked degree their industrial position. In the case of women war workers the great common stimulus of patriotism and the emergency development of their latent and often unsuspected capabilities have helped to establish a "new industrial outlook."

In discussing the bearing of women's industrial employment on the race, the committee takes the attitude that "the only differentiation between men and women which can be justified is such as has its basis in the need of preserving women's power unimpaired for those primary activities which are connected with the family and the home."

### Women's Success in New Work.

Some of the observations and conclusions of the committee in regard to women's success in new lines of work may be briefed as follows:

In munitions works in some cases women acted as full managers. There is a small but increasing tendency to employ them as managers in other industries, ranging from general engineering to jewelry and tobacco. Women are more and more frequently being employed to supervise women, but at present there are few who are equipped for such work. Notable progress has been made by women in scientific work during the war. They have also been particularly successful in process work, preeminently in the light and very light operations.

In the discussion of skilled and semiskilled process work the committee states:

If "skilled man" be taken in the strict sense, as it is used in the engineering trades, for instance, to mean a man who can "put in hand and carry out any given complete job on a particular class of work when furnished only with the requisite drawings," it is doubtful if such a person as a skilled woman exists. But if, on the other hand, "skilled" be used, as it generally is, not of the man but of the job, to mean "operations which in normal times are only undertaken at the close of a definite period of appren-

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ticeship," there are thousands of women who can do "skilled man's work," even work of the highest accuracy, provided they are specially trained and that very few operations are involved.

The committee is of the opinion that women through education and training will be able to perform, if need be, all the operations of a given job and to meet difficulties and emergencies as the skilled man meets them.

Subdivisions, sectionalization and mechanical appliances have made it possible for women to do work which formerly was considered too heavy for them. Bricklaying, barrow wheeling, loading, stacking, and lifting can be efficiently done by them if appliances are used as supplemental to muscular effort, if the hours are not too long, when they have proper clothing and footwear, when rest rooms are provided, the right kind of meals served, and various other conditions of work favorable.

In clerical and commercial work women are to be found in various kinds of employment. They are managers and department heads in many occupations, and have shown their capability also as commercial travelers and buyers. They are commended for their business capacity though there seems to be some question as to their resourcefulness in emergencies and their ability to accept responsibility. The committee thinks, however, that lack of training facilities may partly account for this, and in all these lines of work the necessity for proper training is stressed if women are to take advantage of the wide opportunities which are presented to them.

In health and sanitary services, in maternity work and kindred occupations there are large and varied opportunities for women.

### Summary of Recommendations by the Committee.

Among the more important recommendations made by the committee are those dealing with the local Government service, remuneration, the employment of married women, trade-unions, and training.

#### Local Government Service.

The committee recommends that all local Government clerical posts that are open to men should be open to women, but that no woman should be appointed who has not passed a prescribed school or special examination.

#### Remuneration.

The matter of remuneration especially, as regards raising and stabilizing wages, is discussed in considerable detail.

The importance is emphasized of giving women as wide an opportunity of employment "as other considerations may permit." The organization of women workers into trade-unions is urged as one of the

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most effectual means of securing adequate wages. The committee recognizes the limitations placed upon training by woman's hitherto brief industrial expectancy and the consequent need for the subdivision of industry into processes which she can learn in a short time. The regulation of wages by law is declared to be the most immediate helpful means of bettering the position of women.

It is pointed out that the phrase "Equal pay for equal work" is vague and subject to various interpretations. The majority report of the war cabinet committee on women in industry<sup>1</sup> upholds the principal of equal pay for equal output. The committee on women's employment anticipates Mrs. Sydney Webb in her minority report on women in industry by stating that "anything less equal than occupational rates (known colloquially as 'the same rate for the same job') for men and women on time work would tend to undermine the whole basis of collective bargaining and react injuriously on the standard of life built up by organized effort." The majority report of the committee on women in industry rejects the principal of the rate for the job regardless of sex, apparently fearing that women might be thrown out of industry altogether. Mrs. Webb and the committee on women's employment realize that the carrying out of the principal might result in women being excluded from occupations for which they are less fitted, but argue that in the long run this might be of advantage to women and the State. If a woman's unfitness for certain occupations is due to lack of training, she may be stimulated to seek such training and the State may be forced to provide it.

The committee recommends a minimum wage for as many woman workers as possible and favors the establishment of trade boards for the prescribing of minimum rates. These progressive recommendations, however, sound highly conservative when compared to Mrs. Sydney Webb's advocacy, in the minority report of the war cabinet committee on women in industry, of a national minimum of rest, education, sanitation, and subsistence in which minimum "there should be no sex inequality."

Although admitting that the principle of "equal pay for apparently equal work alone gives hope of the final settlement of that old feud between men and women workers which is inspired by the fear of undercutting," the committee comments upon the much discussed question of dependents as follows:

Upon this it is apposite to point out that if fairness to the employed is taken as the criterion it may well be the case that equal pay discriminates unequally between men and women. A fair wage for a man is reckoned with reference to one who has a family of normal size. For the time being the man with no family is placed at an advantage and the man with an exceptionally large one at a disadvantage. The wage should be

<sup>1</sup>Great Britain. War Cabinet. Report of the Committee on Woman in Industry. London. 1919. [Cmd. 135.] 341 pp. Price 1s. 6d.

settled with regard to the needs of the normal case. Now as regards women, the normal case is not that of the women with several dependents, and it is not with reference to her that the notion of fairness must be examined. The normal case is the single woman, and by giving her equal pay with the man you might effect the appearance of equality without the fact.

This attitude of the committee on women's employment is interesting in connection with Mrs. Webb's proposal, in the minority report to the war cabinet committee, for State provision for children (entirely outside of wages) "of which the present maternity benefits, free schooling and income tax allowances constitute only the germ."

### Employment of Married Women.

While acknowledging the frequent necessity of women entering industry, the committee on women's employment strongly voices the hope that "every inducement, direct and indirect, will be given to keep mothers at home."

As information on the subject of the employment of married women, available through partial inquiries, is very inadequate, the committee recommends that a committee of experts be appointed not only to investigate the physiological aspects of maternity but to study the economic conditions resulting from restricting the labor of woman workers, both married and unmarried, in connection with motherhood.

Infant mortality statistics of children up to 5 years old, classified by occupation of both father and mother should, the committee thinks, be carried in the report of the registrar general, and the occupations of married woman in-patients should be recorded by hospitals.

At present the only restriction in the industrial employment of married women in England is section 61 of the factory and workshop act of 1901 which reads as follows:

An occupier of a factory or workshop shall not knowingly allow a woman or girl to be employed therein within four weeks after she has given birth to a child.

The committee cites the maternity benefits under the national health insurance act of 1918 and the national insurance act as illustrating the acknowledged importance of married women refraining from work for a period before and after confinement. The most imperative need for the child's and the mother's health is declared to be "a free and efficient midwifery and medical service for antenatal treatment and attendance at and after confinement."

The committee reports that resolutions, favoring "the adoption of a scheme of mothers' pensions on the American model" and urging the action of the Prime Minister and Ministry of Reconstruction in the matter, have been passed by 120 metropolitan, town, and urban district councils.

### Trade-Unions.

The report on women's employment states "that under the most favorable circumstances women's organizations have an uphill struggle" and suggests that the State help unionization by allowing all central and local government employees to organize, by the extension of unemployment insurance, and by the election instead of the nomination of workers' representatives on trade boards. Figures submitted as an appendix to the report show, however, that women are becoming unionized to an astonishing extent, doubling their organization membership in three years. At the close of 1917 there were 773,663 woman trade-unionists in the United Kingdom, exclusive of the 2,000 members of the Irish Women Workers' Union.

The committee concludes that mixed unions of men and women are more effectual in collective bargaining than unions composed exclusively of women, yet concedes that the latter have some distinct advantages.

### Training.

The record made by women during the war in new lines of industry had a considerable influence on the public attitude regarding women's capabilities. "Probably nothing short of the abnormality of the times," the committee declares, "would have brought about such a change in thought and opinion," though a return to the old conventional way of looking at woman's work is regarded as possible. The permanence of the new order, the committee believes, is dependent upon the women themselves, especially on their properly qualifying themselves for larger responsibilities.

Again and again in the report on women's employment this need of training is correlated with the various questions connected with women's industrial progress. A general education as a basis for special training is insisted upon. An understanding must also be reached as to the trades affording permanent openings for women. The incertitude of women's careers, the committee admits, adds complications to the important problem of their training which the committee suggests should include preparation for both domestic and industrial life. "The woman must have in her, to be successful, the spirit of craftsmanship."

The Ministry of Munitions training scheme is described in some detail, and the committee recommends that the Ministry of Reconstruction adapt this successful plan to the requirements of peace. Women's war-time training, however, had for its purpose the most rapid possible conversion of women into producers, and it is agreed that such a specialized scheme would have to be modified. Courses must be planned to avoid overstocking of the labor supply and "train-

ing must be closely associated to trade methods and requirements." Classes should be closed to those unable to benefit by training or who can not afterwards take up the trade. It is claimed in the report that provision should be made for the maintenance of women during training, and the appointment of a committee to deal with the question of "providing training for women both during resettlement and afterwards," is urged.

#### Other Recommendations of the Committee.

Recommendations as to suitability of trades, homework, protection in shops, hours, and working conditions, briefly stated, provide that:

Relaxation during the war of restrictions on dangerous and unsuitable trades should be reimposed on the establishment of peace and the Government departments should decide as to suitability of trades.

Regulation of wages by law must be made with a view to maintaining work for home workers though home work should not be encouraged unless the maintenance of adequate wages is possible.

The same protection should be afforded to workers in shops as is now extended to factory workers.

Restrictions, relaxed during the war, on overtime, long spells, night work and Sunday work should again be effective and a 44-hour week with annual two week's holiday with pay is advocated.

Continuation of welfare work under the direction of a single governmental authority; endeavor by both employers and workers to institute good working conditions; representation of women on Whitley councils and works committees as well as on State boards and committees, and power by the State to compel adoption of methods found to be good were advocated. Also, it was recommended that all factories employing large numbers of women should have women superintendents and that the work of factory inspectors should more and more be merged in that of expert adviser.

The foregoing declarations and recommendations of the committee on women's employment show that the vision of that body is no narrow one. Its members clearly hold that life is much more than physical well-being and "mere productivity" and that "it is the task of those who have to reconstruct our industrial system to see to it that the human rights and needs of the workers receive at least equal consideration with the conditions that fit them to maintain their place in the industrial machine."



# INDUSTRIAL ACCIDENTS.

## Coke-Oven Accidents in the United States During the Year 1918.<sup>1</sup>

IN THE accumulation of data regarding the iron and steel industry the Bureau of Labor Statistics has for some years included those by-product coke ovens which were operated in such connection with steel mills as to constitute part of the plants.

It has been considerably disquieting to observe that with the development of the by-product process accident rates, high from the beginning, have shown a steady tendency to increase. The group of ovens included in the tables which have been prepared being limited to a minor fraction of those in operation, it has been uncertain whether the showing was fairly typical of the industry or represented only the section of it which happened to come within the limits of the Bureau's inquiry.

It is accordingly of much interest to have the complete account of coke-oven experience which is afforded by a report on coke-oven accidents in the United States during the calendar year 1918, published by the Bureau of Mines as Technical Paper 239. This paper contrasts in detail the years 1917 and 1918 and reviews in more summary fashion the facts for earlier years.

A comparison of the figures presented in this report and the figures compiled by the Bureau of Labor Statistics indicate that the two series are in entire agreement in showing that the rates in the by-product ovens are remarkably high and have tended in recent years to go higher. The following table well illustrates the fact of high death rates by contrasting by-product coke ovens with blast furnaces which are recognized as one of the hazardous departments.

COMPARISON OF DEATH RATES IN BY-PRODUCT COKE OVENS AND BLAST FURNACES,  
1915 TO 1918.

Year.	By-product coke ovens.		Blast furnaces. <sup>a</sup>
	Bureau of Mines.	Bureau of Labor Statistics. <sup>b</sup>	
1915. ....	1.75	1.20	1.80
1916. ....	1.35	2.30	1.50
1917. ....	3.13	3.90	2.20
1918. ....	2.84	2.90	2.50

<sup>a</sup> From unpublished data.

<sup>b</sup> From MONTHLY LABOR REVIEW for November, 1919, p. 254. Corrected figures for 1918.

<sup>1</sup> Coke oven accidents in the United States during the calendar year 1918, compiled by Albert H. Fay. Technical paper 239, U. S. Bureau of Mines, Washington, 1919. 26 pp.

The report suggests that the increase in rates may be due to better reporting. This is undoubtedly a factor in the augmented frequency of all accidents but can scarcely be accepted as accounting for the rise of the death rate. It seems probable that the most influential factor in the situation during the war has been the enormous labor turnover with the constant presence of inexperienced and untrained men.

The following tables are reproduced from the report because they well illustrate the relations of the different causes and how they have been changing from year to year. The second table analyzes some elements of the first one into beehive and by-product ovens in each of the years.

FATALITIES AND INJURIES PER 1,000 300-DAY WORKERS EMPLOYED IN ALL COKE OVENS, BY CAUSES, DURING THE YEARS ENDING DEC. 31, 1913 TO 1918.

Cause.	Number killed per 1,000 300-day workers.					
	1913	1914	1915	1916	1917	1918
Cars, larries, and motors.....	0.56	0.24	0.32	0.26	0.48	0.62
Railway cars and locomotives.....	.30	.42	.13	.29	.51	.31
Coke-drawing machines.....	.26	.19	.06	.06	.08	.11
Electricity.....	.21	.24	.03	.09	.06	.09
Falls of persons.....	.17	.28	.13	.21	.22	.22
Hand tools.....	.....	.05	.....	.....	.....	.03
Suffocation from gases.....	.04	.....	.06	.....	.14	.09
Burns.....	.09	.09	.22	.06	.17	.17
Gas explosions <sup>1</sup> .....	.....	.....	.....	.....	.03	.....
Other causes.....	.34	.61	.26	.35	.45	.42
Total.....	1.97	2.12	1.21	1.32	2.14	2.06
	Number injured per 1,000 300-day workers.					
Cars, larries, and motors.....	5.23	6.36	3.91	10.81	16.13	20.10
Railway cars and locomotives.....	6.43	3.34	4.42	5.54	9.44	6.99
Coke-drawing machines.....	2.57	3.34	3.06	5.54	7.33	5.38
Electricity.....	1.84	1.13	.51	.97	1.40	1.72
Falls of persons.....	14.61	14.78	12.32	22.39	26.27	24.61
Hand tools.....	14.40	14.08	10.25	14.74	20.09	27.82
Suffocation from gases.....	1.16	.52	.54	.47	1.12	1.49
Burns.....	16.24	14.08	11.11	23.51	23.51	27.54
Gas explosions <sup>1</sup> .....	.....	.....	.....	.76	1.07	1.13
Other causes.....	45.25	45.43	44.66	68.76	82.23	102.86
Total.....	107.73	103.06	90.78	153.49	188.59	219.64

<sup>1</sup> Not segregated prior to 1916.

FATALITIES AND INJURIES PER 1,000 300-DAY WORKERS, IN BEEHIVE AND BY-PRODUCT COKE OVENS, BY CAUSES, DURING THE YEARS ENDING DEC. 31, 1915 to 1918.

Cause.	Killed.							
	1915		1916		1917		1918	
	Bee-hive.	By-product.	Bee-hive.	By-product.	Bee-hive.	By-product.	Bee-hive.	By-product.
Cars, larries, and motors.....	0.38	0.25	0.38	0.13	0.47	0.49	0.31	0.89
Railway cars and locomotives.....	.07	.19	.27	.32	.36	.68	.12	.47
Coke-drawing machines.....	.07	.06	.05	.07	.....	.18	.06	.16
Electricity.....	.....	.06	.....	.19	.....	.12	.....	.16
Falls of persons.....	.07	.19	.11	.32	.05	.43	.12	.31
Hand tools.....	.....	.....	.....	.....	.....	.....	.....	.05
Suffocation from gases.....	.....	.12	.....	.....	.....	.31	.....	.16
Burns.....	.....	.44	.....	.13	.....	.37	.....	.32
Gas explosions <sup>1</sup> .....	.....	.....	.....	.....	.....	.06	.....	.....
Other causes.....	.07	.44	.48	.19	.42	.49	.55	.32
Total.....	.65	1.75	1.29	1.35	1.30	3.13	1.16	2.84
Cause.	Injured.							
	1915		1916		1917		1918	
	Bee-hive.	By-product.	Bee-hive.	By-product.	Bee-hive.	By-product.	Bee-hive.	By-product.
Cars, larries, and motors.....	3.50	4.32	12.37	8.95	10.47	22.82	24.76	16.07
Railway cars and locomotives.....	1.68	7.07	3.66	7.79	2.95	17.12	4.32	9.30
Coke-drawing machines.....	2.66	3.44	4.63	6.63	4.14	11.10	4.26	6.35
Electricity.....	.26	.75	1.07	.84	.26	2.76	.85	2.47
Falls of persons.....	8.03	16.46	18.18	27.43	19.33	34.48	16.30	31.77
Hand tools.....	4.28	16.02	9.79	20.67	9.85	32.21	11.50	41.91
Suffocation from gases.....	.....	1.07	.....	1.03	.....	2.45	.06	2.73
Burns.....	3.56	18.40	14.52	34.26	8.14	41.72	11.01	41.81
Gas explosions <sup>1</sup> .....	.....	.....	.....	1.68	.26	2.02	1.28	1.00
Other causes.....	15.87	72.47	36.15	107.81	39.03	133.38	56.77	142.65
Total.....	39.84	140.00	100.37	217.09	94.43	300.06	131.11	296.06

<sup>1</sup> Not segregated prior to 1916.

Several points may be inferred from inspection of these tables.

1. It is evident that some general cause has been operative tending to higher rates during the later years. Although new plants have been coming into operation rapidly during the interval, it does not seem reasonable to suppose that they are markedly inferior in the matter of safety provisions or operation methods. It seems much more likely that the disturbed situation of the working force which is characteristic of the war years and which has been mentioned above is mainly responsible. It may also be suggested that the influenza epidemic in the latter part of 1918 may have had considerable influence on the accident rate.

2. In both beehive and by-product ovens the prolific cause of fatal injury is the transportation system. Of the rate in 1918 of 2.84 per 1,000, 1.36 cases are credited to various elements of the transportation. This hazard has been found everywhere a difficult one with which to deal. If given adequate engineering attention it has not been found impossible to change for the better.

The demonstration which this report affords, that as at present operated the by-product oven is to be classed as highly hazardous, should lead to serious inquiry on the part of those in charge regarding possible improvements in the present situation.

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## Safety Movement in England.

TO THE annual report<sup>1</sup> of the chief inspector of factories and workshops, Great Britain, for 1918, Mr. Gerald Bellhouse contributes an article on "Accident prevention and safety first." This is of interest both for the information it contains and for the opportunity it affords of comparing the status of such matters in England with that in our own country.

In 1912 the National Safety Council was organized and the proceedings of the safety congress, at which steps were taken toward that end, contain discussions regarding various matters closely similar to those presented in this report by Mr. Bellhouse. It is evident that, up to the onset of the war, employers in England had been content to rely upon the activities of the well-organized and efficient factory-inspection service which had been developed and had not fully realized that no such service can possibly be sufficiently extensive and active to cover all the details which must have attention if the effort to reduce accidents is to have reasonable success. The establishment in 1917 of the British Industrial "Safety First" Association indicates that the war has brought compellingly to the attention of British employers the necessity for constant study and effort within their works as well as scrupulous attention to the directions of the factory inspector.

The report considers accidents as falling into two classes: (1) Machinery accidents and those preventable by safeguards, and (2) nonmachinery accidents, and accidents not due to absence of safeguards. This may be contrasted with what is coming to be recognized as a usable classification in this country, namely, preventable by (1) engineering revision, (2) supervision, and (3) training of the men. A fourth group will contain those cases which are, so far as can now be seen, in the nature of unavoidable trade risks. The expression "engineering revision" has been suggested because safeguarding has often been understood in too narrow a sense as referring exclusively to the "fencing" of machinery.

The report notes improvement in conditions connected with ship-building, referring particularly to the substitution of staging and gangways, with steel supports in place of those of wood formerly used.

<sup>1</sup> Annual report of the chief inspector of factories and workshops for the year 1918. London, 1919. Pp. 13-22.

The device of painting a broad white band around openings in the decks is mentioned as being tried out. Through joint action between employers and workers agreements have been reached in various trades standardizing methods of safeguarding. It is proposed to utilize the industrial councils formed under the Whitley scheme in carrying out such plans.

Under the heading "Safety committees" the report details plans of procedure similar to those which were first used in this country about 1908. The first department to be so organized was a blast furnace in March, 1908. In April an entire steel plant put the committee system into operation, and in August the plant of which the blast furnace mentioned above is a part, completed its organization.

The development of the system in a large British factory may be summarized as follows:

From departmental committees established with the purpose of encouraging the workpeople to make suggestions concerning their work and working conditions, there developed accident inquiry committees for the various departments. "Their chief duties were (1) to inquire into and report on all accidents that occurred in their departments and to make recommendations, if possible, to prevent their recurrence, and (2) to nominate quarterly two members to make regular inspections of the departments along with the department manager and a foreman to point out defects, and to make such recommendations for the prevention of accidents as they consider desirable." This plan greatly reduced the number of accidents and aroused the interest of the workers in accident prevention. A more extensive "Safety first" scheme was then adopted, the chief feature of which was the appointment of a safety inspector to supervise all safety measures. Notices, warnings, and a general set of safety rules aided, also, in keeping the question of safety prominently before the workers. As a result of these new measures there was a reduction in the number of accidents in the works of more than 50 per cent in a single year, and in 1918 a further reduction of 12 per cent.

The following statement detailing the functions of the committees shows how closely the British practice is similar to our own:

1. To inquire into all accidents which occur.

For this purpose—

(a) The employer should furnish to the committee particulars of each accident as soon as practicable after its occurrence.

(b) The committee should have authority to visit the site of the accident, to make a full inspection, to hear witnesses, and generally to investigate all the circumstances of the case, and to make recommendations for preventive measures.

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- (c) The committee should publish the results of their investigations.
2. To inspect the departments of the works at regular intervals.
  3. To keep the subject of safe operations constantly before the minds of the workpeople.
  4. To secure from all the workers suggestions regarding safer practices. The usefulness of giving charge of all safety matters to some specially designated official, generally known as a safety inspector or safety officer, is emphasized in the report.

The following summary of the duties assigned to the inspector in a large ship-repairing works shows the general nature of the work for which such an officer is responsible.

He is charged with the duty of seeing that the factory acts are duly observed and that the machinery is protected. With regard to accidents he is to give advice on their prevention, visit the works to see that proper preventive measures against accidents are observed, and "examine the reports of all accidents, visit the spot and take evidence, and then confer with the works management in cases where negligence or improper appliances appear to have been the operating cause." A further duty is that of organizing a system of "first aid" at all the works, and seeing that the proper appliances and remedies are at all times available.

Finally the report specifies three items which should have attention:

1. A full and careful analysis of all the accident reports.
2. An intensive "safety first" campaign. As a factor in the development of such a campaign the recently formed "safety first" association is regarded as of very great importance.
3. The publication of a series of "safe practices" pamphlets.

Since no statistical information is available it is not possible to say whether the situation in Great Britain is better or worse than that in this country. It may, however, be said with confidence that had we not prior to the war worked out some of these problems to which the war has forced renewed attention in Great Britain, it would not have been possible to present the record shown by our latest figures.<sup>1</sup>

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<sup>1</sup> See MONTHLY LABOR REVIEW for November, 1919, pp. 253 to 257.

## INDUSTRIAL HYGIENE AND MEDICINE.

### A Study of the Munitions Intoxications in France.<sup>1</sup>

**D**URING the war the French Government made extensive studies of the industrial poisons to which the workers in explosives were exposed, and the wealth of material collected by their experts was put at the disposal of Dr. Roger G. Perkins, professor of hygiene and bacteriology in Western Reserve University, and consultant in hygiene to the United States Public Health Service. Dr. Perkins has just published an abstract of the French findings in Public Health Reports for October 24, 1919 (pp. 2335-2374).

The first interesting fact that strikes one in this French material is that the explosive which caused the greatest amount of poisoning in England and in the United States, trinitrotoluol, gave hardly any trouble at all in France, while a compound that is produced in the course of picric acid manufacture, dinitrophenol, and which is also used in combination with picric acid for loading shells, gave rise to very serious and fatal poisoning in France. It appears that the combination most used for shell loading was a 40-60 mixture of dinitrophenol (DNP) and trinitrophenol (TNP), commonly called picric acid.

Such a study made under the exigencies of the war is necessarily incomplete in several respects. Although it is possible to know the number of men actually poisoned, it is impossible to discover the exact number of men exposed to the poison, or their racial distribution, for there was much shifting of the men from place to place, especially the Senegalese and Annamites. The factory physicians also were moved from place to place to care for certain emergencies, so that there could be no continuity in their records, and not only were the gangs of men changed from plant to plant but even more so from one department to another in the factory, thus necessarily often bringing the records of the individual men to an abrupt close. In spite of these handicaps, the French records present very interesting and valuable observations.

<sup>1</sup> Summary of article under this title in Public Health Reports. October 24, 1919. Washington, 1919.

## Dinitrophenol.

Dinitrophenol is produced in France from benzene by the formation of monochlorobenzene, which by treatment with nitric and sulphuric acids is changed to dinitrochlorobenzene. Further treatment with caustic soda produces a sodium compound from which the sodium is removed with hydrochloric acid, leaving the completed dinitrophenol. A further nitration results in the formation of trinitrophenol, the ordinary picric acid, or melinite as it is called in France. The finished DNP is a yellow, or yellowish white, solid with a faint odor of phenol. Various impurities are often present in the commercial product, but it is considered by the French that all of these are less poisonous than DNP itself and can therefore be disregarded as essential factors in the clinical cases. The processes which involve danger of poisoning are those in which there is enough heat to produce fumes of DNP, or steam which may carry DNP, or processes necessitating the handling of solid DNP. In general, these French observers believe that absorption through the skin is the most important, though there are certain cases which seem to show that the respiratory tract is the most important portal of entry for this poison. It can also enter through the digestive tract.

The study of cases of TNT poisoning in England and the United States was greatly aided by the discovery of a test for the urine which showed the presence of TNT in the body. In the same way, the French have succeeded in detecting in the urine of DNP workers a substance which is a reduction product of DNP, and which while not certain proof of poisoning, has always been found in great abundance in the urine of the serious cases. The specific test on the urine is known as the violet reaction of Derrien.

### Factors in Susceptibility to DNP.

Since only a limited number of workmen exposed to DNP became poisoned, it is evident that the susceptibility to this substance varies very much. This susceptibility does not depend on age, for there was no child labor at all; all the workmen were within the mobilization age, and there was no indication of greater susceptibility at either end of this age group. Nor did sex enter as a factor, for no women were employed in the dangerous processes. In connection with the race factor in susceptibility, there are some interesting points. The men came from various parts of France and there were also men of the yellow races, Chinese and Annamites, and from the black, the Senegalese. In general, it was found that the Annamites were the least affected, the Senegalese next, and the whites most, but the racial factor was not the only one to be considered here, for the



Annamites were the most careful in following the regulations, especially with regard to fumes, and the whites were the most careless. Another factor that came in to confuse the issue was the difference in accuracy of the records kept for the different races, thus the Senegalese were not under the charge of French physicians, as were the whites, but were cared for by colonial doctors, less able to deal with such complicated problems, and their apparent insusceptibility may be due in part to less careful examination, also the Senegalese were very susceptible to pneumonia and so many died of this disease with each change of weather that the diagnosis of pneumonia was likely to be made on inadequate grounds. Dr. Perkins believes that probably the resistance in the various races was practically identical.

The one point on which there is no disagreement is that men with an alcoholic history, either past or present, were by far the most susceptible and had to be weeded out at once. The districts in France which had the reputation of housing the heaviest drinkers supplied the heaviest toll of DNP intoxications. It was found also that an examination must be made of the urine of all men before employing them in positions of exposure, for the presence of albumen in the urine shows a marked susceptibility and such men are to be included among the serious risks. While no connection was shown between susceptibility and diseases of the digestive system, or the skin, or the respiratory tract, except tuberculosis, it was clear that the resistance in persons with a low grade of physical condition, whether from tuberculosis or other diseases, was less than that of healthy men, and in many cases where the workers seemed to be resistant for a long time, if they were sick or overworked they might suddenly develop toxic symptoms.

### Clinical History.

Mild forms of poisoning are especially important in calling the attention of the physician to the dangers of a more severe attack so that the worker may be removed from exposure to the poison. In such cases the men complain of loss of appetite, nausea, and vomiting; there may be diarrhea and colic. The tongue is white and furred, but there is seldom jaundice. There is a history of decided loss of weight, general weakness, with headache and dizziness, and moderate sweating especially at night. A few days rest usually brings about a complete cure. It is necessary to make daily examinations of the urine, which will be found to give the Derrien reaction, and when this increases day by day, or remains at a fairly high point, it is an indication that an intoxication of the acute type is about to develop.

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An acute intoxication is usually preceded by the symptoms described above, especially the gastrointestinal disturbances. The onset is sudden, with complaint of extreme fatigue, a painful constriction at the base of the chest, and a burning thirst. The face is pale, the lips slightly blue, there is abundant sweat and a characteristic agitation and anxiety; the breathing is short and labored, the difficulty being more in drawing the breath in than in letting it out, as in asthma. There is moderate fever and irregular pulse. The urine is much diminished in quantity and gives a Derrien reaction of increasing intensity. Improvement in the case is marked by a decided increase in the quantity of urine. Usually removal from work with a rest cure free from exposure to DNP is followed by a rapid cure. It must be noted, however, that a single attack of this sort does not immunize the man, on the contrary he requires careful watching from that time on.

Very severe or "fulminating" intoxication is especially noted among alcoholics, or persons with kidney or liver disease. Death may follow in a few hours. The usual history of such a case is as follows: There is a sudden attack of extreme exhaustion, so that the man finds it impossible to keep on working, or less frequently there are violent attacks of colic and diarrhea. After he leaves work and goes home he grows worse, fever comes on, his temperature goes up to 104° F. There is abundant sweat, which stains the skin yellow even over the parts of the body which have been covered by the clothing and never exposed to DNP. There is intense thirst. Some times after a bowel or bladder discharge there seems to be an improvement, giving false hope of recovery, while the heart remains regular and there is practically no involvement of the lungs. The patient is very much frightened and excited and he may have convulsions followed by unconsciousness which grows deeper and ends in death after a few hours. The whole course of the disease is very like that of fatal uremia. One of the characteristic features is that the extreme loss of water from the tissues through the sweating leads to very early rigor mortis, with delay of decomposition of the cadaver. In very rapidly fatal cases, death has come so quickly that there was no time for treatment and the temperature has gone as high as 108° F. with a still further rise after death.

Perhaps the most interesting feature of the post mortem examination is that nothing is found which is in any way characteristic even on microscopic examination of the organs. There is a dropsy of the lungs but this is secondary to the disturbance of circulation in the lungs which was shown by the difficulty in breathing. DNP and its derivatives can be found in blood and organs but that is true also of the organs and blood of workmen who die from accidental

causes while employed on DNP, so no great weight can be placed upon it.

### Experimental Work.

In 1915, after the appearance of serious cases of poisoning in the munition plants, a committee was appointed to study the toxicity of explosives, and under this committee a long and elaborate series of animal experiments were begun by Dr. André Mayer and completed by him in 1918. He found that DNP was a specific poison and that the characteristic symptoms could be produced in all warm-blooded animals. Its fundamental effect is to increase the combustion of tissues, as shown by the sweating, the panting breath, and the progressive elevation of temperature, which may reach 113° F. at the time of death. This is not the result of a stimulation of the nervous system; it bears no relation to an increase of muscular work, nor to an action of any special organ. It appears to be the result of a general stimulation of cellular oxidation. Animals show a very variable susceptibility to the poison, and the majority of them can be brought to a condition of tolerance, so that they can take a fatal dose every day for a period as long as a month and a half.

### Protection Against DNP Poisoning.

This depends upon the prevention of vapors and dusts and the handling of DNP in such a way that it does not come in contact with the skin, especially when it is hot. The experience in carrying out precautions of this kind is very like our experience in the United States in connection with TNT poisoning, for the French also found that rubber gloves were worse than useless, making the skin soft and moist, and so increasing the danger from any material that could make its way through defects in the gloves. They, too, found it better to use washable gloves, if any, and they, like us, experimented with protective salves and found them useless.

They seem to have had much difficulty in inducing the men to bathe after work, although, apparently, if the bathing arrangement was good and a competent man in charge the difficulty could be surmounted. In some places the following arrangement was made: The men took off their working clothes on one side of the room, and in order to reach their street clothes on the other side they were obliged to pass through a deep stream of warm water reaching nearly up to the waist, with a shower going above. In other places 20 cents was taken off the daily wage of the men who did not bathe and 20 added to the wage of the men who did, making a prize of 40 cents for the clean and virtuous.

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Much stress was laid on medical supervision, and a careful examination including urine analysis was made of all applicants for employment. It was not always possible to rule out the men who might seem to be predisposed, but even so the examination would show which men needed watching. The doctor then was supposed to make weekly rounds during which he could note the condition of the men and see if any were suffering from ailments which they were not reporting. Regular examinations of the urine were made by a laboratory assistant, and the physician was supposed to proceed on the assumption that where the dusts and vapors are removed, where the workers are properly selected, and where cleanliness is enforced there should be no urines giving the Derrien reaction. In other words, the appearance of this reaction means that there is a fault in technique either in the working of the plant, or in the hygiene of the workmen, or that something is wrong in the workman himself. If this reaction persists for several days or increases in intensity, the man must be examined at once, kept under watch, and removed from the shop as soon as there are any of the early symptoms, especially any fever.

The system of rotation of workmen from DNP work to work free from exposure every two weeks was suggested, but met with practical difficulties in France, as it did in the TNT plants in England. It was finally left to the individual factories to settle. The same precautions were advocated as in the English plants to prevent poisoning through the skin of the feet and ankles, by means of wooden sabots and ankle pieces to prevent the dust from working its way through the socks. Probably, however, the most important protective measures were the changes made in the methods of work, such as substituting mechanical work for handwork in the process of granulation, abandoning the desiccators, manipulating the product in a moist condition, and covering the fusion vats with asbestos curtains and installing ventilators above them. The results of all these measures are shown in the records which, although they do not show the cases of sickness and death in comparison with the numbers employed, still give some idea of the improvement by showing the number of deaths per tons of manufactured product.

