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Laws and Agreements Governing Working Conditions Among American Seamen.^a

A SPECIAL meeting of the General Conference of the International Labor Organization of the League of Nations is to be held at Genoa in June to deal with questions relating to seamen, for which the governing body of the International Labor Office has prepared the agenda.¹ This conference will meet under the conditions specified in the articles of the treaty governing the conferences of the International Labor Organization, and each member of the organization will be entitled to appoint four delegates, two of whom shall represent the Government, the remaining two being chosen from the most representative employers' and workers' organizations. Each delegate may be accompanied by two advisers for each item on the agenda. Since this conference will deal exclusively with questions relating to seamen, it is considered desirable that Government and non-Government delegates should be fully competent to deal with maritime affairs.

A questionnaire prepared by the International Labor Office has been submitted to the various Governments and interested persons. The answers of the Government of the United States to this questionnaire have been made by the Department of Labor and present a summary of the general working conditions of American seamen. In the majority of cases it has been impossible to follow the classification under 1 of the preliminary note, owing to the fact that the laws are, in the main, general in their scope. It is only when they are specially excepted from the provisions of a law that any particular kinds of vessels are mentioned. This Government has made little distinction in its laws between navigation of inland waterways and maritime navigation, and the same statutes apply to both classes of navigation. A distinction has been made, however, between persons employed on mechanically driven vessels on large lakes or rivers, whose duty is continuous, and those employed on vessels confined to canals or canalized rivers. Navigation on the Great Lakes and the large navigable rivers is governed, in most cases, by the same laws that regulate transoceanic and coastwise shipping. Those who work in vessels confined to canals or canalized rivers are subject to the local laws of the various States. The preliminary note and questionnaire follow:

^a Compiled by M. C. Frincke, jr.

¹ See p. 2.

Conference of Seamen. Questionnaire.

PRELIMINARY NOTE.

In your answers to these inquiries you are requested to bear the following points in mind—

1. Careful allowance should be made in every answer for the distinctions drawn by legislation or custom in your country between the various kinds of vessels; for instance:

- (1) Foreign-going merchantmen:
 - (a) Steamers and other mechanically driven vessels.
 - (b) Sailing ships.
- (2) Coasting vessels.
- (3) Tugs and barges not self-propelled.
- (4) Fishing boats.
- (5) Vessels employed on inland waterways.

2. In your replies, which are invited in order that international agreements and recommendations may be drawn up, you are requested to state how far you think it possible, or advisable, to apply the same general regulations to the various classes of ships, or whether separate arrangements should be made for them.

3. As regards navigation of inland waterways:

- (a) Does your Government think that this should be subject to the same regulations as maritime navigation?
- (b) Does your Government think it possible to make a distinction between persons employed in mechanically driven vessels on large lakes or rivers, whose duty is continuous, and those employed in vessels confined to canals or canalized rivers?

[It will be recalled that at the Washington Conference during the debate on the Report of the Commission on Hours of Work (Provisional Record, pp. 314-322) attention was drawn by several delegates to the peculiar conditions affecting inland navigation on the Great Lakes of Northern America, the Swedish fiords, and the great rivers of Asia, on which voyages often continue without interruption for several days. In defining the application of the Conventions which may be drawn up in regard to the various items of the agenda, it will be necessary to take these special conditions into account and perhaps to distinguish them from those of river and canal navigation in Europe.]

ITEM I OF THE AGENDA.

*Hours of Labor and their Effect on Manning and Accommodation.*A. *Hours of labor.*

1. Please explain fully the nature of any existing regulations (i) in the national law (ii) in agreements between organizations of ship owners and seamen prescribing the hours of duty for foreign-going seamen.

N. B.—The reply should, where necessary, distinguish between the various classes of seamen (deck hands, engine-room staff and general service) and between the hours of labor while at sea and in port.

2. What arrangements and adjustments does your Government consider necessary for the application to seamen of the 8-hour day and the 48-hour week, as adopted by the Washington Conference?

B. *Manning.*

1. Are there any manning regulations in your national legislation, at any rate for foreign-going vessels?
2. If the principle of the 8-hour day and the 48-hour week were adopted in the mercantile marine:
 - (a) What modifications do you anticipate in your manning regulations, if you have any?
 - (b) Does your Government see any objection to the adoption of international manning scales, at any rate for foreign-going vessels?

C. *Accommodation.*

1. What provision, if any, is made:

(a) By your national law;

(b) By agreements between organizations of ship owners and seamen;

In regard to the amount of cubic space to be allotted to seamen and in regard to their general accommodation?

2. As the application to seamen of the principle of the 8-hour day would probably involve larger crews, what steps would you propose to take, and within what period, to adapt their accommodation to these new requirements?

3. Is it advisable to establish by agreement the international regulation of accommodation for seamen on board ship?

Does your Government think it advisable to fix by international agreements uniform standards of accommodation for seamen on board ship?

ITEM II OF THE AGENDA.

A. *Articles of agreement.*

Under what system are seamen in your country engaged?

(a) Are all seamen required to sign articles of agreement? If so, please give particulars of the legal requirements as to the signature of articles.

(b) What provisions exist for insuring the observance of agreements—

(1) By State supervision?

(2) By trade-unions?

(3) By other means?

B. *Facilities for finding employment for seamen.*

1. Have you in your country any system for registering the service of seamen?

2. Does your national law provide employment exchanges for seamen?

(a) If so, how are they constituted and controlled?

(b) What connection have they with the official authorities who control seamen's employment?

C. *Washington conventions and recommendations on unemployment and unemployment insurance.*

What provisions or modifications, if any, do you consider necessary for the application to seamen:

(a) Of the draft convention?

(b) Of the recommendations adopted at Washington in regard to unemployment and unemployment insurance?

ITEM III OF THE AGENDA.

Prohibition of the Employment of Children under 14 Years of Age.

1. What limitations are imposed by your national law on the age at which children may be employed on board ship?

2. What arrangements and adjustments does your Government consider necessary for the application to the mercantile marine of the draft convention adopted at Washington prohibiting the employment of children under 14 years of age?

ITEM IV OF THE AGENDA.

The Possibility of Establishing an International Code for Seamen.

1. Do you think it possible to establish a kind of international code for seamen?

2. If so, what does your Government consider should be the general principles of an international maritime code as regards the conditions of service at sea?

In particular, should the seamen's contract of employment be brought into line or not with that obtaining generally in the case of other workers: For instance, for discipline, the right to leave their ship in a foreign port, the payment of wages before discharge, etc?

N. B.—The governing body of the International Labor Office, at its meeting in January when the agenda of this questionnaire was drawn up, had this important question brought before it.

The governing body considered it so vast and bound up with so many other problems that the coming international conference would hardly be able to deal with it. In spite of this, it deemed it necessary to retain the question in that agenda for general examination. We should be glad if you would send us forthwith the most complete information available on this subject, particularly on those points which might ultimately give rise to international agreements, in order that the work which will be subsequently necessary may be put in hand.

The discussion of the questions which follow observes the same order as that of the questionnaire, but opinions as to the future policy of this Government are not expressed.

Item I of the Agenda.

Hours of Labor.

IN general it may be said that the principle of the 8-hour day has been accepted by American transoceanic and coastwise shipping and the hours of labor of officers and seamen are now commonly limited by agreements to 8 in every 24. The laws of the United States do not, however make any distinction in kinds of service other than that of officers and seamen, the term "seaman" including "every person (apprentices excepted) who shall be employed or engaged to serve in any capacity on board a vessel" (Revised Statutes, sec. 4612). The statutes provide that the duty of officers shall not exceed 9 hours of any 24 while in port, nor, except in emergency, 12 in any 24 at sea. For seamen in all merchant vessels exceeding 100 tons gross, these same rules prevail, except that while at sea firemen, oilers, and water tenders must be divided into at least three watches and other sailors at least two. Certain days to be recognized as days of rest and holidays are also designated. Fishing and whaling vessels and yachts are exempted from the provisions of this law. The two following statutes comprise all existing legislation on the subject by the Federal Government:

SEC. 2. In all merchant vessels of the United States of more than 100 tons gross, excepting those navigating rivers, harbors, bays, or sounds exclusively, the sailors shall, while at sea, be divided into at least two, and the firemen, oilers, and water tenders into at least three watches, which shall be kept on duty successively for the performance of ordinary work incident to the sailing and management of the vessel.

* * * While such vessel is in a safe harbor no seaman shall be required to do any unnecessary work on Sundays or the following named days: New Year's Day, the Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day, but this shall

not prevent the dispatch of a vessel on regular schedule or when ready to proceed on her voyage. And at all times when such vessel is in a safe harbor, 9 hours, inclusive of the anchor watch, shall constitute a day's work. Whenever the master of any vessel shall fail to comply with this section, the seamen shall be entitled to discharge from such vessel and to receive the wages earned. But this section shall not apply to fishing or whaling vessels, or yachts. [Navigation Laws of the United States, 1919, p. 101.]

SEC. 3. It shall be unlawful for the master, owner, agent, or other person having authority to permit an officer of any vessel to take charge of the deck watch of the vessel upon leaving or immediately after leaving port, unless such officer shall have had at least 6 hours off duty within the 12 hours immediately preceding the time of sailing, and no licensed officer on any ocean or coastwise vessel shall be required to do duty to exceed 9 hours of any 24 while in port, including the date of arrival, or more than 12 hours of any 24 at sea, except in a case of emergency when life or property is endangered. Any violation of this section shall subject the person or persons guilty thereof to a penalty of \$100. Approved May 11, 1918. [Navigation Laws of the United States, 1919, p. 126.]

Various agreements concerning hours have been entered into by the United States Shipping Board, the American Steamship Association, and associations of employees. The working rules agreed upon between these two organizations and the American Association of Masters, Mates, and Pilots and the Neptune Association fix the hours of labor for licensed officers in the home port at 8 a. m. to 5 p. m. with one hour for dinner, and on week days in port, work performed before and after these hours shall be paid at overtime rates. Watch and watch shall be maintained on sailing day and at all outside ports and ports of call. At sea, except in case of danger to the vessel, no mate shall be allowed to work more than 8 hours.² These regulations apply to ocean and coastwise trade, but not to the Great Lakes.

On the Great Lakes the hours of labor are governed by the Federal statutes already quoted. The Lake Carriers' Association, an organization of ship owners representing about 80 per cent of the tonnage on the lakes, refused in 1908 to enter into agreements with the union of seamen.³ This stand was adhered to by the association and most of the other ship owners until the fall of 1917, when a minimum wage schedule was established and the abolition of the continuous-discharge-book system secured through an agreement between the association, the United States Shipping Board, and representatives of the seamen. This agreement has lapsed since the signing of the armistice and is now no longer in effect.

The hours for licensed engineers,⁴ as agreed upon with the Marine Engineers' Beneficial Association and which are effective until Aug-

² Wage scales and working conditions. Trans-Atlantic, Atlantic, and Gulf Coasts. United States Shipping Board. pp. 2, 3.

³ Employment system of the Lake Carriers' Association. Bulletin No. 235 of the U. S. Bureau of Labor Statistics, p. 11.

⁴ Wage scales and working conditions. Trans-Atlantic, Atlantic, and Gulf Coasts. United States Shipping Board. Pp. 3, 4, 5.

ust 1, 1920, are the same as for masters, mates, and pilots, with the further provision that work in excess of 8 hours shall not be performed or paid for unless the work is done upon the written order of the chief engineer, master, owner, or agent of the vessel. An entry shall be made in the log book covering the kind of work, reason for same, and time started and finished, for each time overtime service is performed.

Rules agreed upon with the Eastern and Gulf Sailors' Association,⁵ for unlicensed seamen, fix the same hours of work in port with overtime paid for at special overtime rates, and provide that on vessels carrying more than six men on deck, the wheelmen and lookout men shall be divided into three watches, the remainder of the deck crew to perform any necessary work for a period of 8 hours.

The Marine Cooks' and Stewards' Association⁶ of the Atlantic and Gulf agreed that away from the home port, except for vessels performing daily schedules, the work of employees of the stewards' department (except galley crews) shall be done in 10 hours out of each 24, the galley crew's time to be regulated by the chief cook. Work required between the hours of 8 p. m. and 6 a. m. and, in excess of 10 hours (except for galley crews) between the hours of 6 a. m. and 8 p. m., shall be paid for at overtime rates. Grievances concerning working hours or working of ships are to be settled in the home port and not by stopping work or leaving the ship. These rules were to be effective until May 1, 1920.

The Marine Firemen, Oilers and Watertenders⁷ of the Atlantic and Gulf agreed upon rules effective till May 1, 1920, which included the 8-hour day in port with overtime on week days between 5 p. m. and 8 a. m. and work on Sundays and holidays to be paid for at overtime rates. Wipers are to work two hours on Sundays and holidays at sea. The firemen on ocean-going oil barges shall be divided into three watches, and on ocean-going vessels where coal passers are carried there shall be at least three coal passers and three watches. The law does not permit one man to care for more than four fires on coal-burning vessels.

The United Radio Telegraphers' Association agreed to abide by the same rules as those established for officers; their agreement terminates on August 1, 1920.

Agreements substantially the same in regard to hours of labor as those in effect in the ocean and coastwise trade of the Atlantic Ocean and the Gulf of Mexico have been entered into by seamen's organiza-

⁵ Wage scales and working conditions. Trans-Atlantic, Atlantic, and Gulf Coasts. United States Shipping Board. Pp. 6, 7.

⁶ *Idem*, p. 8.

⁷ *Idem*, pp. 10, 11.

tions on the Pacific coast. These rules were to be effective for one year, from August 1, 1919, to August 1, 1920. The seamen's organizations represented are:

The Licensed Deck Officers' Association, Pacific Coast.
The Marine Cooks' and Stewards' Association of the Pacific Coast.
The Marine Engineers' Beneficial Association.
The Sailors' Union of the Pacific.
The Radio Ship Owners' Service Inc.

While the 8-hour day has been generally accepted by American transoceanic and coastwise shipping there is no demand from the seamen for a 48-hour week, the 56-hour week being considered a matter of necessity considering the nature of work at sea. No further arrangements or adjustments would therefore be necessary for the enactment into law of the 8-hour day as recommended by the Washington Conference.

Manning.

The national statutes state, as regards officers, that there shall be one master for every vessel engaged in ocean or coastwise trade; every vessel of 1,000 gross tons or over shall have on board 3 licensed mates; every vessel of 200 gross tons but less than 1,000 gross tons shall have 2 licensed mates; and every vessel of 100 gross tons or less shall have 1 licensed mate. On the other hand there are no specific requirements as to the number of seamen a vessel must have on board, this matter being left entirely to the discretion of the local steamboat inspectors of the United States Department of Commerce. The number of licensed mates a vessel must have according to the above provisions may be increased in the discretion of the local inspectors.

On merchant vessels of more than 100 tons gross, excepting those navigating rivers, harbors, bays, and sounds, sailors shall be employed for specific duties and shall not be required to work alternately, as in the fireroom or on deck, except in cases of emergency, and no vessel shall depart from any port in the United States unless she has on board a crew of which at least 75 per cent in each department are able to understand any order given by the officers. After the fourth year following the passage of the act in 1915 at least 65 per cent of a vessel's deck crew, exclusive of licensed officers and apprentices, must be of a rating not less than that of able seamen.

In case of desertion or casualty the master must secure if possible an equal number of seamen of the same or a higher rating and report to the United States consul at the first port at which he touches. None of the foregoing provisions apply to fishing or whaling vessels, yachts, or motor boats or to wrecking vessels.

The general statutory regulations relating to the manning of vessels engaged in ocean or coastwise trade are as follows:

Section 4463 of the Revised Statutes of the United States be, and it is hereby, amended [May 11, 1918—Act No. 302] to read as follows:

Sec. 4463. No vessel of the United States subject to the provisions of this title or to the inspection laws of the United States shall be navigated unless she shall have in her service and on board such complement of licensed officers and crew including certificated lifeboat men, separately stated, as may, in the judgment of the local inspectors who inspect the vessel, be necessary for her safe navigation. The local inspectors shall make in the certificate of inspection of the vessel an entry of such complement of officers and crew including certificated lifeboat men, separately stated, which may be changed from time to time by indorsement on such certificate by local inspectors by reason of change of conditions or employment. Such entry or indorsement shall be subject to a right of appeal, under regulations to be made by the Secretary of Commerce, to the supervising inspector and from him to the supervising inspector general, who shall have the power to revise, set aside, or affirm the said determination of the local inspectors.

If any such vessel is deprived of the services of any number of the crew including certificated lifeboat men, separately stated, without the consent, fault, or collusion of the master, owner, or any person interested in the vessel, the vessel may proceed on her voyage if, in the judgment of the master, she is sufficiently manned for such voyage: *Provided*, That the master shall ship, if obtainable, a number equal to the number of those whose services he has been deprived of by desertion or casualty, who must be of the same grade or of a higher rating with those whose places they fill. If the master shall fail to explain in writing the cause of such deficiency in the crew including certificated lifeboat men, separately stated, to the local inspectors within 12 hours of the time of the arrival of the vessel at her destination, he shall be liable to a penalty of \$50. If the vessel shall not be manned as provided in this act, the owner shall be liable to a penalty of \$100, or in case of an insufficient number of licensed officers to pay a penalty of \$500.

That the board of local inspectors shall make an entry in the certificate of inspection of every ocean and coastwise seagoing merchant vessel of the United States propelled by machinery, and every ocean-going vessel carrying passengers, the minimum number of licensed deck officers required for her safe navigation according to the following scale:

That no such vessel shall be navigated unless she shall have on board and in her service one duly licensed master.

That every such vessel of 1,000 gross tons and over, propelled by machinery, shall have in her service and on board three licensed mates, who shall stand in three watches while such vessel is being navigated, unless such vessel is engaged in a run of less than 400 miles from the port of departure to the port of final destination, then such vessel shall have two licensed mates; and every vessel of 200 gross tons and less than 1,000 gross tons, propelled by machinery, shall have two licensed mates.

That every such vessel of 100 gross tons and under 200 gross tons, propelled by machinery, shall have on board and in her service one licensed mate, but if such vessel is engaged in a trade in which the time required to make the passage from the port of departure to the port of destination exceeds 24 hours, then such vessel shall have two licensed mates.

That nothing in this section shall be so construed as to prevent local inspectors from increasing the number of licensed officers on any vessel subject to the inspection laws of the United States, if, in their judgment, such vessel is not sufficiently manned for her safe navigation: *Provided*, That this section shall not apply to fishing or whaling vessels, yachts, or motor boats as defined in the act of June 9, 1910, or to wrecking vessels. [Navigation Laws of the United States, 1919, pp. 125, 126.]

Manning of Merchant Vessels.

In all merchant vessels of the United States of more than 100 tons gross, excepting those navigating rivers, harbors, bays, or sounds exclusively, the sailors shall, while at sea, be divided into at least two, and the firemen, oilers, and water tenders into at least three watches, which shall be kept on duty successively for the performance of ordinary work incident to the sailing and management of the vessel. The seamen shall not be shipped to work alternately in the fireroom and on deck, nor shall those shipped for deck duty be required to work in the fireroom, or vice versa; but

these provisions shall not limit either the authority of the master or other officer or the obedience of the seamen when, in the judgment of the master or other officer, the whole or any part of the crew are needed for the maneuvering of the vessel or the performance of work necessary for the safety of the vessel or her cargo, or for the saving of life aboard other vessels in jeopardy, or when in port or at sea from requiring the whole or any part of the crew to participate in the performance of fire, life-boat, and other drills. * * *

No vessel of 100 tons gross and upward, except those navigating rivers exclusively and the smaller inland lakes and except as provided in section 1 of this act, shall be permitted to depart from any port of the United States unless she has on board a crew not less than 75 per cent of which, in each department thereof, are able to understand any order given by the officers of such vessel, nor unless 40 per cent in the first year, 45 per cent in the second year, 50 per cent in the third year, 55 per cent in the fourth year after the passage of this act, and thereafter 65 per cent of her deck crew, exclusive of licensed officers and apprentices, are of a rating not less than able seamen. Every person shall be rated an able seaman, and qualified for service as such on the seas, who is 19 years of age or upward, and has had at least three years' service on deck at sea or on the Great Lakes, on a vessel or vessels to which this section applies, including decked fishing vessels, naval vessels or Coast Guard vessels; and every person shall be rated an able seaman, and qualified to serve as such on the Great Lakes and on the smaller lakes, bays, or sounds, who is 19 years of age or upward and has had at least 18 months' service on deck at sea or on the Great Lakes or on the smaller lakes, bays, or sounds, on a vessel or vessels to which this section applies, including decked fishing vessels, naval vessels, or Coast Guard vessels; and graduates of school ships approved by and conducted under rules prescribed by the Secretary of Commerce may be rated able seamen after 12 months' service at sea: *Provided*, That upon examination under rules prescribed by the Department of Commerce as to eyesight, hearing, and physical condition, such persons or graduates are found to be competent: *Provided further*, That upon examination, under rules prescribed by the Department of Commerce as to eyesight, hearing, physical condition, and knowledge of the duties of seamanship a person found competent may be rated as able seaman after having served on deck 12 months at sea, or on the Great Lakes; but seamen examined and rated able seamen under this proviso shall not in any case compose more than one-fourth of the number of able seamen required by this section to be shipped or employed upon any vessel.

Any person may make application to any board of local inspectors for a certificate of service as able seaman, and upon proof being made to said board by affidavit and examination, under rules approved by the Secretary of Commerce, showing the nationality and age of the applicant and the vessel or vessels on which he has had service and that he is entitled to such certificate under the provisions of this section the board of local inspectors shall issue to said applicant a certificate of service, which shall be retained by him and be accepted as prima facie evidence of his rating as an able seaman.

Each board of local inspectors shall keep a complete record of all certificates of service issued by them and to whom issued and shall keep on file the affidavits upon which said certificates are issued. [Act of Mar. 4, 1915, sec. 13. Effective on American vessels beginning Nov. 4, 1915; on vessels of foreign nations not covered by treaties Mar. 4, 1916; on vessels of other foreign nations after termination of treaties.]

Undermanning.

In case of desertion or casualty resulting in the loss of one or more of the seamen, the master must ship, if obtainable, a number equal to the number of those whose services he has been deprived of by desertion or casualty, who must be of the same

or higher grade or rating with those whose places they fill, and report the same to the United States consul at the first port at which he shall arrive, without incurring the penalty prescribed by the two preceding sections. This section shall not apply to fishing or whaling vessels or yachts. [Revised Statutes, sec. 4516. Act of Dec. 21, 1898, sec. 1; act of Mar. 4, 1915, sec. 1. Effective beginning Nov. 4, 1915. Navigation Laws of the United States, 1919, pp. 101-103.]

The agreement between the American Steamship Association and the Marine Firemen, Oilers, and Watertenders of the Atlantic and Gulf, an agreement concurred in and approved by the United States Shipping Board, requires all ocean-going vessels of 500 tons gross or over that carry coal passers to carry not less than three coal passers whose sea watches shall be divided into three and in no case is one man to be required to care for more than four fires on coal-burning vessels or 12 fires on oil-burning vessels.

The above rules also establish the standard crew complements in the deck and engine departments on vessels manned by the United States Shipping Board. These rules are also alterable when the circumstances warrant a change. It must be remembered, however, that the rules of this board are in no sense law nor are they obligatory upon other ship owners. They do serve, however, to establish what might be termed the American standard for manning foreign-going ocean and coastwise vessels. The following statement is reproduced from the report of the Marine and Dock Industrial Relations Division of the United States Shipping Board.⁸

Under date of February 1, 1919, the Division of Operations of the United States Shipping Board announced the adoption of the following standard crew complements to be carried in the deck and engine departments of all vessels operated by the Shipping Board:

Deck department.

Position.	Cargo vessels having dead-weight tonnage of—								
	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	11,000
Master.....	1	1	1	1	1	1	1	1	1
Mates.....	3	3	3	3	3	3	3	3	3
Carpenter.....	1	1	1	1	1	1	1	1	1
Boatswain.....	1	1	1	1	1	1	1	1	1
Able seamen.....	4	4	4	6	6	6	7	7	7
Ordinary seamen.....	2	2	2	2	2	2	3	3	3
Total.....	12	12	12	14	14	14	16	16	16

⁸ Marine and dock labor; work, wages, and industrial relations during the period of the war. Report of the Director of the Marine and Dock Industrial Relations Division, United States Shipping Board, submitted to the board as of Dec. 31, 1918. Washington, 1919. Pp. 188, 189.

Engine department.

Position.	Cargo vessels having indicated horsepower of—								
	1,000	1,250	1,500	1,750	2,000	2,250	2,500	2,750	3,000
<i>Coal-burning vessels.</i>									
Chief engineer.....	1	1	1	1	1	1	1	1	1
Assistant engineers.....	3	3	3	3	3	3	3	3	3
Deck engineer.....				1	1	1	1	1	1
Storekeepers.....						1	1	1	1
Oilers.....	3	3	3	3	3	3	3	3	3
Water tenders (not carried on vessels unless fitted with 2 or more water- tube boilers).....								3	3
Firemen.....	3	6	6	6	6	9	9	9	9
Coal passers.....	3	3	3	3	3	6	6	6	6
Total.....	13	16	16	17	17	24	24	27	27
<i>Oil-burning vessels.</i>									
Chief engineer.....	1	1	1	1	1	1	1	1	1
Assistant engineers.....	3	3	3	3	3	3	3	3	3
Deck engineer.....				1	1	1	1	1	1
Storekeepers.....								1	1
Oilers.....	3	3	3	3	3	3	3	3	3
Water tenders (not carried on vessels unless fitted with 2 or more water- tube boilers).....								3	3
Firemen.....	3	3	3	3	3	3	3	3	3
Wipers.....	2	2	2	2	2	3	3	3	3
Total.....	12	12	12	13	13	14	14	18	18

In addition to the above, vessels of the Shipping Board carry a supercargo and sometimes one or two clerks. One wireless operator is carried, unless there are over 50 persons on board, in which case the law requires two.

The figures given for firemen, coal passers, and water tenders are subject to some fluctuation, depending on the arrangement of the boilers and bunkers.

Shipping Board vessels carry six or more persons in the stewards' department; but work on the standardization of this department is still in progress (March, 1919).

Accommodation.

The national laws make fairly careful and complete provisions for the accommodations of the crews of merchant vessels of not less than 100 tons register including river steamboats, but excluding yachts and pilot boats. These provisions are found in section 4153, Revised Statutes, which prescribes how much space for the use of the crew may be deducted from the gross tonnage of a vessel in arriving at its register tonnage. Vessels, the construction of which was commenced before March 4, 1915, are required to allow 120 cubic feet to each seaman or apprentice and not less than 16 square feet measured on the floor or deck for each member of the crew. Not more than one berth shall be placed above another. The quarters must be well constructed, ventilated, and properly lighted, and made secure from bilge water. Other legal requirements fix the minimum food allowances and provide for slop chests, medicines, mess rooms,

washing facilities, and warm clothing. Section 4153, Revised Statutes, in part is as follows:

From the gross tonnage of every vessel of the United States there shall be deducted—

(a) The tonnage of the spaces or compartments occupied by or appropriated to the use of the crew of the vessel. Every place appropriated to the crew of the vessel shall have a space of not less than 72 cubic feet and not less than 12 superficial feet, measured on the deck or floor of that place, for each seaman or apprentice lodged therein. The provisions of this act requiring a crew space of 72 cubic feet per man shall apply only to vessels the construction of which shall be begun after June 30, 1895. Such place shall be securely constructed, properly lighted, drained, and ventilated, properly protected from weather and sea, and as far as practicable properly shut off and protected from the effluvium of cargo or bilge water; and failure to comply with this provision shall subject the owner to a penalty of \$500. Every place so occupied shall be kept free from goods or stores of any kind not being the personal property of the crew in use during the voyage; and if any such place is not so kept free the master shall forfeit and pay to each seaman or apprentice lodged in that place the sum of 50 cents a day for each day during which any goods or stores as aforesaid are kept or stored in the place after complaint has been made to him by any two or more of the seamen so lodged. No deduction from tonnage as aforesaid shall be made unless there is permanently cut in a beam and over the doorway of every such place the number of men it is allowed to accommodate with these words, "Certified to accommodate ——— seamen."

On all merchant vessels of the United States the construction of which shall be begun after the passage of this act, except yachts, pilot boats, or vessels of less than 100 tons register, every place appropriated to the crew of the vessel shall have a space of not less than 120 cubic feet and not less than 16 square feet, measured on the floor or deck of that place, for each seaman or apprentice lodged therein, and each seaman shall have a separate berth and not more than one berth shall be placed one above another; such place or lodging shall be securely constructed, properly lighted, drained, heated, and ventilated, properly protected from weather and sea, and, as far as practicable, properly shut off and protected from the effluvium of cargo or bilge water. And every such crew space shall be kept free from goods or stores not being the personal property of the crew occupying said place in use during the voyage. [Mar. 3, 1897, sec. 2; Mar. 4, 1915, sec. 6. Effective beginning Nov. 4, 1915.]

That in addition to the space allotment for lodgings hereinbefore provided, on all merchant vessels of the United States which in the ordinary course of their trade make voyages of more than three days' duration between ports, and which carry a crew of 12 or more seamen, there shall be constructed a compartment, suitably separated from other spaces, for hospital purposes, and such compartment shall have at least one bunk for every 12 seamen, constituting her crew: *Provided*, That not more than six bunks shall be required in any case.

Every steamboat of the United States plying upon the Mississippi River or its tributaries shall furnish an appropriate place for the crew, which shall conform to the requirements of this section, so far as they are applicable thereto, by providing sleeping room in the engine room of such steamboat, properly protected from the cold, wind, and rain by means of suitable awnings or screens on either side of the guards or sides and forward, reaching from the boiler deck to the lower or main deck, under the direction and approval of the supervising inspector general of steam vessels, and shall be properly heated.

All merchant vessels of the United States, the construction of which shall be begun after the passage of this act having more than 10 men on deck must have at least one light, clean, and properly ventilated washing place. There shall be provided at least one washing outfit for every two men of the watch. The washing place shall

be properly heated. A separate washing place shall be provided for the fireroom and engine-room men, if their number exceed 10, which shall be large enough to accommodate at least one-sixth of the men at the same time, and have hot and cold water supply and a sufficient number of washbasins, sinks, and shower baths.

Any failure to comply with this section shall subject the owner or owners of such vessel to a penalty of not less than \$50 nor more than \$500: *Provided*, That forecables shall be fumigated at such intervals as may be provided by regulations to be issued by the Surgeon General of the Public Health Service, with the approval of the Department of Commerce, and shall have at least two exits, one of which may be used in emergencies. [Navigation Laws of the United States, 1919, pp. 29-31.]

Section 4572 (Dec. 21, 1898) provides that "every vessel in foreign or domestic trade shall provide a safe and warm room for the use of seamen in cold weather," but this section is not applicable to fishing or whaling vessels or yachts. (Navigation Laws of the United States, 1919, p. 112.)

It is also provided that "the local inspectors shall, once in every year, at least, carefully inspect * * * each steam vessel within their respective districts, and shall satisfy themselves that every such vessel * * * has suitable accommodations for the crew." (Sec. 4417, Revised Statutes, as amended. Navigation Laws of the United States, 1919, p. 104.)

These laws are all general in their scope and unless otherwise specified therein they apply to all vessels under the jurisdiction of the Federal Government, whether engaged in ocean, coastwise, lake or river transportation.

The national law also makes careful provisions for the supplying of the crews of vessels with proper food, including 5 quarts of fresh water daily. Fishing or whaling vessels or yachts are exempt from these requirements. The following extract from the Revised Statutes shows the nature of these requirements:

SCALE OF PROVISIONS TO BE ALLOWED AND SERVED OUT TO CREW DURING THE VOYAGE.

(Revised Statutes, sec. 4612; act of Dec. 21, 1898, sec. 23; act of Mar. 4, 1915, sec. 10. Navigation Laws of the United States, 1919, pp. 93, 97.)

Article.	Unit.	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Beef, salt.....	Pound.....			1 $\frac{1}{4}$		1 $\frac{1}{4}$		1 $\frac{1}{4}$
Pork, salt.....	do.....		1		1		1	
Canned meat.....	do.....	1						
Fish, dry, preserved, or fresh.....	do.....						1	
Fresh bread.....	do.....	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Biscuit.....	do.....	2	2	2	2	2	2	2
Flour.....	do.....	4				4		
Corn meal.....	Ounce.....	4				4		
Potatoes or yams.....	Pound.....	1	1	1	1	1	1	1
Canned tomatoes.....	do.....	1					1	
Peas.....	Pint.....			3			3	
Beans.....	do.....		3					3
Rice.....	do.....		3		3			3
Onions.....	Ounce.....	4				4		4
Butter.....	do.....	2	2	2	2	2	2	2
Lard.....	do.....	1	1	1	1	1	1	1
Dried fruit.....	do.....	3		3		3		3
Sugar.....	do.....	3	3	3	3		3	3
Molasses.....	Pint.....	3		3		3		3
Coffee (green berry).....	Ounce.....		3	3	3		3	3
Tea.....	do.....		3	3	3		3	3
Pickles.....	Pint.....		1		1		1	
Vinegar.....	do.....			2				2
Mustard, pepper, and salt sufficient for seasoning.								

Substitutes.

One pound of flour daily may be substituted for the daily ration of biscuit or fresh bread; two ounces of dessicated vegetables for 1 pound of potatoes or yams; 6 ounces of hominy, oatmeal, or cracked wheat, or 2 ounces of tapioca, for 6 ounces of rice; 6 ounces of canned vegetables for one-half pound of canned tomatoes; one-eighth of an ounce of tea for three-fourths of an ounce of coffee; three-fourths of an ounce of coffee for one-eighth of an ounce of tea; 6 ounces of canned fruit for 3 ounces of dried fruit; one-half ounce of lime juice for the daily ration of vinegar; 4 ounces of oatmeal or cracked wheat for one-half pint of corn meal; 2 ounces of pickled onions for 4 ounces of fresh onions.

When the vessel is in port and it is possible to obtain the same, $1\frac{1}{2}$ pounds of fresh meat shall be substituted for the daily rations of salt and canned meat; one-half pound of green cabbage for one ration of canned tomatoes; one-half pound of fresh fruit for one ration of dried fruit. Fresh fruit and vegetables shall be served while in port if obtainable. The seamen shall have the option of accepting the fare the master may provide but the right at any time to demand the foregoing scale of provisions. The foregoing scale of provisions shall be inserted in every article of agreement and shall not be reduced by any contract, except as above, and a copy of the same shall be posted in a conspicuous place in the galley and in the forecabin of each vessel. Fishing or whaling vessels or yachts exempt. [Act of Dec. 21, 1898, sec. 26. Navigation Laws of the United States, 1919, pp. 96, 97.]

In addition to the various foregoing provisions for the welfare and comfort of seamen, the national laws also make other requirements for their benefit. Sections 4564 to 4568 (Navigation Laws of the United States, 1919, pp. 109, 110) make careful provisions designed to require masters of vessels to maintain an ample supply of fresh water and provisions on board their ships. Medicines and anti-scorbutics are required to be provided by sections 4569 and 4570. (Navigation Laws of the United States, 1919, p. 111.) Certain vessels are also required to carry slop chests and detailed provisions as to their contents are prescribed. (Revised Statutes, sec. 4569, acts of June 26, 1884, sec. 11, and June 19, 1886, sec. 13. Navigation Laws of the United States, 1919, pp. 111, 112.) Provisions for a warm room and clothing are made by the provisions of section 4572 of the Revised Statutes. (Navigation Laws of the United States, 1919, p. 112.)

The rules of the United States Shipping Board for deck and engine-room crews require that proper bedding—mattresses, pillows, spreads, blankets, and linen, etc.—shall be furnished each member of the crew and that the engine-room crew be provided with a mess room. These requirements in practically the same form are also found in the working rules of the various classes of unlicensed seamen. These rules were established by agreements between the United States Shipping Board, the American Steamship Association, and the following organizations of seamen: Eastern and Gulf Sailors' Association; Marine Cooks' and Stewards' Association of the Atlantic and Gulf; Marine Firemen, Oilers, and Watertenders of the Atlantic

and Gulf; Marine Cooks' and Stewards' Association of the Pacific Coast; Marine Firemen, Oilers, and Watertenders of the Pacific; Sailors' Union of the Pacific.

The rules of the last-named association also call for a mess room for the accommodation of the crew which shall be so constructed as to afford a sitting room for all and so situated as to be protected from the weather and the heat and odor from the engine room.

Item II of the Agenda.

Articles of Agreement.

THE seamen of this country are not engaged according to any particular system. The law imposes the duty of providing facilities for the employment of seamen upon the shipping commissioners, but Congress has never appropriated any money to be devoted to this purpose, and as a consequence no such facilities are available. (See Navigation Laws of the United States, 1919, pp. 64, 65, 66.)

All seamen on a vessel destined for a foreign port (Mexico, Canada, and the West India Islands excepted) are required to sign articles of agreement. These documents are a part of a ship's papers and must be signed by the seamen and the master in the presence of a United States shipping commissioner. The articles must contain the nature and duration of the voyage, the number and description of the crew, the time when the seaman is to be on board to begin work, the capacity in which the seaman is to serve, the amount of wages, the scale of provisions, the regulations as to conduct on board the vessel, fines, etc., and stipulations as to the allotment of wages. These requirements are set out more fully in the following extract from the Revised Statutes (sec. 4511):

Agreement to Ship in Foreign Trade.

The master of every vessel bound from a port in the United States to any foreign port other than vessels engaged in trade between the United States and the British North American possession, or the West India Islands, or the Republic of Mexico, or of any vessel of the burden of 75 tons or upward, bound from a port on the Atlantic to a port on the Pacific, or vice versa, shall, before he proceeds on such voyage, make an agreement, in writing or in print, with every seaman whom he carries to sea as one of the crew, in the manner hereinafter mentioned; and every such agreement shall be, as near as may be, in the form given in the table marked A, in the schedule annexed to this title [R. S. 4501-4613], and shall be dated at the time of the first signature thereof, and shall be signed by the master before any seaman signs the same, and shall contain the following particulars:

First. The nature and, as far as practicable, the duration of the intended voyage or engagement, and the port or country at which the voyage is to terminate.

Second. The number and description of the crew, specifying their respective employments.

Third. The time at which each seaman is to be on board, to begin work.

Fourth. The capacity in which each seaman is to serve.

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Fifth. The amount of wages which each seaman is to receive.

Sixth. A scale of the provisions which are to be furnished to each seaman.

Seventh. Any regulations as to conduct on board and as fines, short allowances of provisions, or other lawful punishments for misconduct, which may be sanctioned by Congress or authorized by the Secretary of Commerce and Labor not contrary to or not otherwise provided for by law, which the parties agreed to adopt. [Mar. 3, 1897, sec. 19; Feb. 14, 1903, sec. 10.]

Eighth. Any stipulations in reference to allotment of wages, or other matters not contrary to law. [Repealed so far as relates to allotments in trade between the United States, Dominion of Canada, Newfoundland, the West Indies, and Mexico, and coasting trade of the United States, except between Atlantic and Pacific ports, by section 25 of act of December 21, 1898]; (Revised Statutes, sec. 4511) June 26, 1884, section 10; December 24, 1898, section 25. [Navigation Laws of the United States, 1919, pp. 66, 67.]

The following rules shall be observed with respect to agreements (Revised Statutes, sec. 4512):

First. Every agreement, except such as are otherwise specially provided for, shall be signed by each seaman in the presence of a shipping commissioner.

Second. When the crew is first engaged the agreement shall be signed in duplicate, and one part shall be retained by the shipping commissioner, and the other part shall contain a special place or form for the description and signatures of persons engaged subsequently to the first departure of the ship, and shall be delivered to the master.

Third. Every agreement entered into before a shipping commissioner shall be acknowledged and certified under the hand and official seal of such commissioner. The certificate of acknowledgment shall be indorsed on or annexed to the agreement, and shall be in the following form:

State of, County of

On this day of, personally appeared before me, a shipping commissioner in and for the said county, A. B., C. D., and E. F., severally known to me to be the same persons who executed the foregoing instrument, who each for himself acknowledged to me that he had read or had heard read the same; that he was by me made acquainted with the conditions thereof, and understood the same; and that, while sober and not in a state of intoxication, he signed it freely and voluntarily, for the uses and purposes therein mentioned.