Period.	Deaths.	Tons of DNP and mixture DD manufactured.	Deaths per 10,000 tons.
May, 1916, to May, 1917.....	31	19,100	16.3
May, 1917, to May, 1918.....	5	40,700	1.2

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## Picric Acid or Trinitrophenol or Melinite.

This was the favorite explosive in prewar times and the main supply was obtained from Germany, so a new industry had to be set up, and it was possible to observe the action of this substance through all the procedures of manufacturing and handling. No serious effects were observed, no serious cases of sickness. Animal experiments showed that it took fully five times as much TNP as DNP to produce symptoms in guinea pigs. So little danger was there in the TNP departments that they were used as resting places for men who had to be taken away from contact with DNP. The mixtures of explosives were found to be dangerous in proportion to the quantity of DNP used, and in general a mixture of DNP, TNT, and TNP was about as dangerous as DNP alone.

## Dinitrotoluol.

It is in the purification process, the removal of oily substances, that the danger of poisoning occurs, for the purified product is practically nontoxic. During this process the workers who handle the material or are exposed to vapors in the washing process were often made ill. In one shop there were 25 workmen and at times half of these were incapacitated.

## Trinitrotoluol.

While this was less used among the French than among the English and Americans, there was a great deal made, enough at least to expose many workers to its effects. The operatives were no more cleanly than the English and Americans, yet in France the manufacture of TNT is considered essentially safe. Only two cases of fatal toxic jaundice have been recorded and while it is, of course, possible that some cases were missed in the confusion of a war industry, the inquiries set up by the authorities in the case of death of a munition worker were very rigid. What is more significant is that the French claim that there has been very little disability involving loss of time among the workers, so that it was not considered necessary to have change of occupation or any special medical investigations. They believe that their method of purification by the use of sulphite which removes toxic compounds, such as tetranitromethane, is responsible for their escape from the troubles encountered in England and to a somewhat less extent in the United States. Dr. Perkins notes in this connection that since sulphite purification has been used in England there are far fewer cases of intoxication.

## Other Nitrated Bodies.

The results obtained in these various investigations led to a further series of studies of the various bodies used in the manufacture of explosives and of the by-products resulting from the processes. These experiments showed that the chloro and nitrochlorbenzenes are less toxic than the nitrotoluols, anisols and phenols. The most toxic were found to be the dinitrophenol used as an explosive and the corresponding form of dinitranisol and the least was chlorbenzol.

Dr. Perkins appends to this report sections giving a description of the Derrien reaction in the urine, a study of DNT poisoning, one of TNT poisoning, one on tetranitromethane, and finally the records of animal experiments made with various nitrated products.

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## Meeting of American Public Health Association.

**T**HE forty-seventh annual meeting of the American Public Health Association was held in New Orleans from October 27 to 30, 1919. The association is divided into nine sections—Health Administration, Laboratory, Sociological, Industrial Hygiene, Sanitary Engineering, Vital Statistics, Food and Drug, Child Hygiene, and Personal Hygiene.

In the Sociological Section the principal topics considered were the relation of living conditions to health, the influence of industrial conditions and relations on health, community medicine, public health nursing, and similar subjects.

On the relation of living conditions to health Dr. Donald B. Armstrong, director of the Community Health Demonstration of Framingham, Mass., presented a paper recommending a living wage which would provide not only the means to prevent disease, but also the means to create health. In order to prevent disease the wage must be sufficient to provide proper physical environment, the essentials of living, such as food, housing, professional care, etc., and, in order to create health, to make provision for leisure, amusement, and education.

Miss Dorothea C. Davis, in a paper covering the family budgets of approximately 13,000 families visited by agents of the Bureau of Labor Statistics in its country-wide investigation in 1918-19, showed that about 20 per cent of the families included in the study did not have sufficient food for the maintenance of health, 30 per cent were on the border line between sufficient and insufficient nourishment, leaving 50 per cent, in all probability, well nourished. The Bureau of Labor Statistics' study also revealed clothing expenditures which were insufficient to maintain families in health and decency. Fifty

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per cent of the families included in a special housing study were found to live in houses which had less than one room per person, and 17 per cent less than 0.7 of a room per person. Many inadequate miscellaneous expenses for care of health, education, amusement, etc., were also shown in the family budgets collected by the Bureau of Labor Statistics.

Dr. Ernst C. Meyer, director of the Department of Surveys and Exhibits, International Health Board, New York City, presented figures showing that even with an average of one physician to every 750 people in the United States (a much better provision than other countries afford), an extremely large number of cases of illness in the United States are inadequately cared for each year. This condition is due largely to the fact that the middle classes can not pay the prices charged by private doctors. This statement was substantiated by figures given in the paper of the Bureau of Labor Statistics which showed how the expenditure for health increases as the family income increases. In the Bureau of Labor Statistics' study of 1918-19 for 30 selected cities, an increase of 100 per cent in the average family expenditure for health was not at all unusual between the income group of \$900-\$1,200, and those in the group of \$2,100-\$2,500. The tabulations on this subject show that in the lower income groups families were unable to have adequate medical and hospital service, or, if they did have it, the family itself was unable to bear the expense, and the cost was shifted in some form or other to charity. In these 30 cities the mean expenditure for doctor, dentist, hospital, medicines, etc., was only \$58 per family per year, and the average size of family in the entire study was 4.9 persons, making a small expenditure for health per person.

To alleviate this condition Dr. Meyer's paper advocated a reorganization of medical work along the line of community medicine. Two prominent examples of this form of organization are the Mayo Clinic, conducted by the Mayo Brothers at Rochester, Minn., and the Boston Dispensary, of which Dr. Michael M. Davis is director. Dr. Meyer's paper showed that the demand for medical attention would increase as the cost of the service was reduced, and that the only way to reduce the cost was by cooperative organization. Information from the University of Wisconsin indicates that since the State provides a free clinic, students consult physicians four times as frequently as they otherwise did. The community medicine plan has both economy and efficiency to recommend it. Economy is effected through the patient going to the doctor, rather than the doctor to the patient, and also by making possible the continuous use of expensive scientific equipment. Efficiency is accomplished

through the opportunity given each doctor to become a specialist in one line, and through the opportunity afforded for the purchase of more complete and better equipment than each individual doctor would be able to secure for himself.

Dr. Francis E. Fronczak, health commissioner of Buffalo, N. Y. outlined the organization of the Buffalo health center, and especially recommended the bulletin on health centers published in September, 1919, by the American Red Cross for those interested in the subject.

The subject of periodic health examinations was discussed particularly in the papers which took up industrial conditions and relations and their influence on health, and also in some of the general sessions of the association. The value of physical examinations was taken up from the standpoint of the welfare of the worker, the resulting increase in production, and the general raising of the health level of the community.

Medical supervision in industry is necessary to prevent the worker from engaging in occupations injurious to him, although it may be harmless to another. Laborers themselves have not awakened to the value of health as an asset. Dr. Louis I. Harris, director of the bureau of preventable diseases, department of health, New York City, cited instances where studies had been made of the physical conditions and environmental surroundings of painters, fur workers, and laundry workers, which were later used by these trades as an argument for higher wages, rather than as a basis for improved healthful conditions.

The tendency on the part of industrial workers to distrust physical examinations as an effort directed solely toward increased production, was frankly admitted in the discussion. This objection may possibly be overcome as entire communities adopt the plan of periodic health stock taking, which seems to have made considerable progress in some localities. Dr. Armstrong of Framingham, Mass., reported that before the influenza epidemic, 12,000 of the 17,000 population of Framingham had been induced to have physical examinations, and that after the epidemic it was less difficult to get the same persons to submit again to physical examinations.

Other papers were read which emphasized the need for educational campaigns on health subjects, the need for a "will to health" on the part of individuals, and the importance of establishing proper health habits.

In the section on industrial hygiene papers were read on the subjects of health hazards in different industries, such as the effects of nonpoisonous dusts, dyes, cutting oils, and compounds; industrial fatigue in general; and physical examinations with reference to their use in placing, replacing, and classifying employees, as well as in increasing production.



## Industrial Poisoning in British Factories.<sup>1</sup>

INTERESTING light is thrown upon the prevalence of the more common industrial poisons in the industries of Great Britain by some figures, covering the period from 1900 to 1918, published for the first time in a chapter by Dr. T. M. Legge, medical inspector of factories, in the report for the year 1918 of the chief inspector of factories and workshops. As suggested by the author, the figures, being comparative, indicate a radical change, resulting either from improved methods or from diminution in scope, when they show a steady decrease in an industry through a number of years; or conversely, indicate by a stationary position that ameliorative measures for the time being have reached their limit. They reflect, also, the effect upon certain important branches of industry of the dislocation of work during the period of the war by a decrease of cases in one industry and an increase in another. The table as given here is confined to a statement of total cases and of deaths resulting from six of the nine important industrial poisons. The total number of cases includes the deaths:

TOTAL NUMBER OF CASES OF, AND DEATHS FROM, INDUSTRIAL POISONING, IN GREAT BRITAIN, 1900 TO 1918.<sup>a</sup>

Disease.	1900	1901	1902	Average 1903- 1905	Average 1906- 1908	Average 1909- 1911	Average 1912- 1914	1915	1916	1917	1918
<b>Lead poisoning:</b>											
Cases.....	1,053	863	629	601	619	576	522	381	348	317	144
Deaths.....	38	34	14	23	30	35	33	21	21	21	11
<b>Phosphorus poisoning:</b>											
Cases.....	3	4	1	1	1	1	.....	3	2	3	3
Deaths.....	.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....
<b>Arsenic poisoning:</b>											
Cases.....	22	1	4	4	12	7	4	3	.....	30	3
Deaths.....	3	.....	.....	.....	1	.....	.....	.....	.....	5	1
<b>Mercurial poisoning:</b>											
Cases.....	9	18	8	6	7	10	14	6	18	17	9
Deaths.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Toxic jaundice:</b>											
Cases.....	.....	.....	.....	.....	.....	.....	.....	.....	206	190	34
Deaths.....	.....	.....	.....	.....	.....	.....	.....	.....	57	44	10
<b>Anthrax:</b>											
Cases.....	37	39	38	52	57	75	57	50	105	93	72
Deaths.....	7	10	9	13	13	11	7	8	16	12	8

<sup>a</sup> The report states that the fatal cases not reported in previous years are included as both cases and deaths.

### Notifiable Types of Poisoning and of Occupational Diseases.

The report deals specifically with the notifiable types of poisoning and of occupational diseases, beginning with lead poisoning, which shows the strong influence of war-time conditions, lead being controlled by the Ministry of Munitions. "Sustained effort will be

<sup>1</sup> Industrial poisoning, by T. M. Legge. In annual report of the chief inspector of factories and workshops for the year 1918. London, 1919. Pp. 65-83.

required to prevent as far as possible the cases of lead poisoning from increasing again in peace time." As all risk in lead poisoning lies in the inhalation of dust and fumes, it is suggested that the principal factor to be considered is whether or not locally applied exhaust ventilation for the removal of dust and fumes is practicable. Subsidiary precautions for minimizing the effects of lead should, however, not be neglected.

During the period 1915-1918, 11 cases of phosphorus poisoning, known as "phossy jaw," were reported from one factory in which the manufacture of phosphorus was carried on. Only one case was reported in other processes, although the number of workers brought into contact with phosphorus for war purposes was large. Until these cases occurred an apparent immunity from phosphorus poisoning had been enjoyed for many years.

The report shows that cases of arsenic poisoning increased from 3 in 1915 to 30 in 1917. Nine were due to arseniuretted hydrogen gas, the importance of which as a poison, it is stated, has greatly increased owing to the increase in the manufacture of intermediate dyestuffs, involving processes in which zinc dust and hydrochloric acid are used either together in a reduction process or the acid added, as a later stage in the manufacture, as a solvent for the zinc hydrate, formed at the previous stage, and any unconverted metallic zinc. The other cases of arsenic poisoning were due mainly to the manufacture, for purposes of chemical warfare, of arsenic trichloride by the action of sulphuric acid on a mixture of common salt and arsenic, from whence it distilled over and was condensed as an oily liquid and filled into drums. It was difficult to keep the plant free from leaks, and the arsenic chloride permeated the air near the place where the men were working.

The chief significance shown by the figures for mercurial and dinitrophenol poisoning is the relation of the cases reported to munition manufacture. The first two cases of chronic benzol poisoning known to have occurred in Great Britain were reported in January, 1918, as men employed in spreading balloon fabric in a large rubber works. Both cases proved fatal. A third case was reported in July, 1918, and proved fatal. This case was one of three men employed in coating metal rims with rubber solution in the manufacture of pneumatic tires.

Anthrax cases increased noticeably during the war, but deaths were not in proportion to increase, the figures being: For 1909-1913, 288 cases and 45 deaths; and for 1914-1918, 374 cases and 51 deaths.

Toxic jaundice, pitch ulceration, and industrial dermatitis are diseases which receive special consideration. The last proved very troublesome in a large number of engineering works during the war, arising from the cutting oils, cutting compounds, and soluble oils used

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on automatic lathes and similar machines, and composed chiefly of mineral oil derived from the residue of petroleum left after distilling other oils which boil below 300° C. One outbreak involving over 30 persons occurred at a dye works in a weaving shed from cops dyed a sky-blue tint, and the cause was attributed by Dr. Prosser White to the powerful alkaline and caustic processes through which the thread would first pass, subsequently cleared by passage through a weak acid bath. The latter process had not been properly carried out, so that zinc and quicklime were concentrated on the thread.

# WORKMEN'S COMPENSATION.

## Tests of Efficiency in Workmen's Compensation Administration.<sup>1</sup>

By CARL HOOKSTADT.

WORKMEN'S compensation laws have been in effect in the United States for eight years. The time is now ripe for a careful examination into the merits and alleged beneficent results of these laws. Are they having the effect anticipated? Have they reduced accidents? Have they restored the industrial efficiency of injured workers and increased their opportunities for employment? Have they bettered the social and economic conditions of the dependents of those killed through industrial employment? By what means has this been accomplished? What type of administration and insurance has proved most efficient?

Unfortunately few of the compensation commissions have made an intelligent study of their own laws. They do not know not only what other States are doing but even what they themselves are accomplishing. Most of the commissioners' time and energy is consumed in hearing and deciding cases. Have accidents been reduced? They don't know and many apparently don't care. Are injured employees receiving the compensation benefits provided for in the law? They don't know. Are employees receiving their payments promptly? They don't know. What becomes of the permanently crippled workers? They don't know. How long are such workers disabled? They don't know. What disposition is ultimately made of the commutations and lump-sum settlements? They don't know. What becomes of the widows and other dependents? They don't know. What type of insurance carrier furnishes the best service? They don't know.

As a result of numerous requests from State legislatures and others for data on the relative merits of different types of compensation and insurance systems the Bureau of Labor Statistics has undertaken an investigation of this subject. This study has a two-fold purpose: (1) To compare the different types of administration as to cost, security, and service; (2) to compare the several types

<sup>1</sup> Paper read at the sixth annual meeting of the International Association of Industrial Accident Boards and Commissions, held at Toronto, Canada, Sept. 23-26, 1919.

of insurance systems, applying the same tests. Inasmuch as the Bureau has just begun its investigation it would manifestly be unfair and undesirable to give out preliminary data. Results from only two or three States are not only inconclusive but may possibly lead to erroneous conclusions. Under the circumstances this paper will be limited to the tests, standards or criteria by which the success of a compensation act may be measured. The justice or appropriateness of these tests can hardly be disputed. The writer hopes, therefore, to be pardoned if the remarks herein border on the obvious and appear somewhat dogmatic.

### Cost.

The first question to consider is that of cost—cost to the employer, the employee, and the State.

*To the State.*—The compensation costs borne directly by the State involve several factors. Oregon is the only State which pays a part of the actual compensation benefits, one-eighth of the total cost being contributed by the State. Under all of the laws, however, the State bears a portion of the administrative expense. This administrative expense ratio varies, depending upon the kind of administrative agency provided, upon the type of insurance system, and upon the law itself. In those States which have no administrative boards or commissions<sup>1</sup> the cost is small, practically nothing in some States. This expense increases with States having compensation commissions, and reaches its maximum in the States having exclusive State funds. The extent to which the State bears the administrative expense of State funds depends upon the law of the particular State. In some States it is borne by the State, while in others such expenses are taken care of in the premiums and therefore borne by the employers. To compare accurately, therefore, the administrative costs of an exclusive State-fund State, like Ohio, with an exclusive private-insurance State, like Massachusetts, it would be necessary in the case of Massachusetts to include the administrative expenses of the insurance companies. Then, too, in every case the expenses should be correlated with the service rendered. A high expense ratio may not necessarily mean extravagance or waste if the service is commensurate with the expenditures.

To what extent the State should bear the expense of administration is an unsettled question. It was apparently intended that the employer primarily should bear the burden of compensation costs. But should this include administrative expenses? Under the private insurance carrier system employers do bear directly a large share

<sup>1</sup> Alabama, Alaska, Arizona, Kansas, Louisiana, Minnesota, New Hampshire, New Mexico, Rhode Island, and Tennessee.

of the expense of administration, since the expense ratio is one of the factors determining the size of the premium rates. Where administrative expenses are paid out of appropriated public funds employers are to this extent relieved of the cost. It may be argued that the incidence of cost is immaterial in any event since the ultimate consumer or public pays the bill by virtue of the increased cost of the product. This the writer is not at present prepared to discuss.

*To the employee.*—Ohio, Oregon, and West Virginia have been the only States requiring employees to pay a part of the compensation costs. In Ohio and West Virginia employees were required to contribute 10 per cent of the cost; in Oregon 1 cent for each working day. Ohio and West Virginia, however, have abolished this provision; the former in 1914 and the latter in 1919. Moreover, in a number of the Western States the compensation laws specifically authorize employers to make contracts with their employees for medical and hospital service. Employees generally are required to contribute \$1 a month for the support of this service, which usually covers sickness as well as accidents. One criticism against this contract system is that the cost of the medical benefits under the compensation law—a burden it was intended for the employer to assume—is shifted to the employees. It is maintained that the employees' contributions more than defray the entire cost of the service.

In discussing the relative burden borne by each party under compensation acts the distinction between *compensation* costs and *accident* costs should be kept in mind. In no State does the employer pay the whole cost of industrial accidents. In fact, in most States he bears less than one-half the cost, and in some States only about one-fourth. The cost of industrial accidents is borne by the employees in so far as the statutory compensation benefits fail to cover the loss of earnings resulting from the accident. Certain other factors should also be taken into consideration, such as medical costs for which the employer is not liable under the act, and the expenses entailed in the process of procuring the compensation benefits. Frequently a considerable portion of the compensation is dissipated in attorneys' fees, witnesses' fees, traveling expenses, and legal procedure. These matters will be discussed more fully under Service.

*To the employer.*—Although the employees and the State pay a part of the cost, the real burden of compensation costs, as distinguished from accident costs, is after all borne by the employer. The cost to an employer of a given number of accidents depends upon two factors: (1) Liberality of compensation and medical benefits, and (2) the type of insurance. Since the insurance rate is made up of the two factors, pure premium or loss cost and expense loading,

and since the expense ratio varies with the type of insurance the effect of the latter upon insurance rates and therefore upon the cost to the employer can readily be seen. However, inasmuch as this subject will be discussed by others I shall not go into the matter. Suffice it to say that, irrespective of service, the cost to employers under the several types of insurance runs in about the following descending order: (1) Private stock companies, (2) private mutuals and competitive State funds, (3) exclusive State funds, (4) self-insurers.

### Security.

The question of security is important to the employer but especially so to the injured employee. When an employer in good faith insures his risk in a responsible authorized insurance company he should be protected against further liability. But, on the other hand, the employee should not be deprived of his compensation benefits through or because of the insolvency of the employer or the insurance carrier. The employee's interests are paramount and should be given first consideration.

Compensation laws provide various methods for securing or protecting the employee's compensation benefits, some of which are entirely inadequate and unsatisfactory. In all but six States<sup>1</sup> insurance is compulsory but unfortunately in many of these States the law provides no penalty for failure to insure except that the employee may sue for damages with the employer's defenses removed. A judgment awarding damages is of little service to the employee if the employer is insolvent.

Broadly speaking, four types of insurance are provided, namely: (1) Private insurance carriers, either stock (nonparticipating) or mutual (participating); (2) competitive State funds; (3) exclusive State funds; and (4) self-insurance. In most cases the employers have the option of several kinds of insurance. This does not hold true, however, of States having exclusive funds. In these States, except Ohio and West Virginia, no other form of insurance is permitted. Another form of security in most of the laws is the provision making compensation payments a preferred claim or lien against the property of the employer. In fact, this is practically the only security possessed by employees in the noncompulsory insurance States.

*Stock or nonparticipating insurance carriers.*—The security or solvency of private stock companies depends first upon adequate insurance rates and second upon adequate reserves. Both should be under the strict supervision and regulation of State insurance departments. No company can long maintain its solvency with in-

<sup>1</sup> Alabama, Alaska, Arizona, Kansas, Louisiana, and Minnesota.

adequate rates. Under stress of cutthroat competition the temptation to reduce rates below the safety level becomes too great to resist. State regulation is necessary to maintain the solvency of the insurance carrier and to protect the compensation rights of injured employees. But notwithstanding these obvious facts nearly one-half of the compensation States make no provision for rate regulation. Small wonder then that such a state of affairs has resulted in several disastrous failures during the past two or three years. The failure of such companies as the Guardian Casualty & Guaranty Co. of Utah, the Casualty Co. of America, and the Commonwealth Bonding & Insurance Co. of Texas resulted in thousands of dollars of unpaid compensation claims. The Guardian Co. operated in 15 States and the unpaid claims in Montana alone amounted to \$75,000. In those States in which the law held both the employer and insurer individually liable these losses had to be met by the employers. In other States in which employers are relieved of further liability when insured, the injured claimants were the sufferers. The Legislature of California appropriated between \$60,000 and \$70,000 of public money to pay in full the larger claims of injured employees because of the bankruptcy of the Commonwealth Bonding & Insurance Co. of Texas. Many smaller claims have not yet been taken care of. Such is the security record of private stock insurance companies. Whether the State should, as maintained by some, either guarantee the solvency of insurance companies authorized to do business or make good the losses directly out of the State treasury where such insolvency is due to lax insurance laws or their administration, may be questioned. By no means, however, should the injured employee be permitted to suffer.

Coincident with the regulation of rates there should be supervision over reserves. Rates may be adequate to maintain solvency under normal conditions. But a long period of excessive losses or a catastrophe resulting in hundreds of fatalities may endanger the solvency of a carrier unless sufficient reserves have been maintained. What constitutes adequate reserves depends upon the nature of the risks and other factors. They may vary from 65 per cent of the previous year's losses to 100 per cent of the premium.

*Mutual or participating carriers.*—The provisions as to the adequacy of rates and reserves for stock companies apply also to mutuals. In certain States, however, mutual companies because of their lower expense ratio are allowed to issue rates lower than those demanded of stock companies. As to the advisability of this practice insurance actuaries differ. Employers insured in mutual companies, however, are subject to assessment in the event that the losses exceed the premiums. The mutual plan therefore seems to offer a greater degree



of security to the employee and a less degree to the employer. No large mutual company has failed as yet.

*State funds.*—State funds are of two kinds, competitive and exclusive. There are now in existence eight<sup>1</sup> exclusive funds and nine<sup>2</sup> competitive funds. The provisions as to rates and reserves applicable to private companies should also apply to State funds. In some of the States the employer, when insured in the fund, is relieved of all further liability. The fund therefore becomes the employee's sole protection. Nor does any State having such a fund assume liability in case of the fund's insolvency. On the contrary, some of the States specifically disclaim liability beyond the amount of the fund. Since no State fund has as yet become insolvent the policy of the State as regards compensation claims in the event of the fund's insolvency can not be ascertained. However, its probable attitude may be seen from the experience in California where, as already noted, the legislature of the State appropriated over \$600,000 to pay claims resulting from the bankruptcy of a private insurance company.

Some of the competitive funds are not required to and do not report their experience to the State insurance department as private companies must. There seems to be no well-founded reason why State funds should not be subjected to the same regulation as other insurance carriers. It is maintained, however, that because their right to reject undesirable risks is circumscribed by law, State funds should have greater freedom than private insurance companies with respect to rates. It is further contended that the power of supervision over rates, if exercised by a hostile insurance department, could hamper if not actually put a State fund out of business.

*Self-insurance.*—Practically all of the compensation States, except those having exclusive State funds, permit employers to carry their own risk, subject to such safeguards as the law may prescribe. About one-half of the compensation laws require self-insured employers either to furnish proof of solvency or to deposit such security as is required by the compensation commission or insurance department. In the other States they must deposit security in addition to furnishing proof of solvency. In several States employers are also permitted to insure their risks in authorized guaranty companies.

Experience as to self-insurance has been reported to the Bureau by the compensation commissions of 21 States. In 15 of these States no self-insured employer has failed or gone into the hands of a receiver; three States reported one failure each and one State reported two failures, but in all cases the compensation claims were paid either by the

<sup>1</sup> Nevada, North Dakota, Ohio, Oregon, Porto Rico, Washington, West Virginia, and Wyoming.

<sup>2</sup> California, Colorado, Idaho, Maryland, Michigan, Montana, New York, Pennsylvania, and Utah.

receiver or through security which had been deposited. Only two States reported failures—one small concern in each State—which resulted in several claims being unpaid. Several exceptionally disastrous accidents were reported. Three severe catastrophes occurred in Pennsylvania, two of which resulted in over 100 fatalities. Compensation losses were paid in full in every case.

While the security record of self-insurers has been excellent this favorable experience may be due in part to good fortune or pure chance. It is also quite possible that compensation commissions are not always cognizant of every failure of self-insured employers, because such failures may not be reported to them. This was actually the case in Illinois. In such cases the injured claimant usually consults an attorney, who takes the matter before a bankruptcy court and the commission remains in ignorance of the facts.

The filing of a mere financial statement showing assets and liabilities is an insufficient guaranty of ability to meet long-continuing payments or to withstand a catastrophe successfully. The financial statement of a Wisconsin self-insurer showed net assets of \$5,000,000, yet the concern shortly afterwards went into the hands of a receiver. Self-insured employers should also be required to deposit sufficient security to meet all reasonable compensation obligations. Such security may be furnished in various ways: Deposit of cash or bonds; surety bonds; reinsurance; requiring employers to set up reserves; purchase of annuities or trust funds in case of death or permanent disability awards. Reinsurance is frowned upon in some States. Wisconsin, for example, prohibits self-insurers from taking "deductible average" insurance policies because there exist no reliable data upon which premium rates may be based. In Colorado, on the other hand employers in the more hazardous industries are required to reinsure losses over \$25,000 to \$150,000.

There seems to be no legitimate reason why self-insurers should not be subject to the same supervision and regulation as to security and reserves as are imposed upon the regular insurance carriers. The industrial commissions should have full authority to grant, refuse, or revoke permission to self-insure, if satisfactory cause is shown. This discretionary power should include, in addition to questions of solvency, such matters as the employer's attitude toward safety, settlement of claims, discrimination against cripples, etc.

*Noninsurance.*—Another important problem is the failure of many employers to insure their risk under the compensation act. Even in the compulsory insurance States hundreds of employers fail to insure. Most of these are small concerns—stores and the like. Some are extrahazardous employment which the commercial carriers would not insure, such as window cleaners, fishermen, junk dealers, and

so on. It has even been found necessary to permit such employments to carry their own risk. The State should provide facilities for insurance for every employer subject to the compensation act and then penalize heavily those employers who fail to insure. The usual penalty of allowing the employee to sue for damages with the employer's defenses removed is useless in case the employer is insolvent. Every State commission should have on file a list of all the employers under the act, together with their insurance records. This is not an impossible task. Usually, however, the commission's first knowledge of an employer's noninsurance is when an accident claim is presented.

### Service.

The real test of the merits or efficiency of a compensation administrative or insurance system is the quantity and quality of service furnished, service to the employer but particularly service to the employee. The principal tests of service are accident prevention, just compensation awards, promptness of payments, minimum of time and expense in adjudicating contested cases, aid given claimants in obtaining their compensation, medical aid and supervision, and care of the permanently disabled.

*Accident prevention.*—Probably the greatest weakness of compensation laws in the United States is the lack of correlation between compensation administration and accident prevention. Effective prevention of accidents depends largely upon a knowledge of their causes, frequency, and nature. A compensation commission, in the very nature of things, is the most effective agency for enforcing the reporting of accidents. Furthermore, the problem of accident prevention is intimately connected with the whole theory and system of compensation. It would seem, therefore, that this important work would logically be undertaken by the same agency that administers the compensation provisions. As a matter of fact, however, in only nine<sup>1</sup> States are the compensation commissions made directly responsible by law for accident prevention work. Probably a majority of compensation commissioners are lawyers, at least a majority of the chairmen are. It is the legal and judicial aspect of compensation in which they are chiefly interested. They combine the functions of a claim agent with those of a court. They regard safety work as outside their jurisdiction and consequently of no concern to them. Sometimes they even unconsciously come to feel that they have a vested right in industrial accidents, and point with pride to the large amount of compensation paid to injured workmen. One State official spoke with enthusiasm of the large number of accidents in his State—

<sup>1</sup> California, Indiana, Montana, New York, North Dakota, Ohio, Utah, Vermont, and Wisconsin.

many more than in a neighboring State—as much as to say, “See how important we are!” I wish it were possible to diminish the importance the average commission attaches to judicial matters and measure the success of its administration in terms of accident reduction.

*Accident and compensation statistics.*—Probably the most lamentable weakness of compensation administration is the want of reliable statistics. Many of the commissions have no statistical department at all and in others it is not taken seriously. Although the statistical committee of this association has accomplished excellent work in standardizing statistical forms and methods and in awakening an interest in the importance of accurate and comparable statistical data, many commissions are still unconvinced as to its value. They are so immersed in “cases” and so concerned with immediate problems that they have lost sight of both direction and purpose. A modern business organization to-day with no bookkeeping and cost-keeping department is unthinkable, yet the average compensation commission is just such an establishment. It would seem that mere curiosity, if nothing else, would prompt a commission to ascertain the results of the operation of the law.

Every commission should make an analysis of its accidents by industry, cause, nature and extent of disability; it should be able to compute accident frequency and severity rates; it should know whether and what kind of accidents have been reduced, to what extent, in what industries; it should compute and analyze the cost of accidents—in fact, it should furnish data which could be used for the determination of insurance rates; it should know the promptness with which compensation payments are made; it should investigate each lump-sum settlement and tabulate the results; it should know what becomes of the permanently disabled; it should ascertain the functional and occupational incapacity resulting from different kinds of permanent injuries; it should ascertain whether and why crippled men are discriminated against; it should know the number of second injuries; it should know what ultimately becomes of the widows and other dependents; it should know the length of time involved in the adjudication of cases; it should be able to compare and contrast the kind of service furnished by different types of insurance carriers. Unless these facts are known it is not only impossible to compare different types of laws but also impossible to measure the success of any law.

*Just awards.*—It will probably never be possible to insure absolutely just compensation to every injured employee; surely it will be impossible unless the commission personally investigates each case, which would greatly increase the administrative expense and would probably decrease the promptness of compensation payments. In passing it may be pointed out that the recent investigation made

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by Mr. J. F. Connor into the operation of the New York voluntary agreement system should not militate too strongly against the industrial commission of that State. Undoubtedly a similar investigation of practically every other State would show similar results. There are, however, certain methods by which instances of underpayment may be reduced to a minimum. A complete report of every compensable accident should be made promptly to the commission. Supplementary reports should be made at stated intervals thereafter and until the injured man returns to work. In all permanent disabilities and other serious injuries a physician's report should be required. All fatalities and doubtful cases should be investigated. Injured employees should be advised of their rights, and some expression from them as to the facts in the case is desirable. This is obtained to some extent when voluntary agreements or initial and final settlement receipts are required. It is a serious mistake to assume that the employee is familiar with his compensation rights or knows how to obtain them. It is particularly dangerous to receive all reports from one party because it does not permit a comparison or checking up as to accuracy. It is preferable that the first report of the accident be made directly by the employer to the commission. Every settlement or agreement should be carefully checked with the employer's and physician's reports. A special follow-up system should be provided for injuries which may possibly cause permanent disability or impairment of function.

*Prompt payments.*—Few commissions keep any record or have accurate knowledge of the promptness with which compensation payments are made and many have no way of obtaining this information. The opportunity to check up the practices of the different insurance carriers and to ascertain the operation of the law in this respect has been sadly neglected. The date of the first compensation payment should be reported to the commission in every case. Obviously a final settlement receipt should also be required. The number of receipts required between the initial payment and final settlement is less important. Some commissions require weekly or biweekly, other monthly or quarterly; some do not demand receipt but require the employer or insurance carrier to report periodically that payments have been made. It would seem that a monthly receipt or statement would be sufficient.

*Commutations or lump-sum settlements.*—Practically every commission states that it is opposed on principle to the granting of lump-sum settlements. Yet the records show that hundreds and in some States thousands of such lump sums are granted annually. Now, the policy of granting such settlements is either desirable or it is not. If it is desirable, it should be encouraged, but if undesirable, it should

be abolished. Unfortunately most of the compensation commissions have not kept tab on their lump-sum cases and therefore are not in a position to know whether or not the system is desirable. A few commissions have investigated the results of lump-sum grants—some making a thorough study, others a more or less superficial one. The Massachusetts board, which has been keeping track of its commutation cases, has about reached the conclusion to abolish the lump-sum system entirely. Other States, on the other hand, seem very well satisfied with the lump-sum system.

When all interests concerned are in favor of a lump-sum settlement it is easy for the commission to follow the line of least resistance and grant it. The injured employee always wants such a settlement; the employer, insurer, attorney, and commission are also benefited thereby, because it wipes the case off their books and consequently reduces expense and eliminates a lot of bother. Before granting a lump sum the commission should thoroughly investigate each case. A record, showing the amount granted, the nature of the injury, the circumstances of the employee, and the purpose for which the award is granted, should be kept of every case. A yearly investigation of each case should be made and the result recorded.