Section 4511 shall not apply to masters of vessels where the seamen are by custom or agreement entitled to participate in the profits or result of a cruise or voyage, nor to masters of coastwise nor to masters of lake-going vessels that touch at foreign ports; but seamen may, by agreement, serve on board such vessels a definite time, or, on the return of any vessel to a port in the United States, may reshup and sail in the same vessel on another voyage, without the payment of additional fees to the shipping commissioner. [Revised Statutes, sec. 4513, Feb. 18, 1895. June 19, 1886.]

[NOTE.—Section 4511, however, does apply in part to masters of coastwise vessels whose crews are shipped under provisions of the act of Feb. 18, 1895.]

The master shall, at the commencement of every voyage or engagement, cause a legible copy of the agreement, omitting signatures, to be placed or posted up in such part of the vessel as to be accessible to the crew; and on default shall be liable to a penalty of not more than \$100. [Revised Statutes, sec. 4519. Navigation Laws of the United States, 1919, pp. 67, 68.]

Shipment in Foreign Ports Before Consuls.

Every master of a merchant vessel who engages any seaman at a place out of the United States, in which there is a consular officer or commercial agent, shall, before carrying such seaman to sea, procure the sanction of such officer, and shall engage

seamen in his presence; and the rules governing the engagement of seamen before a shipping commissioner in the United States shall apply to such engagements made before a consular officer or commercial agent; and upon every such engagement the consular officer or commercial agent shall indorse upon the agreement his sanction thereof, and an attestation to the effect that the same has been signed in his presence, and otherwise duly made. [Revised Statutes, sec. 4517. Navigation Laws of the United States, 1919, p. 69.]

The legal requirements for the signature of articles of agreement of seamen are somewhat different on sail or steam vessels engaged in the coastwise trade (except between the Atlantic and Pacific coasts), on vessels engaged in foreign trade on the Great Lakes, or on vessels where the seamen are entitled to a share in the profits of a cruise. The chief points of difference are that in this class of trade the articles of agreement do not have to contain stipulations as to the scale of provisions to which each seaman is entitled nor do they have to contain provisions for the allotment of wages. (Navigation Laws of the United States, 1919, pp. 72, 73.)

If a master takes any seaman or mariner to sea on a vessel bound from one State to another nonadjoining State without first signing a contract of agreement as required by law, then the seaman so unlawfully shipped shall be entitled to the highest wages paid at the port where he was shipped and in addition the master will be liable to the payment of a fine of \$20, half of which goes to the seaman. (Navigation Laws of the United States, 1919, pp. 73, 74.)

If a seaman has any cause for complaint he may have his case arbitrated by a shipping commissioner provided the master also consents, in which case his decision is final, but either party may refuse arbitration and resort to action in the Federal courts. (Navigation Laws of the United States, 1919, pp. 85, 86.)

Further protection is accorded seamen by insuring the observance of shipping agreements in so far as they relate to wages, by requiring that seamen be discharged before a shipping commissioner if in America, or a consular officer if in a foreign port. When a seaman is so discharged the master is required to pay the wages due the seaman in the presence of said shipping commissioner or consul. (Navigation Laws of the United States, 1919, pp. 76-78.)

The working rules established by agreements with the seamen's unions provide that in doubtful cases and cases of dispute the employee should do as his officers require and refer the matter in question to the union for settlement.

The Marine Engineers' Beneficial Association, by rule 12 of the working rules agreed upon by them and the ship owners, provides that if, after investigation, it is found that any member of the association was discharged for the observance of the rules, no other member would be permitted to work with his substitute. This association consists of licensed engineer officers.

Facilities for Registering Seamen and Finding Employment for Them.

It is a part of the duties of the shipping commissioners to keep a register of the names of seamen and their characters. The issuance of certificates of service to qualify ordinary or apprentice seamen for a rating as able seamen is intrusted to the boards of local inspectors who are under the Department of Commerce. It is also incumbent upon the local inspectors to keep complete records of all certificates of service issued by them. Penalties are imposed upon any shipping commissioner or clerk who unlawfully demands or receives a fee for his services. The provisions of the laws imposing these obligations are as follows:

Shipping Officers.

The general duties of a shipping commissioner shall be:

First. To afford facilities for engaging seamen by keeping a register of their names and characters.

Second. To superintend their engagement and discharge, in manner prescribed by law.

Third. To provide means for securing the presence on board at the proper time of men who are so engaged.

Fourth. To facilitate the making of apprenticeships to the sea service.

Fifth. To perform such other duties relating to merchant seamen or merchant ships as are now or may hereafter be required by law. [Revised Statutes, sec. 4508.]

In any port in which no shipping commissioner shall have been appointed, the whole or any part of the business of a shipping commissioner shall be conducted by the collector or deputy collector of customs of such port; and in respect of such business such customhouse shall be deemed a shipping office, and the collector or deputy collector of customs to whom such business shall be committed shall, for all purposes, be deemed a shipping commissioner within the meaning of this title [R. S., 4501-4613]. [Revised Statutes 4503.]

The laws prescribe the various periods of service necessary to qualify men to become able seamen. When a seaman has acquired the necessary qualifications to entitle him to serve as an able seaman he may make application to any board of local inspectors for a certificate of service as able seaman. The board of local inspectors after giving the applicant an examination issues him a certificate and records it.

The national law does not specifically provide employment exchanges for seamen, although the placement of seamen was included during the war by the Federal employment offices⁹ as part of their general activities. The United States Shipping Board maintained a recruiting system during the war and still continues its training ships for the purpose of training young men for the sea service, both on its own vessels and on those of other shipowners. In New York City there is maintained what is called the Sea Service Bureau for the placement of seamen, but this is not a Federal employment exchange. The various seamen's unions afford facilities for the securing of

⁹ For discussion of the United States Employment Service, see pp. 127-140.

employment for their members. The transportation companies also make use of various charitable institutions which devote their attention to the needs of seamen.

Washington Conventions and Recommendations on Unemployment and Unemployment Insurance.

The Federal Government has at present no power to establish an all-inclusive system of unemployment insurance. The individual States could do so, but none has taken such action. (Massachusetts and New York have both considered bills on the subject. Other States have conducted or are now conducting investigations.) It is a matter of dispute whether the United States, by becoming a party to the League of Nations, and accepting the draft conventions affecting labor, would thereby acquire the authority under our Constitution to legislate to carry the terms of those conventions directly into effect. Some of our best constitutional lawyers hold that a treaty once entered into becomes "the supreme law of the land" regardless of State legislation to the contrary. The only question to be determined by the Federal Supreme Court, in the view of these lawyers, is whether the subject matter of the treaty is a matter which may properly be referred for international negotiations. Other interpreters of the Constitution hold very vigorously that jurisdiction over labor matters, except in so far as expressly granted to the Federal Government, is among the things "reserved to the States and to the people thereof," and can not be dealt with by the Federal Government by treaty any more than by legislation in the absence of a treaty. The Federal Government could, however, immediately establish an unemployment insurance system taking in all seamen engaged in both foreign and interstate commerce.

It would not be within the power of Congress at present directly to legislate out of existence private employment agencies charging fees for their services. The Supreme Court has declared unconstitutional a law enacted by the State of Washington (U. S. Supreme Court Reports, vol. 37, p. 662; Bulletin No. 246 of the United States Bureau of Labor Statistics, pp. 108-112), which forbade the taking of fees from workmen for securing employment for them. The majority opinion—the court divided 5 to 4—states: "There is nothing inherently immoral or dangerous to public welfare in acting as a paid representative of another to find a position in which he can earn an honest living." The prohibition in question was held by the court to be an arbitrary interference with the right to contract and to carry on business guaranteed by the fourteenth amendment to the Constitution. This decision, however, would in no way interfere with the placing of seamen without charging fees by governmental agencies—such as the shipping commissioners now in existence.

Item III of the Agenda.

Prohibition of the Employment of Children Under 14 Years of Age.

THE age fixed by law (Revised Statutes, secs. 4509, 4510) at which boys may be apprenticed to the sea service is 12 years. The period of apprenticeship terminates when the boy arrives at the age of 18 years. (Navigation Laws of the United States, 1919, pp. 66, 67.) No other limitations as to age are to be found in the statutes. It may be added that in actual practice apprenticeships are very rare and that this method of employing boys in the sea service is seldom resorted to. Boys are not shipped as apprentices but simply as boys, or, if they have the necessary physical qualifications, as ordinary seamen.

In order that the draft convention adopted in Washington prohibiting the employment of children under 14 years of age may be applied to the mercantile marine of this country it would be necessary for Congress to pass a law to that effect.

Item IV of the Agenda.

The Possibility of Establishing an International Code for Seamen.

THE Seamen's Act of the United States, being very much in the nature of a code, demonstrates the possibility of making an international code for seamen.

The requirements of the sea service make it necessary that more stringent disciplinary measures be applied to seamen at sea than to men in other classes of industry. A distinction should be made between the service of seamen while at sea and while in a safe harbor. In the former case suitable penalties should be provided to enforce obedience and the efficient performance of their duties by seamen, but while in a safe harbor seamen should be subject to only such civil liabilities as those to which other classes of workmen are subject. Payment of wages in advance before they are earned should in all cases be prohibited. The existing laws of the United States relating to seamen might be taken as the basis for an international seamen's code. Certain specific provisions could be modified to meet different conditions, but the fundamental principles of justice and fair dealing toward seamen contained in these laws should be retained as the foundation of an international seamen's code.

Price Fixing by the Government During the War.

By C. F. STODDARD.

THE "war powers" of the President of the United States, so frequently referred to as the source of and sanction for all acts of the Chief Executive not expressly granted by the Constitution, are not even referred to in that document, much less are they defined as to nature or delimited as to scope. These indefinite but very extensive powers which have been granted to every war President, and in almost unlimited degree to President Wilson, have arisen out of the necessity for a central executive power in time of national crisis. Justice Story, in his Commentaries on the Constitution, illustrates the wisdom of such a policy in the following language:

Of all the cases in the concerns of government, the direction of war most peculiarly demands those qualities which distinctly exercise the power by a single hand. Unity of plan, promptitude, activity, and decision are indispensable to success, and this can scarcely exist except where a single magistrate is intrusted exclusively with the power.

The very essence of administration is action and it is impossible for a legislative body to act promptly. Quite possibly the "war powers" might have been successfully invoked by the President, had he so desired, for the purpose of devising a complete system of price control and price fixing of "necessary" commodities. President Wilson, however, did not attempt to stretch the already much extended "war powers" over this field. He realized that ample authority to establish and pay fair prices for such material as the Government might need in an emergency had been conferred upon him by the provisions of the National Defense Act (approved June 3, 1916), which empowered him to commandeer manufacturing plants should war needs not be sufficiently met "at a reasonable price as determined by the Secretary of War." This provision of the National Defense Act is as follows:¹

The President, in time of war or when war is imminent, is empowered, through the head of any department of the Government, in addition to the present authorized methods of purchase or procurement, to place an order with any individual, firm, association, company, corporation, or organized manufacturing industry for such product or material as may be required, and which is of the nature and kind usually produced or capable of being produced by such individual, firm, company, association, corporation, or organized manufacturing industry.

Compliance with all such orders for products or material shall be obligatory on any individual, firm, association, company, corporation, or organized manufacturing industry or the responsible head or heads thereof and shall take precedence over all

¹ United States Statutes at Large, vol. 39, p. 213.

other orders and contracts theretofore placed with such individual, firm, company, association, corporation, or organized manufacturing industry, and any individual, firm, association, company, corporation, or organized manufacturing industry or the responsible head or heads thereof owning or operating any plant equipped for the manufacture of arms or ammunition, or parts of ammunition, or any necessary supplies or equipment for the Army, and any individual, firm, association, company, corporation, or organized manufacturing industry or the responsible head or heads thereof owning or operating any manufacturing plant, which, in the opinion of the Secretary of War shall be capable of being readily transformed into a plant for the manufacture of arms or ammunition, or parts thereof, or other necessary supplies or equipment, who shall refuse to give to the United States such preference in the matter of the execution of orders, or who shall refuse to manufacture the kind, quantity, or quality of arms or ammunition, or the parts thereof, or any necessary supplies or equipment, as ordered by the Secretary of War, or who shall refuse to furnish such arms, ammunition, or parts of ammunition, or other supplies or equipment, *at a reasonable price as determined by the Secretary of War*, then, and in either such case, the President through the head of any department of the Government, in addition to the present authorized methods of purchase or procurement herein provided for, is hereby authorized *to take immediate possession of any such plant or plants*, and through the Ordnance Department of the United States Army, to manufacture therein in time of war, or when war shall be imminent, such product or material as may be required. * * *

The compensation to be paid to any individual, firm, company, association, corporation, or organized manufacturing industry for its products or material, or as rental for use of any manufacturing plant while used by the United States, shall be fair and just.

It was not until the Food and Fuel Control Act² was approved (Aug. 10, 1917) that the President was specifically authorized to "fix" prices—the commodities wheat and coal and coke being named. This act also contained the following general provisions, the portions italicized particularly being interpreted as constituting authority to establish prices:

By reason of the existence of a state of war, it is essential to the national security and defense, for the successful prosecution of the war, and for the support and maintenance of the Army and Navy, *to assure an adequate supply and equitable distribution, and to facilitate the movement of foods, feeds, fuel—including fuel oil and natural gas—and fertilizer and fertilizer ingredients, tools, utensils, implements, machinery, and equipment required for the actual production of foods, feeds, and fuel, hereafter in this act called necessities; to prevent, locally or generally, scarcity, monopolization, hoarding, injurious speculation, manipulations, and private controls, affecting such supply, distribution, and movement; and to establish and maintain governmental control of such necessities during the war.* For such purposes the instrumentalities, means, methods, powers, authorities, duties, obligations, and prohibitions hereinafter set forth are created, established, conferred, and prescribed. *The President is authorized to make such regulations and to issue such orders as are essential effectively to carry out the provisions of this act.*

SEC. 2. In carrying out the purposes of this act the President is authorized to *enter into any voluntary arrangements or agreements, to create and use any agency or agencies, to accept the services of any person without compensation, to cooperate with any agency*

² United States Statutes at Large, vol. 40, p. 276.

or person, to utilize any department or agency of the Government, and to coordinate their activities so as to avoid any preventable loss or duplication of effort or funds.

SEC. 4. It is hereby made unlawful for any person willfully to destroy any necessities for the purpose of enhancing the price or restricting the supply thereof; * * * to engage in any discriminatory and unfair, or any deceptive or wasteful practice or device, or to make any unjust or unreasonable rate or charge in handling or dealing in or with any necessities; to conspire, combine, agree, or arrange with any other person * * * (d) to prevent, limit, or lessen the manufacture of the production of any necessities in order to enhance the price thereof, or (e) to exact excessive prices for any necessities * * *.

The President was also authorized, by this act, to license the importation, manufacture, storage, or distribution of any necessary and to prescribe regulations for the issuance of such licenses, the words of the provision being as follows:

SEC. 5. From time to time, whenever the President shall find it essential to license the importation, manufacture, storage, mining, or distribution of any necessities, in order to carry into effect any of the purposes of this act, and shall publicly so announce, no person shall, after a date fixed in the announcement, engage in or carry on any such business specified in the announcement of importation, manufacture, storage, mining, or distribution of any necessities as set forth in such announcement, unless he shall secure and hold a license issued pursuant to this section. The President is authorized to issue such licenses and prescribe regulations for the issuance of licenses and requirements for systems of accounts and auditing of accounts to be kept by licensees, submission of reports by them, with or without oath or affirmation, and the entry and inspection by the President's duly authorized agents of the places of business of licensees. Whenever the President shall find that any storage charge, commission, profit, or practice of any licensee is unjust or unreasonable, or discriminatory and unfair, or wasteful, and shall order such licensee, within a reasonable time fixed in the order, to discontinue the same, unless such order, which shall recite the facts found, is revoked or suspended, such licensee shall, within the time prescribed in the order, discontinue such unjust, unreasonable, discriminatory, and unfair storage charge, commission, profit, or practice. *The President may, in lieu of any such unjust, unreasonable, discriminatory, and unfair storage charge, commission, profit, or practice, find what is a just, reasonable, nondiscriminatory, and fair storage charge, commission, profit, or practice, and in any proceeding brought in any court such order of the President shall be prima facie evidence.*

This licensing provision proved to be a most effective weapon, for unless the prices fixed by the President through any properly authorized agency were adhered to by producers and dealers the licenses could be withdrawn and the offending parties restrained.

A broad interpretation of these provisions of law, together with the exercise of his "war powers," enabled the President to pursue a policy of price determination and regulation which in its effect was the same as though price fixing in its strictest interpretation had been authorized or exercised.

Throughout this article the term "price fixing" is used in a broad sense, including the regulation of prices directly or indirectly by any Government agency. Strictly speaking, the policy was one of price stabilization rather than price fixing.

Price fixing by the Government began in the middle of 1917. The primary purpose was to stimulate production, to insure rapid delivery of supplies, and to prevent extortionate prices, and consequently excessive profits. The stimulation of production was preeminently necessary, and to effect this the prices established were in many instances somewhat abnormal—higher than would otherwise have been the case. In most instances the prices fixed were those to be paid by the Government or by the Allied Governments, but in many cases, notably food and fuel, private enterprises and the public generally were directly benefited. These prices were, as a rule, determined and proclaimed as the result of agreement between the Government and producers and manufacturers, the latter submitting to an inevitable situation from patriotic motives and because of the legislative powers of the Government to commandeer industry if voluntary agreements should fail. As a rule, the price fixed was a maximum, although practically the maximum became the minimum. Metals and metal products furnished the widest field for price fixing, followed by textiles, building material, foods, farm products, drugs and chemicals, and fuel. Attention was first centered upon basic raw material, such as iron ore, copper, and lumber, then upon materials entering into munitions of war, such as sulphuric acid, zinc, and platinum, and finally upon articles needed for general consumption, such as coal, sugar, and flour.

Price-fixing Agencies.

THERE were many agencies which during the period of the war assumed the functions of price fixing. Some of these, for example, the Federal Trade Commission, the War Trade Board, the United States Shipping Board, and various sections of the Army and Navy Departments, established prices only under certain circumstances and on a limited number of commodities connected with their own particular interest, and for this reason their activities will not be considered in this article. With regard to the Army and Navy Departments, it should be emphasized that it was highly important to obtain material and supplies for war purposes, regardless of cost, and the prices determined were in many, perhaps most, instances considerably in excess of the prices that would have been established had there been an opportunity to study all the factors involved and really fix prices that could be regarded as fair to the Government.

The most important price-fixing agencies were the Food Administration, the Fuel Administration, and the War Industries Board, the latter functioning for the most part through its price-fixing committee which was established early in 1918 and which was affiliated with the board but answerable directly to the President.

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The Food Administration was created by the President in August and the Fuel Administration in September of 1917, the former under the direction of Herbert Hoover and the latter headed by Dr. Harry A. Garfield, president of Williams College. Protection of the people was the first object of the Food and Fuel Administrations; they followed the commodities all the way from producer to consumer, fixing prices that the Government should pay and that would benefit the public as well.

The War Industries Board and later its price-fixing committee were concerned primarily with establishing prices to be paid by the United States—in short, with the protection of the Government. They did not extend their activities to include retailers, and in only a few instances were wholesalers included. The President, however, had suggested that prices charged by producers to the Government and to private industry should be uniform, and as a result the general public benefited.

Price Fixing by the Food Administration.

THE organization of the Food Administration was extensive and was developed as rapidly as possible after the appointment of Mr. Hoover as food administrator. On August 16, 1917, the President approved the appointment, for each State, of a Federal food administrator whose duty was to assist in the enforcement of the policies of the Food Administration in its efforts to stabilize conditions, to protect honest enterprises against illegitimate competition, and to correct the abnormalities and abuses that had crept into trade by reason of the world disturbance. These local administrators were in turn assisted by "price interpreting boards" in the principal centers of population, these boards consisting of representatives from wholesalers, retailers, and consumers. They were directed to determine fair margins of profit on retail sales and to publish in the local newspapers the prices resulting from their determinations. They were not legally empowered to fix retail prices but the effect was the same, for the prices published were regarded by the public and by retailers as maximum prices.

Fair-Price Committee.

It was definitely announced by the Food Administration that its aim would be to stabilize and not to fix prices, although, as already intimated, the latter was practically accomplished by the application of its power to license producers and large dealers. Although too late to have any effect upon the 1917 production of wheat, it became evident that it would be necessary to establish a fair price for the crop of that year. Accordingly the Food Administration, with the

approval of the President, appointed, on August 14, 1917, the so-called fair-price committee with the one purpose of determining what the Government should pay for the 1917 harvest. Dr. Harry A. Garfield, president of Williams College, afterwards Fuel Administrator, was appointed chairman of this committee, which was made up of representatives of the wheat-producing sections of the country and the consuming public.³

On August 30 a report was submitted to the President recommending a price of \$2.20 per bushel for No. 1 northern spring wheat at Chicago, and the President issued an order based on this determination establishing this as the basic price from which the prices of all other grades were to be determined applicable at each primary market in the country. Taking \$2.20 as the basic price, the prices of other grades at Chicago ranged from \$2.10 for No. 1 humpback to \$2.24 for No. 1 dark hard winter, No. 1 dark northern spring, and No. 1 amber durum. The prices of Nos. 2, 3, and 4 of each grade were fixed, respectively, at 3, 6, and 10 cents less than basic. The differentials between the different primary markets of the United States were as follows: Kansas City and Omaha, 5 cents less than the basic price; Duluth and Minneapolis, 3 cents less; St. Louis, 2 cents less; New Orleans and Galveston, basic; Buffalo, 5 cents more; Baltimore and Philadelphia, 9 cents more; and New York, 10 cents more than the basic price. These prices were later revised.

The following is the text of the committee's report. It indicates the procedure adopted and the reasons therefor, constituting a brief statement of the policy pursued in arriving at the determined price.

TO THE PRESIDENT OF THE UNITED STATES:

The undersigned committee has been asked by you to recommend the price which the Government should pay for the 1917 crop of wheat.

In its deliberations the committee has kept constantly in mind the three following factors:

First. The fact that the United States is at war.

Second. The need of encouraging the producer.

Third. The necessity of reducing the cost of living to the consumer.

The normal laws of supply and demand have been violently interfered with and Congress has undertaken to offset this disturbance by conferring extraordinary powers upon the President to stabilize prices. Each of the foregoing factors grows out of

³ The other members of the committee were: Charles J. Barrett (farmer), president of Farmers' Union, Union City, Ga.; William N. Doak, vice president and national legislative representative of Brotherhood of Railroad Trainmen at Washington, Roanoke, Va.; Eugene E. Funk (farmer and member of firm of Funk Bros. Seed Co.), president of National Corn Association, Bloomington, Ill.; Edwin F. Ladd (college president and professor of chemistry), president of North Dakota Agricultural College, Fargo, N. Dak.; R. Goodwin Rhett (banker and business man), president of Chamber of Commerce of the United States, Charleston, S. C.; J. W. Shorthill (farmer), secretary of National Council of Farmers' Cooperative Associations, York, Nebr.; James W. Sullivan, representative of American Federation of Labor at Washington, Brooklyn, N. Y.; L. J. Tabor (farmer), master of Ohio State Grange, Barnesville, Ohio; Frank W. Taussig (professor of economics), chairman of United States Tariff Commission, Cambridge, Mass.; Theodore N. Vail (capitalist), president of American Telephone & Telegraph Co., New York, N. Y.; Henry J. Waters (college president and professor of agricultural science), president of Kansas State Agricultural College, Manhattan, Kans.

conditions which have received the careful attention of the committee. Chief among them are: That the wheat yield in a great and important section of the country has this year been below the normal; that over against this situation is the crying need among the whole body of the population, especially the wage earners, that the rising tide of costs shall be stayed and reduced as rapidly as possible consistent with the welfare of the producer; that the Government is at the present time engaged in the great task of reducing and stabilizing cost of other staple commodities; that the wheat of the world is abundant for its needs, even disregarding the stores in Russia, but because of lack of shipping and war conditions the burden of supplying wheat to the Allies and to neutral nations rests for the time being upon the United States and Canada.

Your committee has also considered the fact that the Government price for the 1917 wheat crop is in effect a continuing guaranty until the minimum price guaranteed by Congress for the crop of 1918 goes into effect (July 1, 1918). It has considered the relation of the 1918 minimum-price guaranty to the price here recommended. It has also considered the effect which an early termination of the war would have upon the wheat markets of the world.

In reaching its conclusion the committee has been guided by the principles you have announced, that a fair price should be based upon the cost of production for the entire country, plus a reasonable profit. We have relied upon the cost estimates for the crop of 1917 furnished by the United States Department of Agriculture, checked by the results of our independent investigations and the evidence submitted to the committee by producers and their representatives.

The committee has considered the regulations recently established by the United States Food Administration Grain Corporation for the different grades of the wheat through which all transactions in wheat are to be standardized and speculation to be entirely eliminated. Also that profits to the grain dealer, miller, and flour dealer have been regulated and reduced by the Grain Corporation, effecting a material reduction in the cost of flour.

In consideration of the foregoing facts and circumstances, this committee respectfully recommends that the price on No. 1 northern spring wheat, or its equivalent, at Chicago be \$2.20 per bushel.

[Signed by the Committee.]

The Food and Fuel Control Act guaranteed a minimum price of \$2 for the 1918 crop. The price, however, was fixed by the President on February 21, 1918, at \$2.20, the same as had been established for the 1917 crop. On September 2, 1919, the President issued a proclamation naming \$2.26 as the minimum basic price for the 1919 harvest.

To facilitate wheat purchasing, selling, and accounting, and the taking over of the entire 1917 harvest, if necessary to maintain prices determined by the fair-price committee, the Food Administration Grain Corporation was formed with a capital of \$50,000,000. This was, on June 21, 1918, increased by the President to \$150,000,000, the purpose being (1) to enable the Food Administration to make the necessary readjustments in wheat prices at guaranty terminals to cover increases in railroad rates, and (2) in view of the large 1918 harvest to provide the Grain Corporation with the increased

capital necessary to carry out the Government's guaranty to the producers.

There appears to have been no scientific basis for the price fixed by the fair-price committee, no cost accounts were examined, and no statistical computations were made. The figure was reached "in consequence of an almost precipitous desire to increase the wheat supply and also to placate the farmers."

The Food Administration took the position that it had no legal authority to fix prices, so it adopted the method of voluntary agreement. The general policy pursued was to regulate prices, basing them on cost of production, as reported by producers, plus a stipulated margin of profit per unit of output—a margin which soon came to be interpreted as a minimum rather than a maximum. This may be illustrated by reference to the order fixing maximum profits of flour millers at 25 cents a barrel. This method has been criticized as not promoting efficiency of operation and as offering dishonest millers an opportunity and temptation to pad their reported costs, but it has been justified as "the simplest expedient of a rough and ready kind designed to meet the necessities of the situation," and "was perhaps the only method of regulation which offered a fair chance of success. Though surprisingly effective in the main, it led none the less to serious difficulties."⁴

By a campaign for food conservation carried into the homes of the land and by evidences of real effort to protect the public from excessive prices, the Food Administration succeeded in gaining the general approval of consumers and in so arousing public sentiment against the would-be profiteer in foodstuffs that the latter found himself in an unpopular position and was effectively restrained by the desire to retain the good will of his customers. Too much can not be said in support of the very great and effective power of public opinion in this connection, for it kept most private individuals from hoarding and prevented retailers from attempting to reap excessive profits quite as effectively as the fear that their licenses would be revoked.

Licensing.

As already noted, the most effective weapon conferred upon the Food Administration by the Food and Fuel Control Act was the power to require producers and large dealers to procure licenses and to observe certain detailed regulations made applicable to licensees. A severe penalty was provided for failure to comply. By this method maximum prices were established and maintained. The licensing plan was embodied in a presidential proclamation issued on October

⁴ "The wheat and flour trade under Food Administration control: 1917-18," by Wilfred Eldred. *The Quarterly Journal of Economics*, November, 1918, p. 40.

8, 1917, which set forth 20 commodities and their products,⁵ constituting the prime necessities of life, as subject to license.

Subsequently (Nov. 7, 1917) the President issued a proclamation, effective December 10, declaring it a military necessity to license the manufacture and the sale of bread, cake, crackers, biscuit, pastry, and other bakery products. Concerns using less than 10 barrels of flour and meal a month were excepted. Regulations issued under this proclamation forbade unnecessary profits, or charges which might be unjust, exorbitant, unreasonable, or unfair, and stipulated that manipulation by resales, especially if tending to higher prices, would be regarded as unfair.

The object of this licensing provision was to enlist the cooperation of all patriotic men in the various trades so as to eliminate speculation, hoarding, unreasonable profits, and wasteful practices in the great distribution system of the country. It was adopted to provide more effective machinery for the enforcement of the food law, and it unquestionably assisted in enabling the Food Administration to control prices.

Flour and Bread.

During the early summer of 1917 the Allies had been bidding against one another for flour and wheat in a market stripped of its surplus. A barrel of flour, made from wheat for which the farmer got \$7, was sold at \$15 and threatened to go higher. By fixing the basic price of wheat at \$2.20, by the limitation of profits to 25 cents a barrel, as already noted, by the licensing of bakers, etc., and by the establishment by the United States and the Allied Governments of a single purchasing agency, panic prices were made to drop, and with the assurance of a stable price the mills began to do business on a known margin. The immediate effect of these measures was a fall in the price of flour in two months to \$10.50 a barrel. This has been characterized as "an achievement of the first importance, and, whatever the offsets and inadequacies, is sufficient to justify the work of the Food Administration." Government control was exercised in turn over the margin allowed to the

⁵ This portion of the proclamation reads as follows:

It is essential in order to carry into effect the purposes of said act to license the importation, manufacture, storage, and distribution of necessities to the extent hereinafter specified.

All persons, firms, corporations, and associations engaged in the business either of (1) operating cold-storage warehouses (a cold-storage warehouse, for the purpose of this proclamation, being defined as any place artificially or mechanically cooled to or below a temperature of 45 degrees above zero Fahrenheit, in which food products are placed and held for thirty days or more); (2) operating elevators, warehouses or other places for storage of corn, oats, barley, beans, rice, cotton seed, cottonseed cake, cottonseed meal or peanut meal; or, (3) importing, manufacturing (including milling, mixing or packing), or distributing (including buying and selling) any of the following commodities: Wheat, wheat flour, rye, or rye flour; barley or barley flour; oats, oatmeal, or rolled oats; corn, corn grits, corn meal, hominy, corn flour, starch from corn, corn oil, corn sirup, or glucose; rice, rice flour; dried beans; pea seed or dried peas; cotton seed, cottonseed oil, cottonseed cake, or cottonseed meal; peanut oil or peanut meal; soya-bean oil, soya-bean meal, palm oil, or copra oil; oleomargarine, lard, lard substitutes, oleo oils, or cooking fats; milk, butter, or cheese; condensed, evaporated, or powdered milk; fresh, canned, or cured beef, pork, or mutton; poultry or eggs; fresh or frozen fish; fresh fruits or vegetables; canned: peas, dried beans, tomatoes, corn, salmon, or sardines; dried: prunes, apples, peaches, or raisins; sugar, sirups, or molasses.

millers, the jobbers, and the wholesalers. With a constant output of flour and a stable price the administration was able to approach the bread problem. Bakers were required to make only standard loaves weighing $\frac{3}{4}$, 1, $1\frac{1}{2}$, 2, and 4 pounds. They were also obliged to mix wheat middlings, rye, or some other approved ingredient with wheat flour in prescribed proportions. The application of all these provisions had the effect of fixing the price of bread at approximately 10 cents for a 16-ounce loaf.

Sugar.

The Food Administration's policy with regard to sugar was to fix a maximum price or margin by voluntary agreement with producers, thus applying its general policy as previously stated. Shortly after the organization of the Food Administration announcement was made, as the result of a conference with representatives of producers of about 85 per cent of the domestic beet output, that the producers had agreed to sell the 1917-18 crop of beet sugar at \$7.25 per 100 pounds, cane basis, at seaboard refining points. This agreement was later accepted by all the domestic beet sugar interests. The basic price was later increased.

During the latter half of September, 1917, the international sugar committee was formed to arrange for the purchase and distribution of all sugar either for the United States or the Allied Governments, and for the allotment of sugar to neutrals. The Food Administration succeeded in obtaining from representatives of the entire sugar-refining industry an agreement, to continue during the war, not only to obtain their supplies of raw sugar under the direction of the international sugar committee, but also to work on a stipulated margin between the cost of raw sugar and the selling price of refined sugar, thus limiting profits and going a long way toward stabilizing prices and eliminating speculation. They further agreed to refine sugar on a net margin between the cost of their raw material and the selling price of their refined product of approximately 1.3 cents per pound after deducting trade discounts.

Following conferences with Cuban producers over the price of Cuban raw sugar, an agreement was signed on December 24, 1917, fixing a price of \$4.60 per 100 pounds for the new Cuban crop which was then coming in; this amounted to about \$6 at New York. Just prior to this the Food Administration and the Louisiana producers had negotiated an agreement, signed October 23, fixing a price of \$6.35 per 100 pounds for raw sugar at New Orleans. These prices were subsequently increased.

The Western Sugar Refining Co. and the California-Hawaiian Sugar Refining Co., both located at San Francisco, notified the Food Administration that they would make the wholesale price for cane sugar in

the western half of the United States not to exceed \$7.25 per 100 pounds f. o. b. seaboard refining points.

During 1918 the sugar equalization board, incorporated with a capital of \$5,000,000, was organized by the Food Administration to "deal with facility in foreign sugar and thus give the Food Administration better control over both distribution and prices." "The object is to absorb the high peaks of cost in sugar production and to make small margin on the low cost of certain foreign sugars which may be purchased and thus secure an equalization of the price to the public on a lower level than will otherwise be possible." It was estimated that the public would benefit by upward of 1 cent a pound.

Thus the Food Administration exercised control over sugar and stabilized the retail price at from 9 to 10 cents per pound without actually fixing the price at any point from producer to consumer. By effecting agreements with producers the administration was in position to control the prices asked by refiners and subsequently by dealers by virtue of its authority to prevent "excessive prices for any necessities."

Price Fixing by the Fuel Administration.

THE Fuel Administration followed the policy of the Food Administration in appointing State administrators and local committees of citizens—these latter charged with the duty of ascertaining and reporting to the administrator the reasonable retail margin (that is, "the cost of the local distribution at a reasonable dealers' profit") to be allowed, which, when fixed by order, together with the cost at the mine named by the President, the transportation charges and the jobber's commission (when sold through a jobber), would constitute the price to the consumer. It was the purpose of the Fuel Administration to compile these figures with relation to local needs in order that it might, if necessary, apportion the supply of coal with careful regard to the greatest existing needs. Like the Food Administration the procedure of the Fuel Administration in establishing prices for fuel was based upon a plan involving consideration of cost of production plus a fair per cent of profit. The essential difference, however, was that the production costs used by the Fuel Administration were obtained from the Federal Trade Commission, and represented careful first-hand examination of cost accounts such as no other Government agency was empowered to make. The idea was to fix a price high enough to insure to the least favorably situated mine a margin of profit so that it would continue to produce coal.

Upon determination of fair prices for coal the President issued a proclamation effective for bituminous coal on August 21 and for anthracite coal on September 1, 1917.

The bituminous coal prices were based upon a division of the country into 29 districts, in each of which producers were required to market their output at the same price. It was provided that a jobber should not add to the purchase price a gross margin in excess of 15 cents per ton of 2,000 pounds. The maximum rate established for run-of-mine grade ranged from \$1.90 for Alabama big seam coal to \$3.25 for coal in the State of Washington, the average price being approximately \$2.36 per ton. To meet exceptional conditions in outlying fields prices ranging from \$2.15 to \$3.30 for run-of-mine coal were fixed.⁶

The maximum prices for anthracite were as follows:⁷

MAXIMUM PRICES FOR ANTHRACITE COAL PER TON OF 2,240 POUNDS, F. O. B. CARS AT THE MINE.

Size.	White ash grade.	Red ash grade.	Lykens Valley grade.
Broken.....	\$4.55	\$4.75	\$5.00
Egg.....	4.45	4.65	4.90
Stove.....	4.70	4.90	5.30
Chestnut.....	4.80	4.90	5.30
Pea.....	1 4.00	1 4.10	1 4.35

¹ An order issued by the Fuel Administration, effective Oct. 1, 1917, reduced this price by 60 cents.

It was provided that a jobber dealing in anthracite should not add to his purchase price a gross margin in excess of 20 cents per ton of 2,240 pounds when delivery of such coal was to be effected at or east of Buffalo; 10 cents additional was allowed to be charged if delivery was to be made west of Buffalo.

Method of Fixing Maximum Gross Margins.

On September 30, 1917, the Fuel Administrator announced the method by which the retail coal and coke dealers should fix their maximum gross margins—that is, the difference between the average cost of coal and coke at the retailer's yard, wharf, or siding and the prices at which they are sold to the consumer. Under the plan announced the retailer was to ascertain his retail margin in the year 1915, when more normal conditions prevailed than in the fall of 1917. To this he could add not to exceed 30 per cent of that margin, including his profits at that time. It was provided, however, that in no case should the retail margin added by any retail dealer exceed the average added by him for the same size, grade, and class of business during July, 1917. The Fuel Administration defined the retail gross margin as being the difference between the price charged by retail coal or coke

⁶ These prices were increased by 45 cents a net ton on Oct. 17, 1917, as a result of the wage advance of Oct. 6. On May 25, 1918, the Fuel Administration reduced the prices 35 cents a ton.

⁷ Prices were advanced on Dec. 1, 1917, after the wage increase authorized by the President, by 35 cents a gross ton. There was a further advance on Nov. 1, 1918, of \$1.05 a gross ton, following another wage increase.

dealers to consumers and the average cost of coal or coke to such retailer, f. o. b. cars at his railroad siding, yard, pocket, or trestle, or free alongside his wharf, pocket, or water yard, or the average cost to such retailer at wholesalers' pockets, trestles, railroad sidings, mines, tipples, docks, yards, or wharves, as the case might be. It was directed that this average cost of coal or coke, to which the gross retail margin was to be added, should be ascertained by the dealer for each size and grade on the 1st and 16th of each calendar month, according to a method announced by the Fuel Administration, as follows:

The tonnage and average cost of coal or coke on hand at the beginning of a period is to be combined with the tonnage and average cost of coal or coke received during the period.

Example—Egg Coal.

	Tons.	Total cost.	Average cost per ton.
On hand Oct. 1.....	100	\$600.00	\$6.00
Received Oct. 1 to 15, inclusive.....	300	1,500.00	5.00
Total.....	400	2,100.00	5.25
Sold Oct. 1 to 15, inclusive.....	350		
On hand Oct. 16.....	50	232.50	5.25
Received Oct. 16 to 31, inclusive.....	300	1,425.00	4.75
Total.....	350	1,687.50	4.82

In the above example the average cost per ton of egg coal to which the gross margin should be added for sales during the period October 1 to October 15, inclusive, is \$6; during the period October 16 to 31, inclusive, it is \$5.25; and for sales during the period November 1 to 15, inclusive, the average cost is \$4.82. The same method of computation must be applied by each dealer in ascertaining his average cost of each size and grade of coal or coke.

In July, 1918, the Fuel Administration suggested the fixing of differentials in the prices of crude and of refined petroleum, and in August announced a plan to stabilize the price of crude oil. Coming so close to the end of the war, the effect of this upon prices was not apparent.

Price control by the Fuel Administration was effective. The various factors entering into the production and distribution of coal, such as labor, material, general expenses of operation, and transportation charges, increased very much during 1918, and as a result there were substantial advances to the consumer. The greatest advances, however, occurred after the signing of the armistice, when the restraining influence of the Fuel Administration was considerably modified. Changes in prices to the consumer are shown in the following table, which gives for the United States the average and relative prices, per ton of 2,000 pounds, of bituminous coal and of two grades of anthracite coal in specified months, 1916 to 1920.⁸

⁸ For more complete data on coal prices see MONTHLY LABOR REVIEW for March, 1920, p. 63.

AVERAGE AND RELATIVE PRICES, PER TON OF 2,000 POUNDS, OF COAL FOR THE UNITED STATES IN SPECIFIED MONTHS, 1916 TO 1920.

[1913=100.]

Year and month.	Pennsylvania anthracite, white ash.				Bituminous.	
	Stove.		Chestnut.		Average price.	Relative price.
	Average price.	Relative price.	Average price.	Relative price.		
1913: Average for year.....	\$7.73	100	\$7.91	100	\$5.43	100
1916:						
January.....	7.93	103	8.13	103	5.69	105
July.....	8.12	105	8.28	105	5.52	102
1917: January.....	9.29	120	9.40	119	6.96	128
1918:						
January.....	9.88	128	10.03	127	7.68	141
July.....	9.96	129	10.07	127	7.92	146
1919:						
January.....	11.51	149	11.61	147	7.90	145
July.....	12.16	157	12.19	154	8.10	149
1920: January.....	12.59	163	12.77	161	8.81	162

The extent to which price manipulation might have gone had the Fuel Administration not interfered and fixed what it considered a fair price can only be surmised.

War Industries Board and its Price-Fixing Committee.

THE first agency of any importance in the price-fixing field, after the United States entered the World War, was the War Industries Board, which functioned in this respect largely through its price-fixing committee. Prior to the creation of this board a limited amount of price fixing had been practiced, notably the fixing of prices for lumber by the Council of National Defense as the result of an agreement on June 18, 1917, and the establishment of coal prices for the Navy on June 19, 1917.

The War Industries Board was created by the Council of National Defense, with the approval of the President, on July 28, 1917. Among other things, this board was to give "advice to the several purchasing agencies of the Government with regard to the prices to be paid." The need for such a board was soon apparent. In the autumn of 1917 it was recognized that the country was facing a serious economic situation, due to the inflation of prices of various articles in which a shortage had arisen through the abnormal demands made necessary by the prosecution of the war. The situation was not peculiar to the United States. It had confronted various other nations and had been dealt with through a system of price regulation. The War Industries Board undertook to fix maximum prices of fundamental commodities for the Government, the Allies, and private enterprises. The volume of work required of this board prompted

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the President, on May 28, 1918, to separate it from the Council of National Defense and to clothe it with the authority of a separate executive agency. It was stipulated that in the determination of the prices the chairman of the board should be governed by the advice of a price-fixing committee, consisting, besides himself, of the members of the board immediately charged with the study of raw materials and of manufactured products, of the labor member of the board, of the chairman of the Federal Trade Commission, the chairman of the Tariff Commission, the Fuel Administrator, and a representative each of the Army and of the Navy.⁹ The price-fixing committee had no legislative authority to fix prices, but it acted as the personal representative of the President, exercising such prestige or authority as he might have as President of the United States and commander in chief of the Army and Navy. This authority was quite as effective in dealing with the industries as any act of Congress would have been.

In order intelligently to fix prices the committee endeavored to have before it—

1. The history of the industry under consideration for a period of years before the war;
2. Statistics of the capital invested and its relation to turnover or sales;
3. Sales and profits realized;
4. The cost of production;
5. A statement or balance sheet segregating the costs of the most and least efficient producers of each commodity during the year 1917; and
6. As much more recent information regarding cost and prevailing market prices as could be had up to the time prices are to be fixed.

The machinery for furnishing this information was found in the Federal Trade Commission, which through its chairman as member became closely affiliated with the price-fixing committee. The procedure, in brief, was as follows:

After a careful study of the data secured from the Federal Trade Commission the committee called into consultation the representative members of the industry involved, and endeavored by mutual agreement to determine upon maximum prices which would be fair to all concerned. The prices which were fixed for the public were what were known as primary prices at which the manufacturer or producer usually sells and did not follow the commodity into retail distribution. It was the custom to fix prices for a period of 90 days only, as the conditions involving costs were more or less subject to constant change.

⁹ The personnel of this committee was as follows: Robert S. Brookings, chairman; B. M. Baruch, chairman, War Industries Board, ex officio; W. B. Colver, chairman, United States Federal Trade Commission; F. W. Taussig, chairman, United States Tariff Commission; H. C. Stuart, chairman of the Agricultural Advisory Committee; Hugh Frayne, Labor Division, War Industries Board; H. A. Garfield, Fuel Administrator; R. H. Montgomery, United States Army; Commander John M. Hancock, United States Navy.

The rule was to fix a uniform price to be paid by all departments of the Government, as well as by our Allies, and primary prices to be paid by the public, after which the numerous sections of the War Industries Board took up with the industry the question of the allocation of orders to the end that our war needs should have preference, but the committee at the same time endeavored to secure a supply for our most urgent domestic needs.

As production during the war was of first importance, it was the policy in fixing prices to avoid fixing them so low as to eliminate the high-cost producer. This naturally gave the largest and lowest cost producer a somewhat larger profit at times than would have otherwise been permitted, but it was felt by the majority of the committee that in such cases the excess-profit tax would practically absorb the difference. An illustration in point is that of copper where a price of 23½ cents a pound was determined upon, whereas it was known at the time that several large companies had agreed to furnish the Government with copper at 16½ cents a pound. If there had been no price fixing of any commodity it is probable that the prices at which the largest, and therefore low-cost, producer could sell his commodity would have governed the market, forcing out of business many of the high-cost producers whose production was essential and materially affecting the excess-profit tax returns. It should be emphasized that it was the output of the "bulk line" or marginal producer—that is, the one producing a required commodity in an amount most nearly equivalent to the total needs of the Government and of private industry, as ascertained—that was so badly needed, and the price fixed had to approximate his production cost plus a fair profit. To obtain a maximum output prices had to be high enough to insure the production of a supply sufficient for all urgent needs. Briefly the policy pursued was that of cooperative voluntary price fixing made effective by the impulse of patriotism and by the Government's exercise of certain forms of duress such as fuel discrimination, priorities, licenses, and, if necessary, the commandeering of industries. Price fixing under this form of compulsion was deemed justifiable in order to stabilize industry, to bring out maximum production, to eliminate profiteering, and to effect absolute control of all essential commodities during the war. The method adopted was most effective, and the comparatively low prices which resulted, in face of unprecedented demand both by our own Government and by the Allied Governments, would seem to justify the course. As Prof. Taussig has said,¹⁰ "Soaring prices, speculative advances, manipulation by middlemen, a runaway market—these were the conditions impending and which price fixing was primarily designed to remedy."

¹⁰ "Price fixing as seen by a price fixer," by F. W. Taussig. *The Quarterly Journal of Economics*, February, 1919, p. 213.

Iron and Steel.

While yet a part of the Council of National Defense the War Industries Board was called upon to determine prices that the Government should pay for many essential commodities. Important among these were iron and steel, the initial prices for which were fixed in September, 1917. The control exercised by the Government over iron and steel prices had a very important influence on the course of the market. The following account of price fixing in iron and steel taken from War Industries Board Price Bulletin No. 33 (pp. 19-21) gives an insight into the method adopted for this industry, and at once suggests general considerations that guided the board in its price-fixing policy:

For several months before the policy of price fixing was entered upon, there were discussions and disagreements concerning what prices the Government ought to pay for steel. A controversy arose between the chairman of the United States Shipping Board and the manager of the Emergency Fleet Corporation over the prices to be paid by the Government for structural shapes and steel plates. The manager of the Emergency Fleet Corporation announced on June 16, 1917, that he had agreed "provisionally" upon a price of 3.75 cents per pound for shapes and 4.25 cents per pound for plates, "with the understanding that the committee on raw materials of the advisory commission of the Council of National Defense would later go into the question of costs and determine an equitable return to the steel men." The chairman of the Shipping Board declared that these provisional prices were \$30 a ton higher than prices being paid by the Navy Department for the same material, and that he would sign no contracts at those figures. The steel makers then agreed, pending the final determination of prices, to furnish steel plates at the tentative price of 2½ cents a pound.

The chairman of the Shipping Board joined with the Secretary of the Navy in requesting the Federal Trade Commission to begin an inquiry for the purpose of ascertaining the costs of production, these costs to be used as a basis for determining the prices to be paid by the Government. A similar investigation was being conducted by the Senate Committee on Interstate Commerce as part of an inquiry into the prices at which materials of all kinds should be sold to the railroads. The steel committee of the Council of National Defense had taken up the question of steel prices and was working independently of the other inquiries.

On July 12 a conference was held between the representatives of the iron and steel producers and Government officials, which was regarded as preliminary to fixing prices for Government needs. On September 24, the President approved an agreement between the War Industries Board and the steel men fixing maximum prices on ore, coke, pig iron, steel bars, shapes, and plates, which became effective immediately and were subject to revision January 1, 1918. The price of ore was not reduced; the price of basic pig iron was cut from \$48 per ton to \$33 per ton; the price of steel plates was reduced from 8 cents per pound to 3.25 cents per pound. Other products came under control in the succeeding months, the American Iron and Steel Institute actively cooperating with the Government in the establishment of differentials and in maintaining a due proportion among the prices as they were scaled down.

As part of the policy of price fixing, safeguards were provided against certain commonly predicted evil consequences that were to follow regulation. Fears had been expressed that production would not be maintained when prices were reduced; that producers would protect their profits by reducing wages and so cause labor

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unrest; and that charges of unjust discrimination would be made by the public and the Allies if the Government bought steel at less than the prices they were paying. As part of the agreement, therefore, the producers pledged themselves to maintain production; not to reduce wages; and to sell to the Government, the public, and the Allies at the same prices.

The character of the market situation immediately preceding price fixing must be borne in mind in considering the effectiveness of price regulation of iron and steel. The quantity of steel available in the market was small, mill capacity had been sold up for months ahead, and market prices reflected the scramble to secure the unpledged output. These prices charged to the late comers bore no relation to cost of production. Current deliveries on long-time contracts were at prices much less than those in the open market, though large premiums were paid for prompt shipments. The Government was unable to buy at uniform prices, but was letting contracts at the same time for the same material at different figures. The situation had become intolerable; as a satisfactory means of determining prices the uncontrolled market had failed.

The effectiveness of price fixing in remedying some of these evils can not be questioned. Confronted with the situation as it existed in the middle of 1917, price fixing was a wiser expedient than any of the suggested alternatives. It was more direct and more economical than paying the market price and trusting to the excess-profits tax to bring back to the Treasury the extraordinary profits. It was simpler as a matter of administration, and in closer accord with the general policy of the Government than the commandeering of the steel plants. The policy succeeded in bringing about substantial reductions, in giving uniformity to prices, and in stabilizing the market. The control was so effective that in looking back upon the experience the only regret is that the control was not exercised at an earlier date.

On September 24, 1917, maximum prices were announced by the War Industries Board, namely, \$5.05 per gross ton for iron ore (lower lake ports), \$33 per gross ton for pig iron, \$2.90 per 100 pounds for steel bars, and \$3.25 per 100 pounds for plates. With this announcement the market became stabilized at a level lower than that prevailing before the entry of the United States into the war.

Copper.

Copper was another very important commodity demanded by the Government on which the War Industries Board fixed prices. Copper was a metal of prime necessity to the nations at war. In December, 1915, the average price of copper per pound was 20.35 cents; in February, 1916, it was 27.35 cents and did not react below this figure until July, 1917, when the average was 24½ cents. In December, 1916, the average price was 33.84 cents, and this in spite of increase in output. The average price for the first nine months of 1917 was 28.4 cents. On September 21, 1917, the War Industries Board fixed the price of copper to the Government at 23½ cents f. o. b. New York, and this was increased to 26 cents in July, 1918. The price fixed was a compromise, since 25 cents was the lowest price at which producers were willing to sell, and the Government's offer was only 18 cents. The procedure adopted in fixing the price of

copper illustrates the method followed by the War Industries Board and later by its price-fixing committee in fixing prices for a long list of commodities.

First the quantity needed directly for war purposes and for essential industries was ascertained. From schedules of the Federal Trade Commission such data as necessary were obtained as to amount of production and the production cost, the latter being distributed into amounts spent for labor, material, other supplies, and for general expenses. A list of copper-producing companies was then made up, beginning with the company reporting the highest production cost on a pound basis and continuing to the lowest. The production cost of the "bulk line" producer or marginal producer was then taken as the basis for a fair price to be fixed for all copper needed. "As a rule a price was fixed that would 'protect' four-fifths or nine-tenths of the entire output." This was not an inflexible rule, but was quite generally followed.

The first price fixed by the committee (Sept. 21, 1917) was 23½ cents. Thus, companies whose production cost was less than this amount would receive considerably more than what was considered a fair price for their copper, while those companies whose production cost was over 23½ cents would not receive sufficient to make expenses. However, their embarrassment was relieved by the fact that their product was bought by nonessential industries whose requirements had not been considered in fixing the price and who could not therefore purchase copper at the price fixed.

Textiles and Clothing.

Although some articles (18 series) in the cloths and clothing group, notably certain kinds of woolen, cotton, and leather goods, were subject to price control by the War Industries Board, beginning in May, 1918, the effect was not a stabilization of prices of clothing to the consumer. On the contrary, price control was ineffective in this respect. In the group as a whole, the wholesale price index number, as computed by the Bureau of Labor Statistics, rose continuously from May, 1917, to July, 1918, being 173 in the former month and 249 in the latter month, based on the year 1913 as 100. With apparently no prospect of relief in the price of clothing, which during 1917 and 1918 showed a greater advance than any other item of the average family budget, Dr. Royal Meeker, Commissioner of Labor Statistics, was prompted to direct a letter to the President on August 29, 1918, urging him to appoint a textile and clothing administrator in order that some restraining influence in the interest

of the public generally might be brought to bear upon those responsible for the high prices. Dr. Meeker's letter was as follows:

MY DEAR MR. PRESIDENT: I beg leave to suggest that you appoint immediately a textile and clothing administrator to bring about regulation and control of the prices and qualities of textiles and clothing in the same way as the food administrator has regulated and controlled the qualities and prices of foodstuffs. The benefits to the people from the activities of the Food Administration are statistically demonstrable, and the need for a similar policy of regulation and control of textiles and clothing is likewise demonstrable by the statistical method.

The Food Administration began its activities in May, 1917. For your information I inclose a tabular statement showing variations in prices of food and clothing at wholesale and variations in prices of food at retail. The index numbers are calculated on the basis that 1913 equals 100.

Unfortunately, we have no strictly comparable figures showing variations in prices of clothing at retail for the whole country. We do know the changes in prices of clothing in the shipbuilding centers in which we have made cost-of-living studies. The percentage price changes in these cities were computed on the basis that 1914 equals 100 because it was impossible to get dependable price data as far back as 1913.

You will note that the wholesale food index in May, 1917, was 191, while in July, 1918, it was 185, being a *decrease* of more than 3 per cent since May, 1917. On the other hand, the wholesale cloths and clothing index in May, 1917, was 173, while in July, 1918, it was 249, being an *increase* of more than 44 per cent. Surely there is a reason. No one would have the temerity to say that a scarcity exists any more in textiles than in food. Neither has the demand for clothing increased to a greater extent than the demand for foodstuffs. The difference between the decrease of more than 3 per cent in average prices at wholesale of foodstuffs and the increase of more than 44 per cent in the average prices at wholesale of clothing represents the difference between *public* control of prices in the interests of the people and *private* control of prices for the benefit of the private price controllers.

Quite naturally the Food Administration has been able to control wholesale prices much more effectively than retail prices. You will note that the retail food index for May, 1917, was 151 and that there has been a pretty consistent increase in retail food prices from that date to July, 1918, when the retail food index reached 167, showing a percentage increase of more than 10 per cent.

The increase in cost of food in the families studied in our cost-of-living investigation is less than that shown in our retail-food price index, although it is not possible to compare family expenditures in May, 1917, with July, 1918. We are now tabulating the retail prices for August, 1918, of the different items consumed by workmen's families, as found in the shipbuilding centers included in our budget study. The figures thus far obtained are from southern cities only and show that clothing has increased in price since 1914 by from 91½ per cent to 127 per cent. Furniture and furnishings purchased by workmen show an increase in these same cities of from 104 to 131 per cent. Expenditures for clothing constituted from 11 to 14 per cent of the total family budget in southern cities and from 15 to 16 per cent of the total family budget in northern cities. Food is, of course, a much more important item, ranging from 45 to 54 per cent of the total family expenditures in southern cities and from 40 to 45 per cent in northern cities. Next in importance to expenditures for food, however, come expenditures for clothing, and prices of clothing have increased already to an alarming extent. Dry-goods merchants are frightening people to death and inducing them to purchase much more clothing than they have any earthly need for by telling them that the prices of the new stocks of clothing are to be much higher than they now are.

I sincerely trust that you will seriously consider my suggestion and at once take steps to transfer the regulation and control of clothing consumption and prices from the hands of private individuals intent on acquiring profits to the hands of a competent public administrator charged with the duty and vested with the authority to see to it that the people obtain standard goods at reasonable prices.

Sincerely yours,

ROYAL MEEKER,
Commissioner of Labor Statistics.

EXHIBIT.

Index numbers of wholesale prices of food and cloths and clothing and of retail prices of food in the United States, January, 1917, to July, 1918.

[1913=100.]

Year and month.	Food articles at wholesale.	Cloths and clothing at wholesale.	Food articles at retail.
1917.			
January.....	150	161	128
February.....	160	162	133
March.....	161	163	133
April.....	182	169	145
May.....	191	173	151
June.....	187	179	152
July.....	180	187	146
August.....	180	193	149
September.....	178	193	153
October.....	183	191	157
November.....	184	202	155
December.....	185	206	157
1918.			
January.....	188	209	160
February.....	187	213	161
March.....	178	220	154
April.....	179	230	154
May.....	178	234	158
June.....	180	243	162
July.....	185	249	167

The President replied that he did not believe he had the authority to take the same action in regard to textiles and clothing as he had taken with respect to food and fuel.

Results of the Policy of Price Fixing.

WHATEVER the individual results of the Government's price-fixing policy, it may be said that the Government did succeed in a large measure in preventing extortionate prices for materials needed for war purposes and for other commodities, including primarily food and fuel, essential to the existence of the 105,000,000 people whose cooperation made such a result possible. The achievement of the Food Administration, especially in its efforts to control wheat and its products and to prevent speculative prices by inducing the millers to enter into an agreement not to pay for wheat a price in excess of the fair price established by the Food Administration, presents one of the most important and interesting chapters in the history of price control.

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The same, in a more restricted sense because fewer commodities were dealt with, may be said of the Fuel Administration. Next to food, fuel was the most important article subject to control. Without it war industries could not operate. The control of manufactured articles, and, to a degree, of raw material, depended upon supplies of coal and fuel oil. With increased production and an unprecedented demand, prices were bound to rise and not only affect industry but the public as well. To prevent manipulation and speculative advances in this emergency a policy of price adjustment was absolutely necessary and the Fuel Administration, specifically clothed with this authority, acted with promptness and fixed prices which were based on a careful inquiry into the cost of production. In the opinion of some the prices were fixed unnecessarily high. It is believed that an equal or even greater supply than was secured would have been obtained had prices been fixed sufficiently high to encourage production by the more economically situated mines instead of so high as to stimulate the opening of new mines, the reopening of abandoned mines, and the development of uneconomical mines at a large capital outlay.

Some criticism, even among those directly connected with the War Industries Board and its price-fixing committee, was aimed at the policy of the board in fixing prices on the basis of cost of production for the bulk line or marginal producer rather than by the system of pooling, by which low-cost and high-cost producers alike should receive prices in proportion to their several costs, the Government to charge itself with the average cost and, so far as civilians were to be supplied, to charge them the same price. To quote from Prof. Taussig:¹¹

This proposal [pooling] rested mainly on an unwillingness to permit the low-cost producers to secure high gains. Any price paid uniformly to all producers necessarily meant differences in profits. When that uniform price was fixed on the basis of the marginal or bulk line producer, the profits of those favorably placed were not only great, but greater than they would have been under normal conditions. In the essential industries, such as steel and copper, the necessities of the situation called for the maintenance of high cost and inefficient producers whose position under no ordinary circumstances would be dominant. True, it was urged that the high gains for the fortunate producers were likely to be reached by the excess profits tax. But it was also urged that no such tax could be a complete offset, and that it would be wise to proceed at once upon a pooling basis; let the Government's buying price be cost for each several producer, and average cost, not marginal cost, be the basis of any sales made to the public. The Government as well as the public would secure the goods at lower prices.

Justification for the method actually pursued was found in the necessity of stimulating and maintaining output. Great quantities of material were needed by the Government and it seemed absolutely necessary to adopt some method that would encourage the marginal

¹¹ "Price fixing as seen by a price fixer," by F. W. Taussig. *The Quarterly Journal of Economics*, February, 1919, p. 292.

producer whose output was essential. He at all events had to be maintained. A price had to be paid that would induce him to continue in operation.

The merits of the two methods will not be discussed. The first one was adopted and the results seemed to be quite satisfactory. Most of the prices fixed, as already stated, were in reality agreed prices reached in cooperation with the producers concerned. In some instances there were decreed prices which the producers were bound to accept, knowing that the committee could enforce them by a somewhat veiled threat of commandeering and that public sentiment would condemn as unpatriotic those who refused to accept the prices named.

Did Price Fixing Stimulate Production?

One of the objects of price fixing was the stimulation of production. Did it accomplish this end? The War Industries Board Price Bulletin No. 1 (pp. 44-46) gives data intended to show that the result was generally quite satisfactory in this respect. An index number of changes in the physical volume of production is presented for 90 raw materials, including substantially all the staples, computed at 1917 prices. To make sure that the comparison between increase in the production of raw materials and the increase of prices is fair, an index number of prices was made from these same materials, fabricating factors and all. Here, of course, the prices were the variables, and they were weighted each year by the supply forthcoming in 1917. Finally, a third index was made by multiplying the supply of each commodity each year by its average annual price. From the aggregate values thus obtained relatives were computed with the figures for 1913 as the base, since production data for the year ending June 30, 1914, were not available. The result is as follows:

INDEX NUMBERS OF THE PRODUCTION OF RAW MATERIALS, OF THE PRICES OF RAW MATERIALS, AND OF THE ANNUAL VALUE OF RAW MATERIALS PRODUCED, BY YEARS, 1913 TO 1918.

Year.	Yearly production × 1917 prices.	Yearly prices × 1917 production.	Yearly prices × yearly production.
1913.....	100	100	100
1914.....	99	96	96
1915.....	107	99	106
1916.....	111	117	131
1917.....	114	174	200
1918.....	116	192	225

The general effect of price control by the Government may be best illustrated by the following table, which shows index numbers of 573 commodities brought under formal or informal control at some time during the war compared with those of 793 commodities

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whose prices were left uncontrolled. It is unfortunate that a similar showing can not yet be made for specified articles in each group, as this would reflect more accurately the influence of control on prices.

WAR INDUSTRIES BOARD INDEX NUMBERS OF CONTROLLED AND UNCONTROLLED PRICES, 1913 TO 1918.

[Average prices, July, 1913, to June, 1914=100.]

Period.	1913		1914		1915		1916		1917		1918	
	Controlled prices.	Uncontrolled prices.	Controlled prices.	Uncontrolled prices.	Controlled prices.	Uncontrolled prices.	Controlled prices.	Uncontrolled prices.	Controlled prices.	Uncontrolled prices.	Controlled prices.	Uncontrolled prices.
Year.....	100	102	100	97	102	102	125	124	188	156	197	191
Quarters:												
First.....	97	103	99	99	101	97	115	119	157	141	197	180
Second.....	98	101	98	99	101	101	120	123	194	149	192	189
Third.....	101	101	102	97	102	103	124	124	206	162	199	196
Fourth.....	102	101	100	94	104	109	141	131	196	171	201	199
Months:												
January.....	98	103	99	99	101	97	113	116	151	140	195	178
February.....	97	103	99	99	102	97	115	119	155	142	198	180
March.....	98	103	99	99	101	98	117	121	164	142	197	182
April.....	99	102	99	99	101	99	120	123	183	146	196	187
May.....	98	101	99	98	101	101	121	123	192	149	192	189
June.....	98	101	98	99	100	102	120	124	201	152	189	191
July.....	98	101	98	98	103	103	121	124	209	160	195	194
August.....	102	101	104	98	103	102	125	124	204	162	199	195
September....	103	102	105	96	101	103	127	125	205	163	204	199
October.....	102	102	101	95	101	106	134	127	198	167	201	201
November.....	102	102	99	94	103	109	143	131	200	172	200	200
December....	101	100	99	94	107	111	146	135	193	174	204	197

It will be seen that the commodities ultimately brought under Government price control had risen more than the uncontrolled list by the time the United States severed diplomatic relations with Germany. The index numbers for the two classes in February, 1917, were 155 and 142, respectively. Further, the commodities afterwards controlled were very much more affected by the declaration of war than the others; they rose about 35 per cent in price between February and July, while the uncontrolled commodities rose nearly 13 per cent. Control was applied, then, to prices which as a group were very high before the Government's economic program was developed. That fact doubtless facilitated the effort to prevent a further advance or even to reduce prices.

Broadly speaking, the effect of price control was to bring down the index number of controlled commodities within the year from 209 (July, 1917) to 189 (June, 1918). After June, 1918, however, the controlled commodities began to rise again, often with the full concurrence of the price-fixing authorities. For at their successive reconsiderations of the prices of given commodities these authorities frequently conceded the necessity for raising their previous maximum prices to offset increased costs of production. Uncontrolled commodities, on the other hand, rose in price steadily month by month

after July, 1917, while the controlled commodities were zigzagging downward. With the first relaxation of the Government control the controlled commodities advanced in price, while the uncontrolled commodities declined.

Those responsible for price fixing never formulated fully the principles underlying their action, and it may be doubted if they were guided by any single principle. The attention given to costs of production in their investigation and conferences, however, indicates the point of view from which they worked and some of the determining considerations. The theory of price fixing implied in their regulations was that the principles of a competitive market should be applied to a market situation in which those principles no longer prevailed. The faith that an uncontrolled market will give "fair prices" rests on the belief that competition will keep prices in a close relation to costs of production. When the conditions of demand are such as to destroy this relation between prices and costs, as they were during the war, unfair prices and unreasonable profits result. It was a matter of keeping the faith, therefore, to apply to prices through price-fixing agencies the same principles which the market would have worked out under normal conditions.¹²

Almost immediately upon the signing of the armistice price control and price fixing were terminated, though agreements were, as a rule, carried out to the end of the period for which made. The War Industries Board was dissolved on January 1, 1919. The Food and Fuel Administrations, though created for the duration of the war, practically suspended operations early in 1919.

¹² War Industries Board Price Bulletin No. 33, p. 21. Washington, 1919.

INDUSTRIAL RELATIONS.

New System of Wage Adjustment for Railways.

THE MONTHLY LABOR REVIEW for April carried an account (pp. 50-57) of the provisions of the new railroad control act with regard to a board for the adjustment of industrial relations in the service. Three members of the board are to represent "the employees and subordinate officials of the carriers," and constitute "the labor group;" three are to constitute "the management group, representing the carriers;" and three, "the public group, representing the public." All are to be appointed by the President, subject to confirmation by the Senate. The last named are to be appointed directly, and the others from nominees submitted by the respective groups. Six names are to be proposed by each group, the nominations to be made and offered in such manner as may be prescribed by the Interstate Commerce Commission, which is also to take steps to determine who shall be classed as "subordinate officials."

The act was approved February 28, and authorized the President to act without nominations in case such were not submitted within 30 days after the passage of the act. This limitation required promptness of action by the Interstate Commerce Commission in formulating regulations, and on March 8 the main draft was promulgated.

The act makes no reference to unions, but the commission accepted the representations of those who were "in a position to speak with confidence and authority" that "the overwhelming majority" of the workers—said to be more than 90 per cent of the employees and subordinate officials—are members of certain organizations, or are represented through them, and agreed to accept their nominations. Inasmuch as but three representatives could be appointed it was decided to group the organizations so as to permit the nomination of representatives of the different classes of employees as far as possible. For this purpose the following groups were made:

Group 1:

- Brotherhood of Locomotive Engineers.
- Brotherhood of Locomotive Firemen and Enginemen.
- Order of Railway Conductors.
- Brotherhood of Railroad Trainmen.
- Switchmen's Union of North America.

Group 2:

- International Association of Machinists.
- International Brotherhood of Boilermakers, Iron Ship Builders and Helpers of America.
- International Brotherhood of Blacksmiths, Drop Forgers, and Helpers.
- Amalgamated Sheet Metal Workers' International Alliance.
- Brotherhood Railway Carmen of America.
- International Brotherhood of Electrical Workers.

Group 3:

- Order of Railroad Telegraphers.
- United Brotherhood of Maintenance of Way Employees and Railroad Shop Laborers.
- Brotherhood of Railway Signalmen of America.
- Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees.
- International Brotherhood of Stationary Firemen and Oilers.

The accredited representatives of each group were asked to act and agree among themselves as to nominees representative of the group, the three groups not to offer more than six nominees. Nominations, properly signed and accompanied by a certificate that they had been made in accordance with the regulations, were to be transmitted directly to the President.

As to the management group, it was found that the Association of Railway Executives is representative of approximately 95 per cent of the railroad mileage of the country, and is therefore in a position to speak for the carriers in making the desired nominations. These nominations are likewise forwarded directly to the President, with proper authentication.

Who were to be classed as "subordinate officials" was to be determined after notice and hearings of the parties interested, but as the shortness of time made such determination impracticable, and as there was no doubt as to the status and rights of employees, it was thought best not to make a classification of "subordinate officials" lest it might subsequently be found to be unsatisfactory; accordingly the regulations issued March 8 made no provision for their representation. On March 15, however, a public hearing was held for the purpose of determining upon the classes to be included as "subordinate officials," as the term is used in the act. It was decided to include claim agents who must report to a superior before a final decision on claims is reached; engineers of mechanics, including civil engineers inferior in rank to engineers of maintenance of way; foremen not vested with authority to employ, discipline, or dismiss subordinates; supervisors of signals; yardmasters without authority to employ, discipline, or dismiss, but not including those in large and important centers, where such power is vested in the yardmaster; train dispatchers, and storekeepers, whose powers are limited as set forth in regard to foremen and yardmasters. This included all

classes represented at the hearing except traveling auditors and supervisory station agents whose rank and duties were felt to class them more properly as representatives of the companies than as "subordinate officials." The power of revision of the list on due hearing, and as occasion warrants, was expressly reserved.

Also, supplemental regulations setting forth the relation between employees and subordinate officials in the matter of making nominations, were issued on March 23. It was concluded that both classes of persons were entitled to make and offer nominations, even though "the great mass of the railroad employees and subordinate officials are members of or represented through the organizations named" in the original regulation.

Claims to participate in making the nominations were submitted in behalf of certain organizations not included in the groups enumerated in the regulations of March 8. A fourth group was therefore made, including these organizations of employees and also organizations of subordinate officials admitted to make nominations. This group is as follows:

Group 4:

- Railway Men's International Benevolent Industrial Association.
- American Federation of Railroad Workers.
- Order of Railroad Station Agents.
- American Train Dispatchers Association.
- The Roadmasters and Supervisors Association of America.
- National Order of Railroad Claim Men.
- Railroad Yardmasters of America.
- International Association of Railroad Supervisors of Mechanics.
- International Association of Railroad Storekeepers.
- Colored Association of Railway Employees.
- Brotherhood of Railroad Station Employees.
- Order of Railroad Telegraphers, Dispatchers, Agents, and Signalmen.
- Brotherhood of Railway Clerks.
- American Association of Engineers.
- Grand United Order of Locomotive Firemen of America.
- Porters' Union.
- Skilled and Unskilled Laborers (Railway).
- Order of Railway Expressmen.

These organizations were authorized to act through their accredited representatives in making nominations that would represent single organizations, or be jointly representative of two or more, as might be agreed upon. In transmitting these nominations, statements were to be furnished showing the total membership of the organizations taking action, distinguishing between officials excluded by the regulations and subordinate officials permitted to act; also between the latter and employees proper. The percentage of the membership belonging also to any of the organizations named in the regulations of March 8 was to be stated.

The Board Appointed.

NOMINATIONS were submitted in accordance with the methods prescribed by the act and the regulations of the commission, and a list of names was sent to the Senate by the President on April 13, 1920. The delay in forwarding the list was said to be due to the difficulty in securing suitable persons who met the terms of the law. Active membership in a union or pecuniary interest in railroads operates to bar one from eligibility, though the retention of an honorary membership and insurance or other benefit rights does not so operate.

The persons named were: For the labor group, Mr. Albert Phillips, of Ohio, vice president of the Brotherhood of Locomotive Firemen and Enginemen, of Group 1, A. O. Wharton, of Missouri, of the Railway Employees' Department of the American Federation of Labor, and Mr. James J. Forrester, of Ohio, president of the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, of Group 3; for the management group, Mr. Horace Baker, of Ohio, formerly general manager of the Cincinnati, New Orleans & Texas Pacific Railroad, Mr. J. H. Elliott, of Texas, formerly general manager of the Texas & Pacific Railway Co., and William L. Park, of Illinois, vice president of the Chicago Great Western Railroad Co.; for the public group, Mr. R. M. Barton, of Tennessee, for a number of years a member of the Tennessee court of appeals, Mr. G. Wallace W. Hanger, of the District of Columbia, formerly chief clerk of what is now the United States Bureau of Labor Statistics, and since 1913 assistant commissioner of the United States Board of Mediation and Conciliation, and Mr. Henry Hunt, of Ohio, formerly mayor of Cincinnati.

The Senate confirmed these nominations on April 15, and the board held its first meeting on the following day.

Wage Movement of Organized Railway Employees, 1919-20.

DETAILS of the movement among organized railway employees for increases in their rates of pay are given in various reports¹ published by the chief executives of the railroad organizations, much of this information being contained in correspondence between various officials of the railway unions, the Railroad Administration, and President Wilson.

In February, 1920, there were 17 railroad organizations, representing various crafts affiliated to the American Federation of Labor,

¹ Report of proceedings in connection with 1919-1920 wage movement. Washington, 1920. Circular No. 1, 20 pp., No. 2, 14 pp., No. 3, 14 pp., No. 4, 16 pp., and Official Circular No. 119, Railway Employees' Department, Washington, Apr. 5, 1920.

claiming to represent 95 per cent of the organized employees and to have a membership of 1,900,000. Recently the officers of the Molders' Union of North America authorized the committees of these organizations to represent their membership also in their negotiations. In addition to these unions there are 18 rival unions, comprising a comparatively small percentage of the organized employees, which include in their membership various grades of employees, one or two of them being made up of minor executives such as train dispatchers and station agents.

A letter from Mr. Walker D. Hines, Director General of Railroads, to President Wilson summarizes the claims of the different classes of railroad employees and the reasons actuating the employees in making them.

The demands for substantial wage increases have been presented to the Railroad Administration's Board of Railroad Wages and Working Conditions at different times since the latter part of last summer by nearly all the classes of the 2,000,000 railroad employees. Among the few classes which have not pressed such demands there is insistence that their wages shall be increased if other related classes receive increases. There are two principal causes for putting forward these claims, one the cost of living and the claim that employees in similar industries outside are receiving higher wages, the other a demand for a leveling up by classes which claimed they had not received equal treatment with related work in other departments.

Mr. Hines says:

As illustrating the complexity and wide scope of these matters, the labor members of the board, in suggesting a basis they thought would bring about equalization, estimated that the cost of such equalization would be approximately \$375,000,000 per annum. This figure was arrived at by taking the average monthly increase of a small group of railroad employees, embracing only about 5 per cent of the total number of railroad employees, and estimating how much additional increase in money per month it would be necessary to give the other classes of railroad employees in order to equalize on certain theories with this small group. Even this small group is now demanding large increases. This figure of \$375,000,000 is much less than the employees are demanding. Broadly speaking, the increase of each one cent per hour for all railroad employees of all classes would, with allowance for incidental overtime, cost considerable in excess of \$50,000,000 per year. The following indicates the principal, but not all, of the contentions advanced by the principal classes of the railroad employees involved:

The Brotherhood of Railroad Trainmen:

Passenger brakemen be increased from \$120 per 30-day month to \$150 for 26-day month.

Baggagemen be increased from \$124.80 for 30-day month to \$160 for 26-day month.

Assistant conductors be increased from \$144 for 30-day month to \$179 for 26-day month.

Freight brakemen in valley territory be increased from \$4.08 per day to \$5.88 per day with 10 per cent increase over these rates wherever the grade exceeds 1.8 per cent.

Yard foremen or conductors be increased from \$5.33 per day to \$7.20 per day.

[1124]

Yard helpers or brakemen be increased from \$5 per day to \$6.90 per day.

Switch tenders be increased from \$4 per day to \$5.90 per day.

Also time and one-half for all Sunday and holiday service.

Also guaranty of 26 days per month for regular employees in all classes of service.

The Order of Railway Conductors:

Passenger conductors be increased from \$180 per 30-day month to \$225 for 26-day month.

Through-freight conductors be increased from \$5.40 per day to \$7.65 per day in valley territory, with increases in the mountain rate from \$5.81 to \$8.37 per day.

Local-freight conductors be increased from \$5.92 to \$8.38 per day in valley territory, with increase in mountain rate from \$6.26 to \$9.13 per day.

The Brotherhood of Locomotive Firemen and Enginemen:

Road freight firemen to be increased an average of \$1.84 per day over present rates.

Yard freight firemen to be increased an average of \$2.25 per day over present rates.

Passenger firemen to be increased from present average rate of \$4.31 per day to \$6.50 per day, an increase of \$2.19 per day.

The Brotherhood of Locomotive Engineers:

While presenting no specific requests, notice was served that the engineers desired increases in wages proportionate to any increases granted other employees.

All road employees, as distinguished from yard employees, in the four foregoing organizations, get proportionately increased pay per day when they make mileage in excess of 100 miles and in freight service get time and one-half for time consumed in excess of what would be required on the guaranteed speed basis which is 2½ miles per hour.

The Switchmen's Union of North America:

Foremen or conductors be increased from \$5.33 per day or night to \$8 per night and \$7.50 per day.

Helpers or brakemen be increased from \$5 per day or night to \$7.50 per night and \$7 per day.

Switch tenders to receive same rate as helpers.

Time and one-half for Sundays and holidays.

Maintenance of Way and Enginehouse Laborers:

Rate for all mechanics in the maintenance of way department to be increased from basic rate of 53 cents per hour to uniform rate of 68 cents per hour.

Rate for all trackmen and other laborers to be increased from rates running from 28 cents to 40 cents per hour to a uniform rate throughout the United States of 50 cents per hour. The bulk of these employees now receive between 35 cents and 40 cents.

Brotherhood of Railroad Signalmen of America:

An increase of approximately 10 cents per hour for each class of signal employees.

The Brotherhood of Railway Clerks:

An increase in pay of at least 20 cents per hour retroactive to January 1, 1920, and in addition thereto the reestablishment of differentials between certain classes of employees.

Also the immediate elimination of the 43-cent per hour maximum rate established by the present wage orders for freight handlers and other labor in freight houses, storerooms, etc., and time and one-half for Sundays and holidays.

The Order of Railroad Telegraphers:

That the rates received by telegraphers on the Southern Pacific System, which was stated to be practically the highest in the United States on any important railroad, shall be taken as a basis, the rates of all other telegraphers put on the same basis, and then an increase of 17 cents per hour added to rates so established. The equalization alone, leaving out the addition of the 17 cents per hour additional, would cost the

railroads approximately \$13,000,000 per annum, and the 17 cents per hour increase would mean \$36,000,000 per annum additional.

Shopmen:

Increase to approximately 85 cents per hour, for employees now generally receiving 67 and 72 cents per hour.

These demands have now been formally presented to the Railroad Labor Board² created by authority of the new transportation act.³

The Kansas Court of Industrial Relations.