*Expense to employee.*—Injured employees are entitled to the benefits provided by the compensation act without being subjected to unnecessary expense in obtaining them. Care should be taken by the commission to see that compensation benefits are not frittered away in attorneys' fees, witnesses' fees, doctors' fees, traveling expenses, etc. Hearings should be held at such times and in such places as are most convenient to the employee. The avarice of attorneys should be curbed by curtailment of fees. The employee's rights should be secured and guaranteed without making it necessary for him to engage attorneys. The Pennsylvania board is to be commended in this respect. This board in its Philadelphia office has a special attorney (an employee of the board) to look after the interests of claimants who can not afford to hire a lawyer. This special attorney investigates the circumstances, prepares the case, subpoenas witnesses, and represents the claimant before the referee. If he is not satisfied with the referee's decision he appeals the case to the board. He also represents the claimant in commutation cases, and looks after the appointment of guardians in case of minor dependents. This feature of the Pennsylvania administration might well be copied by commissions in other States. It is desirable also to have the judicial procedure as simple and as free from technicalities as possible.

*Stoppage of compensation payments.*—When to permit the employer or insurer to stop compensation payments in disputed cases is another important matter. In Massachusetts the insurer can not

stop payments until ordered by the board. In Pennsylvania he must continue payments until he files a petition for termination; thus he is required to take the initiative. In Wisconsin and Illinois the employer may stop payment any time he desires, in which case the employee is required to take the initiative and bring the matter before the board. Also, some States provide a penalty in case of unreasonable delay or in case suits are brought or defended on unreasonable grounds.

*Care of the permanently disabled.*—Until recently the welfare of workers permanently injured in industry has been criminally neglected. Disabled workers have been paid their compensation benefits, and then allowed to shift for themselves exactly as they had done prior to the enactment of compensation laws. Fortunately the war focused attention upon the problem. In the attempt to restore the war cripple the plight of the industrial cripple was also brought into relief. Massachusetts was the first State to provide for a rehabilitation department in 1918; since then California, Illinois, Minnesota, New Jersey, and Pennsylvania have followed suit. It is to be hoped that every disabled workman will not only be paid the statutory compensation benefits but also be functionally restored as far as possible, retrained, and replaced in desirable employment.

Probably the greatest handicap suffered by crippled workers is the discrimination against their reemployment. In so far as the compensation act is responsible for this discrimination it should be immediately amended. If the employer is required, under the law, to pay compensation for total permanent disability in case of a second major injury he will feel considerable apprehension about employing one-eyed, one-armed, or one-legged workmen. On the other hand, if the employee is to receive compensation for the loss of one member only, regardless of the resulting disability and loss of earning capacity, he will be inadequately compensated and the purpose of the compensation will be partially defeated. The remedy lies in the adoption of the special-fund plan already in operation in eight States.<sup>1</sup> This plan provides that in case of a second major disability the employer shall be held liable only for the second injury, but the injured employee shall be compensated for the disability resulting from the combined injuries. The additional compensation for the extra liability is paid out of a special fund. Thus substantial justice is insured to both employer and employee, and one potent factor of discrimination is removed.

Every commission should keep track of its permanent disability cases. In the first place it should know the length of the healing period or functional incapacity of every permanent injury. It

<sup>1</sup> California, Minnesota, New York, North Dakota, Ohio, Oregon, Utah, and Wisconsin.

should also know what effect the injury has had upon the employee's wages, upon his change of occupation and upon his opportunity for reemployment. It should ascertain the actual loss of earning capacity, and, in the light of this information, recommend changes in the compensation schedules.

*Medical service.*—Although there has been a great increase in medical benefits in recent years, unfortunately the medical service in many States is still shamefully inadequate. Though handicapped by statutory limitations the commissions should, nevertheless, see to it that the injured workmen receive the best service possible. The establishment of medical departments within the commission seems to have proved universally beneficial and desirable. The commissions should try to establish statistically what effect quality of service and selection of physicians have in reducing the period of disability and decreasing the number of permanent disability cases. It should also try to ascertain the medical cost of accidents by nature of injury.



## Some Comparisons of Workmen's Compensation Legislation.<sup>1</sup>

By F. H. BOHLEN.

IT IS obvious that it is quite impossible to make in the time allotted to me an exhaustive or minute comparison of the many compensation acts in force, even in the United States. I must, therefore, confine myself to a few salient points of difference between the compensation systems in force in the various States in the Union.

Only a few States have put upon the statute books compulsory acts. The great majority of compensation acts are still elective. While at first it may well seem that this is unfortunate, in practice an elective act is generally found to cover substantially all employers and employees. This is certainly so in those States in which the compensation features of the acts are presumed to be accepted in the absence of a rather elaborate rejection thereof.

If one may take the experience of the State of Pennsylvania as a test, it can be safely said that the number of employees who are put outside of the compensation provisions of such an act by their employers' rejection of it is negligible. And, at least in those States in which the State constitution contains, as it does in Pennsylvania, a number of prohibitions against creating new courts or against the establishing of special rules of evidence or method of procedure in special cases, the elective form has a very distinct advantage over the compulsory. It enables the legislature to confer far wider powers upon the board or commission which administers the act, than it could do were the act compulsory, so that a flexible, speedy, and inexpensive procedure can be provided for the adjudication of claims under the act, on the theory that both the employers and employees have agreed to this particular method of adjusting any disputes that may arise under their agreement, on the one hand to pay, and on the other to receive, compensation.

The great bulk of recent acts cover all employments, with the exception of those that are casual in character and domestic service and farming. There are a few of even the more recent acts which are restricted to certain specified industries which the legislature chooses to regard as hazardous. Fortunately the proportion of acts which are so restricted is constantly growing less. There is little or nothing to be said in favor of the restriction of compensation to

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<sup>1</sup> Paper read at the sixth annual meeting of the International Association of Industrial Accident Boards and Commissions, held at Toronto, Canada, Sept. 23-26, 1919.

those industries which are regarded as particularly dangerous. The purpose of the compensation act is not to penalize those who carry on dangerous enterprises, but to make all industries bear, as part of the cost of production, a share of the loss caused to the human beings who take part therein as employees. The greater frequency of accidents in a hazardous business, of course, makes the risk greater and increases this item of cost. Hazardous businesses must pay a higher rate for their compensation insurance. But any business in which an accident occurs is to that extent hazardous, and the unfortunate who loses an arm in a business in which such accidents are rare should not be penalized by being denied compensation.

Again, experience has shown that there is more litigation as to whether a particular employment falls within one of the enumerated classes labeled as hazardous than on any other question, and in these acts in which compensation is restricted to so-called hazardous trades there are many trades included which are far less hazardous than many which are omitted.

There is, perhaps, no logic in excluding even farm labor, and I welcome with real pleasure signs which I have observed in my own State that the many farm owners are becoming converted to the idea of the payment of compensation in lieu of common-law liability, a considerable amount of insurance being written to cover voluntary agreements made outside of the compensation act, which provide for the payment of substantially the compensation which the act requires.

It seems to me a real misfortune that the great majority of the acts recently passed have included in their definition of injuries entitled to compensation the requirement that the accident must arise out of the employment as well as that it must be sustained in the course thereof. It has been found in Pennsylvania that the omission of this requirement has eliminated a quantity of litigation and doubtful questions and narrow and technical distinctions which this ambiguous and ill-understood phrase has raised in other States. There is nothing in the theory of workmen's compensation which requires that the accident from which an employee suffers, or by which he is killed, should in advance be recognizable as an accident of a sort peculiarly apt to occur in his particular employment. That an injury is foreseeable as a probable consequence of an individual's activities may be a proper requirement where the liability is based upon the idea that the individual is at fault in subjecting another to a foreseeable risk. But such an idea has no place in an act in which fault of either side is immaterial and where the only question should be whether a man was injured as a result of his activities in his employment.

The schedules of compensation payable to injured men and to the dependents of those killed vary greatly. While many of the later acts set the compensation in cases of injury as high as 65 per cent, and some continue the payment during the entire period of disability, many, if not most, of the recent acts require only 50 per cent to be paid for a limited period, generally 300 to 500 weeks.

The usual course of compensation legislation may be said to be an introduction of compensation on a modest basis, followed by amendments which both increase the percentage of wages as compensation and enlarge the time during which it is to be paid. As an example, in the last year both New Jersey and Pennsylvania increased the rate of compensation from 50 per cent to 66 $\frac{2}{3}$  and 60 per cent, respectively, and increased the period during which compensation is payable. These increases may be said to be the result of a compromise, at least in Pennsylvania, where labor urged an increase to 65 per cent for life to the totally disabled man. It is a curious fact that employers as a class, though generally insured or engaged in a business so large as to create an average risk exposure as great as that covered by the policies of many of the insurance companies, look at the possible hardship in a particular, though not frequent, case rather than to the increase in the cost of their premium or on their aggregate compensation liability. They therefore tend to fear the altogether abnormal case where compensation may be payable to an injured man for a period of perhaps 30 or 40 years, though this case is of such rare occurrence that the effect upon the insurance rates of giving a life pension is really negligible.

While there have been increases both in the percentage of wages paid as compensation and in the maximum amount that can be paid as compensation, the increased cost of living and the general rise in wages during the past few years leave the workman to-day in no better, if as good, a position as he was in under the apparently smaller compensation of the earlier acts. Figures prepared by the actuaries of the insurance department of Pennsylvania and of the compensation rating bureau of that State show that in 1916, under the act of 1915, by which on its face injured employees receive 50 per cent of their wages, with a maximum of \$10 per week, they actually received only 47.5 per cent of their actual earnings, due to the fact that in a considerable number of cases the wages were over \$20. In 1918 the average amount received by injured men sunk to 43.8 per cent, and these gentlemen computed that even under a proposed amendment raising the percentage to 65 per cent and fixing the maximum at \$13 the average percentage of the actual wage would fall as low as 40.6 per cent. I do not believe that it would be wise to assume that the present high cost of living will necessarily persist or that wages will remain as high as at present. It seems, therefore, inadvisable to attempt at present to change the schedules

of compensation so as to make the nominal percentage conform more truly to the real percentage of wages now received as compensation. Whatever change is ultimately made should, in my opinion, be along the line of increasing the maximum weekly compensation. Sixty-five per cent of the wages seems to be accepted as the ultimate limit. Any higher percentage would undoubtedly tend not only to encourage conscious malingering, but even more to an inclination, perhaps itself subconscious, to exaggerate the seriousness of an injury, and so would often lead to a prolongation of the period of idleness, when a return to work would be harmless and in many cases even helpful to the physical condition of the man.

Practically all acts provide that for certain major mutilations the exclusive compensation is for a stated percentage of wages during a certain period, varying with the severity of the mutilation, and many give compensation for specified periods for substantially every conceivable mutilation, no matter how minute. This is given either as the exclusive remedy or in addition to compensation for whatever loss of earning power the workman has suffered, though where it is so given the periods are less than where the payments are exclusive of other compensation. On the whole, the latter method would seem preferable and was the one which the chairman of our compensation board unsuccessfully urged the Legislature of Pennsylvania to adopt.

While the loss of a leg or an arm or an eye is generally followed by a very definite loss of earning power, no matter what the trade may be, the effect upon the sufferer's earning power of the loss of one phalanx of a finger varies greatly with the nature of his trade or occupation—so greatly that any value placed upon it would not be an average of probable results, but a more or less arbitrary mean between extreme cases. The teamster who loses the first phalanx of the third finger of his left hand usually loses no working time except while his wound is being cared for, while in many trades which require delicacy of touch the workman is permanently debarred from the exercise of his trade and forced to seek a far less highly paid employment.

Many if not most of the acts provide that minors above the legal working age are to be sui juris for all the purposes of the act. This is most advisable and prevents confusion and delay in the signing of agreements and makes it unnecessary that the father or guardian of a child shall sign the receipts for compensation due him.

In the case of death benefits, there is again a wide difference between the different acts. On the whole, the majority tend toward a compensation payable first of all to the widow or dependent widower or children increasing with the depending children surviving. Dependent fathers, mothers, brothers, and sisters come in only if there are no widow, widower, or children. The amounts given vary to an extent which it is impossible to give in detail.

The tendency, especially in recent amendments of earlier acts, is toward increasing the amount of compensation, though only a few States have as yet given a life pension to a widow or dependent widower. Some few have given compensation to children beyond the usual age of 16 or 18, if the children are mentally or physically incapable of self-support. The wisdom of such a provision is, to say the least, doubtful. The amount payable on account of such a child is generally small. It may be enough to secure for the child a certain amount of care in the family of a relative or friend; but it is not enough to give such a child the scientific care which its condition requires. Where the incapacity, though existing, is one which might be removed by proper treatment, the amount given as compensation can not secure the scientific care which often would restore the child to his full status as a useful citizen. On the whole it would seem better that such children should be placed in the many institutions provided by our States for the care and treatment of such cases. And from what I know of the opinion of organized labor, I may say that there appears to be no insistent demand on their part for the continuance of payments to children of this class.

Following the example of New York, there is a tendency to give to widows upon remarriage either the whole or some part of the compensation that would be payable but for the marriage. Such a provision is clearly contrary to the theory upon which compensation acts are based. The widow's remarriage has given her a new breadwinner in lieu of him whom the accident removed. She has, therefore, repaired her own loss. Such a pension can, therefore, only be justified, if at all, if it prevents what is claimed to be a serious condition of immorality and irregular unions into which widows drawing compensation are driven through the fear of losing their compensation if they remarry. If there is any considerable amount of such relations, the mere fear of departing from the theory which underlies compensation laws might not be a sufficient reason for refusing to take steps to terminate the temptation thereto. On the other hand, it may be said that such a dowry is apt to make widows the objects of pursuit by men who would marry them merely for the sake of the money they would get, and that such husbands are not only apt to be bad husbands but to be exceedingly bad stepfathers. The movement toward such payments is the more apt to succeed since it is not opposed by insurance carriers, who assert that experience shows that it would be cheaper to pay a small dowry, so increasing the chance of remarriage, than to pay widow pensions during the full time which the various acts provide.

It is curious that in no act, until the amendments passed by the Pennsylvania Legislature at its last session, was any provision made for a situation which was brought to the attention of the Pennsylvania board almost as soon as the act took effect. It has had before

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it a number of cases in which a man was killed leaving a widow with or without children of her own, but also a child or children by a former husband who did not live with the widow, but generally lived with the family of the deceased father. The vast majority of acts give the compensation to the widow, generally increased by the reason of the existence of the stepchildren. There is no way in which the widow can be required to devote to the support of the stepchildren the sums which she has received on their account.

In substantially every act the sums due to minor dependents are payable to their guardians. It is very rare that the parent of such children has left a sufficient estate to require the appointment of a guardian for his children. There is therefore no guardian, yet before an employer can safely pay compensation to such a child a guardian must be appointed merely for the purpose of receiving these payments at an expense altogether out of proportion to the amount the guardian will receive and disburse.

The amendments recently passed in the Pennsylvania act give the Pennsylvania board the power, where there is no guardian, to pay the amount due to a minor child to a person or corporation selected by it, who is made accountable to it for the manner in which the payments are applied. This, though a small change, is one which will do away with a great deal of unnecessary expense, confusion, and delay and should be copied in other jurisdictions.

A word may be said as to those sections found in substantially all the acts requiring an injured employee to give notice of his accident to his employer and depriving him of his right to compensation if he fails to do so or does not give some good reason for his failure. The purpose of this requirement is to prevent fraud and malingering by giving the employer a speedy knowledge of the accident, so that he may investigate its circumstances and may observe the injured man. Only a few of the acts make the knowledge on the part of the employer or his representative the equivalent of such notice. A great majority of them require the employee to give notice to the employer himself or, if a corporation, to an officer thereof. When one remembers that the compensation acts are intended to be automatically workable and that they confer rights upon a class whose whole attention is generally directed to earning a living, who have not time to study even those laws which are passed for their special benefit, and who are often foreigners ignorant even of our language, it is obvious that such requirement is one which a great number of the employees, of their own motion, can not be expected to fulfill. Either the employer must, through his foreman, see to all accidents being reported or the injured man must as soon as the accident occurs seek some form of legal advice. It is hardly right to expect employers to go out of their way to perfect claims against themselves, though many, particularly those who are insured, do so, and

the whole purpose of the act is to eliminate the need of legal services to enforce compensation. In practice I suspect that this requirement is ignored or that excuses of the flimsiest sort are accepted. At least it should be provided that the knowledge on the part of the employer, or of any person put by the employer in charge of the workmen, of the fact of the accident should be equivalent to notice given by the sufferer.

Practically all of the acts provide that the right to compensation shall be forfeited unless an agreement is entered into or a claim made within a year after the accident, or, in case of death, after the death. It is obviously necessary that some such provision should be contained in every compensation act, and it would be unjust to the employer and might lead to the successful prosecution of false claims if an injured man might delay bringing suit indefinitely, so lulling his employer into a feeling of false security and preventing him from investigating the accident or following up the injured man's condition. On the other hand, experience has shown that a rigid insistence upon action being brought within a year may work hardship and is even capable of being used by unscrupulous employers to defraud the workman of his rights.

I have no doubt that every board or commission charged with the administration of compensation laws must have had cases brought to its attention where an employee has a valid claim to compensation, but has failed to make any claim within the statutory year because he had either been assured by his employer or one of his agents that he was not entitled to compensation or because he had been told that his employer would look after him better than the act would provide for him.

In the first case, the misinformation is often given in good faith; but though the employer is thus acquitted of fraudulent intent, the employee's rights are none the less gone.

In the second case, the employer is often—in fact, almost always—acting in perfect good faith, at least at the time. He offers the man employment of a lighter sort at full wages, an arrangement beneficial so long as it continues, but if for any cause that arrangement is terminated after a year has passed since the accident the employee is as fully debarred from asserting his right to compensation as though the employer's intent had been to defeat the act. While the actual instances of this sort which may have come to my attention have been few, they are sufficient in number to indicate that there are a considerable number of cases of the same sort. In most cases the employer or his insurance carrier waives the statutory limitation where he is convinced that the employee is himself acting in good faith and reasonably, insisting on the strict letter of the act only when they suspect fraud or unreasonable demands; yet, even so, the result is that the employers and not the board or commission

are made the judge of the good faith and reasonableness of their employee's conduct.

It must be admitted that it is extremely difficult to suggest an amendment which would protect both the employer and employee—the employer from stale claims of which few, if any, are meritorious; the employee from the possibility of losing his rights through overreliance upon his employer's generosity or knowledge. I, myself, would hesitate to recommend any particular form. I merely raise the point in order that it may be brought to the attention of your body as a subject worthy of careful thought.

Practically all acts provide that the claims shall be adjudicated and agreements approved by some board or commission. New Jersey, which passed the first effective compensation act, originally placed its enforcement in the hands of its courts, but a few years' experience convinced the legislature of that State that a change should be made, and the New Jersey act is to-day administered by the commissioner of labor and his deputy and the referees appointed by him.

Each State has its own problem of administration. In States where the industries are centered in a few localities, a commission which is required to hear every case is an effective and usual method of administration. In other States, like Pennsylvania, where the industries are enormous and widely scattered over a large area, a more elaborate system is required. In passing it may be said that the system provided in the Pennsylvania act of 1915, which consists of dividing the State into a number of districts, each with one or more referees sitting as a court of first instance, with appeals to the board, has worked surprisingly well.

The system is substantially untouched in its fundamentals by a new procedure article passed at the last session of the legislature by which somewhat greater powers were granted to the board, which was also given the right to assume original jurisdiction in many cases. Minor defects in the original acts were corrected, but substantially the system remains as it was. I can not but feel that where there is sufficient compensation business to warrant the appointment of a separate commission to pass upon compensation claims and agreements it is far better to have the commission independent of any other State activity. It may be, as in Pennsylvania, a bureau or branch of the department of labor. But I feel convinced that the adjudication of compensation cases should not be merely one of the functions of a board charged with the administration of all laws relating to labor. Of course this may be necessary in States where manufacturing and other similar industries are not great in extent and where, therefore, it would be wasteful to create a board at salaries sufficient to attract competent men merely to deal with the small number of compensation cases which would



arise. But unless this is so, the union of functions is apt to give rise to a certain amount of suspicion on the part of employers—a suspicion which in all probability is entirely unfounded, but which nevertheless is apt to exist. Employers as a class resent the intrusion into their affairs which is necessary for the proper enforcement of safety regulations and other labor laws. The board which administers these is apt to be regarded as partisan to labor, no matter how impartial their decisions may actually be.

In addition, in boards of this sort the compensation business is generally put in charge of one member, so that in appearance, at least, opinions are his rather than those of the board. Thus there is lost that interplay of minds viewing the case from slightly different angles, which is highly desirable in the decision of compensation cases.

## How Can Medical Service be Improved? <sup>1</sup>

By F. H. THOMPSON, M. D., MEDICAL DIRECTOR, OREGON STATE INDUSTRIAL ACCIDENT COMMISSION.

**I**N presenting this brief paper, I realize there is a wide variation in the compensation laws of various States and I speak especially in regard to the Oregon law and similar laws.

A problem of every industrial board that has a medical aid provision is the securing of competent and efficient service to injured workmen. This is a paramount issue. The next in importance is the obtaining of such expert service at such cost as is commensurate with the ability and time rendered, and yet hold to the minimum that insures the fund's solvency without abnormally high rating of hazardous work.

This problem, sooner or later, must be solved. It predicates a clear and harmonious understanding between the surgical profession and the industrial board, without which there can be no successful administration of a medical aid provision. It likewise necessitates placing in the board rather broad power—power to make and enforce certain rules, i. e., to apply them to particular conditions that may from time to time prevail in that jurisdiction.

It is my belief that the first movement to better service is a standard fee bill for certain zones, the zones to include one or more States. This zoning idea is held because of the wide variation of fees in certain groups of States, with the overlapping of work in adjoining States. The fee scale should be a minimum scale that would be charged a working man in his respective community. Good surgical service can not be had for less—and there is no valid reason why it should be asked for at a less fee than the minimum. But it must be borne in mind by each medical examiner that, where a minimum fee is allowed, close scrutiny of reports is essential to avoid the padding of bills by certain unscrupulous members of the profession that would make the scale in reality far exceed the minimum. Many of our ill clinical results, or lack of good surgical result, is due primarily to the fact that the fee bill has been so low that the busy, capable, competent surgeon could ill afford to divert his attention from private work to care for industrial cases. This has of necessity given to the inferior practitioner a multitude of most serious cases and he has not been sufficiently skilled to meet the situation. To secure a clear and harmonious relationship between the medical profession and the board, this scale should be chosen by

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<sup>1</sup> Paper read at the sixth annual meeting of the International Association of Industrial Accident Boards and Commissions, held at Toronto, Canada, Sept. 23-26, 1919.

representatives from the State medical society and the board. In Oregon and Washington we have, in joint session with the State medical society, adopted not only a liberal fee bill but also certain rules that we hope will eliminate many of our present difficulties.

A complete, original report, with clear follow-up reports, should be required of every surgeon. Too often incomplete reports allow an injured man to suffer a permanent partial disability that could have been avoided if the medical department had had full knowledge of the case earlier, and placed the man in proper and competent hands. This is especially true in rural districts where bone injuries are most frequently improperly cared for. This suggests the necessity of a sufficient number of claim investigators who can render invaluable service by personal work among claimants and physicians—can often save friction, and, more important, can report in cases of severity that are not in competent hands for the particular type of case in question. In this connection, one of the powers of the board should be to refuse to recognize or pay for service from any surgeon who will not cooperate—or who ruthlessly operates. A very important rule of the board should be to require that no open bone work, such as grafting, wiring, pegging, etc., be done unless first taken up with and authorized by the board. This, with the power of the board to remove an injured workman from the care of one surgeon and place him under the care of another, will surely decrease the number of men that are surgical cripples rather than industrial cripples. Likewise, every eye and ear case should be treated by an eye and ear specialist. Some discretionary power would here have to be exercised by the board on account of embedded foreign body cases in outlying communities, without reasonable access to the specialists.

In Oregon and Washington the compensation commissions expect to handle these cases in this manner. The physician from whom a case is taken will be paid for his services according to the fee schedule, and the specialist, under whose care the commission placed the man, will be paid according to agreement. The immediate cost may be large—the ultimate saving in shortened time loss and conservation of function will be great.

In Oregon two men were unfortunate in suffering fracture of both bones of the forearm, but they were still more unfortunate in residing in a community where resided an unskilled but ambitious young surgeon. He had heard of a Lane plate, but evidently did not know how and when to use it. As a result he entirely ruined the arm of one man and had the other one's arm practically ruined, when the man was found by the commission and function partially restored by

a competent bone surgeon. Under our provision, that young man will do no more bone work for commission cases, unless he learns how.

There is one class of cases that we find are best treated by the orthopedist—namely, sacro-iliac strain. These are fairly frequent, slow of recovery unless rightly handled, and too often aggravated by chiropractors or neglected by the general practitioner. In Oregon even chiros are licensed. I am not proud of that. I firmly believe that since these are accident cases, the commission should be empowered to recognize only surgeons as competent to treat such cases.

Competent specialists should be carefully selected in the larger communities, to whom men may be sent for special examinations; among these should be at least one neurologist. He it is who can best detect a beginning post-syphilitic condition or incipient insanity that is coincident with, but not the result of, an injury by industrial accident. He, too, may recognize the various types of nervous or mental condition, such as hysteria, psychasthenia-dementia in its several forms, malingering, etc., giving prognosis and direction as to the type of treatment. I may say here, that I believe there should be some proper place within reach of the commission for isolation and proper care of nervous mental cases.

Medical service would be improved if closer attention be paid to reconstruction work by selected surgeons. While the leading consideration is restoration to earning capacity, rather than cost in a given case, three or five hundred dollars judiciously devoted to reconstruction may easily save to the board a life pension, and return the injured workman to a life of usefulness. This type of work should be done as early as possible, and I would suggest that all temporary total disability cases extending over two or three months, unless the severity of the injury would easily account for the same, should be examined and cared for accordingly.

Accident prevention, reconstruction, and reeducation are a trio of greatest importance. Reconstruction and reeducation of war casualties is a social, economic, and humanitarian problem recognized by every great country in the recent great world conflict. The industrial cripple is exactly the same problem with exactly the same bearing on social economics, and presents the same humanitarian aspect, and the number far exceeds those of war heroes. It is not money the man most desires—it is earning capacity, for with this reestablished his problem is solved. Contentment is realized only by those who work. No medical aid fund should have a limitation to the extent to which it may go, if restoration partially or completely can be had. The matter of reeducation should be concomitant with that of reconstruc-

tion. In other words, the molding of the mental attitude and the instilling or the cultivating of the determination to do, should begin at the bedside. I long to see the day—and believe I shall see it—when every industrial board will do this work that is so filled with human interest and so important that it is next to sacred. The time is past when we can speak of injured men in terms of money—it must be in terms of humanity. Medical service should not stop short of the best. A man with one hand or one leg has no business at alms on the street—discontented—an object of pity—a social burden.

Mr. Shunk, a case of California, is a living example and magnificent inspiration to anyone of what can be accomplished by reeducation. He can run a lathe, crank an auto, drive an auto, dress right, do any of these common things that the ordinary man can do—and this without either hand.

One other thing that seems essential to the betterment of medical service is the occasional meeting of the county and State medical societies and the presentation of papers that deal with the problems arising between the surgeons and the board, actually illustrating by stereo the good and bad results in certain injury types and thus the necessity of certain board rulings and actions. The board should be clear and firm in all of its rulings and there should be a proper acknowledgment of all questions or communications from the surgeons.

One other suggestion is to require filing early with the board all X-ray plates, and the prompt reading of same by the medical examiner, in order that errors in care of the injured may be detected in time to prevent permanent partial disability that could be avoided. An X-ray of reduced fracture causing permanent partial disability, if not seen until two months after the injury, is useless. We require X-ray ten days after reduction, with prompt filing of same.

One elimination is essential. Do away with the hospital contract system that too frequently renders poor services, overcharges the workman and is not morally right, as every man should have the God-given right to be treated by a surgeon of his own choosing. The man may choose poorly, but ordinarily not. Furthermore, he will be contented, and if results are not soon forthcoming the commission can then justly aid him in a further selection. I am speaking now of the ordinary case of injury.

The first law of nature is self-preservation. The first law of democracy is the establishment of certain personal privileges or rights. Why then should this right be excluded? There is only one answer and it is fallaciously founded and mercenary. I will be broad enough to admit that some hospital contract association cases are well cared

for, but I must contend that the majority are not. The money made by the hospital association would better be added to the present, too meager, compensation to the injured. The only condition that would justify the contract system is in some remote camp. But some method can be devised to cover these few instances and thus prevent the few from forcing upon the many a principle that is basically wrong.

To summarize: First, pay a better fee for skilled service and thus secure the best possible service.

Second, give the industrial board broader power to regulate services and to make certain rules and to enforce them.

Third, a clearer understanding between the medical profession and the industrial board by way of industrial programs at medical meetings.

Fourth, encourage reconstruction of injured workmen and through investigation, etc., place the man in competent hands as early as possible.

Fifth, eliminate the pernicious contract system.

This very brief paper is sincere, but is presented with the idea of eliciting criticism in order to provoke a wholesome discussion that will be of mutual benefit.

## SOCIAL INSURANCE.

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### Attitude of American Medical Association toward Health Insurance.

THE subject of health insurance receives careful and broad-minded consideration in the report of the council on health and public instruction, which embodies the outline of the policies and work of the American Medical Association for the coming year, recommended by the council to the house of delegates at the recent convention of the association at Atlantic City. In stating the problem as it appears in the United States, the report says in part:

There is in this country a certain amount of illness among those whose gross annual income is below an amount that will permit them to bear the expense of such disabling and incapacitating illness without being seriously and perhaps permanently handicapped or crippled thereby.

Such disabling and crippling illness being conceded, if the individual is not able to carry it alone, then the burden must be lightened in some way. This can be done by increasing the income of the individual and thus elevating his economic status to a point where he can carry his own burden; by reducing the amount of sickness through the enlarging and improving of State public health activities; or by distributing the cost of existing disabling illness among the three parties at present responsible, namely, the individual, the industry, and the State, so as to relieve the individual of from 60 to 80 per cent of his burden. A fourth possible procedure, not exactly to be regarded as a remedy, but as a possible line of action, is the laissez faire principle of permitting existing conditions to continue and remedy themselves if possible without interference. The first of these proposed plans might be called the economic remedy; the second, the State public health remedy; the third is social insurance, and the fourth is no remedy at all.

In this discussion many questions arise that can not be answered with our present knowledge. What is the amount of sickness incurred by the average wage earner in the course of the year? How much of a burden is this to him and to his family, through loss of wages, medical attendance, nursing and care, incapacity or reduced productiveness consequent on illness, nonemployment resulting from illness, etc.?

What is the average amount which the individual loses each year through sickness? How much of this loss is due to preventable disease which can be eliminated by increased State health activities and by the better organization of health agencies? What is the minimum annual income that will enable the individual to carry successfully the burden of his own disability? How many American families have an income below this minimum?

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<sup>1</sup> Modern Medicine, September, 1919, pp. 32, 34, 36.

If the first remedy proposed, that of increasing the annual income to a point where each individual can carry his own burdens, seems best, how is this desired object to be accomplished? If the second remedy is adopted, namely, increase of governmental health activities to a point where preventable disease is reduced to a minimum, how large a burden of nonpreventable disease will remain? Will not the increase of governmental health activities to such a point produce just as marked and radical a change in the medical profession as the proposed health insurance? What effect will the plan proposed have on the work and income of physicians? Without providing for the unemployed and the indigent, who would still, as in England, have to be cared for under poor laws and charity organizations, would not the increased professional income from cases of the insured, whom the doctor to-day takes care of for little or nothing, increase the average professional income, provided the compensation for professional services could be properly determined? Would not this increase amount to more than the loss due to lowered rates? If the proposed social insurance can be shown to be necessary and to be the best solution of the problem involved, can the medical profession as a class successfully oppose it simply on the ground that it may interfere with or disturb our professional income and livelihood?

The report of the committee on insurance, presented by Dr. Alexander Lambert, after giving data and commenting on the cost of sickness and the average family expenditure, the average amount of sickness, distribution of sickness, the extent of present medical care among wage earners, wages, the cost of living, and the interest of the medical profession in sickness insurance, says in conclusion:

The responsibility, therefore, is threefold—communal, industrial, and individual. But the burden to-day is almost entirely individual. The community has accepted part of its liability and endeavored, by sanitation, preventive medicine and hospitalization, to improve the situation. Industry has, until now, evaded its entire responsibility and liability. The individual still bears the brunt of the burden and the cost of sickness as a personal calamity. The community and industry have begun to realize and accept their share of the liability. We have in the past received from southern and southeastern Europe enormous numbers of hardy, vigorous laborers and industrial workers. We have used them lavishly and their labor extravagantly. We have neither wisely harbored their energy nor salvaged the damaged. We have recklessly used this labor as if the supply were unlimited. We have indeed treated it as we dealt with our forests and our mines. We have been mining out our labor and burning it up. Now the war is over, hundreds of thousands of these peoples are returning to their former homes, not to return here. This country is facing a scarcity of labor, and must care for it and salvage it, when injured, as never before.

The remedy for this situation lies economically in a redistribution of costs, not of adding new costs, but rearranging the present method of expending the costs already being expended. Large numbers of wage earners, probably a majority of them, now spend each week enough money on funeral insurance, that they may be sure of a decent burial, which would equal or more than equal their share of any just sickness insurance scheme to give them sick benefits, maternity and adequate medical care, and a \$100 funeral benefit. Improved medical care must come from more cooperative and less purely individualistic care from the medical profession. Free choice of physician by patient, and present relation of patient to physician, and just and assured remuneration for work done by the physician can easily be assured to the physicians under an insurance plan.

[2010]



## Provision for Mothers' Pensions in the United States.

REMARKABLE progress has been made in legislation providing mothers' pensions since the first mothers' pension laws were passed in 1911 by Missouri and Illinois. According to a bulletin entitled "Laws Relating to Mothers' Pensions," just issued by the Children's Bureau of the United States Department of Labor, 39 States, Alaska, and Hawaii now have some public provision for mothers left with young children to support, and in at least 5 of the remaining States mothers' pension laws have been under consideration. Canada, Denmark, and New Zealand also have passed legislation providing aid for mothers. This rapid spread of legislation in so brief a period is indicative, says the Children's Bureau bulletin, of a widespread and deep-rooted conviction that no child should be deprived of home life and a mother's care because of poverty alone.

Generally speaking, all mothers' pension laws provide for the payment of a stated weekly or monthly sum for each child under a certain age to mothers who are dependent upon their own efforts to support their children and are morally and physically fit persons to bring up their children. There is considerable variation in the laws in force in the different States. Some States provide pensions only for widowed mothers; others include women who are divorced or who may have been deserted by their husbands, or those whose husbands are in prison, in State asylums, or who are otherwise incapacitated. In three States expectant mothers may receive mothers' pensions; and in a number of instances the mothers of children born out of wedlock come within the scope of the law.

The age up to which an allowance may be made for a child varies from 13 to 17 years. Only one State has a 13-year maximum, but this State allows an extension to 16 years if the child is ill or incapacitated for work. Sixteen years is the maximum in the greatest number of States. One State and Alaska give 17 as a maximum and one other State, with a 16-year limit for boys, makes 17 a maximum in the case of girls.

The amounts of the allowances vary greatly in the different States; they range from \$2 per week per child to \$25 a month for one child and \$15 for each additional child. In many States the amount is far too low to maintain a decent standard of family life, particularly in view of the greatly increased cost of living. It is encouraging to note, however, that the newer laws and more recent amendments, with a few exceptions, are in the direction of making more liberal allowances and of raising the age limits of the children who may be aided,

to keep pace with advances made in child labor and compulsory education laws.

The bulletin contains the complete text of the laws concerning mothers' pensions in force in the United States, Canada, Denmark, and New Zealand, together with rules and regulations issued in connection with their administration and the forms of application used in various localities. It also contains a list of references on the subject of mothers' pensions. An introductory discussion gives a succinct history of mothers' pension legislation and briefly summarizes the provisions of the laws in force in the United States.

# Compulsory Old-Age and Invalidity Insurance Law of Italy.

Translated and Summarized by ALFRED MAYLANDER.

**T**HROUGH the viceregal decree of April 21, 1919, No. 603, which introduces compulsory old-age and invalidity insurance for practically all manual workers, salaried employees, and professions, Italy has added another link to its system of compulsory insurance. Previous to the issuance of this decree the Italian social insurance system consisted of only two forms of compulsory insurance—insurance against industrial accidents, introduced by the law of March 17, 1898, and maternity insurance, established by the law of July 17, 1910.

In its system of compulsory insurance against industrial accidents Italy followed to a great extent the example of Germany, but looked to France and Belgium for models of a system of old-age insurance. The establishment of the National Institute for Insurance of Workmen against Invalidity and Old Age (*Cassa Nazionale di Previdenza per la Invalidità e per la Vecchiaia degli Operai*), under the law of July 17, 1898, was merely an institution for voluntary insurance, although subsidized by the State, and showed a pronounced similarity to the corresponding French and Belgian institutions. The privilege of being insured in this institute was offered by the law to all Italian citizens engaged mainly in manual labor for time or piece wages, or on their own account, provided they did not pay more than 30 lire<sup>1</sup> (\$5.79) per annum in taxes of any nature. A married woman could be insured without the permission of her husband and a minor without the permission of his parent or guardian. The law authorized the institute to carry on an old-age insurance business among other classes of the population (so-called popular annuity insurance), and when a regularly insured person ceased to satisfy the above-mentioned requirements he was transferred to this popular insurance branch.<sup>2</sup>

However, organized labor and social reformers in Italy were not satisfied with this form of voluntary old-age and invalidity insurance, and during the 20 years of operation of the law of 1898 the Government was continuously beset by demands for the enactment of a compulsory old-age and invalidity insurance law. During the war the Government complied in part with these demands by the issuance

<sup>1</sup> Conversions throughout this article are made on the basis of the par value of the lire (19.3 cents) as given in Treasury Department Circular No. 1, Oct. 1, 1919.

<sup>2</sup> For a detailed account of the provisions of the law of July 17, 1898, and of its operation, see Twenty-fourth Annual Report of the Commissioner of Labor, 1909: Workmen's insurance and compensation systems in Europe. Vol. II, pp. 1862 ff. Washington, 1911.

on April 29, 1917, of a viceregal decree which made it compulsory for all auxiliary war establishments to insure their workers in the National Institute for Old-Age and Invalidity Insurance. In pursuance of this decree over 600,000 workers were insured in the institute and more than 40,000,000 lire (\$7,720,000) paid into it as contributions for this insurance.

On November 28, 1918, the Government finally submitted to the Chamber of Deputies a bill for compulsory old-age and invalidity insurance. The unanimous approval of the bill by employers' and workers' organizations and the insistent demand of these organizations for speedy enactment of the bill convinced the Government that it would be most suitable not to await parliamentary action on the bill, which would be greatly delayed by the large amount of urgent legislation before Parliament, but to enact the provisions of the bill by incorporating them in a viceregal decree. Such a decree, having the force of a law and containing substantially all the provisions of the Government bill, was issued in April 21, 1919. Because of its length only a summary of this decree is given.<sup>1</sup>

### Scope of the Law and Persons Covered.

The Italian compulsory invalidity and old-age insurance has a threefold purpose:

1. The granting of a pension in case of invalidity (disability for work) or of old age.
2. The granting of a temporary monthly allowance to the widow or orphans of the insured.
3. The prevention and cure of invalidity.

The decree makes insurance against old age and invalidity obligatory for persons of both sexes of the ages between 15 and 65 years who are employed as—

(a) Laborers, journeymen, apprentices, porters, helpers, clerks, foremen or salaried employees in industry, commerce, agriculture, forestry, fishing, public service, and the professions (inclusive of teachers and private instructors), as well as home workers.

(b) Domestic servants and persons in all kinds of private service.

(c) Half-share (*mezzadri*) and tenant farmers (*affittuari*) who according to usage have to perform manual work for the owner of the farm.

Aliens working in Italy in one of the above occupations are also subject to compulsory insurance but are not entitled to the State contribution unless an agreement between their native country and Italy grants reciprocity in this respect to Italian citizens.

<sup>1</sup> Italy. Atti Parlamentari. Camera dei Deputati. Legislatura XXIV, sessione 1913/19. No. 1195.

From the obligation to insure are exempted:

1. All salaried employees and persons in similar occupations whose average monthly earnings are in excess of 350 lire (\$67.55).

2. All half-share and tenant farmers whose annual actual or estimated income from the land held or leased exceeds 3,600 lire (\$694.80).

3. All seamen during service on Italian vessels, provided they are insured in the Merchant Marine's Invalidity Fund.

4. Those workers, officials, and salaried employees of the State, State railroads, Provinces, communes, and public welfare institutions who in pursuance of a law or regulations receive a pension not less than that provided by the present decree. If the pension is smaller than that provided by the present decree the Social Insurance Council shall in each individual case determine whether and under what conditions the person in question is under obligation to insure.

### Contributions.

The income of the new Italian invalidity and old-age insurance system is derived from contributions (*a*) of the employers, (*b*) of the insured persons, and (*c*) of the State. The employer and the insured person are each to contribute one-half of the premiums prescribed by the decree. The decree has graded the contributions of the insured and of the employers in accordance with the daily earnings of the former and fixed the amount of the biweekly contributions as follows:

BIWEEKLY CONTRIBUTIONS OF INSURED AND EMPLOYER, BASED ON DAILY EARNINGS OF INSURED.

Daily earnings of insured.	Biweekly contributions of—	
	Insured.	Employer.
	<i>Lire.</i>	<i>Lire.</i>
2 lire (\$0.386) and less.....	0.50 (\$0.097)	0.50 (\$0.097)
Over 2 lire to 4 lire (\$0.386 to \$0.772).....	1.00 (.193)	1.00 (.193)
Over 4 lire to 6 lire (\$0.772 to \$1.158).....	1.50 (.290)	1.50 (.290)
Over 6 lire to 8 lire (\$1.158 to \$1.544).....	2.00 (.386)	2.00 (.386)
Over 8 lire to 10 lire (\$1.544 to \$1.930).....	2.50 (.483)	2.50 (.483)
Over 10 lire (\$1.930).....	3.00 (.579)	3.00 (.579)

The contributions are to be collected by means of stamps which the employer pastes on a membership card furnished to each insured person. The employer is held responsible for pasting on the correct amount of stamps, both for the share of the insured person and for his own share of the contribution, and may deduct the insured person's share from his wages. Employers deducting from their employees' wages a larger amount as insurance contribution than the amount fixed by the decree are liable to a maximum fine of 500 lire (\$96.50). If the employer omits to insure an employee

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or fails to pay contributions for him, or pays too small a contribution, he shall, in addition to paying the contribution due, become liable to payment of twice the amount due.

### Benefits.

Insured persons have a valid claim to a pension (1) when they have completed their sixty-fifth year of age and have made at least 240 biweekly contributions, and (2) at any age if they have become permanently disabled for work and have made at least 120 biweekly contributions.

An insured person is considered permanently disabled when his earning capacity has been reduced to less than one-third of the usual earning capacity of persons working in the same occupation in the same locality. If the condition of a pensioner improves to such a degree that the above definition of disability is no longer applicable to him the pension may be suspended.

If the invalidity of an insured person has been brought about through an industrial accident and he is subject to compulsory accident insurance, his invalidity pension is reduced in such measure that combined with his accident pension it will not exceed his annual earnings.

The pension consists of two parts: (1) The part corresponding to the contributions made by the insured person and his employer, and (2) the part formed by the State grant. The first part is to be composed of 66 per cent of the first 120 biweekly contributions, plus 50 per cent of the next 120 biweekly contributions, plus 25 per cent of the remaining contributions. The annual State grant for each pension has been fixed at 100 lire (\$19.30).

The decree provides that periods of military service (voluntary or compulsory) and periods of sickness (up to a maximum of one year) shall be included as contributory periods in the computation of pensions although contributions have not been made during these periods. In such cases the lowest biweekly contribution shall be credited to the insured persons.

If an insured person dies before he becomes entitled to a pension, his widow (unless separated by her own fault), or, in her absence, his children under 15 years of age, shall receive a monthly grant of 50 lire (\$9.65) for a period of six months.

If the invalidity of an insured person has been established and there is possibility of lessening or eliminating it through a suitable cure or through medical treatment in a hospital, the National Social Insurance Institute may with the consent of the insured person adopt such remedial measures. Likewise it may take such measures, with the consent of the insured, if the invalidity of an insured person can

be prevented or shortened through a suitable cure or treatment in a hospital. The costs of such cures or hospital treatment are to be borne by the National Social Insurance Institute independently of other benefits provided in the present decree.

To workers in mines, blast furnaces, furnaces of glass works and foundries, and on steam boilers, to special classes of railroad workers (specified in article 21 of the law of June 30, 1906), and to workers in other industries that may be designated by royal decree, the decree grants the right to a pension after the completed sixtieth year of age even if they are not disabled for work; provided, however, that they have made at least 240 biweekly contributions. If an insured person claims this privilege his normal pension as fixed by the decree as well as the State grant for the pension is to be reduced as follows:

- By 37 per cent if the insured person is 60 years of age.
- By 32 per cent if the insured person is 61 years of age.
- By 26 per cent if the insured person is 62 years of age.
- By 19 per cent if the insured person is 63 years of age.
- By 10 per cent if the insured person is 64 years of age.

In the case of insured persons who avail themselves of the privilege of drawing an old-age pension after the completed sixtieth year of age the obligation of contributing to the insurance continues for them and their employers during periods of employment falling between the completed sixtieth and the completed sixty-fifth year of age.

### Insurance Carriers.

The carriers of the invalidity and the old-age insurance are: (1) The National Social Insurance Institute (*Cassa Nazionale per le Assicurazioni Sociali*) and (2) the provincial social insurance institutes (*Istituti Provinciali di Previdenza Sociale*).

The former National Institute for Insurance of Workmen against Invalidity and Old Age (*Cassa Nazionale di Previdenza per la Invalidità e per la Vecchiaia degli Operai*) assumes the name National Social Insurance Institute and is regulated by the present decree and by the law of May 30, 1907, as amended by the present decree. The organization of the National Social Insurance Institute is subject to regulation by organic law.

A royal decree is to provide for the appointment of an administrative council of the National Social Insurance Institute, to be composed of (1) six employers' representatives and eight representatives of the compulsorily insured persons; (2) two representatives of the voluntarily insured persons; (3) five members selected from among social insurance experts; (4) one representative each of the Ministry of Industry, Commerce and Labor, and of the Ministry of

Finance; (5) the director general of the National Insurance Institute; (6) the director general of the National Accident Insurance Institute; and (7) the director general of insurance institutes in the Ministry of Finance.

Provision is to be made in the decree for the appointment of a president of the National Social Insurance Institute and two vice presidents, one of whom must be an employers' representative and the other a representative of the insured person. The director general of the National Social Insurance Institute is to be appointed by royal decree on proposal of the Ministers of Industry, Commerce and Labor, and of Finance.

The duties assigned to the administrative council are the following:

1. The drafting of an organic statute for the National Social Insurance Institute and of possible amendments of this statute.

2. The compilation of tables for the liquidation of annuities under the various optional plans.

3. The promotion of the establishment of provincial social insurance institutes and the supervision of their operation.

4. To determine how the funds of the institute are to be employed.

5. To prepare the budgets.

6. To establish rules for the employment of the staff of the institute and for its salaries.

7. To attend to all other functions assigned to the council by the decree, the organic statute, or the regulations for the carrying out of the decree.

From among the members of the administrative council there is to be formed an executive committee to be composed of the president and the two vice presidents of the council, the representatives of the two ministries, a member chosen by the council from among the representatives of the insured persons, and the director general of the National Social Insurance Institute.

Provincial social insurance institutes are, as a rule, to be established in each Province and to be administered by an executive committee one-third of whose members shall be appointed jointly by the Minister of Industry, Commerce and Labor, and the Minister of Finance, one-third shall consist of representatives of the insured, and one-third of employers' representatives, the last two groups to be chosen respectively by the most important trade organizations in existence within the jurisdiction of the institute. Where such organizations are not in existence or where in the opinion of the Minister of Industry, Commerce and Labor they do not sufficiently represent the parties interested in the election of the representatives, the representatives of the employers and of the insured are to be chosen by the Minister of Industry, Commerce and Labor.



## Settlement of Disputes.

The decree provides that an arbitration board of the first instance for the settlement of all disputes arising from the application of the decree shall be established at the headquarters of each provincial social insurance institute. Each of these boards shall be composed (a) of a judge designated annually by the president of the appellate court, who shall act as chairman, (b) two representatives each of the employers and of the insured persons, chosen by the respective trade organizations, and (c) two physicians, in case the dispute relates to the determination of the invalidity of an insured person. Decisions of this board may be appealed to the central arbitration board. A decision becomes effective even if appealed unless the central arbitration board, on request of the appellant, orders its suspension.

A central arbitration board to which appeals may be taken is to be established in the Ministry of Industry, Commerce, and Labor. This board is to be composed of one councilor of the supreme court (*Corte di Cassazione*); one higher official each of the Ministry of Industry, Commerce and Labor, and the Ministry of Finance; two physicians having special scientific and professional qualifications (these are to sit on the board only in disputes involving the determination of invalidity); and two representatives each of the employers and of the insured. The decisions of the central arbitration board are final.

## Voluntary Insurance.

Italian citizens subject to compulsory old-age and invalidity insurance may increase their pensions through voluntary contributions.

A pension through voluntary contributions may also be secured by—

1. Independent workers whose annual earnings do not exceed 4,200 lire (\$810.60).

2. Married women who keep house and whose husbands are subject to compulsory invalidity and old-age insurance. Female relatives of compulsorily insured persons who keep house for them may also be admitted to voluntary insurance provided they have no other sort of income on which they pay State, provincial, or communal taxes in excess of 30 lire (\$5.79) per year.

3. Those who were compulsorily insured but have since become disqualified for compulsory insurance.

4. Owners of small agricultural, commercial, or industrial establishments, and professional persons whose annual direct State taxes do not exceed 200 lire (\$38.60).

Those persons who at the coming in force of the present decree were insured in the National Institute for Invalidity and Old-Age Insurance are admitted to voluntary insurance under the present decree even if they do not come under one of the above four groups.

Where collective insurance has been taken out by mutual aid societies, industrial, commercial, or agricultural establishments, or public administrations, the National Social Insurance Institute may underwrite the insurance of all the members of such societies and of all the employees of such establishments.

The taking out of additional voluntary insurance by Italian citizens compulsorily insured and the voluntary insurance of persons coming under groups 1 and 2 are encouraged by the State through the grant of subsidies.

Persons who become disqualified for compulsory insurance before they have made 240 biweekly contributions may have these payments applied toward a pension, provided they make voluntary contributions in accordance with the provisions of the present decree and with rules to be fixed in the regulations for the carrying out of the decree.

At the time of the settlement of each individual insurance account the National Social Insurance Institute adds to the State grant, in the form of a supplementary annuity, the annuity acquired through voluntary contributions. In the case of noncompulsorily insured persons this supplementary annuity amounts to one-third of the annuity acquired through voluntary contributions, and in the case of compulsorily insured persons, to one-sixth. The supplementary annuity, is however, in no case to exceed 100 lire (\$19.30). The decree authorizes the administrative council of the National Social Insurance Institute to submit proposals to the Ministry of Industry, Commerce, and Labor concerning the allowance of State grants larger than those fixed by the decree to those voluntarily insured persons who have taken out insurance in the National Institute for the Insurance of Workmen against Old Age and Invalidity at least one year before the promulgation of the present decree and who lack the qualifications required under the provisions of this decree for compulsory insurance.

Pensions acquired through voluntary contributions may be settled independently of the pensions acquired through compulsory insurance.

### Contribution of the State.

The decree provides for an annual credit in the State budget in favor of the National Social Insurance Institute. During the first 10 years after the coming into force of the decree this credit is to consist each year of 50,000,000 lire (\$9,650,000), available in two half-yearly amounts. With this amount the institute must pay the supple-

mentary State grants for the pensions of the compulsorily and voluntarily insured persons and the grants to widows and orphans. At the end of each five-year period the National Social Insurance Institute must render an accounting as to the disposal made of the State appropriation. The institute must also compile statistics suitable for the control and revision of the technical bases of the decree. On the basis of these statistics the rates of the contributions and the coefficients for the settlement of the pensions may be modified after the decree has been in force for a period of 10 years.

### Transitory Provisions.

The transitory provisions of the decree deal in the first place with the pension rights of persons who are over 55 years old at the time of the coming into force of the decree. Persons subject to compulsory insurance who at that time are between 60 and 65 years old can not obtain their old-age pension until five years after the coming into force of the decree and then only if they have made 120 biweekly contributions. Persons who on the coming into force of the decree have completed their fifty-fifth year but not their sixtieth year may obtain their pension after the completed sixty-fifth year of age even if they have not made 240 biweekly contributions. They must, however, have made at least 120 weekly contributions and show proof that after the completion of their fifty-fifth year of age they have worked during at least 480 weeks. Persons who have been insured in the former National Institute for Invalidity and Old Age Insurance need not show such proof, provided that after having reached their fifty-fifth year of age they have paid the minimum contributions.

Compulsorily insured persons who during the first five years of the effectiveness of the decree become permanently disabled for work are allowed to obtain their pensions even if they have not made 120 biweekly contributions if they have made at least 24 contributions and can show proof that they have worked regularly during the five years preceding the coming into force of the decree.

Persons who on the coming into force of the decree are insured in the former National Institute for Invalidity and Old Age Insurance retain, with respect to the contributions made up to that date, all the rights assured to them by the law of May 30, 1907.

Biweekly contributions made in pursuance of the viceregal decrees of April 29 (No. 670), July 24 (No. 1185), and November 11, 1917 (No. 1907), will be credited at five-sixths of their amount in computing pensions in accordance with the present decree. All previous contradictory provisions are abrogated.

Active military service during the period between May 25, 1915, and the date of the coming into force of the decree will be credited to insured persons in the computation of their pensions in the same manner as if they had paid the legal minimum contributions during such service. Periods during which an insured person has been assigned for service in auxiliary war establishments will, however, not be considered as active service.

### General Provisions.

The general supervision of the carrying out of the compulsory insurance law is to be exercised by the Ministry of Industry, Commerce and Labor, which must annually submit to Parliament a report on the application of the law. The Insurance Council (*Consiglio della Previdenza e delle Assicurazioni Sociali*) is to act as an advisory body to the ministry in the carrying out of the law. A royal decree is to provide for the reorganization of this council and for the constitution of a permanent committee from among its members.

The decree provides for the establishment in the Ministry of Industry, Commerce, and Labor of a technical actuarial office, which is to supervise the application of the social insurance laws, and insurance institutes in general, and to make studies of all matters relating to insurance. The officials of this office must be graduates in pure or applied mathematics of a higher commercial college.

National and foreign insurance enterprises of whatever character doing business in Italy are ordered by the decree to pay annually a supervision fee, to be fixed by the ministry but not to be in excess of one mill of the premiums collected by them. There are exempted from the payment of this fee cooperative and mutual associations for mutual insurance in accordance with the law of July 7, 1907 (No. 506), and mutual and cooperative insurance associations operating only within the commune in which their office is located or whose annual premium receipts do not exceed 20,000 lire (\$3,860). Neither does this obligation apply to industrial accident insurance in agriculture.

The compulsory accident insurance law is also applicable to Italian citizens living in the colonies. They will be insured in the National Social Insurance Institute in accordance with special regulations, to be issued conjointly by the Minister of Industry, Commerce and Labor and the Minister of Colonies.

The decree goes into force January 1, 1920, and will be submitted to Parliament for conversion into a law.

## LABOR ORGANIZATIONS.

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### Organization of New International Federation of Trade-Unions.

THE incident of war so upset international labor relations that it became necessary at the conclusion of hostilities to take steps to reorganize the international secretariat, which prior to the war and during the conflict had maintained headquarters in Berlin with Carl Legein as president. Accordingly, an international trade-union conference was arranged to meet in Amsterdam in July, 1919, at which delegates from 11 countries were present, the object being to wind up the affairs of the old international. This was done in sessions on July 25 and 26.

On July 28, 92 delegates from 14 countries, representing 17,740,000 trade-union members, assembled to perfect the organization of a new international federation of trade-unions. The American Federation of Labor was represented by Samuel Gompers, president; Daniel J. Tobin, treasurer; and John Hynes, president of the Amalgamated Sheet Metal Workers International Alliance. The agenda, among other things, provided for the adoption of a new form of organization and a committee was appointed to draw up a constitution and rules to govern the new federation. Some discussion developed on the report of this committee, especially on the matter of the basis of representation and the amount of contribution per member to be made by each national organization. The committee recommended that each national center represented at the conference should have 1 vote for every 250,000 or fraction of 250,000 members, but this was finally changed on the following basis:

One vote for 250,000 members or less.

Two votes for 250,000 to 500,000 members.

Three votes for 500,000 to 1,000,000 members.

One vote for each 500,000 or fraction thereof over and above 1,000,000 members.

This voting power, upon the insistence of the American delegates, was made applicable to the conference then in session, giving a total of 51 votes, as follows: America, 9; Great Britain, 11; France, 4; Germany, 13; Belgium, Austria, Denmark, and Holland, 2 each; Luxemburg, Switzerland, Sweden, Norway, Spain, and Czechoslovakia, 1 each.

Another provision of the report which resulted in considerable debate was that fixing the basis of contribution at 1 cent per member. It was finally voted to reduce this to one-half cent.

The committee recommended that the headquarters of the International Federation of Trade-Unions be located at Amsterdam, thereby accomplishing what the American delegates had contended for—the removal of the international secretariat from Berlin.

The officers of the new international are: President, W. A. Appleton, England; first vice president, L. Jouhaux, France; second vice president, Corneille Mertens, Belgium; treasurer, L. Oudegeest, Holland; secretary, Edo Fimmen, Holland.

### Report of Committee on Constitution and Rules.

The following is the original report of the committee on constitution and rules, given without the changes adopted as to basis of representation:<sup>1</sup>

#### *Name.*

1. The national centers of trade-unions of the various countries shall combine in an International Federation of Trade-Unions, the autonomy of the trade-union movement of each country being guaranteed.

2. The headquarters of the International Federation of Trade-Unions shall be determined by the international conference.

#### *Constitution.*

The International Federation shall consist of the national and general trade-union centers of those countries which are organized on a trade-union basis.

Only one national center of trade-unions from each country shall be admitted to the International Federation.

N. B.—The management committee shall be authorized to permit exceptions to this rule up to the first biennial conference.

All controversies as to membership shall be examined by the bureau and management committee, and submitted for final decision to the biennial conference of the International Federation.

#### *Objects of the Federation.*

The objects of the International Federation of Trade-Unions shall be:

1. The promotion of the interests and endeavors of the organizations affiliated on a national and international basis.
2. The promotion of the trade-union movement, both national and international, in the countries not affiliated.
3. The promotion of combined action on all questions of mutual trade-union interest.
4. The prevention of international blacklegging.
5. The provision of funds for the promotion and furtherance of the foregoing objects, and such other trade-union objects as may from time to time be incorporated in the rule.

<sup>1</sup>American Federationist, October, 1919, pp. 949-953. Washington, 1919.

### *Management.*

The management of the International Federation shall consist of the bureau, the management committee, and the biennial conference.

1. The bureau shall consist of the president, two senior vice presidents, the treasurer, and the secretary-editor, to be selected, as far as possible, from different nations.

2. One additional vice president for every group of nations shall be appointed and be added to the bureau for the purpose of forming the management committee.

The bureau and the management committee shall be appointed at the biennial conference of the International Federation, and shall remain in office (apart from death or misconduct) until the next biennial meeting.

Any delegate to the first or the biennial conference shall be eligible for nomination to any position on the bureau or management committee, or for any special tasks which the biennial conference shall decide upon, but regard shall be had to the just claim of affiliated nationalities as these are grouped in (1) the United States of America; (2) Central and South America; (3) Britain and the British Colonies; (4) Belgium, France, and Luxemburg; (5) Italy, Spain, and Portugal; (6) Germany, German Austria, and Switzerland; (7) Russia and Baltic Provinces; (8) Bohemia, Poland, and Jugo-Slav; (9) Hungary, Greece, and Balkan States; (10) Denmark, Finland, The Netherlands, Norway, and Sweden.

Where any member of the bureau of the management committee is unable to attend any meeting of the bureau or the general committee, the national center of which he is a member, may nominate a substitute, but such substitute shall not occupy the position of president, treasurer, or secretary, except by the unanimous vote of the other members of the committee. In the event of a substitute not being elected to any of the foregoing positions, the committee itself shall proceed to nominate and elect from those who have been properly delegated temporary occupants of the presidency, the treasury, and the secretaryship.

### *The Conference (Its Convention).*

The regular conference of the International Federation of Trade-Unions shall be held every two years and, if possible, in the autumn.

The bureau shall decide upon the date and place of the conference, should these not have been decided at the previous conference.

Notification of the date, place and draft-agenda of the biennial conference shall be sent by the secretary to each of the national centers at least six months before the conference is to take place. All proposals to be submitted to the conference shall be sent to the secretary not less than three months before the conference meets, together with any explanations of these proposals.

A division shall be called if one-third of the members of the conference propose it. All propositions shall, as far as these rules do not provide otherwise, be decided by simple majority. An equal number of votes shall be taken as a rejection of any proposition.

Amendments handed in after the conference has assembled or during discussions can only be considered by the consent of a two-thirds majority of members represented. Special conferences may be convened on the decision of the bureau, supported by a two-thirds majority of the management committee and confirmed by not less than half of the national centers affiliated. The votes of the national centers in respect of the holding of such conferences to be obtained by telegram.

### *The Conference (Its Composition).*

The conference of the International Federation of Trade-Unions shall consist of the management committee and the representatives of the affiliated national centers.

All representatives of the national centers must be resident and organized in the country which is represented by them.

Every affiliated national organization has the right to send one representative to the conference at the expense of the International Federation of Trade-Unions.

Any affiliated national center may, at its own expense, send additional representatives.

### *The Conference (Representation).*

Each national center represented at the conference shall have 1 vote for every 250,000 or fraction of 250,000 members for which it pays contributions to the International Federation of Trade-Unions.

The credentials of all the delegates attending the conference shall be examined by the executive before the conference opens, and the results reported to the conference before the agenda is proceeded with.

### *The Conference (Its Duties).*

The conference shall elect all officers of the Federation. Such elections shall be decided by secret and written ballot. The candidate obtaining the majority of the votes cast shall be declared elected. Should no candidate at the first ballot receive a clear majority, a second ballot shall be taken as between the three candidates receiving the highest number of votes. If still no candidate has obtained a clear majority, a third ballot shall be taken as between the two candidates who at the second ballot received the highest number of votes.

The conference shall examine all reports of the management committee which have been issued between the biennial conferences, and it shall consider the financial position after the accounts have been submitted and reported upon by the auditors.

The conference shall elect a commission of auditors (3) for the regular examination of the books and accounts of the Federation.

The conference shall attend to:

The consideration of all proposals submitted.

The election of the bureau and management committee.

The fixing of the rate of contributions for the ensuing financial period, which shall be from one biennial conference to the next.

The congress alone shall have authority to decide all questions of principle or tactics of a trade-union nature, apart from exceptional cases.

### *The Bureau and the Management Committee.*

The president of the Federation shall preside over all meetings of the executive, the management committee, and the conference. He shall in cooperation with the bureau, direct the affairs of the International Federation of Trade-Unions, and be responsible to the conference for the efficient fulfillment of the duties both of officials, delegates, and employees of the Federation. The president shall have the casting vote at the meetings of the bureau and the management committee, in case he took part in the vote.

The first vice president shall be the representative and substitute of the president. He shall attend, moreover—

(a) To the propaganda for the extension of the International Federation of Trade-Unions.



(b) To the propoganda for advancement of the national and international trade-union movement in nonaffiliated countries.

The second vice president shall be the representative and substitute for the first vice president. He shall attend moreover—

(a) To the drafting and preparation of the social and economic demands of the International Federation of Trade-Unions.

(b) The preliminary work in connection with the settlement of differences within the movement.

### *The Treasurer.*

The treasurer shall have charge of all matters concerning income and expenditure. He shall sign all cheques or orders for the disbursement of money, and shall keep and be responsible for all the accounts of the federation. He shall prepare all statistics required by the federation, and shall have charge of all appeals for monetary help, and superintend the issue of such appeals.

### *The Secretary-Editor.*

The secretary-editor shall attend to the business management of the office of the International Federation of Trade-Unions, and be responsible for the management of the translation bureau.

He shall write the minutes of all meetings and conferences and submit these minutes to the management committee and the national centers. The president, or his authority, shall sign these minutes.

He shall attend to the publication of a periodical as well as to the other publications of the International Federation of Trade-Unions.

The bureau shall meet once a month at the registered office of the International Federation of Trade-Unions. At this meeting reports shall be considered concerning the activities and intended actions of the affiliated centers.

A copy of the minutes of the meetings, the reports submitted by the members of the bureau included, shall be forwarded to the management committee as soon as possible.

The bureau may appoint delegates to the trade-union functions of the various countries, or entrust them with the promoting of trade-union aims in affiliated or non-official countries.

The bureau, at the request of a national center, shall place one of its members at the disposal of the center if the latter requires such member in the interests of the trade-union movement and is willing to reimburse the bureau the amount of expenses incurred.

The management committee shall meet twice a year. The bureau shall fix the date, place and draft agenda of such meeting, having due regard to the traveling and other conveniences of the members of the committee.

The invitations to the meetings of the management committee shall be sent to the members at least one month before the meeting is held.

The bureau and the management committee shall receive payment of traveling and other expenses.

### *Special Duties of the Management Committee.*

It shall be the duty of the management committee:

(a) To promote the objects of the International Federation of Trade-Unions, especially in their own and the neighboring countries.

(b) To represent the International Federation of Trade-Unions in connection with individual actions in their own and neighboring countries.

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(c) To assist the bureau in its collection of material for the purposes of the International Federation of Trade-Unions, in connection with trade-union appeals for monetary help required for purposes of propaganda in nonorganized or badly organized countries.

(d) To assist in the examination of the funds, as well as of the activities of the bureau since the last meeting, and the program of action for the ensuing six months.

(e) To attend to all proposals put aside by the bureau and the settlement of all differences still to be adjusted.

(f) To attend to all complaints and new proposals.

(g) To arrange the agenda for the regular conference.

(h) To decide questions of admission or nonadmission of national centers pending confirmation by the next conference.

(i) To take decisions regarding special appeals for monetary help, in accordance with the proposal of the bureau.

(j) To arrange the financial program for the ensuing six months.

At least one copy of the minutes of the meeting are to be forwarded as soon as possible to all national centers.

All the activities and decisions of the bureau and the management committee shall be reported to the national centers and receive the approval and endorsement of the biennial conference.

### *Admission, Withdrawal, and Expulsion.*

Only one national center of trade-unions from each country shall be admitted to the International Federation.

The conference of the International Federation of Trade-Unions shall be the final authority on all questions of membership.

Withdrawal from the International Federation of Trade-Unions can only take place at the close of a period under review after six months' notice has been given to the bureau.

National centers which are more than two years' contribution in arrears may be suspended from membership by the bureau until the next conference.

Any national center may be expelled from the International Federation of Trade-Unions for arrears or gross breaches of rules or for continued hostility toward any other national center. The expelling authority shall be the biennial conference.

### *Program.*

The means toward achieving the objects of the International Federation shall be:

(a) An exchange of all information and experiences of importance to the movement by means of official publications and conferences.

(b) The preparing of statistics on uniform lines.

(c) The issue of an appeal for combined assistance in case of need.

(d) The promoting of trade-union propoganda in the countries affiliated when proposed by the respective national center.

(e) Actions effecting a settlement of differences within the movement.

(f) The promoting of trade-unionist objects in the countries nonaffiliated as far as this appears possible.

(g) The collection of material concerning social and economic legislation in all countries.

(h) The encouragement of endeavors to promote and carry out social and economic legislation in all countries.

(i) Regulation of immigration and emigration in the interests of trade-unions.