THE MONTHLY LABOR REVIEW for March (pp. 214 and 215) carried a summary statement of the provisions of a law of Kansas establishing a court of industrial relations. Because of the purpose of the court to adjust differences between employers and employees, the account of the law was printed under the general heading "Conciliation and Arbitration." Contemporaneously, Gov. Allen, of Kansas, in an address on the subject of the law, said: "The law creating the Industrial Court in the State of Kansas is not a distant relative of the process of arbitration or conciliation." There is no representation of capital as such, nor of labor as such, but "the court represents the public in the function of government." The method and spirit of the court are of special interest, therefore, as exemplifying a departure from those commonly applied in such cases.

The first decision rendered by this new court bears date of March 29, 1920, and relates to the wages of linemen employed by the Topeka Edison Co. This company furnishes light and power for various citizens and industries of Topeka and Oakland and for the street car systems of the two cities, and was therefore within the scope of the law as a public utility. The case was before the court on the complaint of the attorney general of the State and of four members of the local union of electrical workers to which the employees concerned belonged. The controversy related to hours and wages, and the complainants prayed for a due investigation and ascertainment of the facts, and that such orders and findings may follow as may be just and reasonable.

The company's reply admitted its incorporation and the nature of its business, and also the existence of an unsettled controversy, setting forth its tender of a partial concession to its workers and their rejection of the same. While denying certain allegations of its employees, it "respectfully submits and tenders the issue here presented, and welcomes the good offices of this court in a judicial determination of that which is equitable and just in the premises."

² See p. 49.

³ See MONTHLY LABOR REVIEW, April, 1920, pp. 50-57.

Of this the opinion says:

It would seem, therefore, that while originally this matter was filed as an action upon a controversy, under the compulsory features of the industrial laws of the State of Kansas, it is now before the court more in the nature of a voluntary submission by mutual agreement of a dispute between the above parties.

There was found to be little conflict in the evidence submitted by the two parties. The men were skilled, first-class workers, of unquestioned fidelity, and were engaged in an occupation involving serious hazards. For several years prior to 1916, the customary wage had been \$2.75 per day. In 1916 an advance was made to \$90 per month of 26 days, for a 9-hour day. In May, 1919, a basic 8-hour day was adopted, with a rate of 60 cents per hour, time and one-half for overtime, and double rates for Sunday work. There was a practice of counting time on the job only, though the men had to report at the storehouse, collect material and tools, and travel varying distances on a truck to reach their work. This practice had come into question, and during the progress of the trial it was mutually agreed to count the time both going and coming as well as in the storehouse, and that employer and workers would share this equally.

It was testified that living costs had so advanced that \$4.80 at the present time did not have the purchasing power of either the \$2.75 per day or the \$90 per month, when these were the wages paid. A comparison with rates paid for like work in localities of similar population, and for other work of a comparable nature as to skill, etc., in Topeka was also made. The seven basic principles of the recent Federal railroad law were recited, i. e., wages for similar work elsewhere, cost of living, hazards, skill required, responsibility, character and regularity of employment, and inequalities due to prior adjustments. To these the courts added an eighth: "The skill, industry, and fidelity of the individual employee."

It was pointed out that the law did not use the term, a "living" wage, but a "fair" wage, while also having regard for a "fair rate of return to the owners." Workers of the class under consideration were said to be "in all fairness entitled to a wage which will enable them to procure for themselves and their families all the necessities and a reasonable share of the comforts of life," including intellectual advancement and recreation, the education of their children, and opportunity to provide for sickness and old age. It was also stated that the law allows only the fixing of a minimum wage, leaving the maximum to "depend upon the skill, fidelity, and industry of the employee, the fair and equitable disposition of the employer, the prosperity of the business, and other economic circumstances."

The men had asked for an advance of 10 cents per hour over the 60-cent rate they had been receiving; and with an agreement reached as to

time in the storehouse and on the road, this was really the only point to be decided. The court issued its order ratifying the agreement made, and fixing the rate of pay at 67½ cents per hour for an 8-hour day, time and a half for overtime, and double time for Sunday work, this rate to be the minimum for six months from April 1, unless changed by agreement of the parties with the approval of the court.

On April 23 there were three other cases pending before the court affecting the Amalgamated Electric Workers of Pittsburg, Kans., the firemen and oilers of the Union Pacific Railway, and the maintenance and shop laborers of the Atchison, Topeka & Santa Fe. The court is also conducting a general investigation of the coal-mining situation in the State with a view to stabilizing employment and securing a fuller production. If continuous operation is impracticable such arrangements are to be considered as will work to the advantage of miners in the matter of alternative employments at certain seasons of the year.

British Report on Dock Labor.

THE court of inquiry (instituted under the Industrial Courts Act)¹ set up by the Ministry of Labor, on the joint application of the Port Labor Employers and the Transport Workers' Federation, to investigate the claims of the dockers to a minimum wage of 16s. (\$3.89, par) per day and changes in working conditions, presented its report to the Government on March 31.

The court met first on February 3, with Lord Shaw of Dunfermline as president, and was composed of Messrs. Harry Gosling and Robert Williams (president and secretary, respectively, Transport Workers' Federation), and Mr. Ben Tillett, M. P. (secretary, Dockers' Union) representing the workers; Sir Joseph Broodbank, Sir Lionel Fletcher, and Mr. Frederick Scrutton, representing the employers; and Mr. John Smethurst (president, Master Cotton Spinners' Federation) and Mr. A. Pugh (general secretary, Iron and Steel Trades Confederation), nominated by the ministry of labor as representing employers and workers in other industries.

Messrs. N. Macpherson and G. H. Ince were the secretaries. Mr. E. Bevin (national organizer of the dockers) and Mr. James Sexton, M. P. (leader of the Liverpool dockers), were in charge of the case for the workers, while Sir Lynden Macassey, K. C., and Mr. Bruce Thomas, instructed by Mr. G. Grinling Harris, secretary to the employers' committee, were counsel for the employers.

Witnesses from every interested group of people in the United Kingdom appeared at the hearings. The twentieth and final session

¹ See MONTHLY LABOR REVIEW, February, 1920, pp. 41-46.

was held on March 11, but the report was delayed in publication until the president could no longer hope for a unanimous signature.

Regret is expressed that two of the employers' representatives were unable to sign the majority report, as this was the first inquiry under the Industrial Courts Act and it was hoped that a full and public inquiry would facilitate agreement and thus effectively strengthen confidence in the method. The court has power only to make recommendations, but if all parties had agreed to them the probability of their being adopted would be greatly increased.

The majority report concedes practically the whole of the claim made by the dockers. It reviews and discusses the conditions of the industry from every point of view, covering more or less definitely the casual nature of the work, unemployment, underemployment, mode of payment, the representation of labor on port authorities, lack of confidence between employers and employed, labor-saving machinery, decline of output, and other matters. The actual recommendations are a minimum national rate of 16s. a day, a system of registration, the maintenance of unemployed casual labor, weekly pay, and Whitley councils for dock labor, with well-defined powers.

One of the two employers signing the majority report made the reservation (a vital one) that while recommending a substantial increase in wages he could not agree to the establishing of a minimum daily wage. The two signers of the minority report, both employers, objected to the proposal to establish a national minimum wage, and also to the proposed amount, 16s. (\$3.89 par). They base their objections on the ground of the effect on the higher grades and on other industries, owing to the deep-rooted insistence of workers to maintain their differential position. Further, they see many practical difficulties in the way of establishing weekly payments of wages in every port; and, while approving the principle of national joint councils, they do not consider such a question within the scope of the reference to the court; and, finally, they do not consider that the court was called upon to suggest a direct representation of labor on the governing port bodies.

The minister of labor, to whom the report is addressed, is under no obligation to give effect to the conclusions of the court, nor has he power to enforce them, but he informed the parties that if they so desired he would call a joint conference to consider the proposals. Delegates of the unions concerned immediately passed resolutions accepting the majority report; but if, as the minority report suggests, the employers refuse to accept the court's proposals a further dispute may arise.

The report is of especial interest at this time in the United States, owing to the long-standing disturbed condition of dock labor along

the Atlantic coast. The following summary is taken from the London Times of April 1, 1920:

THE FINDINGS.

The findings of the court are as follows:

- (1) That with a view to establishing a national minimum standard (to use the words of the claim) the minimum for day workers and pieceworkers shall be 16s. [\$3.89 par] per day on the basis of the national agreement for the 44-hour week.
- (2) That a system of registration of dock labor should be introduced into all the ports, docks, and harbors of the kingdom.
- (3) That the principle of maintenance of unemployed casual labor is approved.
- (4) That wages of dock labor should be paid weekly, and that this system should be introduced at the earliest possible date.
- (5) That the constitution of a national joint council and its correlative and local bodies should be undertaken for the dock labor industry on the lines of the report of the Whitley committee.
- (6) That these bodies should, failing agreement by the parties, be charged with the settlement of the incidental matters mentioned in this report and of the remaining items of claim.

The powers of many of the port and harbor authorities concerned to impose tolls and charges are regulated by statute. If effect is given to the recommendations contained in this report these authorities may find it necessary to have their powers amplified. The court accordingly recommends that the Government should give immediate facilities for the enactment of the alterations found necessary in the statutory powers of such authorities.

The main portions of the report (White Paper 55, price 3d.) are as follows:

The application contained claims under 10 heads, and it was in the hope of a settlement of these that this court of inquiry was set up. The first of the claims was in the following terms: "That the minimum for dayworkers and pieceworkers shall be 16s. per day on the basis of the national agreement for the 44-hour week."

It became evident that there were public considerations which pointed to the great advantage of a report being given at the earliest date on this head. The court could not be blind to the fact that unrest upon a considerable scale might be allayed by such an individual answer, if promptly given. It addressed itself accordingly to limiting the inquiry in the first instance to this issue, so as to enable the results to be communicated ad interim to the ministry.

Upon the other issues to be settled, reliance was placed upon the good sense and good will of the parties in the direction of adjustment of matters of difference. As things have turned out, and after a full investigation, which was conducted with keenness, but without acrimony, there seems good ground to hope that that reliance will be justified.

Interpretation of Minimum.

The language of the claim is open to a wide construction. Sir Lynden Macassey was well within his rights in interpreting "a minimum" as a universal national minimum which swept away all considerations of special circumstances and which admitted of no exception. In amplification of the grotesque results which he argued might follow from such a settlement, a table was put in of the small ports of the Kingdom, and it was added that there were in addition 874 creeks, estuaries, etc., in which loading and unloading and other forms of labor such as that performed by one or other of the grades of dock laborers took place. In the opinion of the court the matter must be approached by both parties in a sensible and practical spirit.

It would be improper to compare the minimum now asked to be set up with the lowest figure of wage obtained in the scheduled ports. A great evening-up of underpaid work will take place, and the parties indicated that, once the principle of the minimum was settled, this could be done by them without difficulty. In London, for instance, the Port of London Authority pays 11s. 8d. [\$2.84 par] per day, whereas ocean shipowners pay 13s. 9d. [\$3.35 par] per day, while in Glasgow the general rate of payment of a docker is 14s. [\$3.41 par] per day. It may be noted that the pledge given on behalf of the men was in these terms (to use the words of Mr. Bevin addressing this court):

"I am conscious that whatever your decision may be, if the principle of the minimum be established, some people in some ports are going to get more on the first settlement than others. We have faced that, and we have discussed it with the whole of our men. It was assumed by the chairman of the employers at the previous meeting, to take a striking illustration, that if Liverpool received 12s. [\$2.92 par] per day and Glasgow 14s. [\$3.41 par], if you decided on 16s. [\$3.89 par] a day Glasgow would say '18s., because I was above Liverpool before.' That is not so, my Lord. That is clearly understood by every member of the federation in every port in the country."

In these circumstances, to start with 11s. 8d. [\$2.84 par] as a general datum of difference with 16s. [\$3.89 par] while ignoring all the other cases of higher wages and lesser differences would be productive of serious error.

Output and Casual Labor.

It became plain as the inquiry proceeded that the question of a minimum wage could not be dis severed from two other considerations directly bearing upon it. The first of these had reference to the serious problem of output, and the second to the problem—equally serious—of casual labor. Both of these things are not only vitally connected with the dock labor, but they are also of deep importance to the industrial and social well-being of the community at large.

Their bearing on the issue was quickly made clear. Unless increase of output could be obtained, the ports, it was contended, might be confronted with such a situation of financial strain as might seriously cripple trade, and destroy all the advantages which might be supposed to follow the fixing of the high minimum asked. The result might be to paralyze the very industry whose progress and development it was the interest of both parties to promote. As to casualization, it met the court at every turn as a specialty which bore fundamentally upon the main wages question.

Standard of Living.

The true and substantial case presented by the dockers was based upon a broad appeal for a better standard of living. What is a better standard of living? By this is not meant a right to have merely a subsistence allowance, in the sense of keeping the soul and body of the worker together, but a right to have life ordered upon a higher standard, with full regard to those comforts and decencies which are promotive of better habits, which give a chance for the development of a greater sense of self-respect, and which betoken a higher regard for the place occupied by these workers in the scheme of citizenship. The court did not discourage this view; on the contrary, it approved of it; and it is fair to the port authorities and employers to say that its soundness was not questioned. In the opinion of the court the time has gone past for assessing the value of human labor at the poverty line.

Cost of Living.

On behalf of the workers a figure of £6 [\$29.20 par], and on behalf of the employers a figure of £3 13s. 6d. [\$17.88 par] out of London and £3 17s. [\$18.74 par] in the London area was presented to the court as the expenses of procuring a decent standard

of life for a family of man and wife and three children, and Prof. Bowley defended these latter figures with great ability. * * * The claim made is for a minimum daily wage of 16s. [\$3.89 par] It has been difficult to obtain accurate information as to the exact number of hours or, say, of half-days worked per week by the docker who comes under the ordinary denomination of a casual worker. It appears to the court, however, that that average may stand at about 8 half-days out of the 11. The 16s. per full day claimed would, on this average, reach a sum of £3 4s. [\$15.57 par] per week. Upon the footing that the workmen obtained work and continued at work, however, during the whole of the 11 half-days, a sum of £4 8s. [\$21.41 par] would be reached.

Casual Labor.

It was strongly contended that the minimum now to be set up would be pointed to as the ground for claims in other industries. This may be the case, no doubt, but the following consideration has to be kept in view: Dock labor is in a very large proportion uncertain labor. The employees in that branch of industry often run the risk of finding themselves without work at the end of any day, or even any half-day. This raises the whole question of casual labor, and it has serious relations to the claim of the workers.

The court is of opinion that labor frequently or constantly underemployed is injurious to the interests of the workers, the ports, and the public, and that it is discreditable to society. It undermines all security, and is apt to undermine all self-respect upon the workers' part. It is only among those who have sunk very far, and whom the system itself may have demoralized, that it can be accepted as a working substitute for steady and assured employment. In one sense it is a convenience to authorities and employers, whose requirements are at the mercy of storms and tides and unforeseen casualties, to have a reservoir of unemployment which can be readily tapped as the need emerges for a labor supply. If men were merely the spare parts of an industrial machine, this callous reckoning might be appropriate; but society will not tolerate much longer the continuance of the employment of human beings on those lines.

The system of casualization must, if possible, be torn up by the roots. It is wrong. And the one issue is as to what practical means can be adopted of readily providing labor, while avoiding cruel and unsocial conditions.

So serious has the position become that it has evolved habits of mind and body on the part of the workmen themselves which are detrimental to them and on a wide scale deeply injurious. Many workers have got into the habit of thinking that day labor is a sign of independence, and that labor secured even for a week leaves them devoid of that liberty to do nothing which they have come to prize. As in so many other cases mentioned in this report, this habit of mind is in no respect sanctioned by the leaders of the men, and, as properly urged by them, one of the true lines of reform in this trade will be the abolition of the daily wage system and the substitution therefor of the payment of wages weekly.

Weekly Payment of Wages.

The practical difficulty in the way of this conversion is that men have become habituated to subsistence money so as to enable them to avoid hunger. A notable pledge was made by the representative of the claimants, to the effect that if a weekly payment of wages were instituted—which it was agreed would carry in its wake responsibility on the part of the workman for making his own subsistence a matter for thrifty outlook—the leaders of the men would counsel the abolition of the old bad hand-to-mouth habit of pay. With the assistance of a joint industrial council and the correlative local bodies to be hereafter recommended, the court does not think that the ministry need fear the elimination of the old method.

As matters stand, however, the daily wage asked to be fixed is the wage of a class upon the footing that this unemployment and underemployment, lamentable as they may be, do actually exist. Casualization, in short, and that on a large scale, seems to have become part and parcel of the dock industry, and this has been accentuated since the outbreak of war. It was, and it remains, one of the most appalling problems which confront all those engaged in social amelioration or philanthropic effort. Since the war it has reached the dimensions of a serious social disease. The spectacle of men, who, after all, have the obligations of citizenship resting upon them, being assembled at the dock gates, uncertain whether they are to enter the ranks of labor for even half a day or be left a prey to those temptations which spring from idleness, poverty, and a sense of neglect, is not one which can be treated by any independent and humane mind with equanimity.

REMEDIES.

Registration.

The beginning of a remedy, and the condition of it, is a system of registration of all workers at the docks.

Maintenance.

It is not for this court to enter into these details. As bearing, however, on the financial question before it, it feels that it is its duty also to record its view in favor of the adoption of the principle of maintenance. The amount can be settled by the parties or upon reference to the industrial council machinery already alluded to. It may be pointed out that once maintenance is part and parcel of a registration scheme, the objections to registration may quickly disappear. The court accordingly reports its opinion that registration and maintenance should both be adopted, and this in regard to all the labor employed at all the ports of the Kingdom.

Output.

The court now finds itself bound to face the question of output. It confesses its view to be that this question is of more importance than the claim itself. It desires to state broadly that unless a reasonable hope can be entertained that output shall be largely increased, it remains extremely doubtful whether the industry could justifiably be charged with the amount of the claim put forward. The court, however, is of opinion that such a reasonable hope exists; and it thinks it to be its duty to submit to the Government the result of its investigation and labors upon this topic. The radical connection between output and the wages claim is this: Witness after witness indicated that the increased debit for wages was a thing which the industry could stand if only output were attained.

Payment by Results.

In order to facilitate the desired output of which the country stands in imperative need, attention should be given to the system which has given satisfaction in many of the aspects of dock labor, namely, payment by results. It is understood that payment by results is impracticable in some aspects of dock and waterside labor, but, where practicable and desirable, consideration should be given to the extension of the system. The court recommends to the joint industrial council the consideration of the extension of this system of payment by results.

It need not be concealed that great alarm is felt on the subject throughout the country, and by port authorities themselves. It would be a mistake on a very large scale to lay the blame for all the decrease of output upon the men. No unprejudiced hearer of the evidence would venture to do so. Various causes, in addition to the reduction of hours to 44 per week, have contributed toward this disastrous result.

RESPONSIBILITY FOR LOSS OF OUTPUT.

(1) *Government Departments.*

In the first place it is right to begin with the action of the Government departments themselves. Congestion at the ports of this Kingdom means immediate loss and possibly suffering to all who are either consumers of produce or engaged in commerce. The chairman of the Port of London Authority roundly charged Government departments with producing congestion by a lack of due consideration either for the requirements of our people or the accommodation of our ports.

It is not for this court to enter into any controversies between Lord Devonport and the departments or between the departments themselves, or to permit any political considerations or political utterances to divert its mind from the one issue, which was very serious, namely, the production of confusion, delay, and disorganization at the port to such an extent as to increase the hazards of the employment, its uncertainties, and the amount of casualization. In the opinion of the court such an increase did occur.

(2) *Port Authorities and Employers.*

The next class of persons to some extent responsible with regard to the loss of output are the port authorities and the employers themselves. The court can not see its way to make any pronouncement derogatory to these institutions and classes of citizens who share with the great bodies of men employed the credit that under their aid and by their efforts the trade of this country has risen to its enormous dimensions. Nor would anyone desire to observe upon the handling of traffic and upon the administration of trade at our ports during the war without a grateful realization of the enormous services which, in combination with the shipping industry of the country, were rendered during the war. It will never be forgotten how those authorities and that industry faced calamities of unforeseen dimensions in the loss of ships and difficulties in the commandeering of property in ports and on the high seas by the Government which might well, under less able and courageous management and work, have imperiled the continued existence of our world-wide commerce, of the supplies of the necessities of life to our island people, and in particular of that entrepôt trade which is the envy of the world.

Representation of labor on authorities.—The port authorities and employers are engaged in daily contact with enormous bodies of men, and with a system, to which they can not be blind, under which the fringe of unemployment is great and underemployment is greater. In the opinion of the court the organization of all the ports in the Kingdom would be strengthened by the admission of or an increase in the direct representation of labor on the governing bodies. It appears to the court manifest that the labor situation might be ameliorated, conditions of labor might undergo advantageous reform, and loss of output might be avoided, if the direct representation here recommended in principle were introduced.

Absence of confidence.—There is, in short, a fact of much significance which the parties and the Government have to face, namely, the absence of confidence between employers and men. * * * While the war has undoubtedly raised the public estimation of the value of dock labor, it has unfortunately, with all its confusions, prevented employers and authorities from devoting the attention which might otherwise have been given to the problem still outstanding and still serious of the amelioration of the conditions of labor. That such conditions require to be ameliorated no one can doubt. When it is mentioned that men failing to obtain labor at 8 o'clock in the morning and driven onto the streets or back to their homes for five hours till the next chance comes, with no certainty even then of any other result, and when

it is remembered that there does not appear even yet to exist on any appreciable scale within the docks, ports, and harbors of our Kingdom any refuge, place of rest, or even proper or sufficient canteen accommodation, although in the case of thousands of men their homes may be miles away from their place of labor, it will be seen that a sense of umbrage is almost bound to linger, manifesting itself, it may be, in breaches of contract which are in terms indefensible.

Industrial councils.—No proper machinery has existed which could mitigate this conflict or smooth a way for the arrangement of differences and the removal of troubles; the task has been hard in many cases upon employers relying upon contracts being obeyed, but finding themselves, in the absence of such machinery, up against hostilities which might otherwise have been removed. It is in this view that the court thinks that the time is ripe for the immediate formation of a joint standing industrial council applicable to the dock workers of the United Kingdom, and for district councils and works committees, all as set forth in the invaluable report of the committee presided over by the distinguished chairman of committees of the House of Commons, the Rt. Hon. J. H. Whitley, M. P.

Labor-saving machinery.—On this subject the court is pleased to note that no difference in policy was suggested by the parties to the issue. Much enlightenment was displayed on the subject on both sides, and it appears fairly clear that the old suspicions as to the introduction of new methods, up-to-date machinery, even the mobility of labor from dock to dock, and other matters of avoidable friction, have disappeared, and that with the introduction of these councils and a better remuneration for labor, employers will be enabled with greater security than before to bring all the ports of this country in point of organization and appliances up to the level of the best equipped ports in the world.

The court reports its opinion that it is within the power of port authorities, more particularly if representative working men are taken into counsel upon the subject, to make some provision for positions being found for labor displaced. Were this done, the course of bringing the industry and the particular ports up to date and so putting our trade abreast in its working conditions with the best in the world would be facilitated. The loss which would thus arise in any port by our being outrivalled by the adoption of more advanced methods elsewhere would be avoided.

(3) *Men.*

The court desires to report with equal frankness upon the responsibilities of the men themselves. The court is unwilling to enter upon isolated cases of breach of contract however gross. * * *

There are, however, breaches of contract which most unhappily are of a far wider and more general scope; one, a failure to give the contract time, and the other a deliberate slowing down of the work. Both of these cases of breach of contract are extremely serious, and they have an effect which the outside public fails to realize of lessening the output of work to such an extent, as, in the opinion of the court, materially to increase the charges upon industry and the prices of supplies to our people.

Failure to give contract time.—The case of a breach of this contract is so general and widespread as to have become in the case of a large percentage of all the dockers in the Kingdom almost a habit. It is chiselling off, so to speak, of fractions of time at the beginning and end of each half day. * * * In a word, it has, in the opinion of the court, been established that the agreed upon 8-hours day has been improperly and in violation of the bargain reduced by 1 hour. Apart from the exceptional cases just alluded to nobody excuses this, and the court is happy to record that the tradeunions as such and the whole body of their officials have no complicity with

this departure. When it is reflected that the body of men engaged who are actually through their leaders parties to the present issues before the court numbers 125,000, it is not difficult to see that the loss, taken in the gross, which thus occurs to all concerned and in particular to the consuming public, is bound to be heavy.

A moderate estimate would appear to be that with regard to 25 per cent of the number of workmen employed the loss alluded to occurs. This means that in each ordinary working day in the ports of this Kingdom 31,250 hours are lost of labor which is of the utmost value not merely to the prosperity of the ports but to the needs of the nation. As a matter of figures, it may be added that to convert that loss into a yearly one our people at large suffer in the course of twelve months from this system to the extent of 9,375,000 hours.

Slowing down of output.—Upon the second point the course of enlightenment does not seem to have made the progress which might have been anticipated. The court can not be blind to the fact that there is, not arising from exceptional causes but as a part of a deliberate policy, the adoption in not a few cases of a system of slowing down of output. Blame in this respect can only be imputed to a minority of the men interested in this inquiry. The great majority see the system in its true light. The system known as "ca' canny" is loss on every side. The workman gains nothing in time. Even with regard to his habits and character, as well as the dignity of his calling, the things which to every decent man are really precious, loss and deterioration and injury occur. It must need be so under a system which substitutes for honest work a scheme of make-believe. To take the illustration given it is not a case of short time in the apparent bulk, it is time adulterated just as in the other case, say, the case of a merchant, who would make up weight by moistening his sugar or mixing it with sand. There is one answer, and only one, to all such devices: Honesty forbids.

The system may be difficult to eradicate; it may need courage and great manliness to resist the temptations to it. Yet the court is impressed with the fact that the responsible leaders of the men do not sanction it, and treat it not only as wrong, but as a mistake.

Minimum standard.—To trade thus situated it does seem a strong demand that a claim for 16s. a day should be made upon the part of labor; but to labor, situated as described, it seems a natural and just thing to demand that its conditions should be made to square with the circumstances and the pressing and vital needs of the hour as already described. After much consideration the court has come to the opinion that the claim of 16s. per day should be conceded, on the footing that the hopes held out on behalf of the men of increased output shall not be frustrated; that on this footing the claim is supported by justice and should be granted as is now recommended by this court, with a broad appeal to the honor of the men.

Industrial Conditions in Belgium in 1919.¹

THE Belgian ministry of industry, of labor, and of provisioning has just completed a survey of the status of unemployment and of the extent to which various Belgian industries had recovered in December, 1919. The investigation was conducted jointly by the administration of mines and the labor inspection service, the former considering conditions in the extractive and metallurgical industries, and the remaining industries being covered

¹ Extracted from Commerce Reports for Mar. 17, 1920. Department of Commerce, Washington.

by the labor inspectors, whose inquiry was extended to all establishments employing more than 20 workmen in 1914. Comparisons are made on the basis of production and employment on corresponding days in December, 1913, and December, 1919. It is obvious that comparisons made on the basis of one day's output may be somewhat misleading in certain cases.

At first glance the results of the investigation are discouraging from the standpoint of comparative labor output. From the standpoint of actual production in comparison with prewar output, they indicate, however, the remarkable industrial revival already commented upon by all recent visitors to Belgium. The effect of the general introduction of the eight-hour day and of the large amount of work necessary to restore plants and mechanical equipment in some industries is shown by the following figures:

In December, 1919, the production of the coal mines was 94 per cent of what it was in 1913 although labor employed amounted to 104 per cent of the prewar figure. Coking plants were producing 37 per cent as much as before the war, while employing 53 per cent as many as in 1913. Plants for making briquets for the railways and other industrial uses attained 98 per cent of the prewar production, with an increase of 9 per cent over the prewar labor force.

The poor showing made by the iron and steel industry is no doubt attributable to the unusually severe damages suffered by such plants and the consequent necessity of employing large numbers in rebuilding and repairing foundries and mills and in installing new machinery or stolen equipment recovered from Germany. With 60 per cent of the prewar personnel, the iron foundries and steel mills produced in December only 34 per cent as much as before the war, but this was a considerable increase over preceding months.

Still more serious is the condition of the zinc foundries, whose production in December was only 18 per cent of the prewar production with 54 per cent of the labor employed in 1913. Special difficulties in obtaining ores and other raw materials are probably responsible for this large proportion of labor to output. The production of lead was only 9 per cent of the 1913 total, while copper production was about 28 per cent. In the quarries, an important and very diversified Belgian industry, production was slightly less than 50 per cent with a personnel of about 54 per cent.

According to the finding of the Administration of Mines, 115 establishments, including coal mines, coke and metallurgical plants, and quarries of various kinds, gave war destruction as the chief reason for subnormal production, 80 plants specifying lack of transportation facilities, 52 lack of adequate coal, 49 labor shortage, 30 reduction of working day, 23 lack of raw materials other than fuel, and 33 (all quarries) lack of orders.

Nonemployment and Nonemployment Allowances by Government.

ACCORDING to the investigation of the Labor Inspection Service, which ignored production figures, the labor employed in all other Belgian industries in December, 1919, represented 70 per cent of the 1913 total of 412,462 workmen. Half of the establishments covered were employing at least 75 per cent of their prewar personnel.

In the food industries 89 per cent of the former personnel was employed, in the construction industries 86 per cent, in the glass industries 81 per cent, and in the paper trade 78 per cent. Other percentages, based on 1914 employment figures, are: Chemical industries, 74 per cent; ceramic products, 71 per cent; furniture and wood-working, 66 per cent; textiles, 61 per cent (general average reduced by slump in the linen industry); tanneries, 58 per cent. Transportation of various kinds engaged 7 per cent more operatives than in 1913, although the traffic on the State railways is by no means equal to the prewar volume.

It is interesting to note that the industrial revival has apparently progressed most favorably in the Province of Liege, the center of the steel and zinc industry, where 80 per cent of the former workers are employed.

In the Province of Brabant, which includes Brussels, the proportion was 78 per cent, and in Hainaut, the largest coal-producing region, and also an important steel center, 76 per cent. As was to be expected, it is in West Flanders, which suffered most of the actual war devastation, that the resumption of work has progressed least, only 48 per cent of the prewar working population being employed.

Taking Belgian industry as a whole, it appears that in December, 1919, 76 per cent of the former personnel was employed. The notable progress made in the year following the armistice is strikingly shown by the chômage allowances granted to the workmen by the Government. In November, 1918, these unemployment pensions amounted to 23,000,000 francs (\$4,439,000, par) per fortnight; in June, 1919, the total was 12,350,000 francs (\$2,383,550, par); while in November, 1919, it had decreased to 5,300,000 francs (\$1,022,900, par).

At that time some 135,000 households, or about 437,000 people, were receiving Government assistance. This figure includes, however, families of soldiers not yet demobilized, widows of soldiers killed in the war, and disabled soldiers. For instance, in the important industrial Province of Hainaut, out of over 16,000 households entitled to the chômage, only 5,688 included families of able-bodied workmen. Assuming that the same proportion prevails throughout the country—and it is probably considerably less than

this—the number of workmen continuing to draw State unemployment pensions would now be about 45,000.

It must be remembered that during the war many Belgian workmen left for England, France, Holland, and other European countries, and that some of them have not yet returned. Furthermore, since the armistice there has been an appreciable emigration of workmen temporarily unemployed on account of inevitable delays in reopening the foundries and mills. This emigration, together with the very slight increase in population during the war, has resulted in a considerable shortage of skilled labor. It is probable, however, that with the continued revival of the metallurgical and other industries most affected by the war most of these emigrants will return. In fact, the repatriation of workers in the glass industry has been going on for some time.

As stated in previous reports, it is not the damaged and destroyed plants, serious as such sabotage was, that chiefly delays the complete revival of Belgian industry. The continued scarcity of important raw materials, depreciated exchange, lack of suitable labor, the transportation crisis, and above all the continual shortage of fuel supplies are important contributing factors. All these obstacles at present combine to retard production and abnormally increase costs. They also prevent a systematic effort to offset shorter hours and higher wages for labor by more scientific shop management, reduction of overhead expenses, and an effective system of cost accounting.

Change in Labor Policy of the Russian Government.

ALEXANDER Kerenski, the leader of the first Russian revolution, has been publishing in the Berlin *Golos Rossii* a series of articles based on information contained in the *Ekonomitsheskaja Zhisn*, the official organ of the Soviet Government. References in these articles to labor conditions in Russia are quoted by *Wirtschaftsdienst*¹ and may be summarized as follows:

In all the Petrograd factories there has been a marked decline in the number of workmen employed. According to statistics which have been published, 12,141 men are employed in all the factories, but the actual number is only 7,585. During the first half of July, 1919, only 50 per cent of the hands employed at the Neva shipyard were at work, in the second half only 30 per cent, and in the first half of August only 24 per cent. Of those actually working only 33 per cent were men, the rest being women and children. The Putilov Works

¹ *Wirtschaftsdienst*. Berlin, Jan. 23, 1920.

had the names of 7,500 workers on their books, but only 2,800, or 37.3 per cent, were actually at work. The present position of the Petrograd heavy industry, which, with the Putilov, Neva, Baltic, Obuchov, and Baronoski Works, was the most important in Russia, is characteristic as showing how far the industry has been decimated by the dictatorship of the proletariat. These works used to employ between 100,000 and 150,000 hands, of which only 33 per cent are now at work. In other industries the situation is, if possible, worse; one factory after another has been forced to close, and the number of workers in the entire industrial district of Petrograd has fallen to about 7 per cent.

In Moscow, on January 1, 1919, there were 49,490 textile workers, but this number was reduced to 15,290 during the next six months. A similar reduction has taken place in the large works at Tula, Sormov, Kolomna, and in the Urals.

Two facts are apparent from the statistics: That the "nationalized" industries are almost completely ruined, and that the position of the workers under the Soviet régime has steadily deteriorated. That the Russian working classes have been decimated and demoralized by the Bolshevik economic policy is admitted by the Bolsheviks themselves, for Lenin's government has found itself obliged to do away with what was one of the main achievements of the revolution, the essential feature of "nationalization," viz, the works councils and control by the worker.

The chief cause of the terrible situation of the Russian industries is the lack of all discipline and order in the factories. The works councils and factory committees, whose function it was to establish order in the factories, have only done harm, have destroyed the last vestige of discipline, and have played havoc with the plant. All these circumstances have compelled the abolition of the works councils and the appointment at the head of the most important industrial establishments of "dictators," who have unlimited powers over the lives of the workers.

The recently appointed dictators are to endeavor to stimulate production by revising wage scale agreements and introducing a system of bonuses. The following examples of their activities are reported in the *Ekonomitsheskaja Zhisn* (Nos. 207-219):

1. The people's commissioner for the traffic system has decided to introduce a system of individual payments based on the efficiency and output of the worker.
2. The workers' central committee of the Association of Polygraphic Industries has decided to substitute a system of bonuses for the existing wage scale.
3. The Association of Metal Workers has introduced the bonus system with successful results.
4. The following system of bonuses has been introduced in the Podolian State railways: The normal standard output is taken to be 25 per cent of the general

efficiency. If a worker in a given period exceeds this standard he receives an addition of 20 per cent of the normal wage; if not, he receives only two-thirds of it. If he completes his work in half the time, i. e., is responsible for a saving of labor of 50 per cent, he receives a bonus equalling 100 per cent of the normal wage.

5. A similar bonus system has been introduced in the Kostroma Machinery Works; in some cases the manager of the works is permitted to fix the normal output and the bonuses.

6. Statistics have been published as to the results of the bonus system in the Moscow traction system. A bonus is paid if more than 12 days per month are worked. Out of 1,000 street-car conductors employed in July, 76.8 per cent worked for 12 days and 27 per cent of them received bonuses averaging 245 rubles.

7. Piecework rates have been introduced in the paper industry. Production has trebled and the bonus system is being introduced.

8. The bonus system has been introduced on the ships of the Maria River line, and the bonus is being paid in bread.

PRICES AND COST OF LIVING.

Retail Prices of Food in the United States.

THE following tables are based on figures which have been received by the Bureau of Labor Statistics from retail dealers through monthly reports of actual selling prices.¹

Table 1 shows for the United States retail prices of food on February 15 and March 15, 1920, and on March 15, 1919, as well as the percentage changes in the month and in the year. For example, the price of potatoes in March, 1919, was 2.9 cents; in February, 1920, 6 cents; and in March, 1920, 6.8 cents. These figures show an increase of 13 per cent in the month and an increase of 134 per cent in the year. The cost of 22 articles combined² increased 14 per cent in the year. Although there was a slight tendency for several articles to decrease during the month from February to March, the increase in other articles, such as potatoes, butter, and pork chops, offset this decrease. The change during the month in the retail cost of 22 articles combined was a decrease of less than one-tenth of 1 per cent, which for all practical purposes may be considered as no change.

¹ In addition to retail prices of food, the bureau secures prices of coal, gas, and dry goods from each of 51 cities, and publishes these prices as follows: Coal, in the March and September issues of the MONTHLY LABOR REVIEW; gas, in the June issue; dry goods, in the April, July, October, and December issues.

² The following are the 22 articles, 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, tea. These include all articles for which prices have been secured each month since 1913 with the exception of lamb, for which the Bureau has no consumption figures

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE; MAR. 15, 1920, COMPARED WITH MAR. 15, 1919, AND FEB. 15, 1920.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

Article.	Unit.	Average retail price on—			Per cent of increase (+) or decrease (—) Mar. 15, 1920, compared with—	
		Mar. 15, 1919.	Feb. 15, 1920.	Mar. 15, 1920.	Mar. 15, 1919.	Feb. 15, 1920.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Sirloin steak.....	Pound.....	41.8	40.6	40.8	— 2	+ 0.4
Round steak.....	do.....	39.4	37.2	37.5	— 5	+ 1
Rib roast.....	do.....	33.4	31.5	31.9	— 4	+ 1
Chuck roast.....	do.....	28.4	25.1	25.1	— 12	0
Plate beef.....	do.....	22.1	18.4	18.2	— 18	— 1
Pork chops.....	do.....	38.6	37.7	39.1	+ 1	+ 4
Bacon.....	do.....	54.9	50.3	50.2	— 9	— 0.2
Ham.....	do.....	51.4	50.7	51.2	+ 0.4	+ 1
Lamb.....	do.....	38.0	39.0	39.8	+ 5	+ 2
Hens.....	do.....	41.1	44.7	45.7	+ 11	+ 2
Salmon (canned).....	do.....	32.1	37.6	37.6	+ 17	0
Milk, fresh.....	Quart.....	14.8	16.7	16.6	+ 12	— 1
Milk, evaporated (unsweetened).....	15-16 oz. can.....	15.3	16.2	15.1	— 1	— 7
Butter.....	Pound.....	66.5	72.6	75.2	+ 13	+ 4
Oleomargarine.....	do.....	39.0	43.4	43.1	+ 11	— 1
Nut margarine.....	do.....	35.5	36.1	36.1	+ 2	0
Cheese.....	do.....	40.5	42.3	42.8	+ 6	— 1
Lard.....	do.....	33.4	32.3	30.4	— 9	— 6
Crisco.....	do.....	33.2	38.1	37.5	+ 13	— 2
Eggs, strictly fresh.....	Dozen.....	48.3	68.5	55.6	+ 15	— 19
Bread.....	Pound.....	9.8	11.1	11.2	+ 14	+ 1
Flour, wheat.....	do.....	6.8	8.1	8.0	+ 18	— 1
Corn meal.....	do.....	5.9	6.5	6.5	+ 10	0
Rollod oats.....	do.....	8.3	10.1	10.3	+ 24	+ 2
Corn flakes.....	8-oz. pkg.....	14.1	14.1	14.1	0	0
Cream of Wheat.....	28-oz. pkg.....	25.1	29.3	29.7	+ 18	+ 1
Macaroni.....	Pound.....	19.3	20.0	20.2	+ 5	+ 1
Rice.....	do.....	13.4	18.3	18.4	+ 37	+ 1
Beans, navy.....	do.....	12.5	12.2	11.9	— 5	— 2
Potatoes.....	do.....	2.9	6.0	6.8	+134	+13
Onions.....	do.....	6.0	9.3	9.4	+ 57	+ 1
Cabbage.....	do.....	5.3	9.3	8.7	+ 64	— 6
Beans, baked.....	No. 2 can.....	18.1	16.9	16.8	— 7	— 1
Corn, canned.....	do.....	19.3	18.6	18.5	— 4	— 1
Peas, canned.....	do.....	19.0	19.1	19.0	0	— 1
Tomatoes, canned.....	do.....	16.4	15.2	15.1	— 8	— 1
Sugar, granulated.....	Pound.....	10.6	18.8	18.7	+ 76	— 1
Tea.....	do.....	70.4	71.4	73.2	+ 4	+ 3
Coffee.....	do.....	37.6	49.1	49.1	+ 31	0
Prunes.....	do.....	20.9	29.0	28.7	+ 37	— 1
Raisins.....	do.....	16.4	25.6	26.4	+ 61	+ 3
Bananas.....	Dozen.....	36.6	41.0	41.4	+ 13	+ 1
Oranges.....	do.....	53.2	53.4	62.0	+ 17	+16
22 weighted articles ¹					+ 14	0

¹ See note 2, p. 68.