(j) Reciprocal contracts promoting independence of movement on the part of members affiliated, by means of regulating the conditions of transfer from one union to another.

(k) The publication of an international review.

Members of the bureau may, on account of continuous gross neglect of duty, be suspended until the next congress from their office by a meeting of the managing committee, specially convened for discussing the matter.

In the event of salaried members of the managing committee not being reelected at the regular conferences, they are entitled to their salary for another year. The managing committee may demand, however, that during this time, they perform such work for the International Federation of Trade-Unions as corresponds with their former duties, and with which they are charged by the managing committee.

#### *Further Propositions of the Committee on Rules.*

1. That Amsterdam be the headquarters of the International Federation of Trade-Unions.
2. That the contribution be one halfpenny or one-half of 1 American cent per member per annum.
3. That the formation of the International Federation of Trade-Unions and the payment of contributions date from the 1st of July, 1919.

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## Thirty-fifth Annual Convention of Trades and Labor Congress of Canada.<sup>1</sup>

THE thirty-fifth annual convention of the Trades and Labor Congress of Canada was held in Hamilton, Ontario, from September 22 to 27, 1919. The report of the credentials committee showed that there were 929 delegates, including 3 fraternal delegates, entitled to seats, the representation being divided as follows: Forty international organizations which have affiliated all of their Canadian membership were represented by 1 delegate each; 3 provincial federations of labor, 1 delegate each; 31 trades and labor councils were represented by 71 delegates; and 489 local branch unions had elected 802 delegates. The total daily attendance of delegates was estimated at 800.

Following the report of the president, the executive council, which is composed of the president, three vice presidents and the secretary-treasurer, presented a review of the work performed during the past year and made a number of recommendations deemed necessary for the welfare of the congress. The subjects considered were 19 in number. On subject 14, Misuse of the strike weapon causes workers to lose in the end, the conference took a decided stand against the too frequent and unwise use of the strike weapon. According to the declaration of the executive council on this subject, "the strikes that are proposed to-day by some of the wilder spirits are very different

<sup>1</sup> Data taken from *The Labor Gazette*, Ottawa, October, 1919, pp. 1192-1212.

things from the legitimate trade-union strike—cutting-off of the supply of labor until the price goes up. They are intended for political purposes: To force the country by the cutting off of supplies to agree to political policies which the country does not want and will only accept under compulsion.”

It is pointed out that in the case of the ordinary strike the public is affected only in a secondary manner. The political strike, however, is said to be essentially a strike against the public at large; “it is an attempt to do by economic force what their constitutional force was not strong enough to do at the polling booth.” The inevitable result is that the public becomes an antagonist and the strikers suffer the loss of public sympathy, even in subsequent undertakings. No lasting success can come of such methods, it is averred, for the Canadian public is “dead set against any class of autocracy, and they will not tolerate it from any section of labor any more than from any other section of the community.”

On the subject of cost of living, the executive council stated that wage increases are required by the workers primarily to improve the standard of living but that this can not be when every increase is discounted in advance by higher costs of the commodities needed.

The congress voted almost unanimously to accept the statement of the executive council on the question of the One Big Union, in which it was declared that—

The futility of the One Big Union methods should have been apparent from the beginning, founded as it was on force and intolerance of the chosen leaders of the labor movement, repudiating the organizations from which they drew their financial and numerical strength, preaching class hatred throughout the country and gambling their whole future on the success of sympathetic and national strikes.

The report of the special committee on housing was adopted. Among the matters recommended for full consideration were the following:

1. That the Federal Government establish a system of loans to those desiring to build homes through the chartered banks at a low rate of interest under conditions that are possible for the workers to avail themselves of.
2. That where it is desirable that a commission be established to operate in the building of homes, same shall have equal representation of workers.
3. Grants should be made to groups of workers who desire to cooperate for the purpose of building homes.
4. That for the successful operation of these loans and to bring immediate relief, a system should be adopted that will expedite the placing of loans for land or buildings without delay or friction.
5. That measures should be taken to correct the evils of the rising unearned increments on urban and rural properties and prevention of speculation in land for housing purposes.
6. Where housing commissions are established they should have power to build and sell houses at cost with power to make advances to individuals or groups of workers to apply their own labor in the construction of same.

7. Where the situation warrants it the Government should erect homes and sell to the workers on terms and conditions similar to those conditions contained in the making of loans.

8. The labor movement, standing as it does for measures of democratic control, should not forget the efforts and results of the centralization, distributing, and purchasing of war supplies, and believe that the same system should now be applied to the acquiring of land supplies and labor so as to prevent waste and allow of the advantages to be gained by the safeguarding of the interests of the workers and establishing conditions by which we should reap advantages for the common good.

The report of the secretary-treasurer showed that the receipts for the past fiscal year, including a balance of \$11,362.16, were \$41,786.86. The expenditure for the same period, including \$5,000 invested in Victory bonds, was \$27,187.41, leaving a balance in hand of \$14,599.45 in addition to the sum of \$10,000 in the reserve fund. The total membership was reported at 160,605, an increase for the year of 43,107.

More than 100 resolutions were submitted to the convention and referred to the appropriate committees. Some of the more important resolutions adopted by the convention had to do with minimum wages and hours of labor, cost of living, cooperative societies, and collective bargaining.

On the subject of minimum wages and hours of labor the following resolution was adopted:

That the congress instruct the executive council, the provincial executive committees, and the provincial federations to urge on the Federal Government and the provincial legislatures to adopt legislation for a maximum 44-hour week for all workers and a wage that will allow of a reasonable standard of living.

No special resolutions in regard to the cost of living were adopted, but it was decided to have the executive council make a complete investigation of the subject, and take the matter before the Board of Commerce.

The application of the cooperative principles to commerce and industry was approved in two resolutions, one of which urged organized labor to give its full support to the promotion and extension of the movement; the other sought legislation to facilitate the incorporation of cooperative societies.

The resolution adopted in favor of collective bargaining was as follows:

*Resolved*, That this congress go on record as being in favor of the right of collective bargaining; our interpretation of same being on the lines of Metal Trades and Building Trades Councils, with strict organized labor representation.

The convention adopted many less important resolutions, some of which were:

In favor of the appointment of an organizer for the textile trades.

In favor of the denaturing of wood alcohol used by painters, varnishers, and others.

In favor of amendments to the merchant shipping act to improve the law in the interests of the masters, mates, and pilots.

In favor of the Government distributing bonus to men and women in the civil service on the principle of equal pay for equal work.

In favor of direct Canadian representation on the executives of all international unions.

In favor of the congress reaffirming support to the labor press.

In favor of making it compulsory for all children to attend school until they reach the age of 16 years.

In favor of pensions for needy mothers, and instructing the executive council and the provincial bodies to do their utmost to secure this legislation.

In favor of experienced operators of not less than 21 years of age being employed in electrical developing stations on an eight-hour basis where there is continuous service and that there be allowed one day's rest in seven.

In favor of a sanitary shop law, and laws to regulate the fitness of barbers to follow their trade.

In favor of the reinstatement of postal workers and Government railway employees who participated in the sympathetic strikes in the west.

In favor of more cooperation on the part of the congress with the Dominion Labor Party.

In favor of the abolition of night work in bakeries for boys under 18 years of age.

Disapproving of military intervention in industrial disputes.

The election of officers, the final business of the conference, resulted as follows:

President: Tom Moore, organizer, United Brotherhood of Carpenters and Joiners, Ottawa, Ontario.

Vice presidents: Arthur Martel, member of executive board, United Brotherhood of Carpenters and Joiners, Montreal, Quebec; H. J. Halford, fourth vice president, Journeymen Barbers' International Union, Hamilton, Ontario; A. J. McAndrew, member of the United Brotherhood of Maintenance-of-Way Employees and Railway Shop Laborers, Moose Jaw, Saskatchewan.

Windsor, Ontario, was selected as the convention city for 1920.

## STRIKES AND LOCKOUTS.

### Strikes and Lockouts in the United States, July to September, 1919.

ACCORDING to information received by the United States Bureau of Labor Statistics, 1,151 strikes and lockouts occurred in this country during the third quarter of the year 1919. Inasmuch as many reports do not reach the Bureau until several months after the strikes occur, the number of strikes occurring during the quarter was probably somewhat larger than the above figure would indicate. Complete data relative to these strikes have not been received by the Bureau and it has not been possible as yet to verify what have been received. The figures in the following tables should therefore be understood to be only an advance statement and not to be accepted as final.

NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH MONTH, JANUARY TO SEPTEMBER, INCLUSIVE, 1918 AND 1919.

Kind of dispute.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Month not stated.	Total.
Strikes:											
1918.....	180	208	293	301	377	284	274	269	194	168	2,548
1919.....	173	196	187	248	400	313	339	337	341	204	2,738
Lockouts:											
1918.....	8	11	11	10	6	6	6	5	10	12	85
1919.....	9	13	5	13	22	9	7	8	6	7	99
Total:											
1918.....	188	219	304	311	383	290	280	274	204	180	2,633
1919.....	182	209	192	261	422	322	346	345	347	211	2,837

Numerous large strikes occurred during the quarter. Probably the most important was the general strike of 367,000 steel workers, beginning September 22, and involving most of the steel industry centers of the country. Other general strikes attracting wide attention were the 250,000 railway shopmen in August, the marine workers on the Atlantic coast in July, and the shipyard workers of New York Harbor in September. Other large disturbances were those of the stockyard employees in Chicago in July and August, the actors in several cities in August and September, the painters in New York City in August, the policemen in Boston in September, the coal miners in Illinois in August, the millinery workers in New York City

in September, and the lockout of carpenters in Chicago in July. Among the street railway strikes were those of the Brooklyn Rapid Transit Co. and the Interborough of New York City in August, and the lines in Boston and Chicago in July.

The data in the following tables relate to the 1,128 strikes and 23 lockouts reported to have occurred in the three months under consideration. A few strikes that occurred during the quarter but in which the exact month was not stated appear in a group by themselves.

STATES IN WHICH 10 OR MORE STRIKES AND LOCKOUTS WERE REPORTED AS OCCURRING DURING THE THIRD QUARTER OF 1919.

State.	July.		August.		September.		Month not stated.		Total.		Grand total.
	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	
New York.....	52	.....	47	1	51	.....	13	.....	163	1	164
Massachusetts.....	39	1	37	1	26	.....	17	.....	119	2	121
Illinois.....	37	1	30	.....	21	.....	7	.....	95	1	96
Pennsylvania.....	29	.....	20	2	29	.....	6	.....	84	2	86
Ohio.....	25	1	24	.....	24	.....	8	.....	81	1	82
Connecticut.....	23	1	19	.....	16	.....	8	.....	66	1	67
New Jersey.....	11	.....	15	.....	20	.....	6	.....	52	.....	52
California.....	4	.....	14	1	17	.....	6	.....	41	1	42
Indiana.....	11	1	9	.....	9	1	5	.....	34	2	36
Rhode Island.....	12	.....	8	.....	5	.....	4	1	29	1	30
Michigan.....	12	1	8	.....	7	.....	1	.....	28	1	29
Missouri.....	5	.....	11	1	6	.....	.....	.....	22	1	23
Washington.....	4	.....	7	.....	12	.....	.....	.....	23	.....	23
Wisconsin.....	5	.....	8	.....	5	.....	5	.....	23	.....	23
West Virginia.....	6	1	8	.....	5	.....	1	.....	20	1	21
Tennessee.....	6	.....	6	.....	3	2	2	.....	17	2	19
Oregon.....	9	.....	2	.....	7	.....	.....	.....	18	.....	18
Minnesota.....	3	.....	5	.....	3	.....	5	1	16	1	17
Maryland.....	2	.....	4	.....	7	.....	1	.....	14	.....	14
Iowa.....	4	.....	5	.....	2	1	1	.....	12	1	13
Virginia.....	3	.....	4	.....	4	1	1	.....	12	1	13
Kentucky.....	4	.....	3	.....	5	.....	.....	.....	12	.....	12
Colorado.....	2	.....	4	.....	5	.....	.....	.....	11	.....	11
Maine.....	1	.....	4	.....	3	.....	3	.....	11	.....	11
Texas.....	.....	.....	2	1	5	.....	3	.....	10	1	11
Utah.....	1	.....	2	.....	7	.....	1	.....	11	.....	11
Louisiana.....	2	.....	2	.....	6	.....	.....	.....	10	.....	10
19 other States and Territories.....	27	.....	29	1	31	1	7	.....	94	2	96
Total.....	339	7	337	8	341	6	111	2	1,128	23	1,151

Of these disputes, 843 strikes and 14 lockouts occurred east of the Mississippi and north of the Ohio and Potomac Rivers; 197 strikes and 4 lockouts occurred west of the Mississippi, and the remaining 88 strikes and 5 lockouts south of the Ohio and Potomac Rivers and east of the Mississippi. In 15 strikes union officials repudiated the action of the men in striking.

As to cities, New York City has the largest number of disturbances, 110; followed by Chicago with 48, Boston with 45, Cleveland with 19, Philadelphia with 17, St. Louis with 16, Newark, N. J., and Worcester, Mass. with 15 each, Providence with 14, and Bridgeport, Conn., Fall River, Mass, Louisville, Ky., and Portland, Oreg. with 12 each.



As to sex, the distribution was as follows: Males, 822 strikes and 18 lockouts; females, 77 strikes; both sexes, 141 strikes and 4 lockouts; sex not reported, 88 strikes and 1 lockout.

The industries in which 9 or more strikes and lockouts were reported are shown in the table which follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES REPORTED AS OCCURRING DURING THE THIRD QUARTER OF 1919.

Industry or occupation.	July.		August.		September.		Month not stated.		Total.		Grand total.
	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	
Metal trades.....	65	2	63	1	45	3	21	.....	194	6	200
Clothing.....	24	.....	18	.....	45	.....	14	.....	101	.....	101
Building trades.....	23	1	22	.....	27	.....	10	.....	82	1	83
Textiles.....	21	1	17	.....	18	1	19	.....	75	2	77
Miners.....	20	.....	26	.....	15	.....	2	.....	63	.....	63
Street Railways.....	22	.....	24	.....	9	.....	2	.....	57	.....	57
Iron and steel.....	14	1	16	.....	11	.....	6	.....	47	1	48
Tobacco workers.....	10	.....	15	.....	11	.....	.....	.....	36	.....	36
Electrical and gas supply.	1	.....	17	.....	9	.....	2	.....	29	.....	29
Shipbuilding.....	12	.....	7	.....	5	1	.....	.....	24	1	25
Printing and publishing.	5	.....	8	.....	8	.....	.....	.....	21	.....	21
Steam railways.....	2	.....	16	.....	3	.....	.....	.....	21	.....	21
Teamsters and chauffeurs.	6	.....	6	.....	5	.....	4	.....	21	.....	21
Telephone employees.	7	.....	6	.....	7	.....	1	.....	21	.....	21
Waiters, cooks, and bartenders.	10	.....	2	.....	7	.....	.....	.....	19	.....	19
City employees.....	5	.....	3	.....	5	.....	4	.....	17	.....	17
Clerks, retail.....	1	.....	5	.....	11	.....	.....	.....	17	.....	17
Bakers.....	6	.....	2	.....	6	1	2	.....	16	1	17
Jewelry workers.....	2	.....	3	.....	11	.....	.....	.....	16	.....	16
Meat cutters.....	5	.....	7	.....	3	.....	1	.....	16	.....	16
Hardware.....	7	.....	.....	.....	3	.....	5	.....	15	.....	15
Musicians and actors.	4	.....	2	.....	8	.....	.....	.....	14	.....	14
Food handlers.....	8	.....	1	.....	5	.....	.....	.....	14	.....	14
Furniture workers and upholsterers.	6	.....	1	.....	4	.....	.....	.....	11	.....	11
Paper and paper products.	5	.....	4	.....	2	.....	.....	.....	11	.....	11
Rubber workers.....	3	.....	3	.....	4	.....	.....	.....	10	.....	10
Carriage and auto workers.	2	.....	3	.....	4	.....	1	.....	10	.....	10
Lumber and timber.....	1	.....	1	.....	7	.....	1	.....	10	.....	10
Marine workers.....	1	.....	1	.....	3	.....	4	.....	9	.....	9
Longshoremen.....	1	.....	5	.....	3	.....	.....	.....	9	.....	9
Chemical workers.....	4	.....	2	.....	2	.....	1	.....	9	.....	9
Miscellaneous.....	34	2	28	.....	33	.....	10	.....	105	2	107
Not reported.....	2	.....	3	7	2	.....	1	2	8	9	17
Total.....	339	7	337	8	341	6	111	2	1,128	23	1,151

Included in the above table are 18 strikes of carpenters, 12 strikes of painters, 24 strikes of building laborers, 37 strikes of tailors, 70 strikes of machinists, 63 strikes of molders, 60 strikes of coal miners, 10 strikes of printers, 12 strikes of railway shopmen, 54 strikes of cotton and woolen employees, and 11 strikes of silk workers.

In 510 strikes and 18 lockouts the employees were reported as connected with unions; in 5 strikes they were not so connected; in 6 strikes they were not connected with unions at the time of striking, but joined immediately after; in 607 strikes and 5 lockouts the number was not reported.

In 548 strikes and 16 lockouts only one employer was concerned in each disturbance; in 47 strikes and 1 lockout, 2 employers; in 15 strikes, 3 employers; in 12 strikes, 4 employers; in 8 strikes, 5 employers; in 48 strikes more than 5; and in 450 strikes and 6 lockouts the number was not reported.

In the 571 strikes for which the number of persons on strike was reported there were 845,661 strikers, an average of 1,481 per strike. In 155 strikes, in which the number involved was 1,000 or more, the strikers numbered 743,514, thus leaving 102,147 involved in the remaining 416 strikes, or an average of 246 each. By months the figures are as follows: July, 269,427 strikers in 177 strikes, average 1,522, of whom 27,921 were in 121 strikes of less than 1,000 persons each, average 231; August, 329,874 strikers in 187 strikes, average 1,764, of whom 35,174 were in 135 strikes of less than 1,000 persons each, average 261; September, 207,325 in 166 strikes, average 1,249, of whom 32,111 were in 127 strikes of less than 1,000 each, average 253.

The following table shows the causes of the strikes and lockouts in so far as reported. In about four-fifths of the disturbances the question of wages or hours was prominent and in about one-fifth the question of union recognition or existence was involved.

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED AS OCCURRING DURING THE THIRD QUARTER OF 1919.

Matter-in dispute.	July.		August.		September.		Month not stated.		Total.		Grand total.
	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	
Increase in wages.....	99	2	124	1	127	.....	45	.....	395	3	398
Decrease in wages.....	4	.....	6	.....	2	.....	.....	.....	12	.....	12
Nonpayment of wages.....	2	.....	1	.....	1	.....	1	.....	5	.....	5
Increase of hours.....	1	.....	.....	.....	1	.....	.....	.....	2	.....	2
Decrease of hours.....	8	.....	6	.....	9	.....	2	.....	25	.....	25
Increase of wages and decrease of hours.....	62	.....	54	1	51	.....	17	.....	184	1	185
Recognition of union.....	16	1	20	6	24	3	6	.....	66	10	76
Recognition and wages.....	4	.....	11	.....	8	.....	4	.....	27	.....	27
Recognition and hours.....	10	.....	.....	.....	.....	.....	.....	.....	10	.....	10
Recognition, wages and hours.....	13	.....	12	.....	12	.....	3	.....	40	.....	40
Recognition and conditions.....	4	.....	5	.....	1	.....	.....	.....	10	.....	10
Conditions.....	13	1	13	.....	17	.....	5	.....	48	1	49
Conditions and wages.....	8	.....	4	.....	3	.....	.....	.....	15	.....	15
Conditions, wages and hours.....	2	.....	5	.....	5	.....	.....	.....	12	.....	12
Employees discharged.....	8	.....	17	.....	10	.....	3	.....	38	.....	38
Discharge of objectionable persons wanted.....	4	.....	1	.....	1	.....	.....	.....	6	.....	6
Nonunion men.....	1	.....	.....	.....	.....	.....	.....	.....	2	.....	2
Interpretation of agreement.....	1	.....	2	.....	2	.....	1	.....	6	.....	6
New agreement.....	12	.....	3	.....	3	.....	.....	.....	18	.....	18
Sympathy.....	8	.....	14	.....	20	.....	1	.....	43	.....	43
Jurisdiction.....	2	.....	2	.....	2	.....	1	.....	7	.....	7
Miscellaneous.....	8	1	7	.....	11	1	11	.....	37	2	39
Not reported.....	49	2	29	.....	31	2	11	2	120	6	126
Total.....	339	7	337	8	341	6	111	2	1,128	23	1,151

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It is frequently difficult to state exactly when a strike terminates, since many strikes end without any formal vote taken on the part of the strikers. The Bureau has information of the actual ending of 366 strikes and 6 lockouts during the quarter, besides 3 strikes in which the positions of the employees were filled with practically no interruption in the work.

## RESULTS OF STRIKES AND LOCKOUTS ENDING DURING THE THIRD QUARTER OF 1919.

Result.	July.		August.		September.		Month not stated.	Total.		Grand total.
	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Strikes.	Lock-outs.	
In favor of employers.....	15	8	1	12	1	3	38	2	40	
In favor of employees.....	39	38	2	33	2	112	112	2	112	
Compromised.....	32	48	2	39	1	120	120	2	122	
Employees returned pending arbitration.....	4	11	1	4	19	1	20	1	20	
Not reported.....	29	25	14	1	9	77	77	1	78	
Total.....	119	130	4	102	2	15	366	6	372	

In the table which follows the duration of 158 strikes and 2 lockouts is given. Besides these there were 19 strikes and 1 lockout for which the statement was made that the duration was short, and 208 strikes and 4 lockouts for which the duration was not reported.

## DURATION OF STRIKES AND LOCKOUTS DURING THE THIRD QUARTER OF 1919.

Duration.	July.		August.		September.		Total.		Grand total.
	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	Strikes.	Lock-outs.	
1 day or less.....	11	6	1	18	18	18	18	18	
2 days.....	8	2	2	12	12	12	12	12	
3 days.....	5	5	4	14	14	14	14	14	
4 days.....	1	1	3	5	5	5	5	5	
5 to 7 days.....	4	4	2	10	10	10	10	10	
1 to 2 weeks.....	4	10	7	21	21	21	21	21	
2 to 4 weeks.....	11	14	15	40	40	40	40	42	
1 to 3 months.....	18	10	7	35	35	35	35	35	
Over 3 months.....	1	2	3	3	3	3	3	3	
Total.....	63	54	41	2	158	2	160	160	

The number of days lost in strikes ending during the quarter was 3,482. The average duration of these strikes was about 22 days. The average duration of strikes lasting less than 90 days was 16 days. By months the record is as follows: July, days lost 1,297, average 21 days; August, days lost 1,384, average 26 days; September, days lost 801, average 20 days. In the case of strikes lasting less than 90 days the average duration was 16 days in July, 18 in August, and 14 in September. In the 2 lockouts 65 days were lost.

# IMMIGRATION.

## Immigration in September, 1919.

THE following tables, prepared by the Bureau of Immigration of the Department of Labor, show the total number of immigrant aliens admitted into the United States in each month from January, 1913, to September, 1919, and the numbers admitted in each fiscal year, 1915 to 1919, and in September, 1919, by nationality. The total departures of emigrant aliens in September, 1919, numbered 27,770.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, JANUARY, 1913, TO SEPTEMBER, 1919.

Month.	1913	1914	1915	1916	1917	1918	1919	
							Number.	Per cent increase over preceding month.
January.....	46,441	44,708	15,481	17,293	24,745	6,356	9,852	18.3
February.....	59,156	46,873	13,873	24,710	19,238	7,388	10,586	7.5
March.....	96,958	92,621	19,263	27,586	15,512	6,510	14,105	33.2
April.....	136,371	119,885	24,532	30,560	20,523	9,541	16,860	19.5
May.....	137,262	107,796	26,069	31,021	10,487	15,217	15,093	10.5
June.....	176,261	71,728	22,598	30,764	11,095	14,247	17,987	19.2
July.....	138,244	60,377	21,504	25,035	9,367	7,780	18,152	9.9
August.....	126,180	37,706	21,949	29,975	10,047	7,862	20,597	13.5
September.....	136,247	29,143	24,513	36,398	9,228	9,997	26,584	29.1
October.....	134,440	30,416	25,450	37,056	9,281	11,771	.....	.....
November.....	104,671	26,298	24,545	34,437	6,446	8,499	.....	.....
December.....	95,387	20,944	18,901	30,902	6,987	10,748	.....	.....

<sup>1</sup> Decrease.

Classified by nationality, the number of immigrant aliens admitted into the United States during specified periods and in September, 1919, was as follows:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES DURING SPECIFIED PERIODS AND IN SEPTEMBER, 1919, BY NATIONALITY.

Nationality.	Year ending June 30—					September, 1919.
	1915	1916	1917	1918	1919	
African (black).....	5,660	4,576	7,971	5,706	5,823	624
Armenian.....	932	964	1,221	321	282	67
Bohemian and Moravian.....	1,651	642	327	74	105	23
Bulgarian, Serbian, Montenegrin.....	3,506	3,146	1,134	150	205	43
Chinese.....	2,469	2,239	1,843	1,576	1,697	325
Croatian and Slovenian.....	1,912	791	305	33	23	6
Cuban.....	3,402	3,442	3,428	1,179	1,169	341
Dalmatian, Bosnian, Herzegovinian.....	305	114	94	15	4	2
Dutch and Flemish.....	6,675	6,433	5,393	2,200	2,735	760
East Indian.....	82	80	69	61	68	18
English.....	38,662	36,168	32,246	12,980	26,889	5,546
Finnish.....	3,472	5,649	5,900	1,867	968	79
French.....	12,636	19,518	24,405	6,840	12,598	2,588
German.....	20,729	11,555	9,682	1,992	1,837	492
Greek.....	15,187	26,792	25,919	2,002	813	126

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES DURING SPECIFIED PERIODS AND IN SEPTEMBER, 1919, BY NATIONALITY—Concluded.

Nationality.	Year ending June 30—					September, 1919.
	1915	1916	1917	1918	1919	
Hebrew.....	26,497	15,108	17,342	3,672	3,055	587
Irish.....	23,503	20,636	17,462	4,657	7,910	1,320
Italian (north).....	10,660	4,905	3,796	1,074	1,236	569
Italian (south).....	46,557	33,909	35,154	5,234	2,137	2,468
Japanese.....	8,609	8,711	8,925	10,168	10,056	887
Korean.....	146	154	194	149	77	8
Lithuanian.....	2,638	599	479	135	160	45
Magyar.....	3,004	981	434	32	52	17
Mexican.....	10,993	17,198	16,438	17,002	28,844	3,869
Pacific Islander.....	6	5	10	17	6	6
Polish.....	9,065	4,502	3,109	668	732	102
Portuguese.....	4,376	12,208	10,194	2,319	1,574	257
Roumanian.....	1,200	953	522	155	89	31
Russian.....	4,459	4,858	3,711	1,513	1,532	208
Ruthenian (Russniak).....	2,933	1,365	1,211	49	103	16
Scandinavian.....	24,263	19,172	19,596	8,741	8,261	1,435
Scottish.....	14,310	13,515	13,550	5,204	10,364	2,022
Slovak.....	2,069	577	244	35	85	20
Spanish.....	5,705	9,259	15,019	7,909	4,224	789
Spanish-American.....	1,667	1,881	2,587	2,231	3,092	475
Syrian.....	1,767	676	976	210	231	71
Turkish.....	273	216	454	24	18	3
Welsh.....	1,390	983	793	732	608	117
West Indian (except Cuban).....	823	948	1,369	732	1,223	182
Other peoples.....	1,877	3,388	23,097	314	247	35
Total.....	326,700	298,826	295,403	110,618	141,132	26,584

## Emigration from Germany as Viewed by the German Trade-Unions.

THE Correspondenzblatt, the official organ of the German Free (Social-Democratic) Trade-Unions, contains an article on prospective emigration from Germany. The following is a summary of this article:

The German working classes are so hard hit by the peace treaty that large numbers will be compelled to emigrate. Already both native and foreign emigration agents are exploiting the situation.

Before the war Germany was a country of immigration rather than of emigration, owing to the rapid development of her industry. Sometimes this immigration was to the manufacturing centers; sometimes it replaced the agricultural workers who had been drawn into the towns. In 1871 there was only 206,755 foreigners within the German Empire; in 1890 the number had risen to 433,254, in 1900 to 778,773, and in 1910 to 1,259,880. Meanwhile emigration was declining. The number of emigrants in 1880 was 221,000, the highest point ever reached; in 1913 it was only 25,843.

Since the armistice, in spite of the scarcity of goods, there has been no great rise in productivity, chiefly on account of the instability of prices. Hence unemployment in the neighboring countries has increased. But this is undoubtedly only temporary. Employment will increase as soon as peace brings more settled conditions, and there will be opportunities for German emigrants. Germany is suffering so much from lack of materials and an unfavorable exchange that emi-

gration agents can impose on the credulous with offers of membership in fictitious colonizing companies in Mexico, South America, etc.

Trade-unions should warn their members against hasty emigration. An emigration of peasants will assuredly not be necessary. People possessing from 5,000 to 20,000 marks (the amounts demanded by the emigration swindlers) need not leave Germany, for there is land at their disposal here. German soil offers them much more in the way of a return on their small capital than a wilderness could do. It should also be kept in mind that improvements are being rapidly made in the condition of the agricultural worker here. Abroad the German will be unpopular and will have to fight for his existence.

In the past German trade-unions have smoothed the way for emigrant workers by securing their entry into foreign trade-unions by means of reciprocal agreements with these. America is, however, an exception, as are also some old-established English trade-unions, which place all sorts of difficulties in the way of membership for foreigners. Such opposition will probably be still greater now than in the past. But German trade-unions have kept up friendly relations with other foreign trade-unions, and therefore German workers will be welcomed in those countries as good trade-unionists.

With respect to emigration legislation, *Correspondenzblatt* makes the following proposals:

(1) The activities of the fraudulent emigration agent must be stopped. Every employment or information office for work in foreign countries which is carried on for gain must be closed. Every attempt to seduce a worker to emigrate must be a punishable offense. This must extend to public advertisements. Such acts can only be dealt with by severe legislation. And since we demand on the other hand a control of the placing of labor abroad, we see no reason why the very severest measures should not be adopted. Permission to place labor abroad should be granted only to direct official bodies and recognized public organizations. No license should be granted to any settlement companies. We have a large number of social organizations of the kind referred to above, which have studied the question during the war and can give reliable information. The whole network of public employment organizations must be pressed into the service in order to avoid misguided emigration. The employers' organizations, being better informed than the workers' organizations, can perform very useful service in this respect.

(2) We must demand from the State more care for its emigrants by embassies and consulates. The consuls should be persons expressly fitted to advance the interests of the emigrant. The Ministry of Labor or the Ministry of the Interior, whichever is the competent ministry for the matter, should have its attachés for specialization in this work. Intending emigrants must be warned that they have to expect hate and hard labor.

[2040]

# Directory of Labor Officials in the United States and Canada.

(Bureaus of Labor, Employment Offices, Industrial Commissions, State Compensation Insurance Funds, Compensation Commissions, Minimum Wage Boards, Factory Inspection Bureaus, and Arbitration and Conciliation Boards.)

## United States.

### DEPARTMENT OF LABOR:

Hon. William B. Wilson, Secretary.

Hon. Louis F. Post, Assistant Secretary.

Address: 1712 G Street, Washington, D. C.

### BUREAU OF LABOR STATISTICS—

Dr. Royal Meeker, commissioner.

Address: 1712 G Street, Washington, D. C.

### BUREAU OF IMMIGRATION—

Anthony Caminetti, commissioner general.

Address: 1712 G Street, Washington, D. C.

### BUREAU OF NATURALIZATION—

Richard K. Campbell, commissioner.

Address: 1712 G Street, Washington, D. C.

### CHILDREN'S BUREAU—

Miss Julia C. Lathrop, chief.

Address: Nineteenth and D Streets, Washington, D. C.

### EMPLOYMENT SERVICE—

John B. Densmore, director general.

Address: Nineteenth and D Streets, Washington, D. C.

### DIVISION OF CONCILIATION—

Hugh L. Kerwin, director.

Address: 1712 G Street, Washington, D. C.

### WOMEN'S BUREAU—

Miss Mary Anderson, director.

Address: Nineteenth and D Streets, Washington, D. C.

### BUREAU OF INDUSTRIAL HOUSING AND TRANSPORTATION—

Leroy K. Sherman, director.

Address: Homer Building, Thirteenth and G Streets, Washington, D. C.

### UNITED STATES HOUSING CORPORATION—

Leroy K. Sherman, president.

Address: Homer Building, Thirteenth and G Streets, Washington, D. C.

### NEGRO ECONOMICS DIVISION—

George F. Haynes, director.

Address: 1712 G Street, Washington, D. C.

### UNITED STATES EMPLOYEES' COMPENSATION COMMISSION:

Mrs. Frances C. Axtell, chairman.

John J. Keegan.

Charles H. Verrill.

S. R. Golibart, jr., secretary.

John W. Trask, medical director.

F. D. Slentz, attorney.

Address of commission: 1730 D Street, Washington, D. C.

## UNITED STATES BOARD OF MEDIATION AND CONCILIATION:

Martin A. Knapp, chairman.

William L. Chambers.

G. W. W. Hanger.

William H. Smith, secretary.

Address of board: 920-926 Southern Building, Washington, D. C.

## Alabama.

## DEPARTMENT OF STATE PRISON INSPECTION (UNDER THE STATE BOARD OF CONTROL AND ECONOMY):

Glenn Andrews, M. D., State inspector, Montgomery.

## CHILD WELFARE COMMISSION:

Thomas E. Kilby (ex officio) governor, chairman.

Child welfare department—

Mrs. L. A. Bush, director.

Address of commission: Montgomery.

## COMPENSATION COMMISSIONER:

(Not yet appointed.)

## UNITED STATES EMPLOYMENT SERVICE:

H. K. Milner, Federal director for State, Birmingham.

## Alaska.

(No special labor officials except mine inspector.)

## Arizona.

## UNITED STATES EMPLOYMENT SERVICE:

Hywel Davies, Federal director for State, Masonic Temple, Phoenix.

## Arkansas.

## BUREAU OF LABOR AND STATISTICS:

Thomas A. Wilson, commissioner, room 129A, State capitol, Little Rock.

Free employment bureau—

E. I. McKinley, deputy commissioner, manager, room 129, State capitol, Little Rock.

Minimum wage commission—

Miss Mary Honora McCabe.

Mrs. J. G. Spurgeon.

Address of commission: State capitol, Little Rock.

## UNITED STATES EMPLOYMENT SERVICE:

Thomas A. Wilson, Federal director for State, Little Rock.

## California.

## BUREAU OF LABOR STATISTICS:

John P. McLaughlin, commissioner, 948 Market Street, San Francisco.

Public employment offices—

C. B. Sexton, superintendent of bureaus, 933 Mission Street, San Francisco.

## INDUSTRIAL ACCIDENT COMMISSION:

A. J. Pillsbury, chairman.

Will J. French.

A. H. Naftzger.

H. L. White, secretary.

H. M. Wolflin, superintendent of safety.

Dr. M. R. Gibbons, medical director.

Address of commission: 525 Market Street, San Francisco.

State compensation insurance fund—

C. W. Fellows, manager.

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## INDUSTRIAL WELFARE COMMISSION:

\_\_\_\_\_, chairman (vacancy).

Mrs. Katherine Philips Edson, executive officer.

A. B. C. Dohrmann.

Alexander Goldstein.

Walter G. Mathewson.

Address of commission: 525 Market Street, San Francisco.

## COMMISSION OF IMMIGRATION AND HOUSING:

Simon J. Lubin, president.

Most Rev. E. J. Hanna, D. D., vice president.

Mrs. Frank A. Gibson.

J. H. McBride, M. D.

Paul Scharrenberg, secretary.

Henry K. Norton, attorney and executive officer.

Address of commission: 525 Market Street, San Francisco.

## UNITED STATES EMPLOYMENT SERVICE:

John P. McLaughlin, Federal director for State, 933 Mission Street, San Francisco.

## Colorado.

## BUREAU OF LABOR STATISTICS:

W. L. Morrissey, deputy labor commissioner and chief factory inspector, Denver.

Public employment offices—

W. L. Morrissey, deputy labor commissioner, etc., Denver.

## INDUSTRIAL COMMISSION:

Joseph C. Bell, chairman.

Hiram E. Hiltz.

William I. Reilly.

H. E. Curran, secretary.

William F. Mowry, chief of claim department.

Address of commission: State capitol, Denver.

State compensation insurance fund—

Thomas P. Kearney, manager.

Minimum wage commission—

(According to an act passed by the 1917 legislature and effective July 20, 1917, the State industrial commission performs the duties of the minimum wage commission.)

## UNITED STATES EMPLOYMENT SERVICE:

Ready Kenehan, Federal director for State, Denver.

## Connecticut.

## DEPARTMENT OF LABOR AND FACTORY INSPECTION:

William S. Hyde, commissioner, Hartford.

Free employment offices—

William S. Hyde, commissioner, Hartford.

## BOARD OF COMPENSATION COMMISSIONERS:

Frederic M. Williams, chairman, room 4, County Courthouse, Waterbury.

George E. Beers, 42 Church Street, New Haven.

Edward T. Buckingham, 1024 Main Street, Bridgeport.

George B. Chandler, 54 Church Street, Hartford.

Dr. James J. Donohue, Central Building, Norwich.

## STATE BOARD OF MEDIATION AND ARBITRATION:

Edward W. Broder, Hartford.

George L. Fox, New Haven.

Patrick F. O'Mara, New Haven.

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## UNITED STATES EMPLOYMENT SERVICE:

William S. Hyde, Federal director for State, Hartford.

## Delaware.

## LABOR COMMISSION:

J. Edgar Rhoads, chairman.

John H. Hickey.

Thomas C. Frame, jr.

George A. Hill.

Miss Helen S. Garrett.

Miss M. Edna Palmer, secretary.

Address of commission: Wilmington.

## Child-labor division—

Charles A. Hagner, chief, 4019 du Pont Building, Wilmington.

## Women's labor division—

Miss M. Edna Palmer, assistant, 4019 du Pont Building, Wilmington.

## Inspector of canneries—

Dr. William R. Messick, Lewes.

## INDUSTRIAL ACCIDENT BOARD:

Sylvester D. Townsend, jr., president.

Harry Mayer.

Volley M. Murray.

Charles H. Grantland, secretary.

Address of board: Dover.

## District of Columbia.

## MINIMUM WAGE BOARD:

Jesse C. Adkins, chairman.

Joseph A. Berberich.

Miss Ethel M. Smith.

Miss Clara E. Mortenson, secretary.

Address of board: District Building, Washington, D. C.

## Florida.

## OFFICE OF STATE LABOR INSPECTOR:

J. C. Privett, State labor inspector, room 6, Baldwin Building, Jacksonville.

## Georgia.

## DEPARTMENT OF COMMERCE AND LABOR:

H. M. Stanley, commissioner, Atlanta.

## UNITED STATES EMPLOYMENT SERVICE:

H. M. Stanley, Federal director for State, 318 State capitol, Atlanta.

## Hawaii.

## INDUSTRIAL ACCIDENT BOARDS:

## County of Hawaii—

W. J. Stone, chairman, Hilo.

## City and county of Honolulu (Oahu)—

F. E. Steere, chairman, Honolulu.

## County of Kauai—

E. E. Mahlum, chairman, Waimea, Kauai.

## County of Maui—

William A. McKay, chairman, Wailuku, Maui.

[2044]

## Idaho.

## LABOR COMMISSION (FOR THE ADJUSTMENT OF LABOR DISPUTES):

W. J. McVety, chairman and acting labor commissioner, Boise.

## INDUSTRIAL ACCIDENT BOARD:

Frank J. Clayton, chairman.

George H. Fisher.

Lawrence E. Worstell.

Address of board: Boise.

## STATE INSURANCE FUND:

D. W. Church, manager, Boise.

## Illinois.

## DEPARTMENT OF LABOR:

Barney Cohen, director, State capitol, Springfield.

Division of factory inspection—

Robert S. Jones, chief inspector, 1543 Transportation Building, Chicago.

Division of labor statistics—

W. C. Lewman, State superintendent of free employment offices, State capitol, Springfield.

Division of private employment agencies—

John J. McKenna, chief inspector, 608 South Dearborn Street, Chicago.

Industrial commission—

Charles S. Andrus, chairman.

Peter J. Angsten (representing employers).

Omer N. Custer (representing employers).

Robert Eadie (representing employees).

James A. Culp (representing employees).

Thomas A. Murphy, chief industrial examiner.

Dr. P. B. Magnuson, medical director.

Address of board: 303-318 City Hall Square Building, Chicago.

## UNITED STATES EMPLOYMENT SERVICE:

W. C. Lewman, Federal director for State, Chicago.

## Indiana.

## INDUSTRIAL BOARD:

Samuel R. Artman, chairman.

Kenneth L. Dresser.

Gilbert H. Hendren.

Edgar A. Perkins.

Thomas Roberts.

Edward J. Boleman, secretary.

Address of board: Rooms 119-122, State capitol, Indianapolis.

Department of factories, buildings, and workshops—

George W. Greenleaf, chief inspector.

Department of boilers—

J. F. Geiger, chief inspector.

Department of mines and mining—

Cairy Littlejohn, chief inspector.

Department of women and children—

Mrs. Arthur T. Cox, director.

## UNITED STATES EMPLOYMENT SERVICE:

H. H. Buskirk, Federal director for State, State capitol, Indianapolis.

## Iowa.

## BUREAU OF LABOR STATISTICS:

A. L. Urick, commissioner, Des Moines.

Free employment bureau—

George B. Albert, clerk, Des Moines.

## WORKMEN'S COMPENSATION SERVICE:

A. B. Funk, industrial commissioner.

Ralph Young, deputy commissioner.

Ray M. Spangler, secretary.

Dr. Oliver J. Fay, medical counsel.

Address: Statehouse, Des Moines.

## UNITED STATES EMPLOYMENT SERVICE:

A. L. Urick, Federal director for State, 114 Courthouse, Des Moines.

## Kansas.

## DEPARTMENT OF LABOR AND INDUSTRY:

J. H. Crawford, commissioner, Statehouse, Topeka.

Free employment office—

J. H. Crawford, director, Statehouse, Topeka.

## INDUSTRIAL WELFARE COMMISSION:

J. H. Crawford, chairman.

R. R. Baer.

Mrs. A. C. Mitchell.

Miss Linna E. Bresette, secretary.

Address of commission: State capitol, Topeka.

## UNITED STATES EMPLOYMENT SERVICE:

J. H. Crawford, Federal director for State, Statehouse, Topeka.

## Kentucky.

## DEPARTMENT OF AGRICULTURE, LABOR AND STATISTICS:

Mat S. Cohen, commissioner of agriculture, labor, and statistics, Frankfort.

Louis Rueff, State labor inspector, Louisville.

Mrs. Charles H. Musgrove, State woman-labor inspector, 605 Republic Building, Louisville.

## WORKMEN'S COMPENSATION BOARD:

R. C. P. Thomas, chairman.

H. J. Allington.

Nat B. Sewell.

Charles J. Howes, secretary.

Dr. T. R. Welch, medical director.

Address of board: Frankfort.

## Louisiana.

## BUREAU OF LABOR AND INDUSTRIAL STATISTICS:

Frank E. Wood, commissioner, suite 626, Maison Blanche Annex, New Orleans.

## OFFICE FACTORIES INSPECTOR OF ORLEANS PARISH:

Mrs. Martha D. Gould, factory inspector of Orleans Parish, room 11, City Hall, New Orleans.

## UNITED STATES EMPLOYMENT SERVICE:

Levering Moore, 341 Carondelet Street, New Orleans.

## Maine.

## DEPARTMENT OF LABOR AND INDUSTRY:

Roscoe A. Eddy, commissioner of labor, Statehouse, Augusta.

## INDUSTRIAL ACCIDENT COMMISSION:

—————, chairman (vacancy).

Arthur L. Robinson, associate legal member.

G. Waldron Smith (ex officio), insurance commissioner.

Roscoe A. Eddy (ex officio), labor commissioner.

Melvin H. Simmons, clerk.

Address of commission: Augusta.

## STATE BOARD OF CONCILIATION AND ARBITRATION:

Alton C. Wheeler, chairman, South Paris.

John Houston, Guilford.

E. A. Cartret, secretary, Westbrook.

## UNITED STATES EMPLOYMENT SERVICE:

H. B. Brawn, Federal director for State, 345 Water Street, Augusta.

## Maryland.

## STATE BOARD OF LABOR AND STATISTICS:

Charles J. Fox, chairman.

Dr. William S. Smith.

Harry C. Willis.

Address of board: St. Paul and Saratoga Streets, Baltimore.

## STATE INDUSTRIAL ACCIDENT COMMISSION:

Charles D. Wagaman, chairman.

Robert E. Lee.

Joseph B. Harrington.

Worthington P. Wachter, secretary.

Dr. Robert P. Bay, chief medical examiner.

Address of commission: 741 Equitable Building, Baltimore.

State accident fund—

James E. Green, superintendent.

## Massachusetts.

## DEPARTMENT OF LABOR AND INDUSTRIES:

(Reorganized under consolidation act of 1919. Took over functions of the State board of labor and industries, minimum wage commission, board of conciliation and arbitration, bureau of statistics, commissioner of standards, and surveyor general of lumber. The divisional heads of the new department have not yet been selected.)

## INDUSTRIAL ACCIDENT BOARD:

William W. Kennard, chairman.

Frank J. Donahue.

David T. Dickinson.

Joseph A. Parks.

Chester E. Gleason.

John H. Cogswell.

Robert E. Grandfield, secretary.

Francis D. Donoghue, M. D., medical adviser.

V. Otis Robertson, director vocational training division.

Address of board: Statehouse, Boston.

## UNITED STATES EMPLOYMENT SERVICE:

Edward F. McGrady, acting Federal director for State, 53 Canal Street, Boston.

[2047]

## Michigan.

## DEPARTMENT OF LABOR:

R. H. Fletcher, commissioner, Lansing.

Free employment bureaus—

R. H. Fletcher, commissioner, Lansing.

## INDUSTRIAL ACCIDENT BOARD:

James A. Kennedy, chairman.

Grant M. Hudson.

Thomas B. Gloster.

Fred S. Johnson, secretary.

Address of board: Lansing.

## STATE COMPENSATION ACCIDENT FUND (UNDER DEPARTMENT OF INSURANCE):

William T. Shaw, manager, Lansing.

## UNITED STATES EMPLOYMENT SERVICE:

Perry J. Ward, Federal director for State, Detroit.

## Minnesota.

## DEPARTMENT OF LABOR AND INDUSTRIES:

John P. Gardiner, commissioner, St. Paul.

Bureau of women and children—

Miss Louise Schutz, superintendent, St. Paul.

## MINIMUM WAGE COMMISSION:

John P. Gardiner, chairman.

Charles W. Gordon.

Eliza P. Evans, secretary.

Address of commission: State capitol, St. Paul.

## STATE BOARD OF ARBITRATION:

Robert F. Pack, president (representing employers).

George F. Buehler, secretary (representing employees).

— (vacancy).

Herbert W. Southworth, executive clerk (nonmember).

Address of board: State capitol, St. Paul.

## UNITED STATES EMPLOYMENT SERVICE:

John P. Gardiner, Federal director for State, 316 Guardian Life Building, St. Paul.

## Mississippi.

## DEPARTMENT OF STATE FACTORY INSPECTION:

A. B. Hobbs, factory inspector, Jackson.

## UNITED STATES EMPLOYMENT SERVICE:

A. B. Hobbs, Federal director for State, Jackson.

## Missouri.

## BUREAU OF LABOR STATISTICS:

William H. Lewis, commissioner, Jefferson City.

Department of factory inspection—

Lee Dunlap, chief inspector, 326 Sheidley Building, Kansas City.

## INDUSTRIAL ACCIDENT COMMISSION:

(Personnel not yet announced.)

## UNITED STATES EMPLOYMENT SERVICE:

William H. Lewis, Federal director for State, 11 North Seventh Street, St. Louis.

## Montana.

## DEPARTMENT OF LABOR AND INDUSTRY:

W. J. Swindlehurst, commissioner, Helena.

## INDUSTRIAL ACCIDENT BOARD:

A. E. Spriggs, chairman.

G. P. Porter (ex officio), State auditor.

W. J. Swindlehurst (ex officio), commissioner of labor.

G. G. Watt, secretary.

Address of board: Helena.

## UNITED STATES EMPLOYMENT SERVICE:

W. J. Swindlehurst, Federal director for State, Helena.

## Nebraska.

## DEPARTMENT OF LABOR:

Frank A. Kennedy, secretary of labor and compensation commissioner,  
State capitol, Lincoln.

## MINIMUM WAGE COMMISSION:

(Inactive; no appropriation.)

## BOARD OF MEDIATION AND INVESTIGATION:

(Personnel not yet announced.)

## BUREAU OF CHILD WELFARE (UNDER DEPARTMENT OF PUBLIC WELFARE):

Mrs. Emily P. Hornberger, director, Lincoln.

## UNITED STATES EMPLOYMENT SERVICE:

Frank A. Kennedy, Federal director for State, 109 City Hall, Omaha.

## Nevada.

## LABOR COMMISSIONER'S OFFICE:

Robert F. Cole, labor commissioner, Carson City.

## INDUSTRIAL COMMISSION:

George D. Smith, chairman.

John M. Gray.

Robert F. Cole.

Dr. Donald Maclean, chief medical adviser.

Address of commission: Carson City.

## New Hampshire.

## BUREAU OF LABOR:

John S. B. Davie, labor commissioner, Concord.

## STATE BOARD OF CONCILIATION AND ARBITRATION:

John H. Neal, chairman, Portsmouth.

George A. Tenney (representing employers), Claremont.

Michael F. Connelly (representing employees), Manchester.

## New Jersey.

## DEPARTMENT OF LABOR:

Lewis T. Bryant, commissioner, Trenton.

## Inspection bureau—

John I. Holt, assistant commissioner.

## Bureau of structural inspection—

Charles H. Weeks, chief.

## Bureau of electrical equipment—

Rowland H. Leveridge, chief.

**DEPARTMENT OF LABOR—Concluded.**

Bureau of hygiene and sanitation—

John Roach, chief.

Workmen's compensation bureau—

William E. Stubbs, secretary.

Bureau of industrial statistics—

Lillian Erskine, chief.

Engineers license and steam boiler inspection bureau—

Joseph F. Scott, chairman.

State employment bureau—

Russell J. Eldridge, acting director.

Bureau of explosives—

Charles H. Weeks, acting chief.

Bureau of mines—

John Roach, acting chief.

**UNITED STATES EMPLOYMENT SERVICE:**

Lewis T. Bryant, Federal director for State, State capitol, Trenton.

**New Mexico.**

(No special labor officials except mine inspector.)

**New York.****INDUSTRIAL COMMISSION:**

Edward F. Boyle, chairman.

Miss Frances Perkins.

Henry D. Sayer.

Edward P. Lyon.

James M. Lynch.

Edward W. Buckley, secretary.

Bernard L. Shientag, counsel.

Address of commission: 230 Fifth Avenue, New York.

Bureau of workmen's compensation—

William C. Archer, second deputy commissioner.

Dr. Raphael Lewy, chief medical examiner, 230 Fifth Avenue, New York.

State insurance fund—

Nicholas Muller, acting manager, 230 Fifth Avenue, New York.

Bureau of employment—

David S. Flynn, director, 230 Fifth Avenue, New York.

Bureau of statistics and information—

Leonard W. Hatch, chief statistician, State capitol, Albany.

Bureau of industries and immigration—

Marian K. Clark, chief investigator, 230 Fifth Avenue, New York.

Bureau of inspection—

James L. Geron, first deputy commissioner, State capitol, Albany; 230 Fifth Avenue, New York.

Bureau of mediation and arbitration—

Edward D. Jackson, third deputy commissioner, State capitol, Albany.

Bureau of industrial code—

Richard J. Cullen and T. C. Eipper, deputy commissioners, 230 Fifth Avenue, New York.

Bureau of women in industry—

Miss Nelle Swartz, chief, 230 Fifth Avenue, New York.

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## INDUSTRIAL COMMISSION—Concluded.

## Industrial council—

Henry D. Sayer, chairman.

Carleton A. Chase.

Richard H. Curran.

Ralph A. Day.

G. E. Emmons.

James P. Holland.

Richard C. Stofer.

Thomas M. Gafney.

Melinda Scott.

M. H. Christopherson.

Edward W. Buckley, secretary, 230 Fifth Avenue, New York.

## UNITED STATES EMPLOYMENT SERVICE:

Henry D. Sayer, Federal director for State, 230 Fifth Avenue, New York.

## North Carolina.

## DEPARTMENT OF LABOR AND PRINTING:

M. L. Shipman, commissioner, Raleigh.

## UNITED STATES EMPLOYMENT SERVICE:

M. L. Shipman, Federal director for State, Raleigh.

## North Dakota.

## DEPARTMENT OF AGRICULTURE AND LABOR:

J. N. Hagan, commissioner, Bismarck.

## WORKMEN'S COMPENSATION BUREAU:

J. N. Hagan, chairman.

S. S. McDonald.

L. J. Wehe.

John B. Brown, secretary.

Address of bureau: Bismarck.

INDUSTRIAL COMMISSION:<sup>1</sup>

Lynn J. Frazier (ex officio), governor.

William Langer (ex officio), attorney general.

J. N. Hagan (ex officio), commissioner of agriculture and labor.

Address of commission: Bismarck.

## UNITED STATES EMPLOYMENT SERVICE:

J. N. Hagan, Federal director for State, Bismarck.

## Ohio.

## INDUSTRIAL COMMISSION:

T. J. Duffy, chairman.

J. D. Clark.

Herbert L. Eliot.

Robert S. Hayes, secretary.

Address of commission: Columbus.

## Division of workshops and factories—

Thomas P. Kearns, chief deputy.

Fred C. Lange, director of safety.

<sup>1</sup> Operates and conducts all utilities and enterprises owned or administered by the State, except those carried on in penal, charitable, or educational institutions.

**INDUSTRIAL COMMISSION—Concluded.**

Division of statistics and mediation—

George F. Miles, chief.

Public employment offices—

George F. Miles, director, Columbus.

Workmen's compensation—

H. E. Baker, director of claims.

E. E. Watson, chief actuary.

Dr. T. R. Fletcher, acting medical examiner.

**UNITED STATES EMPLOYMENT SERVICE:**

George F. Miles, Federal director for State, Columbus.

**Oklahoma.****DEPARTMENT OF LABOR:**

C. E. Connally, commissioner, Oklahoma City.

**BOARD OF ARBITRATION AND CONCILIATION:**

C. E. Connally, commissioner of labor, chairman.

W. A. Murphy, assistant commissioner of labor, secretary.

Austin W. Kenyon (representing employers).

J. C. Powers (representing employers).

A. Simon (representing employees).

J. R. Covington (representing employees).

Hugh Dean (representing agriculture).

J. M. Pierce (representing agriculture).

Address of board: Oklahoma City.

**INDUSTRIAL COMMISSION:**

W. C. Jackson, chairman.

Baxter Taylor.

H. C. Myers.

F. L. Roblin, secretary.

Dr. T. A. Buchanan, medical adviser.

Address of commission: State capitol, Oklahoma City.

**UNITED STATES EMPLOYMENT SERVICE:**

C. E. Connally, Federal director for State, State capitol, Oklahoma City.

**Oregon.****BUREAU OF LABOR:**

C. H. Gram, commissioner and factory inspector, Salem.

**BOARD OF INSPECTORS OF CHILD LABOR:**

Mrs. Millie R. Trumbull, secretary, Courthouse, Portland.

**STATE INDUSTRIAL ACCIDENT COMMISSION:**

William A. Marshall, chairman.

J. W. Ferguson.

Will T. Kirk.

Dr. F. H. Thompson, medical adviser.

Address of commission: Salem.

**INDUSTRIAL WELFARE COMMISSION:**

E. B. MacNaughton, chairman.

Miss Eunice L. Smith.

Amedee M. Smith.

Mrs. Harriet H. Heller, secretary.

Address of commission: 646-648 Courthouse, Portland.

**UNITED STATES EMPLOYMENT SERVICE:**

Leroy F. Shinaman, Federal director for State, 307 New Post Office, Portland.

## Pennsylvania.

### DEPARTMENT OF LABOR AND INDUSTRY:

Clifford B. Connelley, commissioner.

Address of department: Keystone Building, Harrisburg.

#### Industrial board—

Clifford B. Connelley, chairman.

Mrs. Samuel Semple.

Otto T. Mallery.

A. L. Garver, M. D.

James C. Cronin.

Fred. J. Hartman, secretary.

Address of board: Keystone Building, Harrisburg.

#### Bureau of inspection—

John H. Walker, acting chief, Keystone Building, Harrisburg.

#### Division of hygiene and engineering—

F. D. Patterson, M. D., chief, Third and North Streets, Harrisburg.

#### Bureau of workmen's compensation—

W. H. Horner, director, Keystone Building, Harrisburg.

#### Bureau of mediation and arbitration—

William J. Tracy.

William Young, mediator.

Address of bureau: Keystone Building, Harrisburg.

#### Bureau of employment—

Jacob Lightner, director, Third and North Streets, Harrisburg.

#### Bureau of rehabilitation—

S. S. Riddle, chief.

Address of bureau: Keystone Building, Harrisburg.

### WORKMEN'S COMPENSATION BOARD:

Harry A. Mackay, chairman.

Benjamin Jarrett, jr. (ex officio).

Paul W. Houck.

Clifford B. Connelley.

Lee Solomon, secretary.

Address of board: North American Building, Philadelphia.

### STATE WORKMEN'S INSURANCE FUND:

William J. Roney, manager, Harrisburg.

### UNITED STATES EMPLOYMENT SERVICE:

Jacob Lightner, Federal director for State, Harrisburg.

## Philippine Islands.

### BUREAU OF LABOR (UNDER DEPARTMENT OF COMMERCE AND COMMUNICATIONS):

Faustino Aguilar, director, Manila.

## Porto Rico.

### DEPARTMENT OF AGRICULTURE AND LABOR:

Manuel Camuñas, commissioner, San Juan.

#### Bureau of labor—

Carmelo Honeré, chief.

**WORKMEN'S RELIEF COMMISSION:**

Manuel Camuñas, chairman (ex officio), commissioner of agriculture and labor.  
 José E. Benedicto (ex officio), treasurer of Porto Rico.  
 José A. Canals.  
 Dr. J. Reguero Felfu.  
 Abraham Peña.

Address of commission: San Juan.

### Rhode Island.

**BUREAU OF LABOR:**

George H. Webb, commissioner, Providence.

**OFFICE OF FACTORY INSPECTORS:**

J. Ellery Hudson, chief inspector, Statehouse, Providence.

**BOARD OF LABOR (FOR THE ADJUSTMENT OF LABOR DISPUTES):**

George H. Webb, commissioner of labor, chairman.  
 Michael J. Houlihan (representing employers).  
 William C. Fisher (representing employers).  
 Albert E. Hohler (representing employees).  
 John H. Powers (representing employees).  
 Christopher M. Dunn, deputy commissioner of labor, secretary.

Address of board: Providence.

**UNITED STATES EMPLOYMENT SERVICE:**

George H. Webb, Federal director for State, Statehouse, Providence.

### South Carolina.

**DEPARTMENT OF AGRICULTURE, COMMERCE, AND INDUSTRIES:**

B. Harris, commissioner, Columbia.

**BOARD OF CONCILIATION AND ARBITRATION:**

B. E. Geer, chairman, Greenville.  
 W. H. McNairy, Chester.  
 H. E. Thompson, secretary, Batesburg.

### South Dakota.

**OFFICE OF INDUSTRIAL COMMISSIONER:**

Charles McCaffree, industrial commissioner, Pierre.

**UNITED STATES EMPLOYMENT SERVICE:**

Charles McCaffree, Federal director for State, State capitol, Pierre.

### Tennessee.

**DEPARTMENT OF WORKSHOP AND FACTORY INSPECTION:**

Louis L. Allen, department chief, 322 Seventh Avenue North, Nashville.

### Texas.

**BUREAU OF LABOR STATISTICS:**

T. C. Jennings, commissioner, Austin.

Woman's division—

Mrs. Claude De Van Watts, chief.

**INDUSTRIAL ACCIDENT BOARD:**

Judge E. A. Berry, chairman.  
 J. H. Fowler.  
 J. E. Proctor.  
 E. R. York, secretary.

Address of board: Austin.

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**INDUSTRIAL WELFARE COMMISSION:**

T. C. Jennings, labor commissioner, chairman.  
 J. H. Fowler, member of industrial accident board.  
 Annie Webb Blanton, superintendent of public instruction.  
 Mrs. Frances E. Sutherland, secretary.  
 Address of commission: Austin.

## Utah.

**INDUSTRIAL COMMISSION:**

P. A. Thatcher, chairman.  
 W. P. Monson.  
 William M. Knerr.  
 Carolyn I. Smith, secretary.  
 Address of commission: State capitol, Salt Lake City.  
 State insurance fund—  
 C. A. Caine, manager.

## Vermont.

**OFFICE OF COMMISSIONER OF INDUSTRIES:**

John S. Buttles, commissioner, Montpelier.

**STATE BOARD OF CONCILIATION AND ARBITRATION:**

Henry C. Brislin, Rutland.  
 George O. Gridley, Windsor.  
 Levi H. Porter, Wilmington.

## Virginia.

**BUREAU OF LABOR AND INDUSTRIAL STATISTICS:**

John Hirschberg, commissioner, Richmond.

**INDUSTRIAL COMMISSION:**

Richard F. Beirne, chairman (representing State at large).  
 C. G. Kizer (representing employees).  
 C. A. McHugh (representing employers).  
 Address of commission: Box 1794, Richmond.

## Washington.

**BUREAU OF LABOR:**

C. H. Younger, commissioner, Olympia.

**INDUSTRIAL INSURANCE DEPARTMENT:**

H. L. Hughes, chairman.  
 Fred W. Llewellyn.  
 W. P. Brown.  
 Percy Gilbert, secretary.  
 F. A. Bird, M. D., chief medical adviser.  
 Address of department: Olympia.

**STATE MEDICAL AID BOARD:**

Dr. John W. Mowell, chairman.  
 Martin J. Flyzik (representing employees).  
 Dr. J. S. Kloeber (representing employers).  
 R. G. McLean, secretary.  
 Address of board: Olympia.

## STATE SAFETY BOARD:

Dr. J. S. Kloeber (representing employers).  
 Martin J. Flyzik (representing employees).  
 C. H. Younger (ex officio), State labor commissioner.  
 James Bagley (ex officio), State mine inspector.  
 John W. Pace, secretary.

Address of board: Olympia.

## INDUSTRIAL WELFARE COMMISSION:

C. H. Younger, chairman, commissioner of labor and ex officio member of the commission.

Mrs. J. E. Burkey.  
 Mrs. W. S. Griswold.  
 Mrs. George P. Hardgrove.  
 Dr. M. H. Marvin.  
 Mrs. W. H. Udall, secretary.

Address of commission: Olympia.

## UNITED STATES EMPLOYMENT SERVICE:

Lawrence Wood, Federal director for State, 110 Cherry Street, Seattle.

## West Virginia.

## BUREAU OF LABOR:

Samuel B. Montgomery, commissioner, Charleston.

## STATE COMPENSATION COMMISSIONER:

Lee Ott, commissioner, Charleston.  
 F. J. McAndrews, secretary.  
 M. V. Godby, chief medical examiner.

## UNITED STATES EMPLOYMENT SERVICE:

Thomas Cairns, Federal director for State, 126 Summers Street, Charleston.

## Wisconsin.

## INDUSTRIAL COMMISSION:

George P. Hambrecht, chairman.  
 Thomas F. Konop.  
 Fred M. Wilcox.  
 E. E. Witte, secretary.

Safety and sanitation department—  
 R. McA. Keown, engineer.

Workmen's compensation department—  
 L. A. Tarrell, chief examiner.

Employment department—  
 Taylor Frye, director.

Apprenticeship department—  
 Stewart Scrimshaw, director.

Women's department—  
 Miss Tracy Copp, director, Room 809, Manufacturers' Home Building,  
 Milwaukee.

Child labor department—  
 Taylor Frye, director.

Statistical department—  
 Maud Swett, director.

Address of commission: Madison.

## UNITED STATES EMPLOYMENT SERVICE:

George P. Hambrecht, Federal director for State, State capitol, Madison.

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## Wyoming.

## COMMISSIONER OF LABOR AND STATISTICS:

Harry C. Hoffman, commissioner, Cheyenne.

## WORKMEN'S COMPENSATION DEPARTMENT (UNDER TREASURER'S OFFICE):

A. D. Hoskins, State treasurer.

C. P. Morgan, deputy.

W. B. Sammons, assistant deputy.

Address of department: Cheyenne.

## Canada.

## DEPARTMENT OF LABOR:

Hon. Gideon D. Robertson, minister.

F. A. Acland, deputy minister and editor of the Labor Gazette.

Bryce M. Stewart, director of employment service.

## Alberta.

## BUREAU OF LABOR:

(Under the auspices of the department of agriculture, Edmonton.)

## EMPLOYMENT SERVICE:

J. R. Mitchell, general superintendent, Calgary.

## FACTORY INSPECTION:

Mrs. Robert Kneill, Edmonton.

J. N. McLeod, Calgary.

Mrs. Margaret Lewis, Calgary.

## WORKMEN'S COMPENSATION BOARD:

John T. Sterling, chairman.

Walter F. McNeil.

James A. Kinney.

Frederick D. Noble, secretary.

Address of board: Edmonton.

## British Columbia.

## DEPARTMENT OF LABOR:

Hon. J. W. de B. Farris, minister, Victoria.

J. D. McNiven, deputy minister, Victoria.

Robert J. Stewart, chief factories inspector, Vancouver.

J. Peck, chief boiler inspector, Vancouver.

## Employment service—

A. Bruce Powley, general superintendent, Vancouver.

## Workmen's compensation board—

E. S. H. Winn, chairman.

Parker Williams.

Hugh Gilmore.

F. W. Hinsdale, secretary.

Address of board: Board of Trade Building, Vancouver.

## Minimum wage board—

J. D. McNiven, deputy minister of labor, chairman.

Mrs. Helen G. McGill.

Thomas Mathews.

Miss Mabel Agnes Cameron, secretary.

Address of board: Parliament Buildings, Victoria.

## Manitoba.

## BUREAU OF LABOR:

Hon. George A. Grierson, minister of public works, Winnipeg.

## Factory inspection—

Robert A. Stewart, acting chief inspector, 301 Boyd Block, Winnipeg.

## Employment service—

C. Bowman, general superintendent, Winnipeg.

## Fair wage board—

S. C. Oxton, chairman, deputy minister of public works.

W. J. Davidson.

J. W. Morley.

George Armstrong.

Walter Owens.

Address of board: Winnipeg.

## Workmen's compensation board—

H. G. Wilson, commissioner.

A. R. D. Patterson.

C. W. N. Kennedy.

N. Fletcher, secretary.

Address of board: Winnipeg.

## Minimum wage board—

Arthur J. Bennett, chairman.

Mrs. Claude Nash.

Miss Lynn Flett.

James Winning.

Charles Hardin.

E. McGrath, secretary.

Address of board: Winnipeg.

## New Brunswick.

## FACTORY COMMISSION:

Kilgour Shives, Cambellton.

Emma S. Fiske, St. John.

Michael Kelly, St. John.

Charles McDonald, St. John

James Stevens, jr., St. John.

## EMPLOYMENT SERVICE:

C. Herford, general superintendent, Halifax, Nova Scotia.

## INSPECTION OF FACTORIES AND HOTELS:

John Kenny, St. John.

## WORKMEN'S COMPENSATION BOARD:

J. A. Sinclair, chairman.

F. C. Robinson.

S. L. Sugrue.

Address of board: St. John.

## Nova Scotia.

## FACTORY AND MINES INSPECTION (UNDER DEPARTMENT OF PUBLIC WORKS):

Hon. E. H. Armstrong, minister of public works and mines.

Hiram Donkin, C. E., deputy minister of public works.

Philip Ring, factory inspector.

Address: Halifax.