Table 2 shows for the United States average retail prices of specified food articles on March 15 of each year, 1913 to 1920, together with the percentage change in March of each year compared with March, 1913. For example, as compared with the price in March, 1913, sugar showed a decrease of 6 per cent in 1914. As compared with March, 1913, the price in March, 1915, showed an increase of 22 per cent; in March, 1916, an increase of 37 per cent; in March, 1917, an increase of 61 per cent; in March, 1918, an increase of 70 per cent; in March, 1919, an increase of 96 per cent; and in March, 1920, an increase of 246 per cent. This means that the retail price

of sugar in March, 1920, was about $3\frac{1}{2}$ times as much as it was in March, 1913.

The cost of 22 articles, combined, increased 106 per cent during the 7-year period.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE, MAR. 15 OF EACH YEAR, 1914 TO 1920, COMPARED WITH MAR. 15, 1913.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

Article.	Unit.	Average retail price Mar. 15—								Per cent of increase (+) or decrease (—) Mar. 15 of each specified year compared with Mar. 15, 1913.							
		1913	1914	1915	1916	1917	1918	1919	1920	1914	1915	1916	1917	1918	1919	1920	
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.								
Sirloin steak.....	Pound....	24.6	25.4	24.6	26.2	29.5	33.8	41.8	40.8	+ 3	0	+ 7	+ 20	+ 37	+ 70	+ 66	
Round steak.....	do.....	21.3	23.0	22.1	23.3	26.7	31.8	39.4	37.5	+ 8	+ 4	+ 9	+ 25	+ 49	+ 85	+ 76	
Rib roast.....	do.....	19.3	19.9	19.5	20.6	23.3	26.8	33.4	31.9	+ 3	+ 1	+ 7	+ 21	+ 39	+ 73	+ 65	
Chuck roast.....	do.....	15.6	16.9	16.0	16.5	19.3	23.2	28.4	25.1	+ 8	+ 3	+ 6	+ 24	+ 49	+ 82	+ 61	
Plate beef.....	do.....	11.7	12.4	12.2	12.4	14.6	18.2	22.1	18.2	+ 6	+ 4	+ 6	+ 25	+ 56	+ 89	+ 56	
Pork chops.....	do.....	20.2	20.9	17.7	21.8	27.9	33.9	38.6	39.1	+ 3	- 12	+ 8	+ 38	+ 68	+ 91	+ 94	
Bacon.....	do.....	26.1	26.7	26.4	27.6	33.3	48.8	54.9	50.2	+ 2	+ 1	+ 6	+ 28	+ 87	+ 110	+ 92	
Ham.....	do.....	26.2	26.5	25.6	30.3	33.8	44.1	51.4	45.1	+ 1	- 2	+ 16	+ 29	+ 68	+ 96	+ 95	
Lamb.....	do.....	19.1	18.9	19.5	22.0	26.2	31.7	38.0	39.8	- 1	+ 2	+ 15	+ 37	+ 66	+ 99	+ 108	
Hens.....	do.....	21.5	22.4	21.2	22.9	27.6	41.1	45.7	41.1	+ 4	- 1	+ 7	+ 28	.....	+ 91	+ 113
Salmon (canned).....	do.....	.....	.....	19.8	20.0	22.2	29.5	32.1	37.6	.....	.....	.....	.....	.....	.....	.....
Milk, fresh.....	Quart.....	8.9	9.0	8.8	8.8	10.0	13.4	14.8	16.6	+ 1	- 1	- 1	+ 12	+ 51	+ 66	+ 87	
Milk, evaporated (unsweetened).....	15-16 oz. can.....	.....	.....	.....	.....	.....	15.3	15.1	.....	.....	.....	.....	.....	.....	.....	.....
Butter.....	Pound....	41.4	35.1	35.9	40.2	46.1	55.2	66.5	75.2	- 15	- 13	- 3	+ 11	+ 33	+ 61	+ 82	
Oleomargarine.....	do.....	.....	.....	.....	.....	.....	39.0	43.1	.....	.....	.....	.....	.....	.....	.....	.....
Nut margarine.....	do.....	.....	.....	.....	.....	.....	35.5	36.1	.....	.....	.....	.....	.....	.....	.....	.....
Cheese.....	do.....	22.1	23.1	23.2	25.0	32.3	35.1	40.5	42.8	+ 5	+ 5	+ 13	+ 46	+ 59	+ 83	+ 94	
Lard.....	do.....	15.6	15.6	15.2	18.2	23.8	33.2	33.4	30.4	0	- 3	+ 17	+ 53	+ 113	+ 114	+ 95	
Crisco.....	do.....	.....	.....	.....	.....	.....	33.2	37.5	.....	.....	.....	.....	.....	.....	.....	.....
Eggs, strictly fresh.....	Dozen.....	26.3	30.8	25.5	28.5	34.9	44.3	48.3	55.6	+ 17	- 3	+ 8	+ 33	+ 68	+ 84	+ 111	
Bread.....	Pound.....	5.6	6.2	7.1	7.2	8.1	9.5	9.8	11.2	+ 11	+ 27	+ 29	+ 45	+ 70	+ 75	+ 100	
Flour.....	do.....	3.3	3.3	3.4	3.9	5.7	6.6	6.8	8.0	0	+ 33	+ 18	+ 73	+ 100	+ 106	+ 142	
Corn meal.....	do.....	3.0	3.1	3.3	3.2	4.1	7.2	5.9	6.5	+ 3	+ 10	+ 7	+ 37	+ 140	+ 97	+ 117	
Roll'd oats.....	do.....	.....	.....	.....	.....	.....	8.3	10.3	.....	.....	.....	.....	.....	.....	.....	.....
Cornflakes.....	8-oz. pkg.....	.....	.....	.....	.....	.....	14.1	14.1	.....	.....	.....	.....	.....	.....	.....	.....
Cream of Wheat.....	28-oz. pkg.....	.....	.....	.....	.....	.....	25.1	29.7	.....	.....	.....	.....	.....	.....	.....	.....
Macaroni.....	Pound.....	.....	.....	.....	.....	.....	19.3	20.2	.....	.....	.....	.....	.....	.....	.....	.....
Rice.....	do.....	8.6	8.7	9.1	9.1	9.1	12.0	13.4	18.4	+ 1	+ 6	+ 6	+ 6	+ 40	+ 56	+ 114	
Beans, navy.....	do.....	.....	.....	.....	7.6	9.2	15.4	18.1	12.5	11.9	.....	.....	.....	.....	.....	.....
Potatoes.....	do.....	1.5	1.9	1.4	2.4	5.2	2.5	2.9	6.8	+ 27	- 7	+ 60	+ 247	+ 67	+ 93	+ 353	
Onions.....	do.....	.....	.....	.....	3.3	4.5	12.5	4.0	6.0	.....	.....	.....	.....	.....	.....	.....
Cabbage.....	do.....	.....	.....	.....	.....	.....	5.3	8.7	.....	.....	.....	.....	.....	.....	.....	.....
Beans, baked.....	No. 2 can.....	.....	.....	.....	.....	.....	18.1	16.8	.....	.....	.....	.....	.....	.....	.....	.....
Corn, canned.....	do.....	.....	.....	.....	.....	.....	19.3	18.5	.....	.....	.....	.....	.....	.....	.....	.....
Peas, canned.....	do.....	.....	.....	.....	.....	.....	19.0	19.0	.....	.....	.....	.....	.....	.....	.....	.....
Tomatoes, canned.....	do.....	.....	.....	.....	.....	.....	16.4	15.1	.....	.....	.....	.....	.....	.....	.....	.....
Sugar, granulated.....	Pound.....	5.4	5.1	6.6	7.4	8.7	9.2	10.6	18.7	- 6	+ 22	+ 37	+ 61	+ 70	+ 96	+ 246	
Tea.....	do.....	54.3	54.5	54.6	54.6	54.6	61.5	70.4	73.2	+ 0.4	+ 1	+ 1	+ 1	+ 13	+ 30	+ 35	
Coffee.....	do.....	29.8	29.7	29.9	29.9	29.9	30.4	37.6	64.9	- 0.3	+ 0.3	+ 0.3	+ 0.3	+ 2	+ 26	+ 65	
Prunes.....	do.....	.....	.....	13.7	13.3	14.1	16.5	20.9	28.7	.....	.....	.....	.....	.....	.....	.....
Raisins.....	do.....	.....	.....	12.5	12.6	14.1	15.1	16.4	26.4	.....	.....	.....	.....	.....	.....	.....
Bananas.....	Dozen.....	.....	.....	.....	.....	.....	36.6	41.4	.....	.....	.....	.....	.....	.....	.....	.....
Oranges.....	do.....	.....	.....	.....	.....	.....	53.2	62.0	.....	.....	.....	.....	.....	.....	.....	.....
22 weighted arti- cles. ¹	.....	.....	.....	.....	.....	.....	.....	.....	.....	+ 2	+ 1	+ 10	+ 36	+ 58	+ 80	+ 106

¹ See note 2, p. 68.

Relative Retail Prices of 22 Articles of Food.

IN TABLE 3, the average monthly and yearly prices of 22 food articles³ are shown as relative prices or percentages of the average prices for the year 1913. These relatives are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. Relative prices must be used with caution. For example, the relative price of pork chops in November, 1919, was 200, which means that the money price was 200 per cent of the money price in 1913, or, in other words, the price doubled. The relative price of pork chops in December was 181, showing a drop of 19 points from 200, which is a decrease of only 9.5 per cent.

In the last column of this table are given index numbers⁴ showing the changes by months and years in the retail cost of the 22 food articles weighted according to the importance of each article in the consumption of the average family. Prices are obtained each month for 43 food articles, but only 22 of these are included in the retail food price index because the amounts consumed by the average family have been obtained as yet for only these 22 food articles. These articles comprise about two-thirds of the entire food budget of the average family and reflect with great accuracy changes in the cost of the food budget. The figure representing the cost of these 22 food articles was 200 in February and March, 1920. This shows that as compared with 1913 the cost of these food articles was in March, 1920, double what it was in 1913, and that during the month from February to March there was no change in the cost of these articles.

The curve shown in the chart on page 74 pictures more readily to the eye the changes in the cost of the family market basket and the trend in the cost of the food budget than do the index numbers given in the table. The chart has been drawn on the logarithmic scale⁵ because the percentages of increase or decrease are more accurately shown than on the arithmetic scale.

³ For list of articles, see note 2, p. 68.

⁴ For a discussion of the method used in the computation of these index figures, see MONTHLY LABOR REVIEW for March, 1920, p. 34.

⁵ For a discussion of the logarithmic chart, see article on "Comparison of arithmetic and ratio charts" by Lucian 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 pp.

TABLE 2.—RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, 1907 TO MARCH, 1920.

Year and month.	Sirloin steak.	Round steak.	Rib roast.	Chuck roast.	Plate beef.	Pork chops.	Bacon.	Ham.	Lard.	Hens.	Eggs.	But- ter.	Cheese.	Milk.	Bread.	Flour.	Corn meal.	Rice.	Pota- toes.	Sugar.	Coffee.	Tea.	22 weight- ed arti- cles.
1907.....	71	68	76	.....	.....	74	74	76	81	81	84	85	.....	87	.....	95	88	.....	105	105	.....	.....	82
1908.....	73	71	78	.....	.....	76	77	78	80	83	86	86	.....	90	.....	102	92	.....	111	108	.....	.....	84
1909.....	77	74	81	.....	.....	83	83	82	90	89	93	90	.....	91	.....	100	94	.....	112	107	.....	.....	89
1910.....	80	78	85	.....	.....	92	95	91	104	94	98	94	.....	95	.....	108	95	.....	101	109	.....	.....	93
1911.....	81	79	85	.....	.....	85	91	89	88	91	93	88	.....	96	.....	102	94	.....	130	111	.....	.....	92
1912.....	91	89	94	.....	.....	91	91	91	94	93	99	98	.....	97	.....	115	102	.....	132	115	.....	.....	98
1913: Av. for year..	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
January.....	94	92	95	93	92	89	94	93	97	95	108	107	100	100	100	100	99	99	91	106	100	100	98
February.....	94	93	95	93	93	90	95	94	98	97	91	108	100	100	100	100	98	99	90	100	100	100	97
March.....	97	96	98	98	98	97	97	97	99	100	77	108	100	100	100	100	98	99	88	99	100	100	97
April.....	101	99	103	101	101	103	99	99	100	104	73	106	100	100	100	100	98	99	87	98	100	100	98
May.....	101	100	101	101	101	100	100	99	100	104	76	94	99	99	100	101	98	99	91	97	100	100	97
June.....	102	101	102	102	101	99	101	102	100	103	81	92	99	99	100	101	98	99	104	97	100	100	98
July.....	104	104	102	103	101	103	104	104	101	102	87	91	99	99	100	101	98	100	110	100	100	100	100
August.....	104	104	102	103	101	104	105	106	102	101	95	92	100	99	100	100	100	100	109	102	100	100	101
September.....	103	104	101	103	102	108	104	104	102	101	109	98	100	100	100	100	102	100	110	104	100	100	102
October.....	101	104	101	103	102	107	103	102	101	100	121	100	101	101	100	99	103	100	106	101	100	100	104
November.....	100	102	100	102	102	102	101	100	101	97	144	101	102	102	100	99	104	100	107	99	100	100	105
December.....	99	101	100	101	102	97	99	99	100	98	138	104	102	102	100	99	104	100	106	98	100	100	104
1914: Av. for year..	102	106	103	104	104	105	102	102	99	102	102	94	104	100	112	104	105	101	108	108	100	100	102
January.....	99	102	100	102	102	99	98	98	100	100	126	104	104	102	110	98	104	100	108	95	99	100	104
February.....	99	102	101	103	102	100	98	99	99	104	106	93	104	102	110	99	103	100	108	94	99	100	101
March.....	100	103	101	102	102	100	99	99	99	105	90	92	105	101	110	99	103	100	107	93	100	100	99
April.....	100	103	102	103	102	103	99	99	99	108	74	86	104	100	110	99	103	100	105	91	100	100	97
May.....	102	105	102	103	103	106	99	99	98	106	77	85	103	100	110	99	103	100	112	91	100	101	98
June.....	103	106	103	104	103	103	100	100	97	103	82	88	103	100	110	99	103	100	132	93	100	101	99
July.....	106	109	105	106	104	106	101	103	97	103	87	89	103	100	110	98	103	101	155	95	99	101	102
August.....	110	113	108	109	107	119	107	108	99	104	96	94	103	100	112	106	105	101	111	143	100	101	107
September.....	107	110	105	108	107	113	108	108	99	103	107	98	104	100	114	113	109	101	105	145	100	101	107
October.....	103	107	104	106	106	110	106	105	98	100	113	98	104	101	114	111	109	101	89	132	99	101	105
November.....	100	105	103	104	105	104	104	102	99	97	131	103	104	101	114	112	109	101	83	113	99	101	105
December.....	101	103	101	103	103	93	103	100	97	94	139	103	104	101	116	113	107	101	84	110	99	101	105
1915: Av. for year..	101	103	101	101	100	96	100	97	93	97	99	93	105	99	124	126	108	104	89	120	101	100	101
January.....	100	102	101	101	102	88	101	98	97	95	129	101	105	101	120	124	109	104	85	110	101	100	103
February.....	98	100	100	99	101	85	99	96	97	97	98	98	106	100	126	138	110	104	84	118	101	100	101
March.....	97	99	99	98	100	85	98	95	96	99	74	94	106	99	126	136	110	104	82	120	101	100	98
April.....	99	100	100	99	100	94	98	94	96	100	75	94	105	99	126	137	109	104	86	122	101	100	99
May.....	101	103	101	101	101	99	98	95	96	101	76	91	106	98	128	139	109	104	89	124	101	100	100
June.....	103	105	103	103	101	98	99	97	95	98	78	90	105	98	128	130	109	104	99	126	101	100	100
July.....	105	107	104	103	101	100	100	98	93	97	81	90	105	98	126	125	108	104	85	127	101	100	100
August.....	104	107	104	103	101	103	100	98	89	97	88	88	103	99	126	124	108	104	82	123	101	100	100
September.....	104	106	103	102	101	107	100	97	88	97	101	88	103	99	124	117	108	104	79	118	100	100	101
October.....	103	104	102	101	99	110	101	99	91	97	117	92	104	100	124	113	108	104	94	111	100	100	103
November.....	101	102	101	99	98	99	101	100	92	95	133	95	105	100	122	113	107	104	97	119	100	100	104
December.....	99	101	100	99	98	87	101	100	92	95	135	101	107	100	122	114	107	104	106	124	100	100	105
1916: Av. for year..	108	110	107	107	106	108	106	109	111	111	109	103	117	102	130	135	113	105	155	146	100	100	114
January.....	101	102	101	99	99	89	101	101	93	101	123	100	110	100	122	120	107	105	136	123	100	100	107
February.....	101	102	102	99	100	92	101	102	94	104	101	99	112	100	124	125	108	104	141	125	100	100	106

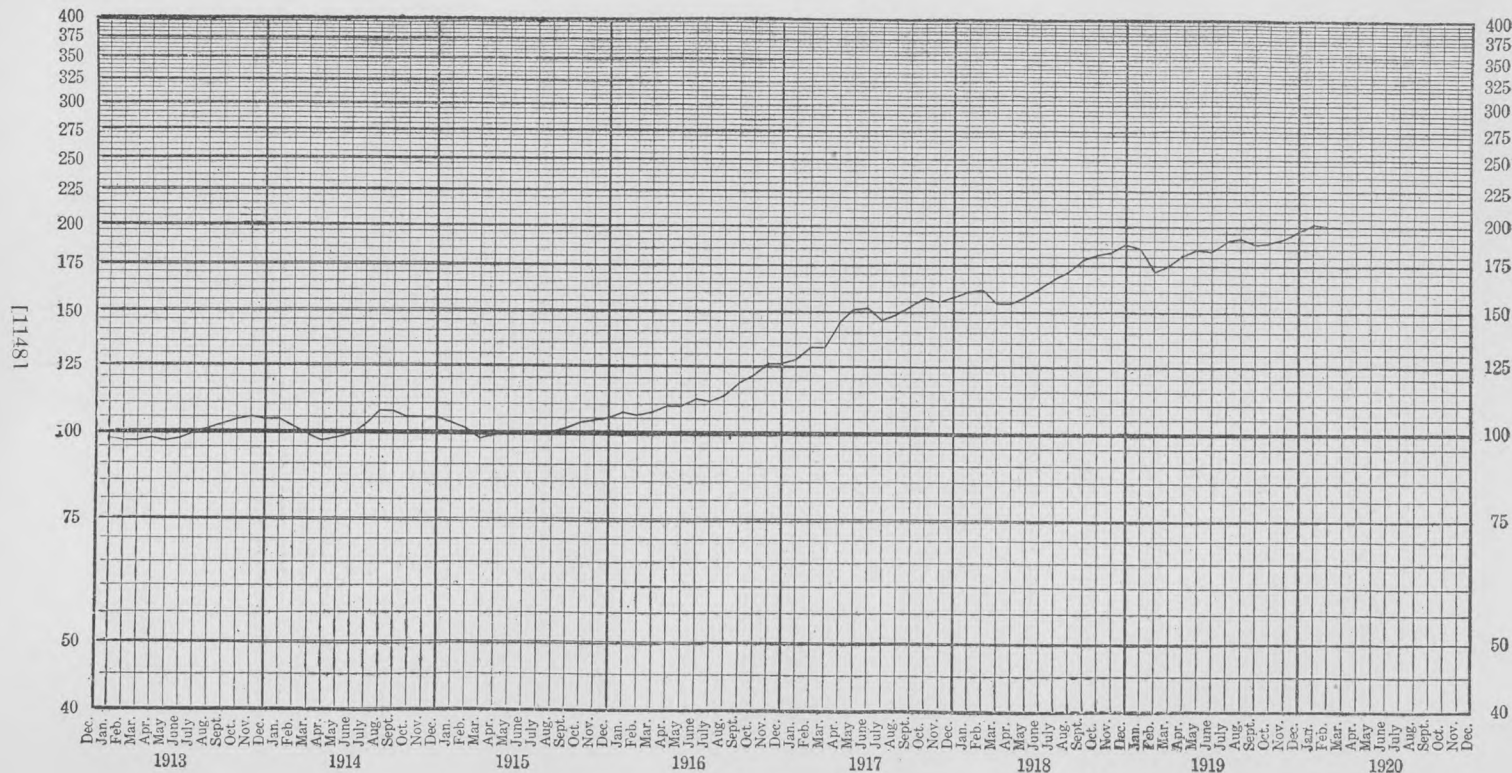
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March.....	104	104	104	103	102	104	103	104	96	107	105	113	100	124	120	107	104	140	137	100	100	107	
April.....	106	103	106	106	105	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	100	109
May.....	109	112	110	109	107	109	105	109	106	113	82	97	112	99	124	119	108	104	140	156	100	100	109
June.....	113	117	113	113	111	110	107	110	108	114	87	95	111	99	124	117	108	105	167	158	100	100	112
July.....	113	116	112	112	109	111	107	111	110	113	93	93	110	100	124	116	108	105	134	160	100	100	111
August.....	112	115	111	110	107	116	108	111	111	112	105	95	111	101	126	134	110	105	141	155	100	100	113
September.....	111	115	110	110	107	125	110	114	118	113	120	102	116	102	136	148	113	105	161	140	100	100	118
October.....	108	111	108	108	106	118	110	114	123	114	132	109	122	105	144	155	117	105	165	149	100	100	121
November.....	106	108	106	107	106	111	111	114	135	112	149	114	132	109	150	174	126	105	198	157	100	100	126
December.....	106	107	106	106	106	106	110	114	137	112	154	118	140	112	138	167	131	105	198	151	100	100	126
1917: Av. for year.....	124	130	126	131	130	152	152	142	175	134	139	127	150	125	164	211	192	119	253	169	101	107	148
January.....	109	111	109	109	108	113	110	114	136	119	158	118	141	112	140	171	132	105	225	146	100	100	128
February.....	113	117	114	116	116	125	114	118	138	126	147	122	142	112	142	171	136	104	290	148	100	100	133
March.....	116	119	118	128	121	133	123	125	151	129	101	121	146	112	144	174	137	104	297	160	101	101	133
April.....	125	130	127	131	132	146	141	136	167	136	112	133	150	114	150	206	154	108	339	175	101	101	145
May.....	127	133	130	134	135	146	155	144	176	138	116	122	153	117	168	266	178	121	352	183	101	103	151
June.....	129	135	132	137	137	148	158	145	177	136	119	123	153	119	170	246	182	125	366	170	101	104	152
July.....	129	137	130	137	136	151	159	147	174	131	122	120	149	125	176	220	195	123	246	166	103	110	146
August.....	130	138	129	136	134	164	160	147	176	131	134	124	148	128	182	229	219	122	206	181	102	111	149
September.....	131	133	131	137	135	185	164	152	188	142	152	129	152	132	176	223	272	124	172	179	102	112	153
October.....	130	138	130	136	136	185	178	159	198	146	160	133	158	143	176	214	232	128	178	177	102	113	157
November.....	124	133	127	132	134	165	179	159	207	138	168	138	156	144	176	208	235	131	183	174	102	114	157
December.....	126	134	128	134	134	161	181	161	211	143	184	142	156	147	166	205	235	133	178	172	102	114	157
1918: Av. for year.....	153	165	155	166	170	186	196	178	211	177	165	151	162	156	175	203	227	148	188	176	102	119	168
January.....	129	137	130	138	142	163	180	162	208	154	195	148	156	151	168	200	233	134	188	173	102	115	160
February.....	131	141	133	142	146	160	179	163	209	170	182	151	158	151	170	200	233	136	188	193	102	112	161
March.....	133	143	135	145	150	161	181	164	210	(1)	128	144	159	151	171	200	240	138	147	167	102	113	154
April.....	144	155	148	159	164	170	183	166	209	(1)	123	132	154	148	175	200	237	139	129	165	101	117	154
May.....	157	170	161	174	181	175	187	170	208	178	123	133	151	148	177	200	233	141	129	165	101	117	158
June.....	168	182	169	184	188	177	191	173	206	177	123	133	150	146	179	203	223	144	171	165	101	119	162
July.....	166	181	168	182	185	180	194	181	206	178	142	137	152	148	179	203	223	148	229	167	101	120	167
August.....	163	178	165	177	179	201	200	180	209	181	155	141	157	153	177	206	227	154	229	169	101	121	171
September.....	164	178	165	178	181	220	208	193	213	185	170	155	163	161	177	206	230	157	229	175	102	122	178
October.....	161	175	163	174	178	216	214	193	216	183	186	170	174	166	175	203	227	161	206	193	102	124	181
November.....	159	173	162	172	175	206	216	195	216	185	215	174	184	173	175	203	217	161	194	196	103	125	183
December.....	159	171	161	171	174	197	217	198	216	180	235	190	193	176	175	203	213	160	188	196	109	124	187
1919: Av. for year.....	164	174	164	169	167	201	205	199	234	193	182	177	193	174	179	218	213	174	224	205	145	129	186
January.....	162	175	165	175	181	193	217	199	211	188	218	184	201	175	175	200	207	159	188	196	117	127	185
February.....	162	174	165	174	181	180	205	193	203	186	147	149	185	174	175	203	200	164	182	195	123	126	172
March.....	165	177	169	178	183	184	203	191	211	193	140	174	183	166	175	206	197	154	171	193	126	129	175
April.....	172	182	175	184	187	197	212	197	223	202	143	186	190	169	175	218	200	154	182	193	129	128	182
May.....	175	187	178	186	181	205	210	203	246	204	154	177	191	167	175	227	207	154	194	193	136	128	185
June.....	170	181	171	176	174	202	212	205	254	200	155	165	192	169	177	227	210	159	224	193	143	129	184
July.....	171	183	169	173	168	220	215	211	266	197	164	164	195	169	179	227	217	168	282	198	155	130	190
August.....	166	177	164	166	160	223	214	212	266	196	174	167	197	174	180	224	220	178	294	202	160	130	192
September.....	161	170	158	158	150	219	206	205	242	194	183	172	195	176	180	221	223	190	253	200	164	130	188
October.....	157	165	155	153	145	211	196	195	228	189	209	186	192	180	180	221	220	199	224	207	159	131	189
November.....	155	162	153	151	143	200	189	188	231	184	235	197	195	184	182	224	220	202	229	227	164	131	192
December.....	154	161	153	152	143	181	186	186	221	184	261	204	196	188	182	233	220	203	253	264	164	127	197
1920:																							
January.....	159	166	159	158	152	178	186	187	215	197	240	194	196	187	195	245	220	208	318	324	165	132	201
February.....	160	167	159	157	152	180	186	188	204	210	199	190	196	188	198	245	217	210	353	342	165	131	200
March.....	161	168	161	157	150	186	186	190	192	215	161	196	194	187	200	242	217	211	400	340	165	135	200

¹No hens sold in this month by order of Food Administration.

TREND IN RETAIL COST OF 22 FOOD ARTICLES, COMBINED, FOR THE UNITED STATES, BY MONTHS, JANUARY, 1913, TO MARCH, 1920.

[Average cost for 1913=100.]



Comparison of Retail Food Costs in 51 Cities.

TABLE 4 shows for 39 cities the percentage of increase or decrease in the retail cost of 22 food articles⁶ in March, 1920, compared with the average cost in the year 1913, in March, 1919, and in February, 1920. For 11 other cities comparisons are given for the one-year and one-month periods. These cities have been scheduled by the Bureau at different dates since 1913. For Savannah, Ga., the comparison is given only for the month, as this city was first scheduled by the Bureau in 1920. These percentage changes are based on actual retail prices secured each month from retail dealers, and on the average family consumption of these articles in each city.⁷

TABLE 4.—PERCENTAGE CHANGES IN THE RETAIL COST OF 22 FOOD ARTICLES IN MARCH, 1920, COMPARED WITH THE COST IN FEBRUARY, 1920, MARCH, 1919, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

City.	Per cent of increase, March, 1920, compared with—		Per cent of increase (+) or decrease (−) March, 1920, compared with February, 1920.	City.	Per cent of increase, March, 1920, compared with—		Per cent of increase (+) or decrease (−) March, 1920, compared with February, 1920.
	1913	March, 1919.			1913	March, 1919.	
Atlanta.....	100	13	+1	Minneapolis.....	108	17	+0.3
Baltimore.....	101	8	−1	Mobile.....		11	−1
Birmingham.....	102	10	−0.3	Newark.....	89	10	−2
Boston.....	95	14	−0.2	New Haven.....	98	14	+0.3
Bridgeport.....		13	−1	New Orleans.....	97	11	−0.3
Buffalo.....	104	13	−1	New York.....	99	12	−2
Butte.....		13	+2	Norfolk.....		8	−3
Charleston.....	109	13	+1	Omaha.....	107	17	+2
Chicago.....	107	20	+3	Peoria.....		15	+1
Cincinnati.....	99	14	+2	Philadelphia.....	96	11	−1
Cleveland.....	105	17	+2	Pittsburgh.....	98	13	+0.1
Columbus.....		14	+1	Portland, Me.....		11	−0.2
Dallas.....	97	11	+1	Portland, Oreg.....	87	11	+2
Denver.....	95	10	+3	Providence.....	104	15	−1
Detroit.....	111	19	+1	Richmond.....	108	12	−2
Fall River.....	101	16	+0.4	Rochester.....		15	−2
Houston.....		13	+1	St. Louis.....	111	16	+1
Indianapolis.....	97	15	+0.4	St. Paul.....		17	+0.1
Jacksonville.....	89	12	−1	Salt Lake City.....	83	10	+2
Kansas City, Mo.....	105	17	+3	San Francisco.....	87	13	−0.4
Little Rock.....	92	11	+0.1	Savannah.....			−3
Los Angeles.....	80	14	+0.1	Scranton.....	102	16	−1
Louisville.....	90	7	−1	Seattle.....	90	11	−1
Manchester.....	98	14	−1	Springfield, Ill.....		20	+2
Memphis.....	103	12	+0.2	Washington, D.C.....	102	9	−3
Milwaukee.....	107	16	+0.1				

⁶ For list of articles see note 2, p. 68.

⁷ The consumption figure used for each article in each city is given in the MONTHLY LABOR REVIEW of November, 1918, pp. 94 and 95.

Index Numbers of Wholesale Prices in the United States.

WHOLESALE prices of commodities as a rule were higher in March than in the previous month, according to information gathered by the Bureau of Labor Statistics of the United States Department of Labor. The Bureau's weighted index number, which is built on a larger number of articles than any other currently published series, increased to 253 for March as compared with 249 for February.

Lumber and building materials again showed large increases, the index number for this group rising from 300 to 324, or 8 per cent. Chemicals and drugs increased 4 per cent and fuel and lighting 2½ per cent in price from February to March. Smaller increases were recorded for metals and metal products and for farm products and foods. Cloths and clothing and house-furnishing goods showed no change in average prices.

The more important price changes from February to March are shown in the following statement:

IMPORTANT ARTICLES INCREASING OR DECREASING IN AVERAGE PRICE IN MARCH
AS COMPARED WITH FEBRUARY, 1920, BY GROUPS OF COMMODITIES.

Increases.

Commodity.	Per cent.	Commodity.	Per cent.	Commodity.	Per cent.
<i>Farm products.</i>		<i>Food, etc.—Concluded.</i>		<i>Lumber and building materials.</i>	
Cotton:		Poultry, Chicago.....	2.63	Plate glass.....	2.70
New Orleans.....	2.94	Olive oil.....	6.03	Lime.....	2.00
New York.....	6.76	Salt.....	4.29	Maple lumber.....	8.00
Barley.....	9.21	Sugar, 96°.....	4.13	Plain oak.....	23.66
Corn.....	8.86	Potatoes.....	22.91	Quartered oak.....	5.00
Oats.....	8.15			Yellow-pine siding.....	52.30
Rye.....	11.20	<i>Cloths and clothing.</i>		Carbonate of lead.....	2.45
Wheat, average.....	1.75	Linen shoe thread.....	15.2	Linseed oil.....	1.85
Hogs.....	2.59	Dress goods: Poplar cloth.....	15.8	Turpentine.....	12.72
Poultry, Chicago.....	14.52				
<i>Food, etc.</i>		<i>Fuel and lighting.</i>		<i>Chemicals and drugs.</i>	
Butter:		Denatured alcohol.....	18.06	Sulphuric acid.....	7.28
Boston.....	3.34	Gasoline.....	5.66	Wood alcohol.....	19.00
Chicago.....	6.61	Crude petroleum.....	13.11	Carbonate of soda.....	9.29
Cincinnati.....	5.22	Refined petroleum.....	3.80	Caustic soda.....	29.69
New Orleans.....	7.22			Nitrate of soda.....	4.05
New York.....	2.17	<i>Metals and metal products.</i>		Soda ash.....	25.24
Philadelphia.....	2.00				
St. Louis.....	3.54	Bar iron:		<i>Miscellaneous.</i>	
Cheese: San Francisco.....	4.55	Philadelphia.....	7.6	Bran.....	9.4
Coffee.....	1.50	Pittsburgh.....	12.5	Lubricating oil, paraffin.....	1.2
Flour, rye.....	11.72	Lead, pig, desilverized.....	4.8	Paper, wrapping.....	2.9
Flour, wheat:		Lead pipe.....	2.6	Rope, pure manila.....	4.1
Kansas City.....	3.10	Pig iron: Bessemer.....	1.2	Wood pulp, sulphite.....	5.5
St. Louis.....	1.50	Pipe, cast iron.....	1.7	Mill feed, middlings.....	9.3
Oranges.....	12.48	Steel billets, Bessemer.....	8.6	Tankage.....	11.8
Meal.....	10.86	Steel plates, tank.....	4.3	Soy bean oil.....	2.4
Fresh beef, New York.....	1.90	Steel, structural.....	15.8		
Hams.....	3.24	Tin, pig.....	2.9		

IMPORTANT ARTICLES INCREASING OR DECREASING IN AVERAGE PRICE IN MARCH AS COMPARED WITH FEBRUARY, 1920, BY GROUPS OF COMMODITIES—Concluded.

Decreases.

Commodity.	Per cent.	Commodity.	Per cent.	Commodity.	Per cent.
<i>Farm products.</i>		<i>Food, etc.—Concluded.</i>		<i>Cloths and clothing—Concl'd.</i>	
Alfalfa hay.....	2.36	Wheat flour:		Yarns, 2/32s, crossbred stock.....	2.2
Calfskins.....	18.50	Minneapolis.....	2.60		
Goatskins.....	4.84	Toledo.....	1.60	<i>Metals and metal products.</i>	
Packers' hides.....	9.17	Currants.....	10.60	Copper, ingot, electrolytic.....	2.5
Cattle.....	4.40	Lemons.....	15.10	Nails, wire.....	10.9
Sheep.....	3.80	Prunes.....	6.37	Pig iron, basic.....	1.5
Peanuts.....	5.13	Raisins.....	2.60	Silver, bar, fine.....	3.8
Tobacco.....	2.63	Bacon.....	4.30	Zinc, spelter.....	3.0
<i>Food, etc.</i>		Fresh beef, Chicago.....	3.53		
Beans.....	3.75	Lamb.....	4.58	<i>Chemicals and drugs.</i>	
Butter: San Francisco.....	3.88	Mutton.....	5.00	Glycerin.....	4.08
Cheese: New York.....	3.20	Mess pork.....	2.62	Opium.....	6.18
Eggs:		Milk:		<i>Miscellaneous.</i>	
Boston.....	20.75	Chicago.....	12.35	Cottonseed meal, prime...	3.9
Chicago.....	12.75	New York.....	2.85	Cottonseed oil, summer,	
Cincinnati.....	18.44	Oleomargarine.....	2.62	yellow.....	1.9
New York.....	14.65	Oleo oil.....	6.74	Jute, raw.....	4.3
Philadelphia.....	23.25	Rice.....	2.00	Rubber.....	4.7
San Francisco.....	13.80	Granulated sugar.....	8.23	Hemp.....	3.3
Herring.....	10.90	<i>Cloths and clothing.</i>			
Mackerel.....	10.50	Print cloths.....	.8		
		Silk, raw.....	6.5		

Measured by changes in the index numbers for the 12 months from March, 1919, to March, 1920, farm products increased nearly 5 per cent in price, food 21 per cent, and cloths and clothing over 64 per cent. In the same period fuel and lighting increased 14 per cent, metals and metal products 18½ per cent, and lumber and building materials 96 per cent in price. The increase in chemicals and drugs was 12 per cent, in house-furnishing goods, 51 per cent, and in the group of miscellaneous commodities, including such important articles as cottonseed oil and meal, mill feed, coconut and soy bean oil, lubricating oil, jute, rubber, newsprint and wrapping paper, Manila hemp, and wood pulp, the increase was about 6 per cent. The increase in all commodities combined was nearly 26 per cent.

INDEX NUMBERS OF WHOLESALE PRICES IN SPECIFIED YEARS AND MONTHS, 1913 TO MARCH, 1920, 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.....	100	100	100	100	100	100	100	100	100	100
January.....	97	99	100	103	107	100	101	109	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.....	103	103	98	96	87	97	101	99	99	100
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.....	105	104	100	93	97	94	114	99	99	101
January.....	102	106	96	93	83	94	103	99	100	99
April.....	107	105	99	89	91	94	102	99	99	100
July.....	108	104	99	90	102	93	108	99	98	101
October.....	105	103	103	96	100	93	124	99	99	101
1916.....	122	126	128	119	148	101	159	115	120	124
January.....	108	113	110	105	126	99	150	105	107	110
April.....	114	117	119	108	147	101	172	108	110	117
July.....	118	121	126	108	145	99	156	121	120	119
October.....	136	140	138	133	151	101	150	124	132	134
1917.....	189	176	181	175	208	124	198	144	155	176
January.....	148	150	161	176	183	106	159	132	138	151
April.....	181	182	169	184	208	114	170	139	149	172
July.....	199	181	187	192	257	132	198	152	153	186
October.....	208	183	193	146	182	134	252	152	163	181
1918.....	220	189	239	163	181	151	221	196	193	196
January.....	207	187	211	157	174	136	232	161	178	185
February.....	208	186	216	157	176	138	232	161	181	186
March.....	212	177	223	158	176	144	232	165	184	187
April.....	217	178	232	157	177	146	229	172	191	190
May.....	214	177	237	160	178	148	223	173	194	190
June.....	217	179	245	159	178	150	219	198	196	193
July.....	224	184	249	166	184	154	216	199	190	198
August.....	230	191	252	166	185	157	222	221	191	202
September.....	237	199	255	167	184	159	220	226	194	207
October.....	224	201	257	167	187	158	218	226	196	204
November.....	221	206	256	171	188	164	215	226	203	206
December.....	222	210	250	171	184	164	195	227	204	206
1919.....	234	210	261	173	161	192	179	236	217	212
January.....	222	207	234	170	172	161	191	218	212	203
February.....	218	196	223	169	168	163	185	218	208	197
March.....	228	203	216	168	162	165	183	218	217	201
April.....	235	211	217	167	152	162	178	217	216	203
May.....	240	214	228	167	152	164	179	217	213	207
June.....	231	204	258	170	154	175	174	233	212	207
July.....	246	216	282	171	158	186	171	245	221	218
August.....	243	227	304	175	165	208	172	259	225	226
September.....	226	211	306	181	160	227	173	262	217	220
October.....	230	211	313	181	161	231	174	264	220	223
November.....	240	219	325	179	164	236	176	299	220	230
December.....	244	234	335	181	169	253	179	303	220	233
1920:										
January.....	246	253	350	184	177	268	189	324	227	248
February.....	237	244	356	187	189	300	197	329	227	249
March.....	239	246	356	192	192	324	205	329	230	253

* Preliminary.