**EMPLOYMENT SERVICE:**

C. Herford, general superintendent, Halifax.

**WORKMEN'S COMPENSATION BOARD:**

V. J. Paton, K. C., chairman.

Fred W. Armstrong.

John T. Joy.

Address of board: Halifax.

**Ontario.****TRADES AND LABOR BRANCH (UNDER DEPARTMENT OF PUBLIC WORKS):**

Walter A. Riddell, superintendent.

H. C. Hudson, general superintendent of employment bureaus.

**Inspectors—**

D. M. Medcalf, chief boiler inspector.

James T. Burke, chief factory, shop and office inspector.

Wm. C. McGhie, chairman of board of examiners, stationary engineers.

Address: Parliament Buildings, Toronto.

**WORKMEN'S COMPENSATION BOARD:**

Samuel Price, chairman.

George A. Kingston, commissioner.

\_\_\_\_\_ (vacancy).

N. B. Wormwith, secretary.

Address of board: Toronto.

**Quebec.****DEPARTMENT OF PUBLIC WORKS AND LABOR:**

Hon. L. A. Taschereau, minister, Quebec.

**Inspection of industrial establishments and public buildings—**

Louis Guyon, chief inspector, 59 Notre Dame Street East, Montreal.

**Registrar of boards of conciliation and arbitration—**

Felix Marois, Quebec.

**Employment bureaus—**

Joseph Ainey, general superintendent, 10 St. James Street, Montreal.

**Housing director—**

Dr. Emile Nadeau.

**Saskatchewan.****BUREAU OF LABOR (UNDER DEPARTMENT OF AGRICULTURE):**

Thos. M. Molloy, commissioner of labor, secretary.

T. Withy, chief factories inspector.

E. Pierce, chief mine inspector.

Address of bureau: Regina.

**Government employment branch—**

G. E. Tomsett, general superintendent, Regina.

**Minimum wage board—**

W. F. Dunn, chairman, Moose Jaw.

Mrs. Austin Bothwell, Regina.

H. Perry, Regina.

Mrs. M. I. Robertson, Saskatoon.

J. F. Cairns, Saskatoon.

T. M. Molloy, commissioner of labor, secretary, Regina.

# PUBLICATIONS RELATING TO LABOR.

## Official—United States.

CALIFORNIA.—*Industrial Welfare Commission. Third biennial report, 1917-1918. Sacramento, 1919. 112 pp.*

This report is noted on pages 261 to 263 of this issue of the MONTHLY LABOR REVIEW.

MASSACHUSETTS.—*Bureau of Statistics. Forty-ninth annual report on the statistics of labor for the year 1918. Boston, 1919. 61, 148, 95, 54 pp. Public document No. 15.*

Consists of four parts which were previously issued as Labor Bulletins Nos. 123 to 126, respectively, and which were noted in the MONTHLY LABOR REVIEW as follows: Seventeenth annual directory of labor organizations in Massachusetts, 1918 (Labor Bulletin No. 123), reviewed in the issue of September, 1918, page 344; Eighth annual report on union scale of wages and hours of labor in Massachusetts, 1917 (Labor Bulletin No. 124), in the issue of December, 1918, page 394; Labor legislation in Massachusetts, 1918 (Labor Bulletin No. 125), in issue of April, 1919, page 261; and Statistics of labor organizations in Massachusetts, 1916 and 1917 (Labor Bulletin No. 126), in issue of August, 1919, page 281.

— *Insurance Department. Sixty-fourth annual report, January 1, 1919. Part II: Life, miscellaneous, assessment and fraternal insurance. Boston, 1919. lxxxiii, 328, 368a pp. Public document No. 9.*

Includes statistics of workmen's compensation experience.

NEW JERSEY.—*Department of Labor. Child labor laws applying to newspaper plants, printeries, factories, workshops, mills, commercial laundries and all places where printing or the manufacture of goods of any kind is carried on, also to mercantile establishments, mines and quarries \* \* \* also compulsory education law. Trenton, 1917. 24 pp.*

NEW YORK.—*Industrial Commission. Bureau of Statistics and Information. Miscellaneous labor laws. Albany, 1919. 138 pp.*

Contains a number of laws which directly or indirectly affect labor although not part of the general labor laws.

PORTO RICO.—*Bureau of Labor. Sixth annual report, 1918. San Juan. 1919. 46 pp. Illustrated.*

The subjects covered in this report include: Compliance with labor laws; Claims of agricultural laborers for wages; Factories and workshops inspected; Free employment agency; The cost of living; Economic condition of the agricultural laborers in the sugar cane, coffee and tobacco plantations; Intervention by the Bureau of Labor in strikes occurring in the island from June 1 to December 31, 1918; and Recommendations for needed legislation. It is stated that unquestionably workers in the sugar cane plantations receive better wages than in any other agricultural tasks, the wages, in 1914, being 54 cents per day for men and not more than 30 cents for women and children. During the period covered by the report there were four wage levels—\$1.75, \$1.30, \$1, and 90 cents per day for men, and 80, 60, 40, and 30 cents for women and children legally authorized to work. The average daily wage paid to men during the season was \$1.23; after its close, 75 cents. Women's wages averaged 52 cents per day.

WASHINGTON.—*State Medical Aid Board. State Safety Board. Maximum fee schedule, rules, and instructions. Olympia, 1919. 40 pp.*

This pamphlet contains, in addition to the maximum fee schedule, the rules governing care of injured workmen, covering noncontract and contract services, hospitals, nurses, and druggists. There are also instructions to district medical aid board assistants and to assistants of the labor commissioner.

UNITED STATES.—*Congress. House. Committee on Appropriations. First deficiency appropriation bill, fiscal year 1920. Second supplement hearing. Part III.—International labor conference. Washington, 1919. 27 pp. 66th Congress, 1st session.*

— — — *Committee on Education. Vocational rehabilitation of persons disabled in industry or otherwise and their return to civil employment. Hearing, on H. R. 12880, January 24, 1919. Washington, 1919. 8 pp. 65th Congress, 3d session.*

— — — *Committee on Irrigation of Arid Lands. Hearings: Work and homes for returning soldiers. Washington, 1919. 32 pp. 65th Congress, 3d session.*

— *Department of Commerce. Bureau of Standards. Report on the condition of elevator interlocks found as a result of a field survey and an analysis of elevator accident statistics. Washington, September 1, 1919. 28 mimeographed pp.*

Contains recommendations for rules to be included in an elevator code, and statistics on fatal and nonfatal elevator accidents from reports of State industrial commissions and departments of labor and coroners' reports.

According to the statistics the largest number of accidents is caused by falling down the shaft, the weighted average percentage of the total fatalities to the public from this cause being 36.9, and to industrial employees 36. For the public the percentage of nonfatalities was 21.3 and for industrial employees 14.7.

— *Department of the Interior. Bureau of Education. Educational changes in Russia, by Theresa Bach. Washington, 1919. 26 pp. Bulletin No. 37.*

A brief account of the outstanding changes in laws and regulations affecting education since 1917. The provision made for adult education is an indication of the need of education felt by the masses in Russia at the present time.

— — — *Education in parts of the British Empire. Washington, 1919. 104 pp. Bulletin No. 49.*

Discusses educational developments in Canada, Jamaica, Australia, New Zealand, Union of South Africa, India, Egypt, and Palestine. Industrial, technical, and agricultural education and vocational work for returned soldiers are among the phases of the subject considered.

— — — *Bureau of Mines. Coke Oven Accidents in the United States during the calendar year 1918. Washington, 1919. 26 pp. Technical paper 239.*

This report is noted more fully on pages 299 to 302 of this issue of the MONTHLY LABOR REVIEW.

— — — *Production of explosives in the United States during the calendar year 1918, with notes on coal-mine accidents due to explosives, and list of permissible explosives tested prior to March 31, 1919. Washington, 1919. 21 pp. Technical paper 231.*

States that there were 135 coal-mine fatalities due to explosives in 1918 as compared with 111 in 1917, an increase of 21.6 per cent. Eighty-five of the fatalities were at bituminous mines, which number is an increase of 29 over the number reported for 1917. However, the report shows a decided decrease in fatalities due to explosives in recent years, it being stated that "in 1903, 9.8 per cent of the fatalities at bituminous mines were caused by explosives, whereas in 1918 only 4.19 per cent were due to this cause." The latest figures for metal mines and quarries are for 1917, the report stating that for this year 79 of the fatalities in metal mines and 21 in quarries were from explosives. The report states that 499,224,660 pounds (249,612 short tons) of explosives were produced in the United States in 1918, as compared with 582,475,327 pounds (291,238 short tons) in 1917.

UNITED STATES.—*Department of the Interior. Bureau of Mines. Safe practice in using wire ropes in mines. Washington, 1919. 11 pp. Technical paper 237.*

— *Department of Labor. Annual report to the Secretary of Labor, fiscal year ended June 30, 1919. Washington, 1919. 22 pp.*

— *Children's Bureau. Infant mortality. Results of a field study in Saginaw, Mich., based on births in one year. Washington, 1919. 91 pp. Illustrated. Map.*

— *Information and Education Service. Report for year ended June 30, 1919. Washington, 1919. 47 pp.*

— *Federal Trade Commission. Cost reports. Copper. Washington, June 30, 1919. 26 pp.*

— *Treasury Department. Public Health Service. Instructions relative to treatment of war risk patients by the United States Public Health Service. Washington, May 1, 1919. 3 pp. Department circular No. 140.*

— *Manual of the mental examination of aliens. Washington, 1918. 118 pp. Chart. Illustrated. Miscellaneous publication No. 18.*

A guide to inexperienced officers in the application of their knowledge of mental diseases and defects to determining the mental status of aliens. It is based upon the experience of public health officers in the examination of immigrants at Ellis Island, N. Y.

— *Public Health Reports. October 24, 1919. Washington, 1919.*

This report contains an article on a study of the munitions intoxications in France, which is reviewed on pages 305 to 312 of this issue of the MONTHLY LABOR REVIEW.

— *War Department. Handbook of economic agencies of the war of 1917. Washington, 1919. 539 pp. Monograph No. 3.*

Lists all organizations "that were parts of the Government of the United States before the war; others that were created in the permanent departments to meet war conditions; other war boards or administrative bodies that were created by special legislation or executive order; others that were created by interallied action for joint service; and still others that were not a part of the Government at all but represented private enterprise organized to assist and cooperate in the advancement of the war."

— *War risk allotments, family allowances, compensation, insurance, army allotments, Liberty bond allotments, and soldiers' and sailors' civil relief under War Risk Insurance Act (act of Oct. 6, 1917, as amended by act of June 25, 1918); army allotment law (act of Mar. 2, 1899, as amended by act of Mar. 2, 1901, and act of Oct. 6, 1917); Soldiers' and Sailors' Civil Relief Act (act of Mar. 8, 1918). Washington, 1919. 112 pp. Special regulations No. 72.*

— *War Industries Board. W. I. B. Price Bulletins. Washington, 1919. Series of 57 bulletins.*

The titles of these bulletins are as follows: 1. Summary; 2. International price comparisons; 3. Government control over prices [not yet received]; 4. Prices of foods; 5. Prices of clothing; 6. Prices of building materials; 7. Prices of chemicals; 8. Prices of feed and forage; 9. Prices of wheat and wheat products; 10. Prices of corn and corn products; 11. Prices of oats, rice, buckwheat, and their products; 12. Prices of barley, hops, rye, and their products; 13. Prices of sugar and related products; 14. Prices of vegetables and truck; 15. Prices of edible vegetable oils; 16. Prices of fruits, nuts, and wine; 17. Prices of spices and condiments; 18. Prices of tea, coffee, and cocoa; 19. Prices of tobacco and tobacco products; 20. Prices of live stock, meats, and fats; 21. Prices of poultry and dairy products; 22. Prices of fish and oysters; 23. Prices of cotton and cotton products; 24. Prices of wool and wool products; 25. Prices of silk and silk products; 26. Prices of hides and skins and their products; 27. Prices of hatter's fur and fur felt hats; 28. Prices of hair, bristles, and feathers; 29. Prices in the button industry; 30. Prices of rubber and rubber products; 31. Prices of paper; 32. Prices of fibers and fiber products; 33. Prices of iron, steel, and their products; 34. Prices of ferroalloys, nonferrous and rare metals; 35. Prices of coal and coke; 36. Prices of petroleum and

its products; 37. Prices of matches; 38. Prices of clay products; 39. Prices of sand and gravel; 40. Prices of quarry products; 41. Prices of cement; 42. Prices of glass; 43. Prices of lumber; 44. Prices of paints and varnishes; 45. Prices of mineral acids; 46. Prices of heavy chemicals; 47. Prices of miscellaneous inorganic chemicals; 48. Prices of fertilizers; 49. Prices of soaps and glycerin; 50. Prices of essential oils, flavoring and perfumery materials; 51. Prices of wood-distillation products and naval stores; 52. Prices of natural dyestuffs and tanning chemicals; 53. Prices of coal-tar crudes, intermediates, and dyes; 54. Prices of drugs and pharmaceuticals; 55. Prices of proprietary preparations; 56. Prices of explosives; 57. Prices of miscellaneous organic chemicals.

## Official—Foreign Countries.

AUSTRALIA (QUEENSLAND).—*Inspector of machinery and scaffolding. Report for the year ended 30th June, 1919. Brisbane, 1919. 9 pp.*

— *Insurance Office. Third annual report for the year ended 30th June, 1919. Brisbane, 1919. 36 pp. C. A. 64-1919.*

The section of this report devoted to the workmen's compensation department shows that, during the period covered, 9,687 claims were made, of which 156 were for fatal injuries. These figures compare with 9,737 and 143, respectively, in the previous year. Of the remaining claims 309 were for permanent and 9,222 for temporary disabilities. The amount of compensation paid and estimated on account of these claims was \$809,196, of which \$209,034 was for fatal injuries, \$235,469 for permanent disabilities, and \$364,693 for temporary disabilities. Of the permanent disabilities, 85 were caused by machinery, 61 by hand tools, 41 by objects being handled, and 26 by vehicles.

The greatest number of temporary disabilities—2,082—were caused by objects being handled, while of the others 1,302 were caused by hand tools, 945 by falls of persons, 692 by vehicles, and 561 by machinery. Of the fatalities 31 were caused by vehicles, 21 by animals, and 15 by falling objects. The report states, also, that during the three years the workmen's compensation act has been in force, 26,514 claims have been made, 25,589 have been settled, 2 cases have been litigated, and \$1,939,895 has been paid on account of claims. The fund showed a surplus of \$268,604 on June 30, 1919.

— (SOUTH AUSTRALIA).—*Government Statistician. Statistical register 1917-18. Compiled from official records. Adelaide, 1918. 456 pp.*

BELGIUM.—*Commission Centrale de Statistique. Statistique générale de la Belgique. Exposé de la situation du Royaume, de 1876 à 1900. Tome III, contenant les tables analytique et alphabétique des matières comprises dans les trois volumes. Brussels, 1914. 950 pp.*

The third volume of the abstract of Belgian statistics for the period 1876 to 1900, published by the Belgian General Statistical Office. The volume deals with statistics relating to property, agriculture, industry, commerce, transportation, mail and telegraph service, the monetary system, and credit institutes. The chapter on industry is divided into 4 sections: 1. General statistics; 2. Statistics of individual industries; 3. Legislation; and 4. State authorities for the supervision of industry, arbitration boards, labor councils, advisory councils, chambers of commerce, industrial museums, and exhibitions. In the sections dealing with general industrial statistics and with statistics of the individual industry groups are to be found the following data: Number of establishments and workers, size of establishments, distribution of the gainfully engaged persons by social status (employer, salaried employee, worker), employment of women and children, daily hours of labor, wages, and output, night work, age of workers, composition of workers' families, unemployment, etc., based on the censuses of 1880 and 1896. The volume also contains an analytic and alphabetic index of the matter comprised in the three volumes forming the statistical abstract.

[2063]

BELGIUM.—*Ministère de l'Industrie, du Travail et du Ravitaillement. Office du Travail. Recensement de l'Industrie et du Commerce, 31 Décembre, 1910. Deuxième partie recensement industriel. Vols. V and VI. Brussels, 1919. 789, 597 pp.*

Volumes 5 and 6 of the Belgian census of industry and commerce of December 31, 1910. Volume 5 shows the distribution of industrial establishments (exclusive of home work), their employees, and motive power by industry groups and sub-groups, and by communes. Volume 6 gives the same information for home-working industries and also shows the distribution of industrial establishments (exclusive of home work) according to size, i. e., the number of persons employed, by industry groups and subgroups, and by communes. In both volumes the results for 1910 are compared with those for 1896, the year of the preceding census.

CANADA (SASKATCHEWAN).—*Bureau of Labor. Eighth annual report for the twelve months ended April 30, 1919. Regina, 1919. 28 pp.*

Covers a variety of subjects, such as coal mine inspection, factory inspection, farm labor, public employment offices, strikes and trades disputes, labor legislation, etc. A table shows a total of 13 fatal and 771 nonfatal industrial accidents in 1918-19, as compared with 18 fatal and 671 nonfatal in the preceding year. Of the total accidents in the year 1918-19 the largest number, 504, or 64.3 per cent, were connected with steam and electric railroads. The report also gives a table showing the rate of wages paid for the past four years in building trades, based on returns from three of the cities in the Province, and which "would in most cases apply to the country districts as well."

WAGES IN BUILDING TRADES IN SASKATCHEWAN, CANADA, 1915 TO 1918.

Trade.	1915	1916	1917	1918
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Bricklayers.....	70	75	75	85
Carpenters.....	40	55	50	65
Electricians.....	35	45	50	65
Plumbers.....	60	62½	65	75
Plasterers.....	65	65	65	80
Painters.....	35	45	45	60
Woodworkers.....	20-32	40	40	45
Building laborers.....	25	30-35	30-35	40
Common laborers.....	20	27½	30	35

DENMARK.—*Arbejderforsikrings-Raadet. Beretning for aaret 1918. Copenhagen, 1919. 145 pp.*

Since April 1, 1917, a single compensation law has covered all classes of workmen in Denmark. The system is compulsory as respects seamen and fishermen, and both voluntary and compulsory as respects industrial workers and agricultural laborers.

A full account of the Danish compensation laws and their administration is contained in the twenty-fourth annual report of the U. S. Commissioner of Labor. A summary of operations for 1912, 1913, and 1914 may be found in the MONTHLY LABOR REVIEW for January, 1916, (p. 70, 71). The following table is a summary of operations for 1918. No comparison is made for previous years as the new law effective April 1, 1917, is so different from the preceding law as to make comparison misleading. In converting the amount of compensation into money of the United States standard of value, the crown was considered as being the equivalent of 26.8 cents.

## SUMMARY OF ACCIDENT INSURANCE STATISTICS FOR DENMARK, 1918.

Insured occupations.	Deaths.		Compensation to survivors.	Cases of temporary incapacity.	Cases of permanent incapacity.	
	Number.	With survivors.			Number.	Compensation.
Industrial workers:						
Compulsory insurance.....	72	48	\$70,250.84	282	991	\$284,967.35
Voluntary insurance.....				1	4	1,845.18
Fishermen, etc.....	19	7	12,823.80	3	20	3,866.70
Seamen.....	165	77	85,170.40	9	39	17,831.38
Agricultural workers:						
Compulsory insurance.....	79	31	38,431.20	120	628	168,530.19
Voluntary insurance.....	13	10	10,720.00	21	140	32,316.24
Other.....	32	28	41,968.80		10	2,219.04
<b>Total.....</b>	<b>380</b>	<b>201</b>	<b>259,365.04</b>	<b>436</b>	<b>1,832</b>	<b>511,576.09</b>

GERMANY (BERLIN).—*Statistisches Amt der Stadt Berlin. Die Arbeiterkrankenversicherung in Berlin und vororten im Jahre 1914. Berlin, 1919. 45 pp.*

A bulletin of the Municipal Statistical Office of Berlin giving financial statistics of the sick funds of Greater Berlin for the year 1914.

GREAT BRITAIN.—*Department of Overseas Trade. Report on the trade of Australia for the year 1918. London, 1919. 62 pp. Cmd. 351. Price, 3s. net.*

Containing sections on cost of living, price fixing, housing, and other matters relating to industry.

— — — *Report on the trade of South Africa for the year 1918. London, 1919. 90 pp. Cmd. 357. Price, 6s. net.*

Contains reports of mining, agriculture, cost of living, and various phases of industrial development.

— — — *Home Office. Annual report of the chief inspector of factories and workshops for the year 1918. London, 1919. 83 pp. Cmd. 340. Price, 9s. net.*

States that during the period of the war the prominence given to safety, health, and welfare, including reduction in hours of labor, has been apart from special war work, the principal feature of the work of factory inspection. The experience gained shows, the report states, that an increase in the relative hours of work does not necessarily mean an increase in production, that the more the comfort and welfare of the worker are studied and provided for the greater is his output, and that attention given to health and the prevention of accidents means greater efficiency and reduced charges. The report refers very briefly to special features of the work, calling attention to the detailed reports covering hours of labor, accidents, welfare, industrial poisoning, etc., which are made a part of the general report. These chapters are reviewed elsewhere in this issue of the MONTHLY LABOR REVIEW, hours of labor on pages 251 to 254, accidents on pages 302 to 304, and industrial poisoning on pages 315 to 317.

— — — *Employment of children. London, 1919. 12 pp.*

An explanatory statement of amendments to the provisions of the Employment of Children Act, 1903.

GREAT BRITAIN.—*Home Office. Mines and quarries: General report, with statistics, for 1918, by the chief inspector of mines. Part I.—Divisional statistics and reports. London, 1919. 90 pp. Cmd. 339. Price, 9d. net.*

The following table summarizes the inspector's report concerning accidents and accident rates:

NUMBER OF EMPLOYEES, NUMBER OF DEATHS FROM ACCIDENTS, AND ACCIDENT DEATH RATES IN MINES AND QUARRIES OF GREAT BRITAIN, 1917 AND 1918.

Establishments under—	Number of employees.		Number of deaths from accidents.		Accident death rates (per 1,000 employees).	
	1917	1918	1917	1918	1917	1918
Coal Mines Act.....	1,021,340	1,008,867	1,370	1,401	1.34	1.39
Metalliferous Mines Regulation Act....	20,500	20,821	25	19	1.22	.91
Quarries Act.....	43,631	43,215	56	67	1.28	1.55
Total.....	1,085,471	1,072,903	1,451	1,487	1.34	1.39

— *India Office. Statistical abstract relating to British India from 1907-08 to 1916-17. Fifty-second number. London, 1919. 260 pp. Cmd. 335. Price, 1s. net.*

Contains statistics on cooperative societies, wages, prices, factory inspection, cotton and jute mills, factories, etc. In the section on industries it is stated that in 1916-17 there were 256,409 persons employed in cotton mills and 262,552 in jute mills, and that in 1916 there were 28,031 employed in arms and ammunition factories and arsenals (government), 110,468 in cotton ginning, cleaning, and pressing mills and factories, 110,699 in railway workshops and other factories, 30,434 in printing presses, 25,808 in iron and brass foundries.

— *Laws, statutes, etc. Public general acts passed in the eighth and ninth years of the reign of His Majesty King George the Fifth, being the eighth session of the thirteenth Parliament of the United Kingdom of Great Britain and Ireland. With an index and tables showing the effect of the year's legislation on the public general acts; also the titles of the local and private acts arranged consecutively and in classes. London [1919]. 501 pp. Price, 3s. net.*

— *Local Government Board. Manual on the preparation of State-aided housing schemes. London, 1919. 74 pp. Price, 2s. 6d. net. Illustrated.*

Considers the shortage of houses, State financial assistance, kinds of schemes to which assistance will be given, selection of locality, choice of site, planning and construction of roads, fencing, drainage, house accommodation, supply of material, and plans for building.

— *Maternity and child welfare centers in England and Wales, 1st April, 1919. London, 1919. 102 pp. Price, 1s. net.*

A list including all municipal and voluntary maternity and child welfare centers known to the board at the time the report was issued.

— *Ministry of Health. An outline of the practice of preventive medicine. London, 1919. 124 pp. Cmd. 363. Price, 6d. net.*

Includes a section treating of industrial hygiene.

— *Housing. Powers and duties of local authorities. London, 1919. 28 pp. Price, 2d. net.*

— *Ministry of Labor. Out-of-work donation. Decisions given by the umpire respecting claims to out-of-work donation. Vol. II. Nos. 501-1000. (Given up to 4th April, 1919.) Together with index. London, 1919. 260 pp. Price, 2s. net. U. I. 440 B. Vol. II.*



GREAT BRITAIN.—*Ministry of Labor. The seal of honor. National scheme for disabled men.* [London], 1919. 14 pp. Model form.

Explains the scheme for the employment, on a percentage basis, of disabled ex-service men, which has been discussed with the majority of the staple trades as represented by the national trades advisory committees and the industrial councils and which in some trades has been adopted outright, in others with modifications, and in the engineers' and shipbuilders' trades is being discussed. Under the scheme every employer who employs ten or more people is asked to have disabled men represent at least 5 per cent of his force. Those who comply with the request will receive certificates from the Ministry of Labor and have their names inscribed on a "National roll." The administration of the scheme is proposed to be through the local employment committees, when they exist, in consultation with the local technical advisory committees, except where special arrangements have been made for the matter to be handled by the trade itself.

— *Training Department. Scheme No. 33 for the training of apprentices whose apprenticeship has been interrupted by service in H. M. forces. Apprentices in the gold, silver, horological and allied trades.* [London] 1919. 4 pp. A. T. S. 3, No. 33.

— *Ministry of Reconstruction. Reconstruction problems 36. Industrial research.* London, 1919. 32 pp. Price, 2d.

— *Reconstruction problems 37. The mission of the British Army.* London, 1919. 24 pp. Price, 2d.

— *Reconstruction problems 38. The business of Government. I. The central machinery; II. The work of the departments; III. The civil service.* London, 1919. 30, 32, 40 pp. Price, 2d. each.

— *Parliament. House of Lords. Select committee on the prices fixed by the Ministry of Food for milk production. Report, together with the proceedings of the committee and minutes of evidence.* London, 1919. 55 pp. 161. Price, 6d. net.

(IRELAND).—*Local Government Board. Housing of the working classes (Ireland) bill. Financial assistance to local authorities. I. Draft regulations. II. Copy of circular issued by the Local Government Board for Ireland.* Dublin, 1919. 8 pp. Cmd. 225. Price, 1d.

— *Financial assistance to public utility societies and housing trusts. I. Draft regulations for public utility societies. II. Draft regulations for housing trusts. III. Draft model rules for public utility societies. IV. Copy of explanatory memorandum issued by Local Government Board for Ireland respecting public utility societies.* Dublin, 1919. 18 pp. Cmd. 226. Price, 2d. net.

(SCOTLAND).—*Registrar General. Sixty-third annual report, 1917.* Edinburgh, 1919. 151 pp. Cmd. 287. Price 1s. 3d. net.

INDIA.—*Department of Mines. Report for the year ending 31st December, 1918.* Calcutta, 1919. 89 pp. Price, rupees 2 and annas 2, or 3s. 6d.

JAPAN.—*Department of Foreign Affairs. Factory law, ordinance for the enforcement of the factory law, regulations for the enforcement of the factory law, etc.* Tokio, 1919. 42 pp.

The law provides that with certain exceptions no person under 12 years of age may be employed in a factory; that no persons under 15 years of age nor women may be employed more than 12 hours a day, nor between 10 o'clock in the evening and 4 o'clock in the morning; and that persons under 15 years of age and women shall not be allowed to work with dangerous machinery or with materials that are poisonous or dangerous to health. It further provides for competent inspection of the factories, and for employers' liability.

UNION OF SOUTH AFRICA.—*Department of Mines and Industries. Annual Reports for the calendar year ended 31st December, 1918.* Pretoria, 1919. 119 pp. Chart, 34 tables. Price, 10s. 6d.

Contains sections devoted to Labor, Wages and stores, Output and development, Accidents and prosecutions, Administration of the Mines and Works Act and regulations, Technical examinations, Machinery and mechanical laboratory, besides a section

devoted to general subjects, statistical tables, and other matter. The total number of accidents reported for 1918 was 2,833, resulting in 646 deaths and 2,472 injuries, compared with a total of 2,780 accidents in 1917, resulting in 698 deaths and 2,395 injuries. The compensation paid by or on behalf of mines in respect of deaths and injuries from accidents amounted to £126,626 (\$616,225.43) of which £38,076 (\$185,296.85) was for 589 death claims and £88,550 (\$430,928.58) for 4,448 claims for injuries.

## Unofficial.

AMERICAN ASSOCIATION FOR LABOR LEGISLATION. *The American Labor Legislation Review, Vol. IX, No. 3, New York, September, 1919. Pp. 302-393.*

Articles included in this number are: "International Labor Conference, Washington, October 29, 1919 (Preliminary work of organizing committee)"; "Labor in the Peace Treaty"; "American labor movement indorses the Peace Treaty and Covenant"; and "Power of the United States under the Constitution to enter into labor treaties."

AMERICAN STATISTICAL ASSOCIATION. *Quarterly publications, new series No. 127 (Vol. XVI). September, 1919. Boston, 1919. pp. 411-494.*

Articles of interest are Retail prices of food during 1917 and 1918 by Raymond Pearl and Magdalen H. Burger, and Food expenditures by men and women, by Horace Secrist. The latter article shows the results of a study conducted by Northwestern University into the ratio of expenditures by men and women and states that the results obtained support very closely the ratio commonly used in budgetary studies—90 per cent for women to 100 per cent for men.

ANTHRACITE BOARD OF CONCILIATION. *Award of the anthracite coal strike commission and subsequent agreements. Hazleton, Pa., Markle Bank Building, September, 1919. 38 pp.*

Includes the text of the agreement of September 29, 1919, between the anthracite operators and the anthracite mine workers' organization.

ARMSTRONG ASSOCIATION OF PHILADELPHIA. *Eleventh annual report for the fiscal year ending April 17, 1919. Philadelphia, Brown Bros. Building, 1919. 16 pp.*

This association is specially concerned with the interests of the Negroes of Philadelphia. The report includes sections on Industry and progress, with statistics of employment work; A rural community center; and Educational matters.

ASSOCIATION OF CHAMBERS OF COMMERCE OF THE UNITED KINGDOM. *Report of proceedings and resolutions adopted at the 58th annual meeting, April 9 and 10, 1918. London [1918]. 167 pp.*

Of interest to labor are the sections on industrial councils and control of trade and industry.

BASSET, WILLIAM R. *When the workmen help you manage. New York, The Century Co., 1919. 266 pp.*

A consideration of the relation between capital and labor, the subject being treated under the following chapter headings: The new basis of industry; Skillful management *v.* welfare work; Have we reached the limit of wages?; Harnessing the creative instinct; Making the workman proud of his job; When the workmen help to manage; Providing steady jobs for your men; Preserving the wage system; Why profit sharing fails; Striking the balance between capital and labor; The system of representation. In his conclusion the author suggests the following principles to govern the relationships in industry:

- (1) Capital and labor are not partners, but are in a position of buyers and sellers.
- (2) Each is to be rewarded for what it does, and for nothing more.
- (3) The dignity of capital is assured; the dignity of labor must be assured.
- (4) The dignity of labor will in part come about through the expression of the creative instinct, and in part through a participation in control at least of those matters that concern labor.

(5) This participation may take any form that seems suitable to the case, but the essentials of the participation are that it be constructive and free from managerial interference, although subject to managerial veto.

(6) The reward of labor for its effort should be direct, and associated in time of payment with the work done, and graduated, after a living wage, upon the quantity or quality of the work done with departmental as well as individual incentives.

(7) A living wage is to be calculated on the annual basis, and the provision of twelve months' work is an integral part of any scheme.

(8) The amount of the wage is immaterial. It is the ratio to production that counts, and no raises of wages are to be added into the cost of the finished product, or at least such additions are not to be counted as raises of wages.

(9) It is the function of capital to provide facilities and plans, so that the worker may earn more with than without capital. Otherwise there is no reason for capital's being.

BENEŠ, EDOUARD. *Le mouvement ouvrier tchécoslovaque*. Paris, 1918. 44 pp.  
Extract from *Le monde Slave*, 1<sup>re</sup> année, tome 2., Feb.-Sept., 1918.

History of the labor movement among the Czecho-Slovaks. Extracted in several parts from *Le Monde Slave* for February-September, 1918.

BUREAU OF APPLIED ECONOMICS (INC.). *Changes in cost of living, 1914-1919*. A summary of existing data. Washington, 1919. 55 pp.

A compilation, with some analysis, of the existing authoritative data on changes in cost of living since 1914. The greater portion of the material is derived from publications of the United States Bureau of Labor Statistics.

— *Standards of living. A compilation of budgetary studies*. Washington, 1919. 49 pp.

Brings together the results of the various studies of standards of living in this country, including Minimum subsistence and minimum comfort budgets, by Prof. W. F. Ogburn; Higher food prices and the proper nutrition of workmen's families, by Prof. M. E. Jaffa; A minimum budgetary estimate for Pacific coast workers, by Dr. Jessica B. Peixotto; Budget proposed by Seattle and Tacoma (Wash.) street railway employees; Budgetary study of the Department of Health, New York City; Cost of the Navy ration for enlisted men; and a Canadian budget.

— *Wages in various industries; a summary of wage movements during the war*. Washington, 1919. 62 pp.

Compiled from official Government sources and compares wages and earnings in 1919 and 1914 in the following industries and occupations: Army, Government Arsenal, Building trades, Coal mining (anthracite and bituminous), Dredge and tug-boat employees, Great Lakes, Farm labor, Harbor employees in New York City, Iron and steel industry, Longshoremens, Metal mining, Metal trades (railroad shops), Navy and navy yards, Printers, Railroad employees, Seamen, Shipyards, and Street railway employees. Earnings in the manufacturing industries of the United States and in New York State are also shown.

COONEY, P. A. AND MCKINNEY, W. P. M. *Necessary steps towards solution of industrial problems and high cost of living*. Chicago, 112 South Michigan Ave., 1919. 8 pp.

The following steps, the authors believe, if properly taken, will lead to universal prosperity: "First—income tax: Present method of assessing this tax on corporate profits must be revised; Second—Labor earnings: All further increases in labor earnings must come from profits created by labor's own increased productiveness; Third—Increased production, efficient distribution: Every manufacturing organization should determine its most economical producing capacity and obtain it by properly rewarding labor's cooperation; Fourth—Reduced cost of living: Selling prices could be reduced in proportion to increased production to a point far below our present prices, and a prosperity far beyond our present dreams realized." The method of accomplishing each of these steps is considered.