Changes in Wholesale Prices in the United States.

INFORMATION collected in representative markets by the Bureau of Labor Statistics shows that further increases took place in the wholesale prices of many important commodities in the United States during the first quarter of 1920. Among the articles showing an increase are sheep, mutton, hams, butter, corn and corn meal, oats, potatoes, cotton and cotton goods, shoes, pig iron, steel billets, pig lead, crude and refined petroleum, and gasoline.

On the other hand, some articles, as cattle, fresh and salt beef, hogs, bacon, lard, salt pork, eggs, milk, wheat and wheat flour, rice, sugar, hides, and electrolytic copper decreased in price during the quarter. Rye and rye flour, barley, wool and woolen goods, leather, anthracite and bituminous coal, coke, copper wire, tin plate and pig tin, and spelter showed practically no change in price.

Comparing prices in March with those of a year ago, the Bureau's records show that No. 1 northern spring wheat increased 18 per cent, wheat flour 17 per cent, rice 37 per cent, oats 44 per cent, barley 55 per cent, granulated sugar 56 per cent, and potatoes nearly 229 per cent. Butter, milk, eggs, corn and corn meal, rye, and rye flour showed increases ranging from 4 to 16 per cent. In the same period cotton increased 52 per cent, cotton yarns 89 per cent, bleached muslin 79 per cent, worsted yarns 47 per cent, suitings 72 per cent, storm serge 35 per cent, packers' hides 32 per cent, and chrome calf leather 88 per cent. Men's shoes showed an increase of 48 per cent, women's shoes 57 per cent, coke 34 per cent, copper wire 32 per cent, pig iron 33 per cent, steel billets 42 per cent, pig lead 77 per cent, and crude petroleum 53 per cent. Increases of 12 per cent, 14 per cent, 23 per cent, 37 per cent, and 38 per cent were shown for sole oak leather, gasoline, electrolytic copper, spelter, and refined petroleum, respectively, while wool, and anthracite and bituminous coal increased less than 10 per cent.

On the other hand, mess beef decreased 52 per cent, bacon 31 per cent, lard 25 per cent, hogs 24 per cent, cattle 22 per cent, and fresh beef and mess pork each decreased 16 per cent from March, 1919, to March, 1920. Hams, mutton, tin plate, and pig tin showed decreases ranging from 4 to 14 per cent.

WHOLESALE PRICES IN CERTAIN MONTHS, 1914 TO 1920, AS COMPARED WITH AVERAGE PRICES IN 1913.¹

Average money prices.

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Article.	Unit.	1913	July—				1918				1919				1920		
			1914	1915	1916	1917	Jan.	Apr.	July.	Oct.	Jan.	Apr.	July.	Oct.	Jan.	Feb.	Mar.
FOODSTUFFS.																	
(a) Animal.																	
Cattle, good to choice steers	100 lbs..	\$8.507	\$9.219	\$9.213	\$9.985	\$12.560	\$13.113	\$15.175	\$17.625	\$17.856	\$18.413	\$18.325	\$16.869	\$17.594	\$15.938	\$14.969	\$14.400
Beef, fresh, good native steers..	Lb.....	.130	.135	.132	.141	.164	.175	.205	.240	.245	.245	.245	.208	.229	.232	.213	.205
Beef, salt, extra mess.....	Bbl.....	18.923	17.250	17.500	18.250	30.500	31.500	31.900	34.875	35.500	35.500	35.500	34.300	23.250	18.625	17.000	17.000
Hogs, heavy.....	100 lbs..	8.365	8.769	7.281	9.825	15.460	16.300	17.150	17.720	17.850	17.538	20.500	22.225	14.656	15.094	14.513	14.435
Bacon, short, clear sides.....	Lb.....	.127	.141	.111	.157	.248	.293	.271	.276	.286	.289	.326	.337	.227	.221	.220	.211
Hams, smoked, loose.....	Lb.....	.166	.177	.161	.190	.240	.295	.308	.303	.336	.349	.360	.384	.290	.294	.306	.316
Lard, prime, contract.....	Lb.....	.110	.102	.081	.131	.201	.250	.258	.264	.266	.238	.313	.351	.280	.241	.210	.210
Pork, salt, mess.....	Bbl.....	22.471	23.625	18.500	27.167	42.250	50.400	53.200	48.500	42.500	50.375	55.000	58.900	44.125	44.875	43.438	42.300
Sheep, ewes.....	100 lbs..	4.687	4.538	5.469	6.545	8.600	11.144	14.950	10.975	9.469	9.556	13.500	8.125	7.156	10.875	13.063	13.525
Mutton, dressed.....	Lb.....	.103	.095	.109	.131	.145	.192	.243	.205	.151	.176	.229	.159	.126	.158	.206	.196
Butter, creamery, extra.....	Lb.....	.310	.270	.261	.276	.376	.487	.415	.432	.554	.618	.615	.512	.646	.631	.622	.663
Eggs, fresh, firsts.....	Doz.....	.226	.187	.169	.223	.318	.557	.330	.374	.497	.579	.403	.406	.569	.652	.515	.450
Milk.....	Qt.....	.035	.030	.030	.031	.050	.081	.059	.054	.082	.091	.066	.071	.073	.085	.081	.079
(b) Vegetable.																	
Wheat, No. 1, northern.....	Bu.....	.874	.897	1.390	1.170	2.582	2.170	2.170	2.170	2.216	2.223	2.589	2.680	2.625	2.931	2.688	2.755
Wheat flour, standard patent..	Bbl.....	4.584	4.594	7.031	6.100	12.750	10.085	9.985	10.702	10.210	12.275	12.215	12.155	12.031	14.444	13.538	13.165
Corn, No. 2, mixed.....	Bu.....	.625	.710	.783	.808	2.044	1.775	1.665	1.665	1.385	1.401	1.609	1.920	1.400	1.503	1.450	1.579
Corn meal.....	100 lbs..	1.599	1.780	1.750	1.982	4.880	4.835	5.350	4.825	3.370	3.150	3.525	4.488	2.950	3.080	3.013	3.450
Oats, standard, in store.....	Bu.....	.376	.369	.529	.405	.764	.799	.872	.765	.693	.653	.681	.764	.706	.836	.833	.901
Rye, No. 2.....	Bu.....	.636	.618	1.036	.966	2.226	1.915	2.648	1.705	1.625	1.613	1.741	1.555	1.388	1.766	1.568	1.744
Rye flour.....	Bbl.....	3.468	3.075	5.533	5.035	11.417	10.356	13.687	10.500	9.169	8.738	10.060	8.050	7.413	9.538	8.513	9.510
Barley, fair to good malting.....	Bu.....	.625	.533	.743	.746	1.391	1.534	1.722	1.125	.957	1.133	1.268	1.299	1.299	1.494	1.390	1.518
Rice, Honduras, head.....	Lb.....	.051	.054	.049	.045	.070	.079	.087	.094	.091	.091	.087	.133	.121	.127	.128	.125
Potatoes, white.....	Bu.....	.614	1.206	.444	.863	2.375	1.272	.687	1.035	.993	1.084	1.152	1.683	1.350	2.621	2.678	3.291
Sugar, granulated.....	Lb.....	.043	.042	.058	.075	.075	.074	.073	.074	.088	.088	.088	.088	.088	1.54	.150	.137
TEXTILES AND LEATHER GOODS.																	
Cotton, upland, middling.....	Lb.....	.128	.131	.092	.130	.261	.324	.317	.312	.325	.296	.290	.351	.355	.393	.388	.414
Cotton yarn, carded, 10/1.....	Lb.....	.221	.215	.160	.253	.450	.536	.616	.641	.610	.445	.417	.591	.611	.727	.747	.755
Sheeting, brown, Pepperell.....	Yd.....	.073	.070	.060	.078	.140	.171	.240	(³)	(³)	.191	.150	.219	.229	.285	(³)	(³)
Bleached muslin, Lonsdale.....	Yd.....	.082	.085	.075	.088	.160	.180	.230	.250	.250	.209	.176	.274	.294	.323	.333	.333

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Wool, 1/4 and 3/8 grades, scoured	Lb.....	.471	.444	.557	.686	1.200	1.455	1.455	1.437	1.437	1.200	1.091	1.236	1.236	1.236	1.236	1.236
Worsted yarn, 2/32's.....	Lb.....	.777	.650	.850	1.100	1.600	2.000	2.150	2.150	2.150	1.750	1.500	1.600	1.750	2.250	2.250	2.200
Clay worsted suitings, 16-oz.....	Yd.....	1.382	1.328	1.508	2.000	3.250	4.065	4.275	4.450	(3)	(3)	(3)	(3)	(3)	(3)	5.423	5.423
Storm serge, all-wool, 50-in.....	Yd.....	.563	.505	.539	.760	1.176	1.308	1.308	1.470	1.642	1.642	1.054	1.223	1.374	1.421	1.421	1.421
Hides, packers' heavy native steers.....	Lb.....	.184	.194	.258	.270	.330	.328	.272	.324	.300	.280	.295	.486	.482	.400	.403	.364
Leather, chrome calf.....	Sq. ft....	.270	.275	.280	.460	.540	.530	.550	.640	.630	.660	.680	1.100	1.250	1.275	1.275	1.275
Leather, sole, oak.....	Lb.....	.449	.475	.495	.635	.815	.830	.800	.830	.770	.785	.825	.950	1.025	.915	.915	.915
Shoes, men's, Goodyear welt, vici calf, blucher.....	Pair.....	3.113	3.150	3.250	3.750	4.750	4.750	5.000	5.645	6.500	6.500	6.500	7.476	9.000	9.282	9.500	9.600
Shoes, women's, Goodyear welt, kid, 8-in. lace. ⁴	Pair.....	2.175	2.260	2.350	2.750	3.500	4.250	4.250	5.000	5.350	5.350	5.350	7.250	8.000	8.000	8.250	8.250
MINERAL AND METAL PRODUCTS.																	
Coal, anthracite, chestnut.....	2,240 lbs.	5.313	5.241	5.200	5.507	5.933	6.600	6.370	6.693	7.000	8.050	8.017	8.304	8.507	8.518	8.513	8.514
Coal, bituminous, run of mine.....	2,000 lbs.	2.200	2.200	2.200	2.200	5.000	3.600	3.600	4.100	4.100	4.100	4.000	4.000	4.500	4.100	4.100	4.100
Coke, furnace, prompt shipment	2,000 lbs.	2.538	2.000	2.750	2.750	15.000	6.000	6.000	6.000	6.000	5.781	3.900	4.095	4.825	6.000	6.000	6.000
Copper, electrolytic.....	Lb.....	.157	.134	.199	.265	.318	.235	.235	.255	.260	.204	.153	.215	.217	.193	.191	.186
Copper wire, bare, No. 8.....	Lb.....	.167	.148	.210	.325	.328	.262	.263	.285	.290	.228	.175	.244	.264	.228	.230	.230
Pig iron: Bessemer.....	2,240 lbs.	17.133	14.900	14.950	21.950	57.450	37.250	36.150	36.600	36.600	33.600	29.350	39.350	29.350	40.400	42.900	43.400
Steel billets.....	2,240 lbs.	25.789	19.000	21.380	41.000	100.000	47.500	47.500	47.500	47.500	43.500	38.500	38.500	38.500	48.000	55.250	60.000
Tin plate, domestic, coke.....	100 lbs.	3.588	3.350	3.175	5.875	12.000	7.750	7.750	7.750	7.750	7.350	7.000	7.000	7.000	7.000	7.000	7.000
Pig tin.....	Lb.....	.449	.311	.391	.589	.620	.842	.880	.932	.796	.715	.725	.702	.560	.637	.603	.621
Pig lead.....	Lb.....	.044	.039	.058	.069	.114	.068	.070	.080	.081	.056	.051	.056	.064	.087	.088	.092
Spelter.....	Lb.....	.058	.051	.220	.113	.093	.079	.070	.087	.091	.074	.065	.079	.079	.097	.092	.089
Petroleum, crude.....	Bbl.....	2.450	1.750	1.350	2.600	3.100	3.750	4.000	4.000	4.000	4.000	4.000	4.000	4.250	5.063	5.513	6.100
Petroleum, refined, water-white	Gal.....	.123	.120	.120	.120	.120	.160	.160	.171	.175	.175	.185	.205	.220	.224	.240	.250
Gasoline, motor.....	Gal.....	.168	.140	.120	.240	.240	.240	.240	.241	.245	.245	.245	.245	.245	.257	.265	.280

¹ This table is published quarterly in the February, May, August, and November issues of the MONTHLY LABOR REVIEW.

² Standard war flour.

³ No quotation.

⁴ Prior to January, 1918, prices are for gun metal, button.

WHOLESALE PRICES IN CERTAIN MONTHS, 1914 TO 1920, AS COMPARED WITH AVERAGE PRICES IN 1913—Concluded.

Relative prices.

Article.	1913	July—				1918				1919				1920		
		1914	1915	1916	1917	Jan.	Apr.	July.	Oct.	Jan.	Apr.	July.	Oct.	Jan.	Feb.	Mar.
FOODSTUFFS.																
(a) Animal.																
Cattle, good to choice steers.....	100	108.4	108.3	117.4	147.6	154.1	178.4	207.2	209.9	216.4	215.4	198.3	206.8	187.4	176.0	169.3
Beef, fresh, good native steers.....	100	103.8	101.5	108.5	126.2	134.6	157.7	184.6	188.5	188.5	188.5	160.0	176.2	178.5	163.8	157.7
Beef, salt, extra mess.....	100	91.2	92.5	96.4	161.2	166.5	168.6	184.3	187.6	187.6	187.6	181.3	122.9	98.4	89.8	89.8
Hogs, heavy.....	100	104.8	87.0	117.5	184.8	194.9	205.0	211.8	213.4	209.7	245.1	265.4	175.2	180.4	173.5	172.6
Bacon, short, clear sides.....	100	111.0	87.4	123.6	195.3	230.7	213.4	217.3	225.2	227.6	256.7	265.4	178.7	174.0	173.2	166.1
Hams, smoked, loose.....	100	106.6	97.0	114.5	144.0	177.7	185.5	182.5	202.4	210.2	216.9	231.3	174.7	177.1	184.3	190.4
Lard, prime, contract.....	100	92.7	73.6	119.1	182.7	227.3	234.5	240.0	241.8	216.4	284.5	319.1	254.5	219.1	190.9	190.9
Pork, salt, mess.....	100	105.1	82.3	120.9	188.0	224.3	236.7	215.8	189.1	224.2	244.8	262.1	196.4	199.7	193.3	188.2
Sheep, ewes.....	100	96.8	116.7	139.6	183.5	237.8	319.0	234.2	202.0	203.9	288.0	173.4	152.7	232.0	278.7	288.6
Mutton, dressed.....	100	92.2	105.8	127.2	140.8	186.4	235.9	199.0	146.6	170.9	222.3	154.4	122.3	153.4	200.0	190.3
Butter, creamery, extra.....	100	87.1	84.2	89.0	121.3	157.1	133.9	139.4	178.7	199.4	198.4	165.2	208.4	203.5	200.6	213.9
Eggs, fresh, firsts.....	100	82.7	74.8	98.7	140.7	246.5	146.0	165.5	219.9	256.2	178.3	184.1	251.8	288.5	227.9	199.1
Milk.....	100	85.7	85.7	88.6	142.9	231.4	168.6	154.3	234.3	260.0	188.6	202.9	208.6	242.9	231.4	225.7
(b) Vegetable.																
Wheat, No. 1, northern.....	100	102.6	159.0	133.9	295.4	248.3	248.3	248.3	253.5	254.3	296.2	306.6	300.4	335.4	307.6	315.2
Wheat flour, standard patent.....	100	100.2	153.4	133.1	278.1	220.0	217.8	233.5	222.7	224.1	266.5	265.2	262.5	315.1	295.3	287.2
Corn, No. 2, mixed.....	100	113.6	125.3	120.3	327.0	284.0	266.4	266.4	221.6	224.2	257.4	307.2	224.0	240.5	232.0	252.6
Corn meal.....	100	111.3	109.4	124.0	305.2	302.4	334.6	301.8	210.8	197.0	220.4	280.7	184.5	192.6	188.4	215.8
Oats, standard, in store.....	100	98.1	140.7	107.7	203.2	212.5	231.9	203.5	184.3	173.7	181.1	203.2	187.8	222.3	221.5	239.6
Rye, No. 2.....	100	97.2	162.9	151.9	350.0	301.1	416.4	268.1	255.5	253.6	273.7	244.5	218.2	277.7	246.5	274.2
Rye flour.....	100	88.7	159.5	145.2	329.2	298.6	394.7	302.8	264.4	252.0	290.1	232.1	213.8	275.0	245.5	274.2
Barley, fair to good malting.....	100	85.3	118.9	119.4	222.6	245.4	275.5	180.0	153.1	153.0	181.3	202.9	207.8	239.0	222.4	242.9
Rice, Honduras, head.....	100	105.9	96.1	88.2	137.3	154.9	170.6	154.3	178.4	178.4	170.6	260.8	237.4	249.0	251.0	245.1
Potatoes, white.....	100	196.4	72.3	140.6	386.6	207.2	111.9	168.6	161.7	176.5	187.6	274.1	219.9	426.9	436.2	536.0
Sugar, granulated.....	100	97.7	134.9	174.4	174.4	172.1	169.8	172.1	204.7	204.7	204.7	204.7	204.7	358.1	348.8	318.6
TEXTILES AND LEATHER GOODS.																
Cotton, upland, middling.....	100	102.3	71.9	101.6	203.9	253.1	247.7	243.8	253.9	231.3	226.6	274.2	277.3	307.0	303.1	323.4
Cotton yarn, carded, 10/1.....	100	97.3	72.4	114.5	203.6	242.5	278.7	289.6	276.0	201.4	188.7	267.4	276.5	329.0	338.0	341.6
Sheeting, brown, Pepperell.....	100	95.9	82.2	106.8	191.8	234.2	328.8	(a)	(b)	261.6	205.5	300.0	313.7	390.4	(c)	(c)
Bleached muslin, Lonsdale.....	100	103.7	91.5	107.3	195.1	219.5	280.5	304.9	304.9	254.9	214.6	334.1	358.5	393.9	406.1	406.1

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Wool, 1/4 to 3/8 grades, scoured.....	100	94.3	118.3	145.6	254.8	308.9	308.9	305.1	305.1	254.8	231.6	262.4	262.4	262.4	262.4	262.4
Worsted yarn, 2/32s.....	100	83.7	109.4	141.6	205.9	257.4	276.7	276.7	276.7	225.2	193.1	205.9	225.2	289.6	289.6	283.1
Clay worsted suitings, 16-ounce.....	100	96.1	109.1	144.7	235.2	294.1	309.3	322.0	(³)	(³)	(³)	(³)	(³)	(³)	(³)	332.4
Storm serge, all wool, 50-inch.....	100	89.7	95.7	135.0	208.9	232.3	232.3	261.1	291.7	291.7	187.2	217.2	244.0	252.4	252.4	252.4
Hides, packers' heavy native steers.....	100	105.4	140.2	146.7	179.3	178.3	147.8	176.1	163.0	152.2	160.3	264.1	262.0	217.4	219.0	197.8
Leather, chrome calf.....	100	101.9	103.7	170.4	200.0	196.3	203.7	237.0	233.3	244.4	251.9	407.4	463.0	472.2	472.2	472.2
Leather, sole, oak.....	100	105.8	110.2	141.4	181.5	184.9	178.2	184.9	171.5	174.8	183.7	211.6	228.3	203.8	203.8	203.8
Shoes, men's, Goodyear welt, vici calf, blucher.....	100	101.2	104.4	120.5	152.6	152.6	160.6	181.3	208.8	208.8	208.8	240.2	289.1	298.2	305.2	308.4
Shoes, women's, Goodyear welt, kid, 8-inch lace 4.....	100	103.9	108.1	126.4	160.9	160.9	160.9	189.2	202.6	202.6	202.6	274.5	302.8	302.8	312.3	312.3
MINERAL AND METAL PRODUCTS.																
Coal, anthracite, chestnut.....	100	98.6	97.9	103.7	111.7	124.2	119.9	126.0	131.8	151.5	150.9	156.3	160.1	160.3	160.2	160.3
Coal, bituminous, run-of-mine.....	100	100.0	100.0	100.0	227.3	162.7	162.7	186.4	186.4	186.4	181.8	181.8	204.5	186.4	186.4	186.4
Coke, furnace, prompt shipment.....	100	78.8	69.0	108.4	591.0	236.4	236.4	236.4	236.4	227.8	153.7	161.3	190.1	236.4	236.4	236.4
Copper, electrolytic.....	100	85.4	126.8	168.8	202.5	149.7	149.7	162.4	165.6	129.9	97.5	136.9	138.2	122.9	121.7	118.5
Copper wire, bare, No. 8.....	100	88.6	125.7	195.6	202.4	157.5	157.5	170.7	173.7	136.5	104.8	146.1	158.1	136.5	137.7	137.7
Pig iron, Bessemer.....	100	87.0	87.3	128.1	335.3	317.4	211.0	213.6	213.6	196.1	171.3	171.3	171.3	235.8	250.4	253.3
Steel billets.....	100	73.7	82.9	159.0	387.8	184.2	184.2	184.2	184.2	168.7	149.3	149.3	149.3	186.1	214.2	232.7
Tin plate, domestic, coke.....	100	94.2	89.2	165.1	337.3	217.8	217.8	217.8	217.8	206.6	196.7	196.7	196.7	196.7	196.7	196.7
Pig tin.....	100	69.3	87.1	86.6	138.1	187.5	196.0	207.6	177.3	159.2	161.5	156.3	124.7	141.9	134.3	138.3
Pig lead.....	100	88.6	131.8	156.8	259.1	154.5	159.1	181.8	184.1	127.3	115.9	124.7	145.5	197.7	200.0	209.1
Spelter.....	100	87.9	379.3	194.8	160.3	136.2	120.7	151.7	156.9	127.6	112.1	136.2	136.2	167.2	158.6	153.4
Petroleum, crude.....	100	71.4	55.1	106.1	126.5	153.1	163.3	163.3	163.3	103.3	163.3	163.3	173.5	206.7	225.0	249.0
Petroleum, refined, water-white.....	100	97.6	97.6	97.6	97.6	130.1	136.6	139.0	142.3	142.3	150.4	166.7	178.9	182.1	195.1	203.3
Gasoline, motor.....	100	83.3	71.4	142.9	142.9	142.9	142.9	143.5	145.8	145.8	145.8	145.8	145.8	153.0	157.7	166.7

² Standard war flour.

³ No quotation.

⁴ Prior to January, 1918, prices are for gun metal, button.

PRICES AND COST OF LIVING.

Changes in Cost of Living in 14 Cities in the United States, 1914 to 1919.

THE following table shows the changes in the cost of living from December, 1914, to December, 1919, inclusive, in 14 cities located on the Atlantic and Gulf coasts and on the Great Lakes. These changes are based on actual prices secured by agents of the Bureau of Labor Statistics for each of the periods named.

The first column in the table shows the average per cent of the total family expenditures that is devoted to each of the different groups of items—food, clothing, etc., in the usual family budget.

The succeeding columns show the per cent of increase in prices of the several groups of items in each of the years named, over the prices of December, 1914. It will be noted that from the beginning of the period covered until 1918, inclusive, the increase in the cost of food was, with a very few exceptions, greater than the total increase, but that in 1919 the total per cent of increase was greater than the increase in food except in two cities, thus showing that clothing, rents, miscellaneous items, etc., increased in price in 1919 more rapidly than food.

CHANGES IN COST OF LIVING IN 14 SPECIFIED CITIES FROM DECEMBER, 1914, TO DECEMBER, 1919.

Portland, Me.

Item of expenditure.	Per cent of total expenditure.	Per cent of increase from December, 1914, to December—				
		1915	1916	1917	1918	1919
Food.....	41.2	¹ 1.96	18.59	49.83	86.82	91.86
Clothing:						
Males.....		1.09	8.98	31.45	82.27	137.77
Females.....		3.21	10.48	34.15	89.37	156.69
All clothing.....	17.4	2.13	9.72	32.78	85.77	148.49
Housing.....	12.4	.24	.61	2.38	2.48	10.72
Fuel and light.....	6.4	.37	11.39	28.85	67.69	69.77
Furniture and furnishings.....	4.1	6.24	20.94	43.49	110.83	163.69
Miscellaneous.....	18.5	¹ 4.2	13.83	37.96	65.55	83.18
Total.....	100.0	¹ 4.2	13.83	37.96	72.23	91.59

Boston, Mass.

Food.....	44.5	¹ 0.33	18.03	45.76	74.88	80.83
Clothing:						
Males.....		6.06	20.95	45.31	112.79	172.05
Females.....		7.76	22.85	49.92	122.54	209.13
All clothing.....	15.5	6.63	21.86	47.53	117.48	192.40
Housing.....	12.8	¹ .07	1.06	1.06	2.76	12.24
Fuel and light.....	5.6	1.12	10.51	29.21	56.56	63.18
Furniture and furnishings.....	3.3	8.40	26.31	58.37	137.62	198.71
Miscellaneous.....	18.3	1.57	15.72	38.13	61.96	81.12
Total.....	100.0	1.57	15.72	38.13	70.60	92.30

¹ Decrease.

CHANGES IN COST OF LIVING IN 14 SPECIFIED CITIES FROM DECEMBER, 1914, TO DECEMBER, 1919—Continued.

New York, N. Y.

Item of expenditure.	Percent of total expenditure.	Per cent of increase from December, 1914, to December—				
		1915	1916	1917	1918	1919
Food.....	42.0	1.34	16.26	55.28	82.62	90.95
Clothing:						
Males.....		4.78	20.32	51.40	126.39	201.26
Females.....		4.87	24.73	57.63	137.15	234.97
All clothing.....	16.6	4.82	22.31	54.21	131.25	219.66
Housing.....	14.3	¹ 1.10	1.05	2.63	6.47	23.39
Fuel and light.....	4.3	¹ 1.06	10.98	19.92	45.47	50.63
Furniture and furnishings.....	3.3	8.43	27.60	56.47	126.51	172.92
Miscellaneous.....	18.7	1.97	14.91	44.68	70.01	95.82
Total.....	100.0	1.97	14.91	44.68	77.28	103.81

Philadelphia, Pa.

Food.....	40.2	0.34	18.92	54.41	80.67	87.21
Clothing:						
Males.....		3.30	16.15	54.11	119.61	204.16
Females.....		3.94	15.90	49.12	101.71	175.88
All clothing.....	16.3	3.60	16.03	51.33	111.16	190.30
Housing.....	13.2	¹ 1.29	1.72	2.60	8.00	16.74
Fuel and light.....	5.1	¹ 1.81	5.37	21.54	47.94	51.25
Furniture and furnishings.....	4.4	6.94	19.87	49.84	107.69	162.75
Miscellaneous.....	20.8	1.19	14.65	43.81	67.47	88.62
Total.....	100.0	1.19	14.65	43.81	73.86	96.49

Baltimore, Md.

Food.....	42.0	¹ 4.08	20.87	64.35	96.35	92.48
Clothing:						
Males.....		2.46	22.97	49.55	98.66	175.90
Females.....		3.03	25.09	54.75	117.35	183.08
All clothing.....	15.1	2.74	24.00	52.07	107.72	177.43
Housing.....	14.0	¹ 1.18	.85	2.96	13.78	25.76
Fuel and light.....	5.0	.49	9.14	25.54	45.97	48.09
Furniture and furnishings.....	4.3	5.59	26.38	60.79	122.34	166.99
Miscellaneous.....	19.7	¹ 1.37	18.51	51.27	78.71	99.39
Total.....	100.0	¹ 1.37	18.51	51.27	84.68	98.40

Norfolk, Va.

Food.....	34.9	0.75	22.38	63.89	86.18	91.49
Clothing:						
Males.....		1.60	10.33	37.15	97.61	143.99
Females.....			1.68	26.02	91.58	168.08
All clothing.....	21.1	.80	5.98	31.55	94.58	158.40
Housing.....	11.8	.07	¹ 1.72	¹ 1.72	38.96	63.26
Fuel and light.....	5.4		17.03	33.30	74.62	89.90
Furniture and furnishings.....	6.7	.62	8.73	38.96	105.51	143.61
Miscellaneous.....	20.2	.61	14.73	45.15	76.75	97.50
Total.....	100.0	.61	14.73	45.15	80.73	106.98

¹ Decrease.

CHANGES IN COST OF LIVING IN 14 SPECIFIED CITIES FROM DECEMBER, 1914, TO DECEMBER, 1919—Continued.

Savannah, Ga.

Item of expenditure.	Per cent of total expenditure.	Per cent of increase from December, 1914, to December—				
		1915	1916	1917	1918	1919
Food.....	34.3	¹ 0.26	17.57	50.83	76.22	80.85
Clothing:						
Males.....			25.62	60.03	137.90	199.97
Females.....		¹ 6.65	22.21	52.51	128.17	189.94
All clothing.....	18.8	¹ .76	24.06	56.58	133.57	195.86
Housing.....	12.9	¹ 1.44	¹ 3.04	¹ 4.32	5.90	22.04
Fuel and light.....	5.7	¹ 1.30	¹ 1.65	¹ 21.11	37.50	52.21
Furniture and furnishings.....	5.1	¹ 1.84	12.75	50.67	128.61	182.06
Miscellaneous.....	23.2	¹ .21	14.49	42.49	67.34	81.97
Total.....	100.0	¹ .21	14.59	42.49	74.98	98.68

Jacksonville, Fla.

Food.....	34.6	¹ 0.26	17.57	50.83	76.22	80.85
Clothing:						
Males.....		10.35	35.06	74.76	136.56	199.39
Females.....		10.61	32.03	68.49	123.10	226.13
All clothing.....	16.8	10.47	33.69	71.92	130.47	217.22
Housing.....	12.3	¹ 6.87	¹ 18.15	18.65	5.89	22.04
Fuel and light.....	4.6		2.30	15.07	55.19	79.03
Furniture and furnishings.....	5.4	15.13	43.42	73.73	126.47	186.17
Miscellaneous.....	26.3	1.27	14.66	41.63	60.50	80.92
Total.....	100.0	1.27	14.66	41.63	71.52	102.14

Mobile, Ala.

Food.....	39.1	¹ 1.04	19.92	57.32	80.56	98.36
Clothing:						
Male.....		1.77	9.12	37.91	74.64	104.29
Females.....		2.35	8.82	39.72	98.74	144.37
All clothing.....	18.6	2.04	8.98	38.76	85.99	123.71
Housing.....	10.3	¹ 1.86	¹ 4.33	¹ 3.60	11.16	29.58
Fuel and light.....	5.1	(²)	8.76	27.11	57.11	75.55
Furniture and furnishings.....	4.3	4.07	15.29	42.76	108.34	153.34
Miscellaneous.....	22.5	¹ .40	13.82	43.16	72.38	87.02
Total.....	100.0	¹ .40	13.82	43.16	71.37	94.54

Houston, Tex.

Food.....	38.4	¹ 1.04	19.92	57.32	86.13	97.45
Clothing:						
Males.....		3.11	24.76	49.32	117.38	182.12
Females.....		2.13	25.34	53.85	117.28	200.48
All clothing.....	15.2	2.06	25.04	51.49	117.33	192.03
Housing.....	13.2	¹ 2.29	¹ 7.34	¹ 7.72	11.68	13.37
Fuel and light.....	4.2	¹ .85	8.28	22.70	47.46	60.04
Furniture and furnishings.....	5.6	6.12	29.62	62.31	119.93	181.80
Miscellaneous.....	23.4	¹ .29	16.41	44.89	67.55	88.16
Total.....	100.0	¹ .29	16.41	44.89	75.67	101.70

¹ Decrease.² No change.

CHANGES IN COST OF LIVING IN 14 SPECIFIED CITIES FROM DECEMBER, 1914, TO DECEMBER, 1919—Concluded.

Chicago, Ill.

Item of expenditure.	Per cent of total expenditure.	Per cent of increase from December, 1914, to December—				
		1915	1916	1917	1918	1919
Food.....	37.8	2.66	25.23	53.42	78.72	93.05
Clothing:						
Males.....		8.51	26.53	51.91	137.06	211.78
Females.....		6.15	21.22	50.03	141.29	232.86
All clothing.....	16.0	7.48	24.21	50.58	138.91	223.99
Housing.....	14.9	1.08	.70	1.36	2.55	14.02
Fuel and light.....	6.0	1.93	6.64	19.34	37.06	40.10
Furniture and furnishings.....	4.4	5.91	19.96	47.45	108.89	175.99
Miscellaneous.....	20.6	3.01	19.51	41.78	58.72	84.26
Total.....	100.0	3.01	19.51	41.78	72.16	100.61

Detroit, Mich.

Food.....	35.2	4.05	26.51	59.69	82.46	99.47
Clothing:						
Males.....		1.70	19.35	46.91	123.66	203.53
Females.....		3.00	18.30	46.46	102.54	163.16
All clothing.....	16.6	2.31	18.86	46.70	113.82	181.79
Housing.....	17.5	2.08	17.52	32.64	39.03	60.15
Fuel and light.....	6.3	1.62	9.94	30.20	47.56	57.86
Furniture and furnishings.....	5.9	8.73	24.50	50.40	107.31	172.61
Miscellaneous.....	18.3	3.51	22.25	49.85	72.53	100.09
Total.....	100.0	3.51	22.25	49.85	78.03	107.87

Cleveland, Ohio.

Food.....	35.6	1.43	26.43	54.33	79.41	92.85
Clothing:						
Males.....		1.60	17.43	42.85	102.73	165.11
Females.....		2.36	18.57	44.65	102.38	173.92
All clothing.....	16.0	1.96	17.97	43.71	102.56	171.23
Housing.....	16.4	.12	.92	11.29	16.49	39.93
Fuel and light.....	4.1	.30	10.04	26.80	51.94	62.91
Furniture and furnishings.....	6.0	4.72	19.67	47.84	102.44	172.28
Miscellaneous.....	21.8	1.42	19.10	42.93	67.07	85.90
Total.....	100.0	1.42	19.10	42.93	71.36	95.05

Buffalo, N. Y.

Food.....	36.1	2.44	30.09	64.07	87.77	94.74
Clothing:						
Males.....		9.11	31.01	59.27	127.93	186.67
Females.....		8.76	27.92	57.54	117.51	189.07
All clothing.....	17.5	8.95	29.58	58.47	123.11	190.78
Housing.....	15.4	1.15	4.70	9.35	20.72	29.04
Fuel and light.....	4.9	1.30	9.30	23.46	49.34	55.66
Furniture and furnishings.....	5.6	7.05	24.13	50.15	106.34	165.42
Miscellaneous.....	20.6	3.53	24.38	51.13	75.96	90.28
Total.....	100.0	3.53	24.38	51.13	80.91	102.65

¹ Decrease

National Industrial Conference Board Report on Changes in Cost of Living.¹

THE recent report of the National Industrial Conference Board (Boston) on changes in the cost of living from July, 1914, to November, 1919, is the fifth report prepared by the board on this subject. It includes also changes in the cost of the different budget items for the period July, 1919, to November, 1919. The method of securing data was similar to that of the previous investigations and included replies to questionnaires sent to dealers in clothing, furnishings, and fuel in different sections of the country and to representative persons in regard to rent and car-fare changes. It also included use of the index numbers of retail food prices as compiled by the United States Bureau of Labor Statistics.

Nothing was added by the board to the data already published by the Bureau of Labor Statistics in regard to the changes in the cost of food which had been found to have increased in the entire period 92 per cent.

For the period from July, 1919, to November, 1919, the average increases in rents reported from 156 cities were small. In a number of localities they had remained stationary, though this may be partly accounted for by the fact that in many cases leases for a year had been signed previous to this period. No decreases were reported, however, and the average advance for the country for this five-month period was about 8 per cent, making a total increase since July, 1914, of 38 per cent. As rents are largely a local matter no startling differences in different sections of the country were found, but owing to the very general housing shortage it was the general opinion that there could not be a reduction in rents until this condition is remedied.

The rise of 17.5 per cent in the price of clothing for the summer and fall of 1919 was greater than that for any other item in the budget for the same period, while for the entire period from the beginning of the war the increase was 135 per cent. Price schedules were secured from 195 dry goods and specialty stores in 66 representative cities, although no attempt was made to study the question geographically, since it had already been determined from previous investigations that the locality apparently had no effect on clothing prices. From the average prices in November, 1919, trial clothing budgets for a wage earner and his wife were constructed which represent, not a complete outfit, but the amount of clothing which might be purchased in one year. According to these trial budgets the increase in the man's budget, in November, 1919, over July, 1914,

¹ National Industrial Conference Board. Changes in the cost of living, July, 1914–November, 1919. Boston, December, 1919. 24 pp. Research report No. 25.

was 141.2 per cent, in November, 1919, over November, 1918, 26.8 per cent, and in November, 1919, over July, 1919, 20 per cent. The percentage increases in the woman's budget for the same periods were, respectively, 129.5, 22, and 15.3.

The advance in the combined average cost of fuel, heat, and light in November over July, 1919, was 4 per cent, while the advance for the entire period since July, 1914, was 48 per cent. Coal alone advanced about 5 per cent for the five-month period, but this was somewhat offset by the fact that there was considerably less increase in the price of gas and electricity. Information in regard to coal prices was secured from 114 dealers in 42 cities in all sections of the country, but data in regard to the cost of light were secured in less detail, the American Gas Association and the National Electric Light Association supplying estimates of the price changes.

Miscellaneous items, which include household furnishings, tobacco and confectionery, medical care, reading material, amusements, church contributions, insurance and organization dues, and car fare are estimated to have advanced 75 per cent over the whole period, and 7 per cent since July, 1919.

In order to determine the total increase in the cost of living the average percentages of increase for the different items of the budget were weighted according to the relative importance of each item in the family budget. The following table shows the percentage increases in the cost of living in average communities between July, 1914, and November, 1919.

PER CENT OF INCREASE IN COST OF LIVING, NOVEMBER, 1919, OVER JULY, 1914.

Budget items.	Relative importance in family budget.	Increase in cost between July, 1914, and November, 1919.	Increase as related to total budget.
All items.....	100.0	.....	82.2
Food.....	43.1	92	39.7
Shelter.....	17.7	38	6.7
Clothing.....	13.2	135	17.8
Fuel, heat, and light.....	5.6	48	2.7
Sundries.....	20.4	75	15.3

Retail Price Changes in Great Britain.

THE following table gives for Great Britain the increase over July, 1914, in the cost of food and general family expenditure for April of each year, 1915 to 1920, and for each month in 1920. 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.

The table gives percentage 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 prices it is necessary to add 100 to the percentage as given, e. g., for January, 1920, the increase in cost of food is 136 per cent, the relative price being 236.

The figures represent two comparisons: First, the increase in prices, based on the same kinds and quantities as used in July, 1914; second, the increase, based on the change in the standard of living, resulting from a substitution of one kind of food for another to meet war-time conditions.

The table shows that retail prices of food were 135 per cent higher in April, 1920, than in July, 1914, and that the increased cost of all items in the family budget was 130 to 135 per cent.

PER CENT INCREASE IN COST OF FOOD AND ALL ITEMS IN FAMILY BUDGET IN GREAT BRITAIN BASED ON JULY, 1914.

[Compiled from the British Labor Gazette.]

Year and month.	Food.		All items in family budget.	
	Retail prices (assuming same kinds and quantities).	Expenditures (allowing for estimated changes in consumption).	Cost (assuming same kinds and quantities).	Expenditures (allowing for estimated changes in consumption).
April, 1915.....	24	.....	.....	.....
April, 1916.....	49	.....	.....	.....
April, 1917.....	94	61	¹ 65	.....
April, 1918.....	106	44	² 90-95	⁵⁵
April, 1919.....	113	87	³ 110	⁹⁵
1920.				
January.....	136	115	125	115
February.....	135	112	130	115
March.....	133	107	130	115
April.....	135	(⁴)	130-135	(⁴)

¹ Not including taxes.

² The increase, excluding additional taxation, is 5 per cent less.

³ The increase, excluding additional taxation, is 7 per cent less.

⁴ No longer calculable, mainly owing to decontrol.

Retail Prices of Foodstuffs and Firewood in Bucharest, Roumania, 1911, 1914, and 1919.

A RECENT issue of the Bulletin of the General Statistical Office of Roumania¹ publishes a comparative table of retail prices of foodstuffs and firewood in Bucharest in October, 1911, 1914, and 1919. Index numbers based on prices in October, 1911, are given. The table is reproduced in part:

¹ Buletinul Statistic al Romaniei. Seria IV, Vol. XIV, No. 2. Bucharest, 1920, p. 292.

AVERAGE RETAIL PRICES OF FOODSTUFFS AND FIREWOOD IN BUCHAREST, ROUMANIA, OCTOBER, 1911, 1914, AND 1919.

[Par value of 1 lei=19.3 cents.]

Article.	Unit.	Average prices.			Per cent of increase.		
		October, 1911.	October, 1914.	October, 1919.	October, 1914, over October, 1911.	October, 1919, over October, 1911.	October, 1919, over October, 1914.
		<i>Lei.</i>	<i>Lei.</i>	<i>Lei.</i>			
Corn meal.....	Kilogram.....	0.16	0.25	1.50	56	837	500
Bread, first quality.....	do.....	.26	.33	3.50	26	1,246	963
Bread, second quality.....	do.....	.23	.28	1.00	21	339	263
Beef.....	do.....	.90	.90	9.50	.....	955	955
Pork.....	do.....	1.40	1.20	10.50	¹ 15	650	782
Mutton.....	do.....	.80	.80	6.50	.....	712	712
Chicken.....	Each.....	1.85	1.75	18.00	¹ 6	872	934
Duck.....	do.....	1.50	1.80	19.00	20	1,166	955
Goose.....	do.....	3.20	4.00	28.50	25	790	612
Turkey.....	do.....	5.40	9.20	47.50	70	779	417
Carp, fresh.....	Kilogram.....	.90	.80	5.25	¹ 12	483	562
Carp, salted.....	do.....	.90	1.05	6.15	16	583	488
Eggs.....	Per 100.....	6.75	9.00	70.00	33	937	671
Milk.....	Liter.....	.35	.40	2.50	14	614	526
Cheese.....	Kilogram.....	1.40	1.90	22.00	35	1,471	1,063
Lard.....	do.....	1.90	1.40	27.00	¹ 26	1,321	1,820
Olive oil.....	do.....	2.00	2.50	16.50	25	725	560
Olives.....	do.....	1.10	1.30	12.00	18	990	823
Sugar.....	do.....	1.25	1.35	12.50	8	900	825
Rice.....	do.....	.55	.50	12.00	¹ 10	2,081	2,323
Coffee.....	do.....	2.55	3.00	17.00	17	566	469
Wine.....	Liter.....	1.00	1.30	9.50	30	850	630
Brandy.....	do.....	1.20	1.40	12.50	16	940	796
Vinegar.....	do.....	.50	.60	2.50	20	400	316
Beans, white.....	Kilogram.....	.35	.35	2.15	.....	514	514
Potatoes.....	do.....	.10	.14	.70	40	600	400
Onions.....	do.....	.10	.35	.55	250	450	57
Nuts.....	do.....	.55	.60	4.50	7	718	664
Firewood, oak.....	100 kilograms.....	3.65	3.85	33.00	5	804	760
Firewood, beech.....	do.....	3.45	3.60	28.00	4	711	679

¹ Decrease.

According to the preceding table there has been an enormous increase in the cost of foodstuffs in Roumania since 1911. Up to the outbreak of the European war the increase in prices was relatively small, and in the case of some very important foodstuffs such as pork, chicken, fish, lard, and rice, a decrease in price is shown. Since 1914, however, prices have risen so rapidly that in October, 1919, the price increases over October, 1911, of the 28 articles listed in the table vary between 339 and 2,081 per cent. The articles showing an increase in price in excess of 1,000 per cent are rice (2,081 per cent), cheese (1,471 per cent), lard (1,321 per cent), bread, first quality (1,246 per cent), and duck (1,166 per cent). Of other important foodstuffs, the price of beef increased 955 per cent, of pork 650 per cent, mutton 712 per cent, eggs 937 per cent, milk 614 per cent, sugar 900 per cent, coffee 566 per cent, and potatoes 600 per cent.

WAGES AND HOURS OF LABOR.

Wages and Hours of Labor in Brick, Chemical, Glass, Leather, Paper, Pottery, and Rubber Industries in 1919.

IN THIS article are presented the results of the investigation of wages and hours in various industries which was carried on as part of the industrial survey of 1919. The industries included are the manufacture of brick, chemicals, glass, leather, paper and pulp, pottery, and rubber goods.

Under the general heading "chemical industry" are included establishments engaged in the manufacture of general chemicals, explosives, pigments, fertilizer, food products, petroleum products, soap, and sugar. In the case of these industries, however, while the products are very unlike, the processes involved are so few and so similar that it was found feasible to combine the data for all the chemical establishments included in the survey under one set of occupation terms.

The glass industry was subdivided according to the nature of the product. In the survey are included establishments engaged in the manufacture of bottles, lighting fixtures, plate glass, table ware, and window glass. In tabulating the material it was found possible in the case of some occupations to combine the data from different branches of the industry, while other occupations were characteristic of one or another separate branch. In the section of Table 4 relating to the glass industry the letters following the occupation terms are the initials of the branches of the glass industry in which the occupations are found. Those occupations which have no letter following them are found in all five subdivisions of the glass industry.

The investigation of the leather industry was confined to establishments tanning sole leather, heavy upper leather, such as cow and calf skins, and light upper leather made from the skin of the goat and the kid. In the table the occupations found in each branch of the industry are tabulated separately.

The report on the investigation of the paper and pulp industry is naturally subdivided into two parts—one dealing with the manufacture of pulp and the other with the manufacture of paper. In

the latter division of the industry were included plants manufacturing news print paper, wrapping and blotting paper, book paper, and writing paper. Processes of manufacture are so similar that it was found possible to combine the occupations for all subdivisions of the pulp industry and likewise those for the paper industry.

Four branches of the manufacture of rubber goods were included in the survey—namely, the manufacture of tires and tubes, of boots and shoes, of mechanical goods, and of rubber hose. As in the case of the glass industry, it was found necessary in the rubber industry to indicate in which branches each of the selected occupations was found. The letters following the occupation titles refer as follows: "F," to the manufacture of footwear; "H," to the manufacture of hose; "M," to the manufacture of mechanical goods; and "T," to the manufacture of tires and tubes. Occupations with no letters following them are found in all branches of the industry.

In the case of the brick and pottery industries no significant subdivision existed, and the material for each industry is presented in a single table.

Table 1 shows the number of establishments and the number of employees in each industry covered by the survey in each State in which the industry was included. The States to be covered in the survey of each industry were selected on the basis of the number of employees shown by the Census of Manufactures of 1914. No attempt was made, however, to apportion the representation in the different States exactly in proportion to the number of employees in them; but enough establishments were included in each State to give fairly typical results for the State. Undoubtedly the lapse of time, and especially the disturbing effects of the war, have rendered obsolete much of the data applying to conditions in 1914, but there is no more recent information available as to the number of employees in the industries in the different States.

TABLE 1.—NUMBER OF ESTABLISHMENTS AND NUMBER OF EMPLOYEES, BY STATE AND INDUSTRY.

State.	Brick.		Chemicals.		Glass.		Leather.		Paper and pulp.		Pottery.		Rubber.	
	Es- tab- lish- mts.	Em- ploy- ees.	Es- tab- lish- mts.	Em- ploy- ees.	Es- tab- lish- mts.	Em- ploy- ees.	Es- tab- lish- mts.	Em- ploy- ees.	Es- tab- lish- mts.	Em- ploy- ees.	Es- tab- lish- mts.	Em- ploy- ees.	Es- tab- lish- mts.	Em- ploy- ees.
Alabama.....			11	983										
California.....	3	180	4	191			4	454						
Connecticut.....			2	77					6	193				
Delaware.....							2	556					2	1,684
Florida.....			3	227									1	199
Georgia.....			13	1,602										
Illinois.....	4	316	5	1,967	3	615	2	725					2	296
Indiana.....	4	194	3	2,533	10	2,265								
Iowa.....	5	255	5	352										
Kansas.....			5	382										
Louisiana.....			11	2,481										
Maine.....									5	1,038				
Maryland.....	2	107	5	791	2	474								
Massachusetts.....			4	654			6	1,209	13	1,549			5	5,335
Michigan.....	3	111	4	395			8	688	7	609			1	2,242
Minnesota.....									4	350				
Missouri.....	5	244	5	575										
New Hampshire.....									4	337				
New Jersey.....	1	32	4	2,961	2	1,268	4	930	3	99	4	576	5	1,759
New York.....	1	58	6	1,225	10	1,043	4	345	11	734	2	792		
North Carolina.....			7	1,132										
Ohio.....	3	102	12	1,536	10	2,462			8	741	5	1,017	4	4,281
Oklahoma.....			6	735										
Oregon.....									3	687				
Pennsylvania.....	4	204	10	1,306	16	2,793	14	2,055	9	716			1	320
South Carolina.....			9	1,364										
Tennessee.....			8	855										
Texas.....			8	1,350										
Vermont.....									3	281				
Virginia.....			6	1,262	2	285								
Washington.....									2	377				
West Virginia.....					13	2,158					4	872		
Wisconsin.....			7	1,736			7	1,997	7	619			2	1,822
Total.....	35	1,803	163	25,982	68	13,363	51	8,959	85	8,330	15	3,257	23	17,989

The attempt was made to secure as many schedules as possible having pay rolls falling within the first five months of 1919. In some instances, however, special circumstances made it necessary to take schedules for earlier periods. As industry was in an unsettled state immediately after the close of the war and conditions were rapidly changing, the exact date of the material presented is a matter of more importance than it would be in a normal year. Therefore, there is presented in Table 2 information as to the number of pay-roll periods in each industry falling within each calendar month. The table indicates that of the 440 schedules included in the seven industries 31 antedated 1919 and 3 ended early in June of the same year. Ninety-two per cent of the schedules fell within the first five months of 1919. All the material is presented as of the year 1919. In none of the industries, so far as could be ascertained, were there any changes in the rates of wages during the progress of the survey.

TABLE 2.—NUMBER OF PAY-ROLL PERIODS IN SPECIFIED MONTHS, 1918 AND 1919.

Industry.	Number of pay-roll periods in—										Total number of pay-roll periods.
	1918				1919						
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	
Brick.....					1		8	14	12		35
Chemicals.....	1	5	1	7	43	10	66	17	13		163
Glass.....		1		1	7	18	17	13	11		68
Leather.....					2	12	12	18	5	2	51
Paper and pulp.....		3	4	5	9	21	16	10	17		85
Pottery.....							5	9		1	15
Rubber.....			1	2	1	7	10	2			23

The presentation of the material relating to hours and earnings is complicated by the fact that in each of the industries here described pay rolls of different lengths were found. In computing earnings on an hourly basis the length of the pay-roll period is of little importance, but in all tables presenting figures relating to hours the exact length of the pay-roll period becomes of importance. Table 3 indicates how many pay-roll periods of each specified number of days were used in the computations on which the material presented in the final table is based. It will be seen that approximately three-fourths of the periods were 6 days in length. The other one-fourth fell under the general heading of 2 weeks or one-half month. There were periods varying all the way from 11 days to 14 days in length.

TABLE 3.—SCHEDULE DISTRIBUTION BY NUMBER OF WORKDAYS IN PAY-ROLL PERIOD.

Industry.	Total.	Number of schedules in pay-roll period covering—				
		One week or 6 workdays.	Two-weeks, one-half month, or—			
			11 work- days.	12 work- days.	13 work- days.	14 work- days.
Brick.....	35	20	.....	6	8	1
Chemicals.....	163	120	.....	7	24	13
Glass.....	68	39	.....	22	6	1
Leather.....	51	32	2	2	13	2
Paper and pulp.....	85	72	.....	8	5	.....
Pottery.....	15	6	.....	9	.....	.....
Rubber.....	23	19	.....	1	3	.....

At the time of the survey some industries were very active and others considerably depressed. Every effort was made to confine the survey to establishments working full time. In the case of two of the industries included in this report, however, that was found to be impossible, and in using the figures in Table 4 with respect to hours

of operation allowance should be made for the fact that in the glass industry two part-time schedules were included in the State of New York and one each in New Jersey and Pennsylvania; while in the rubber industry one part-time schedule was included in Connecticut. The other schedules in all industries represent full-time pay-roll periods.

The information concerning hours and earnings on which the tables are based was obtained directly from the pay rolls or other records of the companies by agents of the Bureau. Other information was obtained from responsible officials in personal interviews. Wherever the records of the company failed to indicate the time actually worked by pieceworkers during the selected pay-roll period, arrangements were made to have such a record kept for a future period from which record data were afterwards copied. In all cases the figures copied by the agents represented the hours actually worked and earnings actually received by individual employees during the selected pay-roll period.

In Table 4 (pp. 101 to 107) are given the fundamental facts concerning the hours and earnings of employees in the selected occupations of each of the seven industries enumerated above. The first three columns of the table indicate the sex and occupation of the employees to whom the later figures in the same line refer, and also the number of establishments and the number of employees whose records were used in computing the averages. The rest of the table divides naturally into two sections, the former dealing with hours, the latter with earnings.

The facts about hours are shown in six columns. The first of these columns shows the average number of hours actually worked during the pay-roll period by employees on one-week pay rolls; the second shows the average number worked by employees on two-week and half-month pay rolls. It will be seen that there is no constant ratio between the figures for the same occupation in the two columns. This is to be explained partly by the fact that the figures for the two columns necessarily come from different establishments, partly by the fact that the second of the two columns contains data from pay rolls varying in length from 11 to 16 days; and partly by the fact that longer pay rolls show a constant tendency toward shorter average hours of actual work.¹

The two groups of employees are combined in the next column. This column shows the average number of hours per week day worked by the employees in each occupation. This figure is obtained for each employee in the occupation by dividing the number of hours

¹ For a discussion of the effect of the lengthening of the pay-roll period upon average hours see MONTHLY LABOR REVIEW, January, 1920, p. 121.

worked by him during the pay-roll period by the number of week days in the period, adding the daily hours of all the employees in the occupation, and dividing the sum by the number of people in the occupation. The resulting quotient, average hours worked per week day, is the number of hours per day that each employee in the industry would have worked if all had worked six days a week and no more, and if all had worked the same number of hours on each week day.

By multiplying the average hours per week day by six the figures in the column "Average hours worked per week" are obtained. In the next column are shown the average full-time hours per week in each occupation. By comparing average hours worked per week with average full-time hours per week are obtained the figures in the last column relating to hours, the column headed "Per cent of full time worked."

The last four columns of the table relate to earnings. In the first two of these columns are given the average earnings actually received during the pay-roll period by those on one-week pay rolls and by those on two-week and half-month pay rolls. These incommensurable figures are changed to a comparable form by reducing them to average hourly earnings, and the result for all the employees in each occupation is shown in the column bearing that heading.

Finally, in the last column of the table, are shown the average earnings per week for employees in each occupation. This figure was first computed for each employee by dividing his earnings for the pay-roll period by the number of week days in the period and multiplying the quotient by six. The sum of the figures thus obtained for all the employees in the occupation divided by the number of people in the occupation is the average earnings per week for the occupation. It is a hypothetical figure. It represents what each employee in an occupation would have earned in a week if all employees in the occupation had earned the same amount on each week day of the pay-roll period, and if any one employee in the occupation had earned the same amount per day as any other employee in the same occupation.²

A figure for average earnings per week may be obtained by multiplying the average hours per week of an occupation by the average earnings per hour in the same occupation. Weekly earnings obtained in that way may vary considerably from the figures given in the table. Where this variation occurs, however, it is entirely due to additions or subtractions necessarily involved in handling continuing decimals. The two methods are fundamentally identical, as

² For a fuller discussion of the significance and limitations of some of the figures shown in the tables see MONTHLY LABOR REVIEW, April, 1920, pp. 97-99.

may be seen from the following analysis of them. The formula for the method just referred to may be stated as follows:

$$\text{Earnings per week} = \text{hours per week} \times \text{earnings per hour.}$$

$$\text{Hours per week} = 6 \times \text{hours per day} = 6 \times \frac{\text{total hours}}{\text{number of week days}}.$$

$$\text{Earnings per hour} = \frac{\text{total earnings}}{\text{total hours}}.$$

$$\therefore \text{Earnings per week} = 6 \times \frac{\text{total hours}}{\text{number of week days}} \times \frac{\text{total earnings}}{\text{total hours}}.$$

This formula indicates the successive operations involved in computing actual weekly earnings by the method of multiplying hours per week by earnings per hour. It will be seen, however, that this formula readily reduces to the simpler form—

$$6 \times \frac{\text{total earnings}}{\text{number of week days}}.$$

The last formula is exactly the one used in applying the method followed in the table.

The results obtained by this method are substantially correct, but can not lay claim to absolute accuracy. One source of possible error should be pointed out. The practice of working fewer hours on Saturday than on other week days, while by no means universal, is widely prevalent; and the number of hours worked on Saturday varies more or less from establishment to establishment. Wherever fewer hours are worked on Saturday than on other days, the theoretical figure for actual weekly earnings described above will express exactly what it professes to express (namely the amount that would have been earned in a week if the earnings had been uniformly distributed), only in the case of employees for whom Saturdays constituted one-sixth of the total number of days worked by them. In all other cases the figure will vary more or less from theoretical exactness. If the number of Saturdays exceeds one in six, the computed weekly earnings will be somewhat too low; if the number is less than one in six, the earnings will be correspondingly high. Careful experiment has shown, however, that these variations offset one another so largely that the net result is a variation of a few cents at the most in the weekly average for the group, a variation so slight that it may be entirely disregarded.

The earnings represented in the column of earnings per week are average actual earnings. No attempt has been made to compute average full-time weekly earnings on account of the difficulties involved in determining their amount. Such earnings should indicate how much the employees represented in the table would have earned if they had worked full time and no more. In the days when piece-workers and time workers alike were paid at a uniform rate for all

their work regardless of the number of hours per day they worked or the amount of work they turned out, actual earnings of employees for any number of hours per week could be readily and accurately changed into corresponding full-time earnings per week. The prevalence of a higher rate for overtime work and of a great variety of bonus systems in the industrial world of to-day makes the process of changing actual earnings to full-time earnings laborious and the results problematical.

Overtime pay presents few theoretical difficulties. If the exact number of hours of overtime work and the overtime rate is reported for each employee, it is possible to deduct from the figures reported for total hours and total earnings the overtime hours and earnings, and from the remainders to compute an hourly rate for regular time. But the practical difficulties encountered in attempting to determine the overtime hours and earnings of each employee are great. Overtime hours can not be ascertained by subtracting the full-time hours of an employee for the pay-roll period from the hours actually worked by him. Overtime is a matter of daily hours, and overtime hours on one day of the pay-roll period may be offset by less than full-time hours on another day. It frequently happens that an employee whose total hours worked during the pay-roll period are less than the full-time hours of the period still has a considerable amount of overtime to his credit. Moreover, the pay rolls of many establishments afford no indication of the amount of overtime paid for. The extra pay for overtime is frequently handled in practice by "boosting" the hours. For example, in an 8-hour establishment that pays at the rate of time-and-a-half for overtime an employee who works 10 hours in a day is credited on the pay roll with 11 hours. By this method the total earnings of the employee for the pay period can be computed by multiplying his total hours as thus measured by his regular hourly rate. In many cases it is only by obtaining the time record of the employee day by day that overtime hours can be discovered. In establishments in which records are carelessly kept it is not always possible even in that way to determine overtime beyond possibility of mistake.

The effect of computing full-time earnings by the use of an hourly rate containing any element of extra pay for overtime is obviously to show full-time earnings more or less in excess of the amount that could actually be earned in regular time only. An additional difficulty is presented in the case of employees working overtime and receiving a bonus. It becomes necessary to determine for each such employee how much bonus, if any, he would have received if he had performed no overtime work. Sometimes it is readily seen that the bonus would have been earned in regular time. Such is the case, for

example, with an attendance bonus, which is usually paid for regularity of attendance during regular time only. A production bonus, however, can not be so readily apportioned. It will be obvious in some cases that all of it was earned in overtime, but in other cases an approximate apportionment of the bonus between regular time and overtime is the nearest approach that can be made toward determining regular-time earnings.

Still more hopeless would be the attempt to determine how much of such a production bonus would have been earned in full regular time by an employee who worked less than full time in the pay-roll period for which the records were copied and consequently earned no bonus for that period. Production bonus systems are very frequently so arranged that an employee of average ability and industry will earn some bonus if he works full time. But in the case of any individual employee who works less than full time during a pay-roll period there is obviously no possible method of determining how much bonus he would have earned if he had worked exactly full time. For such an employee no method of handling the bonus question would give results which could be depended upon as even approximately accurate.

The purpose of dwelling at length upon the impossibility of making an accurate determination of full-time earnings from the pay-roll data of employees under modern conditions is only partly to explain the omission of figures for such earnings from the following table. It is intended primarily to bring out and emphasize the fact that it is entirely inadmissible to compute full-time earnings for employees in any occupation shown in the table by multiplying full-time hours per week by earnings per hour. For, while the former figure is definite and entirely adapted to the purpose in hand the latter represents the average actual hourly earnings of employees, some of whom worked more than full time and others less and whose average hourly earnings for the period, therefore, may be either more or less than they would have been if the same employees had worked full regular time and no more.

In Table 4 are set forth for each industry in turn the facts concerning hours and earnings referred to in the preceding paragraphs. The chief value of the table lies in its presentation of these facts on a comparable weekly basis. The derivative figure for per cent of full time worked sheds some light on the question of the regularity with which modern industrial operations are carried on. In using the figures of the table for purposes of comparison between different industries or different occupations, due weight should be given to the conditions under which the information was gathered, as set forth in the earlier part of this article.

TABLE 4.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS MADE IN SPECIFIED INDUSTRIES IN 1919, BY SEX, OCCUPATION, AND PAY-ROLL PERIOD.

Brick.

Sex and occupation.	Number of establishments.	Number of employees.	Average hours actually worked—				Full-time hours per week.	Per cent of full time worked.	Average earnings actually made—			
			In weekly pay period.	In biweekly or semi-monthly pay period.	Per week day.	Per week.			In weekly pay period.	In biweekly or semi-monthly pay period.	Per hour.	Per week.
MALES.												
Brick machine tenders.....	34	41	52.8	114.6	8.9	53.4	54.2	89	\$24.74	\$55.71	\$0.484	\$25.62
Grinding machine tenders.....	33	63	48.4	105.2	8.2	49.2	53.2	92	19.67	48.91	.438	21.18
Kiln firemen.....	34	160	69.5	135.8	11.0	66.0	73.5	90	27.65	55.52	.423	27.06
Kiln setters.....	35	198	42.1	88.6	7.0	42.0	53.8	78	22.46	52.37	.558	23.21
Laborers.....	35	844	48.9	90.5	7.7	46.2	53.7	86	17.75	39.86	.423	18.27
Loaders and wheelers.....	31	276	40.0	87.0	6.7	40.2	51.9	77	21.97	48.79	.561	22.53
Off bearers.....	34	178	40.8	94.6	7.0	42.0	52.9	79	17.10	45.45	.439	18.77
Puggers.....	34	43	48.3	96.7	7.9	47.4	53.6	88	20.26	48.29	.469	21.64
Total.....	35	1,803	47.7	95.4	7.8	46.8	55.1	85	20.00	45.35	.464	20.64

Chemicals.

MALES.												
Foremen, chemical operations.....	124	802	62.2	117.5	9.6	57.6	57.9	99	\$36.35	\$88.25	\$0.674	\$38.50
Foremen, mechanical operations.....	121	690	59.6	121.3	9.6	57.6	68.3	84	28.38	79.71	.557	32.24
Heater men.....	53	1,596	59.3	103.3	8.3	49.8	57.7	86	29.51	62.25	.582	28.78
Laborers.....	162	16,330	48.0	100.7	7.9	47.4	57.4	83	18.15	44.91	.390	18.70
Process men, assistant.....	142	5,442	55.9	113.4	8.9	53.4	55.2	97	24.47	63.99	.500	26.54
Process men, primary.....	50	929	52.4	116.2	8.7	52.2	55.6	94	31.03	84.06	.683	35.65
Process men, secondary.....	137	2,494	59.4	116.5	9.3	55.8	56.8	98	28.18	68.12	.544	30.12
Total.....	163	28,283	50.9	108.4	8.4	50.4	56.8	89	20.90	59.70	.457	23.24
FEMALES.												
Laborers.....	29	669	45.9	92.1	7.4	44.4	52.6	84	12.35	30.31	.272	12.70

TABLE 4.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS MADE IN SPECIFIED INDUSTRIES IN 1919, BY SEX, OCCUPATION, AND PAY-ROLL PERIOD—Continued.

Glass.

[The branch of the industry in which each occupation is found is indicated as follows: B=bottles; L=lighting ware; P=plate glass; T=Table ware; W=window glass.]

Sex and occupation.	Number of establishments.	Number of employees.	Average hours actually worked—				Full-time hours per week.	Per cent of full time worked.	Average earnings actually made—			
			In weekly pay period.	In biweekly or semi-monthly pay period.	Per week day.	Per week.			In weekly pay period.	In biweekly or semi-monthly pay period.	Per hour.	Per week.
MALES.												
Batch mixers.....	65	224	155.5	104.8	8.9	53.4	157.2	93	\$21.19	\$46.71	\$0.419	\$21.77
Blockers (L., T.).....	8	45	145.0	82.0	7.4	44.4	149.8	89	34.12	86.46	.815	35.34
Blowers.....	36	1,050	138.2	78.9	6.8	40.8	147.7	86	38.24	65.94	.868	33.08
Cappers (W.).....	4	54	46.3	111.0	7.9	47.4	50.0	95	29.27	59.81	.625	29.35
Cranemen (P.).....	3	19	-----	143.7	10.9	65.4	75.2	87	-----	66.41	.476	30.06
Cutters, decorative (L., T.).....	10	113	46.5	94.8	7.8	46.8	52.7	89	27.34	54.62	.590	27.34
Cutters, plate (P.).....	3	27	-----	137.3	10.3	61.8	63.6	97	-----	59.40	.432	26.81
Cutters, rough plate (P.).....	3	12	-----	101.7	7.7	46.2	74.0	62	-----	55.88	.526	25.14
Cutters, window (W.).....	3	52	58.8	-----	9.8	58.8	60.7	97	64.03	-----	1.094	64.03
Decorators (L., T.).....	12	47	47.0	102.8	8.2	49.2	51.3	96	23.85	55.39	.508	25.32
Finishers (B., L., T.).....	15	152	142.5	79.9	6.8	40.8	147.2	86	31.36	75.34	.784	32.07
Flatteners (W.).....	3	32	53.4	-----	8.9	53.4	55.7	96	69.83	-----	1.343	69.83
Foot casters (T.).....	3	9	49.9	89.3	6.8	40.8	46.1	89	31.96	70.78	.803	32.72
Furnace men.....	62	365	72.8	118.2	10.8	64.8	70.8	92	28.19	49.64	.407	25.78
Gas makers.....	30	271	65.4	118.9	10.3	61.8	67.5	92	26.69	51.47	.422	25.92
Gatherers.....	20	484	137.7	80.2	6.3	37.8	146.6	81	28.71	63.64	.731	29.26
Grinders and polishers (P.).....	3	40	-----	146.2	10.6	63.6	73.8	86	-----	65.03	.429	29.13
Handlers (T.).....	4	11	43.9	93.5	7.5	45.0	46.8	96	39.18	94.01	.945	42.74
Laborers, boy and factory.....	67	3,488	142.2	76.4	7.1	42.6	150.2	85	14.22	26.10	.354	13.72
Laborers, common.....	67	2,009	50.8	101.5	8.3	49.8	58.5	85	17.50	37.88	.354	17.41
Layers (P.).....	3	90	-----	144.7	10.8	64.8	72.9	89	-----	73.07	.498	32.91
Leer men.....	60	381	50.8	107.3	8.6	51.6	56.1	92	19.43	44.60	.396	20.11
Machine operators (B., L., W.).....	39	920	46.7	86.4	7.5	45.0	51.3	88	32.73	67.53	.773	33.06
Melters (P.).....	3	16	-----	153.6	10.8	64.8	77.0	84	-----	70.78	.495	31.52
Mold makers (B., L., T.).....	45	265	150.5	100.2	8.2	49.2	148.6	101	34.48	71.64	.698	34.61
Packers.....	61	1,071	52.3	98.4	8.2	49.2	56.1	88	21.60	40.87	.421	20.52
Pressers (B., L., T.).....	15	180	40.2	77.9	6.6	39.6	46.6	83	34.15	66.65	.850	33.92
Sand blasters (L.).....	4	11	49.8	118.0	8.4	50.4	50.2	100	21.33	55.25	.431	21.90
Skimmers (P., W.).....	6	41	45.2	124.3	8.5	51.0	61.3	83	29.39	65.11	.582	30.10
Splitters (W.).....	4	27	41.6	96.7	7.2	43.2	51.6	84	21.52	51.37	.516	22.45
Total.....	68	11,506	46.7	92.2	7.8	46.8	53.7	87	22.03	46.24	.500	22.19

FEMALES.												
Decorators (L., T.).....	11	127	44.8	100.6	7.7	46.2	49.9	93	10.95	25.52	.246	11.31
Laborers, girl and factory.....	40	1,222	45.2	78.3	7.3	43.8	50.9	86	9.21	21.92	.219	9.62
Packers.....	23	508	46.8	92.0	7.0	42.0	54.6	77	9.38	26.51	.243	11.45
Total.....	47	1,857	45.4	86.4	7.2	43.2	51.9	83	9.38	24.40	.227	10.23

Leather.

MALES.												
<i>Heavy upper.</i>												
Beam hands.....	15	107	51.5	117.8	8.6	51.6	54.0	96	\$27.64	\$58.29	\$0.532	\$27.43
Buffers.....	10	129	45.5	112.2	8.3	49.8	58.0	86	27.43	58.23	.538	27.04
Finishers.....	10	201	51.6	135.3	8.6	51.6	54.4	95	27.20	72.29	.584	29.10
Fleshers and unbairers.....	14	160	46.0	118.7	8.0	48.0	52.9	91	26.49	60.25	.569	26.78
Glazers.....	11	105	33.4	108.0	6.5	39.0	53.7	73	18.32	47.31	.552	19.43
Laborers, all departments.....	15	1,439	51.0	117.2	8.7	52.2	55.7	94	24.00	48.82	.451	22.70
Putters-out, hand.....	7	80	43.6	111.5	7.9	47.4	55.2	86	27.96	54.75	.579	26.61
Putters-out, machine.....	9	49	46.4	119.2	8.4	50.4	56.2	90	21.30	48.58	.438	21.82
Seasoners.....	15	234	49.2	108.0	8.2	49.2	54.4	90	24.21	54.45	.502	24.36
Shavers.....	15	192	47.5	110.1	8.1	48.6	55.3	88	33.34	56.52	.637	30.59
Sorters and measurers.....	9	105	50.1	115.3	8.4	50.4	50.6	100	23.39	48.58	.458	22.96
Splitters.....	14	131	48.1	112.6	8.3	49.8	56.3	88	24.56	61.15	.528	26.36
Stakers, tackers and stretchers, hand.....	14	320	48.9	100.7	8.0	48.0	55.6	86	25.92	52.01	.516	24.86
Stakers, machine.....	14	150	43.6	111.4	7.6	45.6	54.0	84	24.59	63.55	.570	26.03
<i>Light upper.</i>												
Fleshers and unhajrers.....	10	124	45.2	.....	7.6	45.2	49.2	92	25.78	.....	.561	25.78
Glazers.....	11	289	47.2	.....	7.9	47.2	50.5	93	36.85	.....	.738	36.85
Laborers, all departments.....	12	766	47.3	.....	7.9	47.3	49.1	96	24.99	.....	.526	24.99
Putters-out, machine.....	9	110	45.5	.....	7.6	45.5	49.4	92	20.41	.....	.444	20.41
Seasoners.....	6	59	44.1	.....	7.2	44.1	51.1	85	22.23	.....	.533	22.28
Shavers.....	10	59	40.4	.....	6.7	40.4	49.4	82	26.35	.....	.648	26.35
Stakers, hand.....	9	101	39.5	.....	6.7	39.5	50.9	78	26.20	.....	.658	26.20
Stakers, machine.....	11	189	45.9	.....	7.6	45.9	49.8	92	29.84	.....	.655	29.84
Trimmers.....	8	75	48.4	.....	8.1	48.4	49.4	98	29.21	.....	.599	29.21
<i>Sole.</i>												
Bark grinders.....	17	54	49.1	102.6	8.0	48.0	53.5	90	20.83	38.04	.403	19.20
Beam hands.....	23	166	49.4	104.4	8.1	48.6	52.5	93	26.68	51.05	.517	24.91
Fleshers and unbairers.....	23	123	44.7	99.6	7.6	45.6	52.6	87	26.01	46.48	.523	23.44
Laborers, all departments.....	24	1,986	47.0	101.3	7.9	47.4	52.3	91	24.97	44.96	.482	22.49
Liquor runners.....	21	50	52.5	127.5	9.2	55.2	53.7	103	25.96	56.71	.480	26.16
Operators, rolling-machine.....	23	273	49.0	100.7	7.9	47.4	52.3	91	30.84	51.62	.560	26.30
Setters out.....	17	84	52.2	116.3	8.8	52.8	53.0	100	25.59	47.21	.456	23.96
Total.....	51	7,970	47.3	107.6	8.1	48.6	53.0	92	26.03	49.49	.518	24.72

* Several employees omitted.

TABLE 4.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS MADE IN SPECIFIED INDUSTRIES IN 1919, BY SEX, OCCUPATION, AND PAY-ROLL PERIOD—Continued.

Leather—Concluded.

Sex and occupation.	Number of establishments.	Number of employees.	Average hours actually worked—				Full-time hours per week.	Per cent of full time worked.	Average earnings actually made—			
			In weekly pay period.	In biweekly or semi-monthly pay period.	Per week day.	Per week.			In weekly pay period.	In biweekly or semi-monthly pay period.	Per hour.	Per week.
FEMALES.												
Heavy upper.												
Glazers.....	3	64	46.3	98.2	7.6	45.6	59.1	77	\$17.33	\$29.93	\$0.312	\$14.25
Laborers, all departments.....	7	167	43.5	99.7	7.5	45.0	57.9	78	12.27	27.06	.270	12.42
Seasoners.....	6	81	47.6	95.1	7.6	45.6	57.2	80	18.35	31.42	.354	16.21
Light upper.												
Glazers.....	6	114	35.8	.....	6.0	35.8	51.0	70	15.40	.....	.422	15.40
Ironers.....	6	42	40.5	.....	6.7	40.5	49.1	82	12.58	.....	.314	12.58
Laborers, all departments.....	10	148	44.6	.....	7.4	44.6	48.6	92	13.47	.....	.300	13.47
Putters-out, machine.....	4	69	33.4	.....	5.6	33.4	48.9	68	10.54	.....	.313	10.54
Seasoners.....	7	243	40.2	.....	6.6	40.2	49.5	81	11.99	.....	.291	11.99
Sole.												
Laborers, all departments.....	4	61	46.3	95.1	7.6	45.6	48.0	95	17.22	36.58	.375	17.38
Total.....	23	989	40.8	98.1	6.9	41.4	52.1	79	13.40	29.17	.318	13.43

Paper and pulp.

MALES.												
<i>Paper.</i>												
Back tenders.....	81	757	53.0	102.1	8.7	52.2	50.8	102.8	\$26.88	\$53.76	\$0.516	\$26.63
Beater men.....	82	459	54.5	108.0	8.9	53.4	51.7	103.3	31.09	53.76	.551	29.44
Calender men.....	29	305	50.1	95.4	8.3	49.8	49.3	101.0	25.81	44.34	.504	24.92
Counters.....	15	43	52.4	92.2	8.4	50.4	50.0	100.8	24.02	40.68	.450	22.56
Cutter men.....	57	186	54.6	109.3	9.0	54.0	53.7	100.6	23.15	48.26	.428	23.15

[1179]	Enamellers.....	7	87	55.1	95.6	8.5	51.0	50.2	101.6	30.15	47.74	.526	26.83
	Loftmen.....	7	65	48.1	.....	8.3	48.1	48.8	98.6	21.43	.....	.429	21.43
	Machine tenders.....	81	702	53.4	112.0	8.9	53.4	50.9	104.9	36.60	76.49	.692	36.63
	Packers.....	80	582	52.1	99.0	8.6	51.6	53.2	97.0	25.98	41.04	.427	24.93
	Plater men.....	12	45	50.3	106.0	8.4	50.4	51.4	98.1	23.13	48.81	.460	23.30
	Rag workers.....	19	84	51.1	108.3	8.6	51.6	54.1	95.4	18.36	38.69	.359	18.58
	Size makers.....	40	53	55.6	134.9	9.2	55.2	54.0	102.2	24.42	60.36	.440	24.90
	Third hands.....	70	617	52.8	99.2	8.6	51.6	50.9	101.4	23.36	45.66	.447	22.99
	Trimmers.....	38	100	53.4	102.5	8.8	52.8	52.8	100.0	26.71	50.39	.500	26.25
	Washermen.....	16	55	51.4	98.3	8.5	51.0	49.7	102.6	23.90	46.25	.473	23.64
	Total.....	82	4,140	52.8	103.4	8.7	52.2	51.4	101.6	27.68	52.90	.512	27.18
	Pulp.												
	Acid makers.....	36	106	56.6	118.9	9.4	56.4	51.1	110.4	28.52	56.68	.500	28.12
	Barkers.....	30	234	53.6	90.6	8.2	49.2	51.7	95.2	22.03	41.06	.424	20.95
	Blow pitmen.....	33	125	53.7	108.4	8.7	52.2	50.0	104.4	23.36	46.46	.433	22.90
	Chipper men.....	36	147	55.0	95.2	8.5	51.0	52.4	97.3	23.20	42.36	.431	21.77
	Cooks.....	37	119	55.5	108.4	9.1	54.6	50.5	108.1	31.07	60.93	.555	30.51
	Grinder men.....	29	555	52.1	93.3	8.3	49.8	52.6	94.7	24.14	44.80	.444	23.10
	Pressmen.....	43	677	51.4	100.7	8.3	49.8	50.9	97.8	23.03	45.67	.448	22.40
	Screenmen.....	32	180	52.6	111.2	8.8	52.8	49.7	106.2	22.59	50.79	.433	22.84
Splitter men.....	20	83	54.9	113.4	9.0	54.0	51.9	104.1	21.56	52.19	.433	22.52	
Total.....	43	2,226	52.9	100.0	8.5	51.0	51.4	99.2	23.93	46.37	.449	23.17	
Grand total.....	85	6,366	52.8	101.9	8.6	51.6	51.4	100.4	26.47	50.08	.490	25.78	
FEMALES.													
Paper.													
Calender girls.....	4	43	49.8	.....	8.3	49.8	51.3	97.1	15.09	.....	.303	15.09	
Counters.....	35	199	48.7	100.5	8.1	48.6	52.1	93.3	14.72	27.87	.297	14.48	
Laborers.....	58	1,165	47.7	92.9	7.9	47.4	51.5	92.0	13.10	25.11	.276	12.82	
Sorters.....	21	557	49.3	90.2	8.0	48.0	52.0	92.3	13.70	23.42	.274	13.10	
Total.....	64	1,964	48.2	92.9	8.0	48.0	51.7	92.9	13.44	24.75	.277	13.11	

Pottery.