DAYTON ENGINEERING LABORATORIES CO. *Trades training. Tool making; tool designing; pattern making; engineering; ignition: university cooperative courses.* Dayton, [1919]. 16 pp. Illustrated.

The purpose of this booklet is to show the way to acquire skill in a trade connected with the automotive and electrical industry.

EMERSON, HARRINGTON. *The traffic cops and why the industrial conference will be a disappointment.* New York, 30 Church Street, 1919. 15 pp.

This essay, in which the author prophesied failure for the industrial conference called by President Wilson, chiefly because it was not fully representative, but also "because it is attempting to force collective bargaining as to matters that in many cases not even individuals have the right to bargain about or to agree to," was in substance given as an address in New York on October 11, at a dinner of the National Association of Employment Managers.

GENERAL FEDERATION OF WOMEN'S CLUBS. *Americanization Committee. 1918-1920. A suggested program for Americanization.* [Los Angeles, 1919.] 36 pp.

Contains besides the general report on need of Americanization, the Home Teacher Act of California, suggestive outlines for seminars in Americanization, and suggested outlines for speakers on Americanization.

HANSSON, SIGFRID. *Ett kvartssekel av Svenska bleck-o. plåtslagareförbundets historia, 1893-1918.* Stockholm, 1918. 104 pp.

A historical sketch, based on original sources, of the first 25 years of the existence of the sheet and tin plate workers' federation of Sweden.

HEYDE, LUDWIG. *Social-politics in the peace covenant and in the League of Nations.* Translated by M. Elisabeth Benedix. Amsterdam, 1919. 35 pp.

HICHENS, W. L. *The new spirit in industrial relations. Being an address delivered at the United Summer School, Swanwick, Derbyshire, 1919.* London, Nisbet & Co. (Ltd.), 1919. 31 pp.

The cure for the industrial ills from which we suffer, the author thinks, is not to be found in State trading, in guild socialism nor syndicalism, nor in copartnership, nor in Whitley councils, although all of these have their benefits to offer, but in a fuller realization of individual duties, which he considers the new spirit in industrial relations. He says of this spirit: "It is in the idea that if we have rights we also have duties, and that it rests with each of us to see that these duties are faithfully and honestly carried out."

HODGKIN, J. E., EDITOR. *Quakerism and industry. Being the full record of a conference of employers, chiefly members of the Society of Friends, held at Woodbrooke, nr. Birmingham, 11th-14th April, 1918, together with the report issued by the conference.* Darlington, The North of England Newspaper Co. (Ltd.) [1918.] 152 pp.

The conference was called by invitation sent to all members of the Society of Friends who, so far as could be ascertained, were employers of upward of 50 persons, the total number invited being 375. A great variety of industries was represented and the subjects considered included Wages, Security of employment, Working conditions, and Appropriation of surplus profits. Conclusions were reached that in regard to many of the matters referred to there is ample room for experiments; that "The conditions of modern industry allow scope for such experiment. In the main, however, conditions must be determined for industries as units by collective agreements between representative associations. We believe it to be our duty to welcome and support this collective bargaining, to join the associations in our respective industries, and to seek through them to raise the standard of industry generally"; and that "In this connection we suggest the desirability of giving full information as to wages, average costs, and average profits in the industry as a basis for effectual collective bargaining, and as a recognition of the public character of our industrial functions."

HOERLE, HELEN CHRISTENE AND SALTZBERG, FLORENCE B. *The girl and the job.* New York, Henry Holt & Co., 1919. 266 pp.

While the purpose of this book is to help teachers in the upper grades of the elementary schools and in the first years of the secondary schools in interesting pupils in their choice of a vocation, it contains so much accurate information and practical suggestion that it should be of value to all persons interested in the matter of the vocational guidance of girls, as well as to the girls themselves. It is made up chiefly from reports and interviews with people who have succeeded in their chosen occupations. Each occupation is treated concisely from the point of view of the opportunities presented to the average girl, and all are grouped under the headings of Office workers, Department store workers, Hotel workers, Agency work, Miscellaneous business opportunities, The professional woman, Arts and the girl, The girl in industry, and The girl in business.

INSURANCE YEAR BOOK, 1918-1919. *Forty-sixth annual issue. Life, casualty and miscellaneous; Fire and marine. Corrected to June 20, 1918.* New York, The Spectator Co., 1918. 597, A-455, B-280, iv; 568, B-290, C-480, liii, respectively.

The volume on Life, casualty, and miscellaneous insurance contains data referring to industrial insurance, workmen's compensation, Labor laws, etc.

JOURNAL OF INDUSTRIAL HYGIENE. Vol. 1, No. 6. New York, The Macmillan Co., October, 1919. pp. 261-322, 83-98.

An article on Wage-earning women in war time: The textile industry, by Florence Kelley, general secretary of the National Consumers' League, has special reference in Pennsylvania and New Jersey to woolen and worsted yarn, and in Rhode Island to the work of women at night. The data on which the article is based were collected by the National Consumers' League under the direction of the Secretary of War. The complete results will be published as a United States Senate document under the title Wage-earning women in war time. Other articles are The relation of drug addiction to industry, by Thomas S. Blair, of the Pennsylvania Department of Health; Problems in the training of industrial nurses, by Anne H. Strong, Simmons College; and Blood examinations of trinitrotoluene workers, by George R. Minot, Harvard Medical School.

KAHN, OTTO H. *Reprint of a memorandum as to certain aspects of the high cost of living.* New York, September, 1919. 36 pp.

KONFERENCEN MELLEM LEDELSEERNE FOR DE FAGLIGE LANDSORGANISATIONER I SVERIG, NORGE OG DANMARK. *Protokol.* Copenhagen, Sept. 11-13, 1918. 34 pp.

The series of resolutions adopted by this conference of the leaders of the Scandinavian trade-union movement at Copenhagen, September 11-13, 1918, met to consider matters of common interest, were printed in the January, 1919, issue of the MONTHLY LABOR REVIEW, pp. 305, 306.

LABOR COPARTNERSHIP ASSOCIATION. *Memorandum on labor copartnership addressed to all joint bodies of employers and employees, and especially to joint standing industrial councils and interim reconstruction committees.* London, 6, Bloomsbury Square, 1919. 4 pp.

— *Speeches on profit sharing and labor copartnership by Lord Robert Cecil and J. R. Clynes, at the annual meeting, May, 1919.* London, 1919. 24 pp. Price, 3d.

MACIVER, R. M. *Labor in the changing world.* New York, E. P. Dutton & Co., 1919. 230 pp.

The present wage system, the author holds, is the root of industrial evil, and he believes that nothing less than a drastic revision of the whole industrial order can prevent drift and chaos. This revision embodies the substitution of organized co-operation for industrial conflict and disorganization. He believes that this is the

solution, which can and must be found for the three great industrial problems which at present demand our most earnest thought, namely:

(1) How to absorb in the ordinary industries of peace, with as little dislocation and discontent as possible, the soldiers who have returned and the workers who have been engaged on war work; (2) How to remove the disintegrating conflict between labor and capital which was growing more and more bitter before the war; (3) How to increase the efficiency and productivity of industry, not only in order to make good the material ravages of war, but to provide those material resources on which—though not on them alone—depend the removal of the existing mass of poverty and the provision of that opportunity and leisure without which life remains tragically unfulfilled.

The author believes that this is a day of big things—big industry which demands big purpose and involves big problems. He believes that large-scale business, in relation with the social and economic conditions on which it depends, makes possible a wider view, a more constructive policy, through which “men may come to build what, in comparison with the present, may well be called the ‘great society’—not merely the great State, but that manifold life of coordinated and yet spontaneous activities which, instead of being dominated and in part repressed by a State devoted to the pursuit of power, will find in the State one of its essential organs.” In this new society education seems to be needed more than anything else—education which, without ignoring the advantages of efficiency, will include “social education; education in the character and needs of our society and in the real conditions on which its greatness depends; education which makes plain the end behind the means, the idea and the forms of social welfare to which all economic activity should be subservient; education which, in short, can help men to live together as well as to work together.”

MODERN MEDICINE. Vol. 1, No. 6. Chicago, Modern Hospital Publishing Co., October, 1919. pp. 459-548.

Medical supervision of students at Wisconsin, by C. R. Bardeen, dean of the medical school, Madison, Wis.; The University of Iowa as a State medical center, by Harold Chamberlin; and Medical extension work, by Don K. Martin, executive secretary of the Ohio State Medical Association, present various phases of public health work in relation to educational institutions. The third of a series of articles on Uses of motion pictures in industrial diseases, by Leslie Willis Sprague, is presented; an article on Health service through employees' mutual benefit association, by Bert Hall, describes the activities of this nature carried on by the Milwaukee Electric Railway & Light Co., Milwaukee; and an article by Dr. R. P. Albaugh deals briefly with Carbon monoxide poisoning—the toxicology, symptomatology, and treatment. In the department of public health and public welfare, etc., there are articles on The rôle of ventilation in preventive medicine, by George Truman Palmer, New York State Commission on Ventilation; Neighborhood organization *v.* tuberculosis by N. A. Nelson, Cincinnati; Antituberculosis League; and A critical survey of public health topics, by Jules Schevitz, Oklahoma Tuberculosis Association. Dr. James H. McBride has an article on The physician and human conservation, and John W. Trask, medical director, United States Employees' Compensation Commission, contributes an account of the Medical and hospital treatment under the Federal compensation act.

MUNDY, E. W. *Copartnership in industry.* Industrial Reconstruction Council, London, 1919. 15 pp.

A lecture delivered before the Industrial Reconstruction Council on copartnership, especially in relation to systems of profit sharing.

NATIONAL ASSOCIATION OF WOOL MANUFACTURERS. *Bulletin*, Vol. XLIX, No. 4. A quarterly magazine devoted to the interests of the national wool industry. Boston, October, 1919. pp. 303-390.

Articles of especial interest to labor are Military argument for developing American wool industries, by Paul T. Cherington; A large corporation's labor department to foster confidence between employer and employee, being an address by William M. Wood; and How prices rose and fell in the Civil War and the Great War.

NATIONAL CIVIC FEDERATION. *Commission on foreign inquiry. The labor situation in Great Britain and France.* New York, E. P. Dutton & Co., 1919. 433 pp.

This report, which portrays the larger phases of British and French industrial conditions at the present time, is reviewed on pages 127 to 129 of this issue of the MONTHLY LABOR REVIEW.

NATIONAL EDUCATION ASSOCIATION. *Commission on the emergency in education. Teachers' salaries and salary schedules in the United States, 1918-19,* by E. S. Evenden. Washington, 1919. 169 pp. *Commission series No. 6.*

NATIONAL INDUSTRIAL CONFERENCE BOARD. *Hours of work as related to output and health of workers. Metal manufacturing industries.* Boston, July, 1919. 62 pp. *Research report No. 18.*

This report is based on the replies to two questionnaires sent out, one in the latter part of 1917, the other in March, 1919, asking for details as to changes in hours and the effect upon production. Owing to the great variety of work in the metal-working industry, frequent changes in raw materials, and other variations in important factors affecting the output, it was not deemed possible to secure detailed statistical comparisons of output before and after changes in hours, and the findings are based on the statements of manufacturers as to the effect of reduced hours on production. These statements were based usually either on plant records or manufacturers' personal observation and were verified in many cases by correspondence or by field work. On this basis, the results for the two inquiries were as follows:

SUMMARY OF CHANGES IN OUTPUT FOLLOWING REDUCTIONS IN HOURS OF WORK FOR PRINCIPAL HOUR GROUPS, 1917 AND 1919.

Changes in hours.	Establishments in which output was—			Employees in establishments in which output was—		
	In-creased.	Main-tained.	De-creased.	In-creased.	Main-tained.	De-creased.
1917						
Reduced to 48 hours.....	5	13	23	37,499	9,167	9,238
Reduced to 50 hours.....	4	28	34	3,421	33,349	23,026
Reduced to 52-52½ hours.....	4	15	16	2,006	31,436	9,934
Reduced to 54 hours.....	2	17	33	825	22,185	14,197
Reduced to 55 hours.....	3	24	35	10,724	8,478	23,670
1919.						
Reduced to 48 hours.....	1	5	24	3,241	2,992	29,363
Reduced to 50 hours.....	2	10	25	1,570	2,334	14,650
Reduced to 52-52½ hours.....	.....	4	2	.....	2,217	10,532
Reduced to 54 hours.....	.....	3	6	.....	2,320	1,743
Reduced to 55 hours.....	.....	2	6	.....	159	3,505

No formal conclusions are drawn, but as important facts brought out by the investigation the following are listed:

1. A 50-hour week has proved efficient and practicable in a large number of metal manufacturing establishments.
2. A 48-hour week has proved practicable in a considerable number of establishments.
3. The piece-rate system is more conducive to current efficiency of production than is the day-rate system.
4. There is no clear-cut line below which a reduction in hours brings a practically uniform change in efficiency of production in different establishments.

Another highly important consideration brought forward is the following:

Much depends upon the degree of cooperation secured between the management and its workers. If full cooperation to attain the highest reasonable efficiency could be secured there can be little doubt that a 50-hour week could be generally adopted in the metal trades without serious loss of production. Several of the statements given in this report by manufacturers who maintained production when hours were shortened

refer to such cooperation. Likewise, the evidence indicates that under such conditions a 48-hour week could be made an economic schedule in a much larger proportion of establishments than is now possible.

**NATIONAL TRANSPORT WORKERS' FEDERATION.** *Report of the ninth annual general council meeting held at Swansea, June 5 and 6, 1919.* London, 8, St. Martin's Place, Trafalgar Square, WC 2, 1919. 106 pp.

**NATIONAL TUBERCULOSIS ASSOCIATION.** *Framingham Community Health and Tuberculosis Demonstration. Committee on appraisal. Report. What has the demonstration done? Should it be continued? Framingham, Mass., October, 1919.* 19 pp.

Since January 1, 1917, the National Tuberculosis Association has been carrying on an intensive experiment aimed at the control of tuberculosis, known as the Framingham Community Health and Tuberculosis Demonstration. The association had at its disposal \$100,000, and the demonstration was planned to cover a three-year period ending January 1, 1920. In view of the fact that many phases of the program would have been unfinished on that date, the National Tuberculosis Association, through the national committee in charge of the work, took steps to meet the following points of inquiry: (1) How much has the experiment or demonstration accomplished thus far? (2) In what measure has the work approached an answer to the problem originally set? (3) Would an extension of time for the demonstration be justifiable? This pamphlet contains the answer to these questions in the report of an appraisal committee appointed through the cooperation of Surgeon General Blue of the United States Public Health Service. A continuance of the demonstration was recommended, and a further appropriation of \$100,000 has been made to carry on the work for the year 1920. The recommendations and general plan of extension of the appraisal committee were approved, with only minor changes.

**NEW JERSEY STATE CHAMBER OF COMMERCE.** *Bureau of State Research. A practical building program to meet the immediate and permanent needs of New Jersey industry. In "New Jersey," Section 2, Vol. VI, No. 9. Newark, June, 1919. 20 pp. Consecutive. No. 17.*

Summarizes the results of a special investigation conducted by the New Jersey Department of Labor in the hope that it may prove suggestive as a solution of the municipal housing shortage. It is stated that one of the greatest handicaps in the solution of the problem has been that "Chambers of Commerce and Boards of Trade still follow tradition in talking of 'houses' for workers rather than confining their discussions to practical types of 'housing' for specific localities. What industry needs for its productive workers, and the community for its wage-earning citizens, is that each family shall be assured pleasant, sanitary quarters, with enough privacy to insure self-respect and decent living standards and a stabilized rent which shall not consume more than a quarter of the breadwinner's annual income; or a house-purchase plan within the means of the average pay envelope. Light and air, modern conveniences, playgrounds for the children, and gardens for the adults must no longer be reckoned as luxuries to be taxed by private capital, but as community and industrial assets which should be within the reach of all." The report treats of the following subjects: The housing shortage; A local problem; Housing *v.* houses; Land costs dominant factor; Urban housing developments; Building construction and materials; Economic foundation; Types of model housing development; Methods of financing and financial plan.

— — — *Democracy in industry. Proceedings of conferences December 17, 1918, January 28 and March 28, 1919. In "New Jersey," Vol. VI, Nos. 4-6. Newark, January to March, 1919. Pp. 41-104.*

At these three conferences held at Newark, representatives of employers, employees, and the public discussed plans and methods for securing better industrial relations and authorized an investigation by the Chamber of Commerce of the subject of representation in industry.

**PAN-AMERICAN FEDERATION OF LABOR.** *Report of the proceedings of the second congress, held at New York City, July 7 to 10, 1919.* Washington, 407 A. F. of L. Building, 1919. 67 pp.



PARRY, JUDGE. *Industrial reconstruction in Government departments. A lecture delivered before the industrial reconstruction council, January 22, 1919.* London, Nisbet & Co. (Ltd.), 1919. 16 pp. Price, 2d.

RALPH, JOSEPH. *Equities of labor values. Sausalito, Calif., Oct. 14, 1919.* 15 pp.

An endeavor to account for the pronounced labor unrest throughout the country.

REA, SAMUEL. *Our railroad problem. How to settle it effectually in the public interest. Address before the savings bank section of the American Bankers' Association, St. Louis, Mo., Oct. 1, 1919.* [Philadelphia], 1919. 29 pp.

In this address by the president of the Pennsylvania Railroad Co. various sections of the Cummins railroad bill, including the labor provisions, are discussed.

RHOADS, SAMUEL H. *The liability of railroads for personal injuries to their employees and their dependents. Lansing, Mich., May, 1919.* 22 pp.

A consideration of cases under the workmen's compensation laws of the various States which come within the scope of the Federal compensation act, followed by an explanation of the defects and insufficiencies as developed by decisions of the courts, and the following suggested amendments: 1. The abolishment of the defense of assumption of risk in all cases; The inclusion of all employees used interchangeably in moving both kinds of commerce; The avoidance of the possibility of injured employees or their dependents being deprived of the right to recover compensation under the workmen's compensation laws of the State in case of accidental injuries. The author is legislative representative of the Brotherhood of Railroad Trainmen of the State of Michigan.

ROCKEFELLER FOUNDATION. *International Health Board. The control of hookworm disease by the intensive method, by H. H. Howard. New York, 1919. 189 pp. Chart. Illustrated. Publication No. 8.*

ST. PHILIP'S SETTLEMENT EDUCATION AND ECONOMICS RESEARCH SOCIETY. *The equipment of the workers. An inquiry into the adequacy of the adult manual workers for the discharge of their responsibilities as heads of households, producers, and citizens. London, George Allen & Unwin (Ltd.), 1919.* 334 pp.

This inquiry was begun in 1916 by a few persons who made the Y. M. C. A. settlement in St. Philip's Sheffield, their meeting place and center of investigation and later organized into the St. Philip's Settlement Education and Economics Research Society. The purpose of the inquiry was to discover the extent of the "equipment" of the adult manual workers of Sheffield, and the method was that of personal calls at the homes of representatives of each class of workers, classed roughly by sex, age, social stratum, and occupation. The interviews were designed to elicit, through questionnaires, accurate information in each case upon educational ideas, leisure, musical tastes, esthetic feelings, social and religious activities, reading, home, political ideas, root desires, and other data. The individuals thus studied were classed into three classes—the well-equipped, the inadequately equipped, and the mal-equipped. A number of the "extensive" studies reproduced from the completed questionnaires are given of each class. Two volumes supplementary to the present one are planned by the society to be issued during the next few years, one on The education of the workers, and the other on The environment of the workers.

STONE, N. I. *Wages, hours and individual output. Reprinted from The Annals of the American Academy of Political and Social Science, Philadelphia, September, 1919.* 26 pp. Publication No. 1326.

Discusses The economic law of wages; Wages and labor costs; Relation of compensation to output—week work, piecework, the time and bonus system—and reaches the conclusion that while each of the systems discussed has its advantages and disadvantages, eight general principles suggest themselves for our guidance, the first and last of which are: "The workman is entitled to a living wage as a minimum compensation for his time and effort which he spends at the plant. Whatever the form of compensation, he must receive a basic wage measured by the time he spends at the plant at a rate sufficient to yield a living wage"; and "The worker should share in the benefits resulting from the introduction of improved machinery and increased

efficiency. Whether this share should take the form of higher wages, shorter hours, or a share in the general profits, or in the specific savings resulting from the improvements, is a subject so large as to require separate treatment."

STOWELL, CHARLES JACOB. *The Journeymen Tailors' Union of America. A study in trade-union policy.* Urbana, Ill., 1919. 143 pp. *University of Illinois studies in the social sciences*, December, 1918, vol. 7, No. 4.

Mr. Stowell's book is a continuation of his "Studies in trade-unionism in the custom tailoring trade" published in 1913. The earlier monograph included the economic history of tailors' unions and data concerning wages and conditions of labor among union tailors in 1912. The present study analyzes the policies and practices of the journeymen tailors' union with regard to the most important problems connected with collective bargaining, helpers and apprentices, and jurisdictional questions. A final chapter indicates the more important economic effects of this policy upon the industry and the public.

WARNE, FRANK JULIAN. *Corporation finance and the wageworker.* (Reprinted from Vol. LXXXV of the *Annals of the American Academy of Political and Social Science*, Philadelphia, September, 1919. 8 pp.)

States that the so-called "property investment" account and the alleged "capital obligations" account, as they appear today on the books of transportation corporations, are useless as a fair measure of ascertaining the securities that have a just claim upon the earnings of the companies, statements that are verified by findings and rulings of the Interstate Commerce Commission.

The author believes that until a financial and corporate organization of industry is adopted by American industries that will represent the facts of investment as they exist, the workers will continue to ignore the financial statements of those industries.

A first reform necessary in these days, declares the author, is the abandonment of past and present financial and corporate methods based on profits and the substitution thereof of those that show the actual facts in relation to social service.

WATERBURY CHAMBER OF COMMERCE. *Survey of price levels in Waterbury compared with other cities for various dates in 1919.* Report of Committee. Waterbury, September, 1919. 64 pp.

This report is noted on pages 203 to 206 of this issue of the MONTHLY LABOR REVIEW.

WEBER, GUSTAVUS A. *Organized efforts for the improvement of methods of administration in the United States.* New York, D. Appleton & Co., 1919. 391 pp. *Institute for Government research. Studies in administration.*

An account of organized agencies that have been established in recent years for making scientific studies of problems of organization and administration with a view to bringing about more efficient methods in the conduct of public business. The scope of the work is limited to agencies, both official and unofficial, whose chief interest is the technique of administration, rather than the problems of politics, and which have for their immediate aim the bringing about of improved methods in public administration in the United States. There are included official and unofficial agencies for investigating the administration of particular cities, counties, and States, as well as the national administration.

WILLOUGHBY, WILLIAM FRANKLIN. *Government organization in war time and after. A survey of the Federal civil agencies created for the prosecution of the war.* New York, D. Appleton & Co., 1919. 370 pp. *Problems of war and of reconstruction.*

A methodical statement and description, in 16 chapters, of the special war agencies of the Government and their operations. Chapters 9 and 10 set forth the action taken by the Government in the mobilization of labor. Chapter 9 deals with the first phase of the problem, viz, the determination of labor conditions; and chapter 10 with the second phase of the problem, viz, the recruitment and direction of labor. Chapter 16, headed "Conclusion," is a brief but comprehensive summary and commentary on the industrial activities of the Government under the war emergency of 1917 and 1918.

## SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS.

*[The publication of the annual and special reports and of the bimonthly bulletin was discontinued in July, 1912, and since that time a bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These bulletins are numbered consecutively beginning with No. 101, and up to No. 236 they also carry consecutive numbers under each series. Beginning with No. 237 the serial numbering has been discontinued. A list of the series is given below. Under each is grouped all the bulletins which contain material relating to the subject matter of that series. A list of the reports and bulletins of the Bureau issued prior to July 1, 1912, will be furnished on application.]*

### Wholesale Prices.

- Bul. 114. Wholesale prices, 1890 to 1912.
- Bul. 149. Wholesale prices, 1890 to 1913.
- Bul. 173. Index numbers of wholesale prices in the United States and foreign countries.
- Bul. 181. Wholesale prices, 1890 to 1914.
- Bul. 200. Wholesale prices, 1890 to 1915.
- Bul. 226. Wholesale prices, 1890 to 1916.
- Bul. 269. Wholesale prices, 1890 to 1918. [In press.]

### Retail Prices and Cost of Living.

- Bul. 105. Retail prices, 1890 to 1911: Part I.  
Retail prices, 1890 to 1911: Part II—General tables.
- Bul. 106. Retail prices, 1890 to June, 1912: Part I.  
Retail prices, 1890 to June, 1912: Part II—General tables.
- Bul. 108. Retail prices, 1890 to August, 1912.
- Bul. 110. Retail prices, 1890 to October, 1912.
- Bul. 113. Retail prices, 1890 to December, 1912.
- Bul. 115. Retail prices, 1890 to February, 1913.
- Bul. 121. Sugar prices, from refiner to consumer.
- Bul. 125. Retail prices, 1890 to April, 1913.
- Bul. 130. Wheat and flour prices, from farmer to consumer.
- Bul. 132. Retail prices, 1890 to June, 1913.
- Bul. 136. Retail prices, 1890 to August, 1913.
- Bul. 138. Retail prices, 1890 to October, 1913.
- Bul. 140. Retail prices, 1890 to December, 1913.
- Bul. 156. Retail prices, 1907 to December, 1914.
- Bul. 164. Butter prices, from producer to consumer.
- Bul. 170. Foreign food prices as affected by the war.
- Bul. 184. Retail prices, 1907 to June, 1915.
- Bul. 197. Retail prices, 1907 to December, 1915.
- Bul. 228. Retail prices, 1907 to December, 1916.
- Bul. 266. A study of family expenditures in the District of Columbia. [In press.]
- Bul. 270. Retail prices, 1913 to 1918. [In press.]

### Wages and Hours of Labor.

- Bul. 116. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia.
- Bul. 118. Ten-hour maximum working-day for women and young persons.
- Bul. 119. Working hours of women in the pea canneries of Wisconsin.
- Bul. 128. Wages and hours of labor in the cotton, woolen, and silk industries, 1890 to 1912.
- Bul. 129. Wages and hours of labor in the lumber, millwork, and furniture industries, 1890 to 1912.
- Bul. 131. Union scale of wages and hours of labor, 1907 to 1912.
- Bul. 134. Wages and hours of labor in the boot and shoe and hosiery and knit goods industries, 1890 to 1912.
- Bul. 135. Wages and hours of labor in the cigar and clothing industries, 1911 and 1912.
- Bul. 137. Wages and hours of labor in the building and repairing of steam railroad cars, 1890 to 1912.
- Bul. 143. Union scale of wages and hours of labor, May 15, 1913.
- Bul. 146. Wages and regularity of employment in the dress and waist industry of New York City.
- Bul. 147. Wages and regularity of employment in the cloak, suit, and skirt industry.
- Bul. 150. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1913.

### **Wages and Hours of Labor—Concluded.**

- Bul. 151. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1912.
- Bul. 153. Wages and hours of labor in the lumber, millwork, and furniture industries, 1907 to 1913.
- Bul. 154. Wages and hours of labor in the boot and shoe and hosiery and underwear industries, 1907 to 1913.
- Bul. 160. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories.
- Bul. 161. Wages and hours of labor in the clothing and cigar industries, 1911 to 1913.
- Bul. 163. Wages and hours of labor in the building and repairing of steam railroad cars, 1907 to 1913.
- Bul. 168. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1913.
- Bul. 171. Union scale of wages and hours of labor, May 1, 1914.
- Bul. 177. Wages and hours of labor in the hosiery and underwear industry, 1907 to 1914.
- Bul. 178. Wages and hours of labor in the boot and shoe industry, 1907 to 1914.
- Bul. 187. Wages and hours of labor in the men's clothing industry, 1911 to 1914.
- Bul. 190. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914.
- Bul. 194. Union scale of wages and hours of labor, May 1, 1915.
- Bul. 204. Street railway employment in the United States.
- Bul. 214. Union scale of wages and hours of labor, May 15, 1916.
- Bul. 218. Wages and hours of labor in the iron and steel industry, 1907 to 1915.
- Bul. 225. Wages and hours of labor in the lumber, millwork, and furniture industries, 1915.
- Bul. 232. Wages and hours of labor in the boot and shoe industry, 1907 to 1916.
- Bul. 238. Wages and hours of labor in woolen and worsted goods manufacturing, 1916.
- Bul. 239. Wages and hours of labor in cotton goods manufacturing and finishing, 1916.
- Bul. 245. Union scale of wages and hours of labor, May 15, 1917.
- Bul. 252. Wages and hours of labor in the slaughtering and meat-packing industry.
- Bul. 259. Union scale of wages and hours of labor, May 15, 1918.
- Bul. 260. Wages and hours of labor in the boot and shoe industry, 1907 to 1918.
- Bul. 261. Wages and hours of labor in woolen and worsted goods manufacturing, 1918.
- Bul. 262. Wages and hours of labor in cotton goods manufacturing and finishing, 1918.
- Bul. 265. Industrial survey in selected industries in the United States, 1919. Preliminary report. [In press.]

### **Employment and Unemployment.**

- Bul. 109. Statistics of unemployment and the work of employment offices in the United States.
- Bul. 172. Unemployment in New York City, N. Y.
- Bul. 182. Unemployment among women in department and other retail stores of Boston, Mass.
- Bul. 183. Regularity of employment in the women's ready-to-wear garment industries.
- Bul. 192. Proceedings of the American Association of Public Employment Offices.
- Bul. 195. Unemployment in the United States.
- Bul. 196. Proceedings of the Employment Managers' Conference held at Minneapolis, January, 1916.
- Bul. 202. Proceedings of the conference of the Employment Managers' Association of Boston, Mass., held May 10, 1916.
- Bul. 206. The British system of labor exchanges.
- Bul. 220. Proceedings of the Fourth Annual Meeting of the American Association of Public Employment Offices, Buffalo, N. Y., July 20 and 21, 1916.
- Bul. 223. Employment of women and juveniles in Great Britain during the war.
- Bul. 227. Proceedings of the Employment Managers' Conference, Philadelphia, Pa., April 2 and 3, 1917.
- Bul. 235. Employment system of the Lake Carriers' Association.
- Bul. 241. Public employment offices in the United States.
- Bul. 247. Proceedings of Employment Managers' Conference, Rochester, N. Y., May 9-11, 1918.

### Women in Industry.

- Bul. 116. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia.
- Bul. 117. Prohibition of night work of young persons.
- Bul. 118. Ten-hour maximum working-day for women and young persons.
- Bul. 119. Working hours of women in the pea canneries of Wisconsin.
- Bul. 122. Employment of women in power laundries in Milwaukee.
- Bul. 160. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories.
- Bul. 167. Minimum-wage legislation in the United States and foreign countries.
- Bul. 175. Summary of the report on condition of woman and child wage earners in the United States.
- Bul. 176. Effect of minimum-wage determinations in Oregon.
- Bul. 180. The boot and shoe industry in Massachusetts as a vocation for women.
- Bul. 182. Unemployment among women in department and other retail stores of Boston, Mass.
- Bul. 193. Dressmaking as a trade for women in Massachusetts.
- Bul. 215. Industrial experience of trade-school girls in Massachusetts.
- Bul. 223. Employment of women and juveniles in Great Britain during the war.
- Bul. 253. Women in the lead industry.

### Workmen's Insurance and Compensation (including laws relating thereto).

- Bul. 101. Care of tuberculous wage earners in Germany.
- Bul. 102. British National Insurance Act, 1911.
- Bul. 103. Sickness and accident insurance law of Switzerland.
- Bul. 107. Law relating to insurance of salaried employees in Germany.
- Bul. 126. Workmen's compensation laws of the United States and foreign countries.
- Bul. 155. Compensation for accidents to employees of the United States.
- Bul. 185. Compensation legislation of 1914 and 1915.
- Bul. 203. Workmen's compensation laws of the United States and foreign countries.
- Bul. 210. Proceedings of the Third Annual Meeting of the International Association of Industrial Accident Boards and Commissions.
- Bul. 212. Proceedings of the conference on social insurance called by the International Association of Industrial Accident Boards and Commissions.
- Bul. 217. Effect of workmen's compensation laws in diminishing the necessity of industrial employment of women and children.
- Bul. 240. Comparison of workmen's compensation laws of the United States.
- Bul. 243. Workmen's compensation legislation in the United States and foreign countries.
- Bul. 248. Proceedings of the Fourth Annual Meeting of the International Association of Industrial Accident Boards and Commissions.
- Bul. 264. Proceedings of the Fifth Annual Meeting of the International Association of Industrial Accident Boards and Commissions.

### Industrial Accidents and Hygiene.

- Bul. 104. Lead poisoning in potteries, tile works, and porcelain enameled sanitary ware factories.
- Bul. 120. Hygiene of the painters' trade.
- Bul. 127. Dangers to workers from dusts and fumes, and methods of protection.
- Bul. 141. Lead poisoning in the smelting and refining of lead.
- Bul. 157. Industrial accident statistics.
- Bul. 165. Lead poisoning in the manufacture of storage batteries.
- Bul. 179. Industrial poisons used in the rubber industry.
- Bul. 188. Report of British departmental committee on danger in the use of lead in the painting of buildings.
- Bul. 201. Report of committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions. [Limited edition.]
- Bul. 205. Anthrax as an occupational disease.
- Bul. 207. Causes of death by occupation.
- Bul. 209. Hygiene of the printing trades.
- Bul. 216. Accidents and accident prevention in machine building.
- Bul. 219. Industrial poisons used or produced in the manufacture of explosives.
- Bul. 221. Hours, fatigue, and health in British munition factories.
- Bul. 230. Industrial efficiency and fatigue in British munition factories.
- Bul. 231. Mortality from respiratory diseases in dusty trades.
- Bul. 234. Safety movement in the iron and steel industry, 1907 to 1917.
- Bul. 236. Effect of the air hammer on the hands of stonecutters.
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NOTE.—An index of Vol. IX (July to December, 1919) is being prepared and will be forwarded when issued, upon request.