MALES.												
Casters and pressers.....	15	106	46.8	88.9	7.5	45.0	53.0	84.9	\$33.61	\$54.97	\$0.658	\$29.45
Decorating kiln men.....	13	37	48.6	103.7	8.8	52.8	54.3	97.2	27.96	74.72	.654	34.57
Dippers.....	14	52	42.6	77.7	6.7	40.2	47.5	84.6	32.26	77.57	.943	36.28
Dish makers.....	15	46	44.1	88.6	7.4	44.4	52.8	84.1	33.07	57.27	.696	30.08
Gilders and liners.....	12	90	46.0	93.6	7.7	46.2	51.4	89.9	38.68	69.39	.774	36.33
Handlers.....	15	60	47.9	92.1	8.0	48.0	52.8	90.9	31.90	82.57	.817	37.60

TABLE 4.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS MADE IN SPECIFIED INDUSTRIES IN 1919, BY SEX, OCCUPATION, AND PAY-ROLL PERIOD—Concluded.

Pottery—Concluded.

Sex and occupation.	Number of establishments.	Number of employees.	Average hours actually worked—				Full-time hours per week.	Per cent of full time worked.	Average earnings actually made—			
			In weekly pay period.	In biweekly or semi-monthly pay period.	Per week day.	Per week.			In weekly pay period.	In biweekly or semi-monthly pay period.	Per hour.	Per week.
MALES—concluded.												
Jiggers.....	15	198	45.5	79.6	6.9	41.4	52.3	79.2	\$34.59	\$60.31	\$0.775	\$31.65
Kiln placers.....	15	272	37.8	72.7	6.2	37.2	52.4	71.0	30.94	60.46	.830	30.54
Laborers.....	15	1,009	50.6	78.5	7.1	42.6	54.9	77.6	20.16	39.20	.479	19.86
Mold makers.....	15	37	50.7	97.0	8.2	49.2	53.0	92.8	41.14	82.68	.840	41.27
Packers.....	15	48	47.0	80.2	7.0	42.0	52.9	79.4	31.24	52.00	.665	27.64
Sagger makers.....	14	49	46.1	88.8	7.5	45.0	52.9	85.1	43.50	68.33	.822	37.02
Setters-out.....	15	53	38.6	78.8	6.5	39.0	52.7	74.0	40.71	85.19	1.087	41.85
Turners.....	15	85	43.8	81.6	7.0	42.0	52.7	79.7	31.51	67.09	.783	32.80
Total.....	15	2,142	47.2	81.1	7.1	42.6	53.6	79.5	26.60	54.03	.647	26.83
FEMALES.												
Gilders and liners.....	13	62	39.6	85.5	6.9	41.4	50.4	82.1	20.29	42.46	.509	20.85
Laborers.....	15	681	42.2	75.0	6.5	39.0	51.7	75.4	11.38	23.26	.300	11.54
Transferers.....	14	372	44.3	84.8	7.2	43.2	49.5	87.3	14.82	29.82	.342	14.86
Total.....	15	1,115	43.0	78.1	6.8	40.8	50.9	80.2	13.37	26.04	.326	13.17

Rubber.

[The branch of the industry in which each occupation is found is indicated as follows: F--footwear; H--hose; M--mechanical goods; and T--tires and tubes.]

MALES.												
Bead makers (T.).....	14	208	48.2	102.7	8.1	48.6	49.6	98	\$30.87	\$72.69	\$0.680	\$31.69
Belt makers (M.).....	4	39	49.7	92.0	8.2	49.2	52.7	93	24.07	38.00	.500	23.57
Bias cutter operators (T.).....	13	44	53.8	104.0	8.8	52.8	50.8	104	32.32	69.70	.630	32.49
Boot, shoe, and lumberman makers (F.).....	5	813	51.6	.....	8.6	51.6	53.1	97	26.13	.....	.507	26.13
Braiders (H.).....	5	43	50.7	97.8	8.4	50.4	51.9	97	22.81	41.25	.472	22.64

[1181]	Builders or makers, hand (T.).....	12	400	44.4	107.7	7.8	46.8	51.3	91	25.27	64.55	.733	23.42
	Builders or makers, machine (T.).....	13	582	44.1	93.1	7.4	44.4	48.8	91	34.00	67.07	.769	33.59
	Calender men.....	23	318	53.0	101.7	8.7	52.2	51.9	101	30.35	67.86	.607	30.63
	Compounders.....	23	250	52.5	101.4	8.6	51.6	52.2	99	25.70	56.03	.502	25.74
	Cutters, machine (F., H.).....	10	142	49.7	110.2	8.3	49.8	53.5	93	26.61	52.08	.550	26.23
	Cutters and covers, hand (F., H.).....	12	386	54.0	103.1	9.0	54.0	52.8	102	30.29	53.02	.557	30.04
	Finishers and treaders (T.).....	14	1,057	43.5	95.9	7.3	43.8	48.9	90	32.06	65.36	.732	32.00
	Laborers and helpers (T.).....	13	4,085	47.4	104.3	8.0	48.0	50.5	95	25.40	54.43	.548	25.58
	Laborers and helpers (F., H., M.).....	15	2,657	55.6	101.5	8.8	52.8	53.0	100	21.09	42.00	.395	20.85
	Lathe men, buffers and cutters (T.).....	7	33	46.6	114.1	8.3	49.8	52.3	95	38.61	67.79	.671	33.47
	Lathe men, buffers and cutters (H., M.).....	4	40	56.1	105.1	8.3	49.8	54.0	92	23.01	50.57	.472	23.29
	Makers, hand (H., M.).....	7	81	49.9	95.0	8.0	48.0	52.9	91	24.97	47.74	.509	24.03
	Makers, machine (H.).....	7	36	41.9	96.6	7.2	43.2	53.7	80	19.78	47.79	.475	20.54
	Millmen.....	23	983	51.5	105.6	8.5	51.0	52.3	98	26.18	59.65	.531	26.52
	Operators, tubing machine (jacket and cover) (T.).....	8	37	49.7	108.0	8.3	49.8	50.6	98	29.93	65.75	.611	29.98
	Operators, tubing machine (jacket and cover) (H., M.).....	9	83	53.7	103.8	8.9	53.4	53.8	99	23.50	48.09	.439	23.44
	Ply cutters, tread cutters, and splicer preparers (T.).....	12	202	47.7	99.2	7.9	47.4	50.2	94	29.14	47.85	.607	28.52
	Refiners, screeners, and grinders.....	14	127	50.4	109.2	8.4	50.4	52.1	97	25.00	67.85	.562	27.84
	Tube rollers, wrappers, and strippers (T.).....	13	327	43.3	104.0	7.5	45.0	50.0	90	31.81	66.57	.718	31.65
	Tube rollers, wrappers, and strippers (F., H., M.).....	5	62	55.0	98.9	8.9	53.4	53.9	99	27.73	49.50	.503	27.02
	Vulcanizers (T.).....	13	1,108	48.6	91.9	8.0	48.0	48.4	99	34.00	84.82	.734	34.45
	Vulcanizers (F., H., M.).....	13	394	51.5	105.4	8.4	50.4	53.9	94	26.55	51.17	.514	25.59
	Wrappers, machine (T.).....	3	32	49.3	119.3	9.6	57.6	59.0	98	38.18	64.66	.584	33.43
	Wrappers, machine (F., H., M.).....	10	64	45.9	101.1	7.7	46.2	51.8	89	24.07	51.91	.577	24.05
Total.....		23	14,613	49.8	102.8	8.2	49.2	51.1	96	27.04	56.90	.563	27.02
FEMALES.													
	Bead makers (T.).....	6	34	49.0	102.3	8.2	49.2	52.9	93	18.58	37.45	.376	18.51
	Bias-cutter operators (T.).....	2	12	50.4	-----	8.4	50.4	49.1	103	23.57	-----	.472	23.57
	Boot, shoe, and lumberman makers (F.).....	5	1,316	44.1	-----	7.8	44.1	51.4	86	14.79	-----	.333	14.79
	Braiders (H.).....	5	84	47.7	86.0	7.3	43.8	53.0	83	13.84	21.50	.310	13.56
	Builders or makers, hand (T.).....	4	84	47.7	94.9	7.9	47.4	48.8	97	24.90	39.15	.512	24.03
	Cutters, machine (F., H.).....	2	24	38.7	-----	6.4	38.7	53.1	73	9.06	-----	.231	9.06
	Finishers and treaders (T.).....	3	74	41.7	-----	6.9	41.7	49.1	85	21.26	-----	.513	21.26
	Fitters (stitching, quarter makers, etc.) (F.).....	3	209	45.5	-----	7.2	45.5	51.8	88	15.25	-----	.338	15.25
	Laborers and helpers (T.).....	11	300	46.5	98.5	7.8	46.8	51.0	92	17.78	31.41	.361	16.80
	Laborers and helpers (F., M., H.).....	15	1,168	48.4	92.5	7.9	47.4	53.1	89	12.97	26.99	.272	12.88
	Ply cutters, tread cutters and splicer preparers (T.).....	5	31	46.5	-----	7.7	46.5	51.4	90	21.28	-----	.457	21.28
	Tube rollers, wrappers, and strippers (T.).....	5	40	43.2	108.7	7.4	44.4	49.2	90	20.31	50.36	.465	20.82
Total.....		22	3,376	45.8	95.0	7.8	46.8	51.9	90	14.95	29.44	.326	14.84

Wages and Hours of Labor in Denmark.

THE Danish statistical office has made a study of wages of industrial workers on the basis of material supplied by the Danish Employers' Association (*Dansk Arbejdsgiverforening*).¹

The data apply to the quarter ending September 27 and are calculated in the form of average weekly earnings. They cover 100,649 workers. Comparative figures are shown for the year 1914.

Briefly summarized the data are as follows:

AVERAGE HOURLY RATES OF WAGES IN DENMARK, SEPTEMBER, 1914 AND 1919.
[Computations into United States currency made on par value of crown, 26.8 cents.]

City, and sex and class of workers.	Number of workers (Septem- ber, 1919).	Average hourly rates—		Per cent increase September, 1919, over September, 1914.
		Sep- tember, 1914.	Sep- tember, 1919.	
<i>Copenhagen.</i>				
Male workers:		<i>Cents.</i>	<i>Cents.</i>	
Skilled.....	23,242	18.0	58.5	225.0
Unskilled.....	13,398	12.7	50.3	296.1
Total males.....	36,640	16.3	54.5	234.4
Female workers.....	11,569	8.7	28.9	232.2
Total, both sexes.....	48,209	14.6	48.4	231.5
<i>Provinces.</i>				
Male workers:				
Skilled.....	22,001	14.7	49.2	234.7
Unskilled.....	23,565	10.9	41.6	281.7
Total males.....	45,566	12.9	45.2	250.4
Female workers.....	6,874	6.9	26.2	279.7
Total, both sexes.....	52,440	12.0	42.7	255.8
<i>The Kingdom.</i>				
Male workers:				
Skilled.....	45,243	16.4	54.2	230.5
Unskilled.....	36,963	12.2	44.7	266.4
Total males.....	82,206	14.7	49.4	236.1
Female workers.....	18,443	7.9	27.9	253.2
Total, both sexes.....	100,649	13.5	45.5	237.0

Various laws limit the hours of labor of workers in Denmark.² These laws are the apprentice act, bakery workers' law, the general factory act, and quite recently the law on the 8-hour day in continuous industries. Recent agreements between employers and em-

¹ Statistiske efterretningen udgivet af det Statistiske departementet, 18 februar 1920.

² Beretning om de (Samvirkende Fagforbunds) Virksomhed, 1 April 1918-31 Marts 1919. Copenhagen, 1919, pp. 29, 30.

ployees have materially reduced the hours of labor. The following table shows the result of the agreement of 1919, covering the same group of workers as in 1918, between the National Federation of Trade Unions and the National Employers' Association:

NUMBER AND PER CENT OF EMPLOYEES WORKING EACH SPECIFIED NUMBER OF HOURS PER DAY.

Hours per day.	1918		1919	
	Number.	Per cent.	Number.	Per cent.
Under 8 hours.....	791	0.5	791	0.5
8 hours.....	8,452	4.8	17,343	9.9
8½ hours.....	8,891	5.0	98,013	55.9
9 hours.....	29,661	16.9	59,195	33.7
9½ hours.....	68,352	39.0		
10 hours.....	53,072	30.3		
Over 10 hours.....	6,123	3.5		
Total.....	175,342	100.0	175,342	100.0

The 10-hour day is a thing of the past in so far as the organized workers of Denmark are concerned. The 59,195 workers who in 1918 worked 10 or more hours per day now work only 9 hours. Only 8 hours are worked on Saturday. There have been no reductions in wages as a result of these agreements.

MINIMUM WAGE.

New Minimum-Wage Awards in Massachusetts and Washington.

Massachusetts.

THE division of minimum wage of the Massachusetts Department of Labor and Industries recently approved the determination of the wage board established to recommend minimum wage rates for women and girls employed in the manufacture of knit goods other than standard lines of hosiery and underwear, and issued a decree establishing the new rates, effective July 1, 1920.

These rates are as follows:

1. For experienced employees, not less than \$13.75 a week.
2. For all others, not less than \$8.50 a week.
3. An employee, irrespective of age, shall be deemed experienced who has been employed in the occupation for at least 40 weeks.
4. These rates are based on full-time work, by which is meant the full number of hours required by employers and permitted by the laws of the Commonwealth.

It is explained that the knit-goods occupation includes all branches of the knit-goods industry, with the exception of staple lines of hosiery and underwear, but that this exception shall not apply to lines used for athletic purposes nor to special lines such as bathing suits, tights, and infants' garments.

This decree is the third entered since the reorganization of the Department of Labor on December 1, 1919, and the fifteenth since the enactment of the minimum wage law of 1912.

To guide it in determining the minimum wages to be fixed, the board made an inquiry into the cost of living of a self-supporting girl in Massachusetts under present conditions, and found the total weekly budget to be \$15.30, distributed as follows:

Board and room.....	\$8. 50
Clothing.....	3. 25
Laundry.....	. 50
Cariare.....	. 75
Doctor and dentist.....	. 30
Church.....	. 10
Newspapers and magazines.....	. 20

Vacation.....	\$0. 50
Recreation.....	. 40
Savings.....	. 20
Incidentals.....	. 30
Insurance.....	. 10
Self-improvement.....	. 20
Total.....	15. 30

Washington.

THE Industrial Welfare Commission of the State of Washington recently adopted the following resolution which had been approved by the Public Housekeeping Conference which met to recommend wages, hours, and standards of labor for employees in the different occupations of the public housekeeping industry. The provisions of this resolution become effective on June 2, 1920.

Be it resolved, That this Public Housekeeping Conference does hereby make the following recommendations to the Industrial Welfare Commission in reference to standards of labor demanded for the health and morals of women workers in the different occupations of the Public Housekeeping Industry throughout the State:

That no person, firm, association, or corporation shall employ any female over the age of 18 years in any occupation in the public housekeeping industry throughout the State at a weekly wage rate of less than \$18 or \$3 per day or 37½ cents per hour, such wage being the estimate of said conference of the minimum wage adequate to supply the necessary cost of living and to maintain them in health and comfort.

That no person, firm, association, or corporation shall employ any female over the age of 18 years in any occupation in the public housekeeping industry throughout the State more than six days in any one week.

That no person, firm, association, or corporation shall employ any female over the age of 18 years in any occupation in the public housekeeping industry throughout the State more than five hours without a rest period of at least one-half hour; that a schedule of hours be posted in all cases; that where a uniform be required it must be furnished and laundered by the employer; that when meals are furnished to employees the time used in eating may be deducted in arranging the schedule; that if room be furnished same must be properly heated and sanitary; that there must be separate toilets for women and a suitable room provided for change of clothing and for eating lunches; that women shall not be employed as "bell hops" nor serve as elevator operators after 12 o'clock at night; that when board is furnished \$1 per day may be deducted; and for room furnished \$2 per week may be deducted; that 25 cents may be deducted for breakfast, 35 cents for lunch, and 40 cents for dinner; that in every case there shall be a definite agreement as to whether board and room shall or shall not be furnished; that otherwise the straight wage scale shall prevail.

WOMEN IN INDUSTRY.

Plans for Improvement of Domestic Service.

IT WILL be easily conceded that it requires no country-wide statistical survey of domestic service to convince the public that housewives in general are confronted by a serious shortage in the domestic-labor supply. The situation has become so harassing that it seems likely to result in changes in ideals and methods of household management, in social conventions, and home and community activities. Even the exercise of the age-honored virtue of hospitality is being abridged. To the servantless housewife the entertainment of guests, involving the preparation of food and the washing of countless dishes, becomes a modified joy, raising the question of whether the rewards of a hostess counterbalance the caloric energy expended therefor.

An editorial in the *Journal of Home Economics*, December, 1919, voices a realization of the importance of meeting the household labor problem. After referring to the domestic service studies of the Y. W. C. A., to the New York experiment of the United States Employment Service in placing household assistants, to somewhat similar experiments in other cities, to Lady Londonderry's efforts at organizing domestic servants in England, and to the schemes for similar organization in this country, the editorial states that the American Home Economics Association, "whose work is definitely for the home, has not even a committee on household employment." The editor suggests that that association make some real contribution to the solution of the difficulty and concludes with this interrogation: "Is it not time that we helped either to adjust domestic service to the home, or else show the home how to be independent of it?"

Action Taken Toward Solution of Domestic Service Problem.

New York State College for Teachers.

THE Beta Chapter of the Omicron Nu¹ at the New York State College for Teachers has planned a series of studies and discussions on the "servant problem," covering—

The home or family unit, the social and economic relation to the community; growth of family and service.

Development of public service—what it means and involves; principles underlying service.

Can household service be put on a business basis? If so, what standards should be established?

¹ Honorary home economics sorority.

Physiological and ethical side of service.

Specialization in domestic service work—a place for it in vocational high schools.

A suggested course of study for the vocation.

National Housewives' League.

The dearth of domestic helpers is calling other organizations into energetic action. The National Housewives' League has recently appointed a national committee on household employment, the chairman of which is Mrs. Henry S. Patterson, who has tried the experiment of home assistants in her own household. The league is also being urged to establish in New York City a Bureau of Household Occupations.

Chicago Conference on Household Management.

On January 12, 1920, a conference on household management was held in Chicago under the auspices of the Chicago Woman's Club, the Woman's City Club, Chicago Housewives' League, and the Illinois Federation of Women's Clubs. "The future of the American home," "The Chicago household workers' point of view," "Part-time work," and "Mechanical aids in the home" were among the subjects discussed. Miss Eleanor Richardson, of the Y. W. C. A., gave a talk at this conference, declaring that if we are to get the better type of servant back into the home we shall have to "compete with business on terms of business." She gave a brief statement of the experiment being tried by the central branch of the Y. W. C. A. in New York City in placing domestic helpers on an eight-hour day basis with the whole of Sunday off and a wage of \$12 a week and up. She declared that these girls were given the same information about their prospective employers as were the girls going into industry. Miss Richardson expressed the belief that in Chicago, where the community spirit is strong, an agreement as to a fair and constructive standard for household work could be reached which would bring women back to domestic service. The regulation and systematizing of this service were advocated by Miss Richardson, who also recommended a democratic attitude toward young women in household employment and the raising of domestic work into the dignity of a profession.

Mrs. D. W. Redfield, of the department of home economics and pure food of the Illinois Federation of Women's Clubs, emphasized the need of making housework a profession not only for maids but also for mistresses. She declared that "the business of housekeeping and homemaking comes under three heads—food, clothing, and shelter. The physical work of the home, known as general housework, comes under the first of these, namely, food, and is covered by the business of cooking and cleaning. This is the common meeting ground for the 25,000,000 women 20 or more years of age, whether working in their own homes or in the homes of others." She was in

favor of opportunity being provided for every woman to graduate in general housework and to receive some degree, as R. H. (registered houseworker) or H. E. (household engineer). An authoritative body, she thought, should give examinations at different times of the year in various places, and suggested that the Federal Board for Vocational Education would be the logical agency to work out the scheme. Examinations could then be held in all States and should be available to every woman. The woman who through practical experience has learned the technique of general housework and secures 100 per cent as the result of an examination should be given her degree. Those who fail in some part of the examination should be allowed, after further preparation, possibly under a neighborhood domestic science teacher, another opportunity to pass. Diplomas or badges might be substituted for references.

Mrs. B. H. Badenoch, instructor in the American School of Home Economics, spoke to the conference on the subject of the servantless home, and began with the statement that the most vital point in the success of any woman in her home is her attitude toward her work, adding that as a rule women place too low a value on their work. Mrs. Badenoch's contention seems to be in line with the latest theories of the industrial experts on the relation of psychology to productivity. She gave the following counsel:

Plan what to do, do it, forget it, and recreate. In planning the work alternate standing, walking, and sitting tasks, and *sit* as much as possible. It is just as easy to sit while ironing, washing dishes, paring vegetables, or making a cake as it is to stand, and it uses much less energy. Seek to make each task as easy as possible, use the fewest motions possible, and then do it the same way each time; in other words, turn it over to habit, the great conservator of energy. Stop work before becoming too tired. Science tells us that one-half the rest will be needed for recuperation and twice the work can be accomplished by so doing. And most important of all, wear loose clothing and sensible shoes (when will women stop wearing their old high-heeled pumps for housework?). Use the back properly (the University of Cornell has a whole bulletin on this important subject) and put rhythm and spirit into the work. With the same form and spirit we can find as much health and exercise in housework as in a game of tennis or golf. Can't we?

According to Mrs. Badenoch the working hours of the home should be reduced to as near an eight-hour day as possible. She holds that household work for a few adults can be easily brought within an 8½-hour day, but this, she admits, becomes difficult in the case of a mother with two or more children. Such a mother would have to adhere strictly to the following fundamental rules to keep within the time limit:

1. Eliminate *all* unnecessary work.
2. Secure family cooperation.
3. Simplify the manner of living, using less form.
4. Study to shorten every operation connected with the upkeep of the home.
5. Work with a definite aim for each day. In other words, build a schedule.

[1188]

Housekeepers' Alliance.

The Housekeepers' Alliance of Washington, D. C., is formulating plans for domestic service classes for both mistresses and maids at the community centers during the next school year. The organization has also established a placement bureau in the Franklin Public School. The following rules and recommendations have been drawn up for the Alliance's placement office:

1. An employee who leaves an employer without a week's notice shall be placed on probation, given another trial, and if she fails again her name will be stricken from the list of the Housekeepers' Alliance placement office.

2. Insolence shall not be tolerated and shall be considered a cause for dismissal at the discretion of the employer. At the same time employers are urged to safeguard themselves against insolence by observing the Biblical injunction "Provoke not to wrath."

3. Long and faithful service on the part of an employee it is recommended shall be rewarded by an increase of wages, and a good record card of the same be filed at the Housekeepers' Alliance placement office.

4. Employers are urged not to lay too much stress upon ill temper on the part of employees, since experience has proved that a person may live harmoniously with one employer when she has found it impossible to live with another.

5. A thief shall never be directed to employment by the Housekeepers' Alliance placement office. Reports from employers on the status of such cases should be promptly reported to the secretary, but with great care not to accuse wrongfully.

6. A classified list shall be an important part of the secretary's record of the Housekeepers' Alliance placement office, and be a guide for wage adjustment.

7. If an applicant is sent by the Housekeepers' Alliance placement secretary for employment and finds that the opportunity has previously been closed, no notice of this fact having been made to the office, it is requested that car fare be refunded to the applicant.

8. An employer who is a member of the Housekeepers' Alliance shall receive one service a month from the office provided she has secured one satisfactory employee.

9. Adjustments of all grievances shall be made at the Housekeepers' Alliance placement office in the interest of better understanding.

10. Compensation at the present time must be left between employer and employee with the understanding that members of the Housekeepers' Alliance will make every effort to standardize labor and keep down prices.

Forty dollars per month is recommended as a fair price for cooks, that is, those who can prepare food economically and in some accord with the requirements of health. To receive more than \$40, the applicant should have a certificate as evidence that she is qualified by instruction and experience to do fancy cooking.

Thirty-five dollars per month is recommended for a general houseworker.

Thirty dollars per month is recommended as the wage for skilled chambermaids and waitresses.

Three dollars with dinner and \$4 without dinner is suggested as the maximum wage for an evening waiter.

Part-time assistants paid for by the hour are recommended as an aid to solving the domestic service problem, since by this means one employee can serve several families, doing the heavy work in each household and being available at odd times as needed.

Proficiency in a general houseworker who is obliged to combine the positions of cook, housemaid, and waitress must be recognized in this scale of wages.

Providence Housewives' League.

The bureau of household occupations of the Providence (Rhode Island) Housewives' League is an organization for the placing of home assistants.² Reporting on the work of that office for the last year the president, Mrs. Howard K. Hilton, writes as follows:

The bureau has prospered in every way and we have been able to do much educational work among both employer and employee. We are constantly facing new problems, but feel that the bureau has come to stay; and a number of other cities have already copied our idea. We are now to form an association of representatives from these bureaus to meet together for conference and discussion. During the month of February we supplied over 10,000 hours of service and we are practically self-supporting, our idea being that the bureau shall not be a money-making enterprise nor a philanthropical one, but educational.

Domestic Workers' Unions.

Domestic employees themselves are also taking steps toward bettering their working conditions. This is indicated by the fact that the American Federation of Labor reports 10 unions of such workers in the following cities: Los Angeles and San Diego, Calif; Brunswick, Ga; Chicago and Glencoe, Ill.; New Orleans, La.; Beaver Valley, Pa.; and Denison, Harrisburg, and Houston, Tex.

The secretary of the Hotel and Restaurant Employees of the International Alliance and Bar Tenders' International League of America reports that in August, 1919, that association established three domestic workers' unions—one in Mobile, Ala., another at Fort Worth, Tex., and another at Lawton, Okla. Last October a union of this character was started in Tulsa, Okla., which has made better progress than the other three. In March, 1920, a charter was issued to a domestic workers' union in Richmond, Va.

Conclusion.

IT IS obvious that recalcitrant domestic workers have forced housewives into a more scientific consideration of household problems. Facing the alternative of doing the domestic work themselves or paying a price for it they never paid before and at the same time granting so-called privileges they never granted before, housewives are weighing in an unwonted manner the relative values of household tasks. This will undoubtedly make for higher standards in home economics.

² See "Efforts to standardize the working day for domestic service," MONTHLY LABOR REVIEW, August 1919, p. 206.

VOCATIONAL TRAINING.

Part-time Instruction.¹

THAT the development of part-time and continuation classes steadily progresses is evident from the reports which come in month by month from the various State educational authorities.

The Iowa State Board for Vocational Education, in addition to the part-time classes for painters and machinists mentioned in the April number of the MONTHLY LABOR REVIEW, is conducting part-time dull-season courses in agriculture in four counties at 19 different centers. The classes are open to persons over 14 years of age who are engaged in farming and who can not take advantage of the regular vocational agricultural courses. They are in session 5 days a week for 10 weeks.

The instruction, which is adapted to local conditions as well as to the special individual needs of the pupils, comprises both classroom instruction and laboratory instruction. One-fourth of the time given to class instruction is devoted to farm crops; one-fourth to animal husbandry, one-fourth to farm shop, tractors, and farm engineering, and one-fourth to arithmetic, bills, letters, and records.

Application of the classroom instruction to actual farm conditions is secured through the personal work of the organizer for the county who is hired for 12 months and who in addition to his duties as organizer has the follow-up work in charge. After the classes have closed he spends his entire time in assisting individual members of the class in the solution of problems peculiar to their own farms.

The State is at present employing four organizers and a number of instructors, all chosen because of special fitness, by reason of training and experience, for this work. Some of them are practical farmers holding degrees from agricultural colleges, some are graduates of liberal arts colleges, who combine practice in farming with experience in teaching, while a few are seniors from agricultural colleges, who have also had agricultural experience.

The county provides each class with \$60 worth of books and charts, and also samples of grains, salts, etc.; the State library commission loans to each center 45 books, most of which relate to the subject

¹ The data on which this article is based were obtained from the Vocational Summary (Washington), March, 1920, p. 194.

studied, and the United States Department of Agriculture furnishes 200 bulletins dealing with various phases of agriculture.

The extent of the movement thus far may be seen in the fact that the training now being given will be directly applied, through the farms represented by the members of the classes, to from 30,000 to 35,000 acres of land now under cultivation throughout the State.

Another example of a part-time school equally as significant but of an entirely different character is that conducted by one of the packing companies of the Chicago stockyards for the boys and girls of its office force. The school has the approval of the State educational authorities and is in part at least maintained by Federal funds granted under the terms of the Federal Vocational Act. The Chicago Board of Education, which is collaborating with the company in this educational work for its employees, provides two high school teachers to take charge of the instruction given. Rooms, equipment, and supplies are furnished by the company.

All office employees between 14 and 18 years of age, and these number about 300 boys and girls, are required to attend the school eight hours a week on company time. About 60 per cent of these pupils are under 16 years of age, and as boys constitute the greater part of this percentage the courses given seem to be especially adapted to them.

The instruction includes a thorough training in problems relating to the packing industry as well as in English, spelling, business correspondence, arithmetic, rapid calculation, commercial geography, civics, and hygiene. Girls under 18 years of age are taught typewriting and comptometer operation. Girls who have had previous training in stenography but lack experience are given a five months' finishing course in English and office practice and at the same time are employed as stenographers by the company. All instruction is made as concrete as possible, the use of textbooks having been practically abolished.

Classes of a similar character have been organized in three other plants, and joint meetings of the teachers once a week promote cooperation and provide a means for the exchange of methods, ideas, and materials, all of which is proving of great value to those engaged in the movement.

The effort which the committee on education of the New York State Federation of Labor is making to bring trade apprenticeship within the scope of the recently enacted part-time school law of New York State, through definite apprenticeship agreements in each trade, is indicative of the attitude of a strong labor organization toward the possibilities of the part-time school.

The proposed agreement as outlined by the committee follows:

*Agreement between Master ——— Association and ——— Union
Covering the Education of Apprentices.*

1. The parties to this agreement hereby pledge themselves to cooperate with the public-school authorities to foster the education and vocational training of the apprentices in the ——— trade to the end that each apprentice shall become a thorough mechanic, with the requisite knowledge of the science and physics of the trade, instruction in mechanical drawing, the mathematics of the trade, the manipulation of tools, and the mechanical processes required for full mastery of the trade. Attention shall also be given to the study of civics, history of the industry, Americanization, and such other subjects as seem proper to develop the technical, moral, and patriotic standards that make for good citizenship and sturdy manhood.

2. Apprentices must have reached the age of 16 years and passed the eighth grade in school before entering the trade. Preference shall be given to boys who have attended ——— trade classes in the public vocational schools. Apprenticeship to cover a period of four years.

3. The ——— Employers' Association agrees to allow apprentices four hours off each week with pay to attend a continuation school during the school term.

4. The ——— Union will withhold membership in the union from any apprentice failing to attend such continuation school.

5. Attendance shall be for the full term of four years. (Subject to approval of the school authorities for apprentices in their eighteenth, nineteenth, and twentieth years.)

6. The parties to this agreement shall each nominate two of their members as members of an advisory board to be approved by the board of education. This advisory board shall counsel and advise: (a) To employ competent teachers; (b) to provide proper courses of study; (c) to purchase or acquire sites and grounds and to purchase, lease, acquire, or construct, and to repair suitable shops or buildings and to properly equip the same; (d) to purchase necessary machinery, tools, apparatus, and supplies.

7. One of each of the representatives on the advisory board of the parties to this agreement, together with a representative of the teaching staff of the continuation school, shall constitute an examining board, whose duty it shall be to pass on the fitness of apprentices to continue in the trade.

8. Examination shall be held at the end of each five-month period of the school term. Apprentices not showing progress consistent with the standards set by the school and the trade can be discharged as not having the qualifications necessary for competency in the trade. Additional attendance at an evening school can be recommended.

9. Apprentices completing the full four years' course shall receive a certificate signed by the presidents of the organizations, parties to this agreement, and the examining board, stating that the apprentice is competent to begin work as a journeyman.

10. Apprentices temporarily out of regular employment shall attend school not less than 20 hours per week.

Report on Apprenticeship in the Building Industry, Great Britain.

AT THE quarterly meeting of the industrial council for the building industry (Building Trades Parliament) held at York (England) on November 25, 1919, a report was submitted by the education committee subcommittee appointed to consider the question of apprenticeship of boys to the various trades within the industry. This report is interesting in that the subject matter

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concerns in a general way many different industries and is one compelling the attention of employers and employees.

There are four general aspects of the subject treated: (1) Preparation for industry, the committee outlining its criticisms of the educational system in England as at present conducted, and submitting recommendations for its amendment; (2) the threshold of industry, the committee considering the matter of the selection of a life occupation with special reference to the building trades; (3) training in industry, the committee considering problems existing inside and outside the workshop and suggesting amendments to the "haphazard methods which have prevailed in the past" in order that "the ideal and supremacy of craftsmanship" may be realized and attained; and (4) post-apprenticeship period, the committee dealing "with the position in the industry of the youth who has completed the period of training required to qualify as a journeyman in his trade."

While the committee does not regard training for an industrial, commercial, or professional occupation as being the primary duty of the schools, it suggests that the fact that the average boy has, subsequent to his school career, to earn a living, demands an examination of the educational system from this point of view. It points out some of the defects of the present system and recommends: (1) Elementary schools to develop "the intelligence, imagination, and morale of the scholars without any particular bias, be it commercial or industrial"; (2) central or higher grade schools for "special training of a commercial, industrial, technical, or more advanced 'general' character"; (3) technical schools for boys who show the necessary abilities and disposition to receive the more advanced courses in the technicalities of a trade; (4) secondary schools for those who desire to proceed with the higher branches of "pure education"; (5) universities to offer higher training in any industry which a boy may select. In this connection some suggestions are made as to the form the curriculum should take. The report further recommends that scholarships and other forms of maintenance allowances should be payable by the State in respect of those youths who by their attainments have qualified to remain in full-time attendance at school beyond the age of 14 years.

The committee regards it as very important that a boy should be rightly directed in the choice of a trade or occupation at the time when he passes from school life into the wider field of industry and begins to earn money for himself.

He is passing from the period of discipline and restraint into the comparative freedom of industry; the physical and temperamental changes and characteristics of adolescence are powerful factors, and the idea of independence due to his capacity to earn a wage makes careful supervision necessary. Too early a conception of having reached the stage of manhood may do irretrievable harm.

Reference is made to the juvenile departments of the employment exchanges where employers and prospective employees may be brought together, but the committee believes that "the present methods leave much to be desired." There have been established in connection with these employment exchanges juvenile advisory committees, or choice-of-employment committees, to assist the boys in choosing a suitable occupation and to ascertain the needs of industry and register vacancies that may be available, etc. The committee commends this plan and recommends that it be extended; also that the associations of employers and of workpeople in the building industry be represented on the committees and that each juvenile advisory committee have a building trades apprenticeship subcommittee with direct representation of employers and operatives from each craft in the industry.

Functions of Apprenticeship Subcommittee.

THE committee suggests the following as the functions of this subcommittee, which may be made applicable to other industries:

1. To arrange for addresses to the boys in the schools upon the possibilities, etc., of the trades within the industry, i. e., to stimulate the interest of boys for craftsmanship. Those boys in a group of schools who are about to leave could be brought together in one center for this purpose.
2. To interview (with their parents) the boys who desire to enter a trade within the industry. The committee would have at their disposal full information in regard to (a) the scholastic attainments of the boy, particularly in respect of the inclination he has shown toward manipulative art during his school career; (b) his health record and physical development; and (c) his temperamental qualities, and any special characteristics that may have been observed. The committee will thus be able to advise which (if any) trade within the industry would be most likely to suit the boy.
3. To recommend suitable boys to employers who have the right kind of vacancy.
4. To prepare lists of employers who have the necessary facilities for training in a given trade. We regard this selection of the employer as equally important as the selection of the youth, as it will be admitted that not all employers have the necessary faculty or facilities for training the future craftsman.
5. To insure, by means of visits, regular reports, and occasional interviews that the youth is receiving the right kind of training, both in the workshop and in the technical institution, during his period of apprenticeship. Friendly supervision of this nature will indicate to the lad that there is some one interested in his efficiency, and will have a good moral as well as industrial value.
6. To advise the local education authority in regard to the equipment, selection of instructors, curriculum, etc., in the technical institution. This should conduce to efficiency of instruction and the right relationship between education and industry. This feature will be particularly important in the continuation schools to be established under the new education act.
7. To provide for the transfer of an apprentice from one employer to another, where such transfer is desirable, to enable the youth to receive as much variety of training as possible.

8. To consider and provide for the position of those youths in the industry who can not become craftsmen, but for whom continuity of employment in another capacity may be available.

9. To encourage advanced training in suitable cases where youths show the capacity to take up later posts of responsibility in the industry.

10. To promote the physical, social, and moral well-being of the youths by working in conjunction with boys' clubs, etc.

In considering the subject of training in industry the committee directs attention to the fact that the problem "is concerned with all grades of the working boy, and is not confined to the task of teaching the boy the use of tools or the special duties of his occupation; it also has regard to the health and general development of the youth."

The employer must recognize that he is under an obligation either to teach the youth, or to see that he is taught the trade, and that adequate facilities are available for such purpose. The operative, on the other hand, has need to regard the youth as the future fellow-craftsman whose training in a large measure depends upon the spirit of cooperation manifested in the workshop. It is not the function of, nor possible for, the operative to create in the youth an aptitude for the trade; it is, however, within his sphere to give the boy such assistance and encouragement as will enable him to master the difficulties of the craft.

Other problems inside the workshop relate to the determination of the number of entrants to meet the requirements of industry and its expansion, the method of selection, the age of admission, the length of apprenticeship, the question of promotion, advancement, etc., and the health of the boys in the factory.

That the life of the boy outside the workshop has a considerable effect on his industrial efficiency is generally recognized, and the problem of enabling youths to spend their leisure time judiciously and advantageously must be considered, in the opinion of the committee. There should be facilities for continuing education outside working hours and it is very important that recreational facilities also be provided.

The committee cautions against regarding the completion of apprenticeship as the completion of training in the chosen career. The university courses should be made readily available to the boy who desires to proceed to higher instruction. The boy who shows special aptitude should be given an opportunity to develop further and to qualify for the better positions in industry.

The committee proposes, should its recommendations be approved by the building trades council, to develop a model scheme of apprenticeship to cover workshop and institutional training to serve as a basis for each trade and area; to get into touch with the local authorities in order to establish the right relationship between education and industry, both national and local; and to formulate suggestions for the improvement generally of the position of all youths in the industry.

EMPLOYMENT AND UNEMPLOYMENT.

Employment in Selected Industries in March, 1920.

THE Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in March, 1920, from representative establishments in 13 industries. The figures for March, 1920, when compared with those from identical establishments for March, 1919, show increases in the number of people employed in 11 industries and decreases in 2. The largest increases—93.6, 55.4, 46.2 and 37.9 per cent—appear in woolen, men's ready-made clothing, cotton finishing and automobile manufacturing, respectively, while respective decreases of 12.6 and 8.2 per cent are shown in car building and repairing and cigar manufacturing.

All industries report increases in the amount of the pay roll for March, 1920, as compared with March, 1919. The largest increases—183.4 and 163.8 per cent—appear in woolen and men's ready-made clothing, while cotton finishing, cotton manufacturing, and hosiery and underwear show respective increases of 90.4, 70.3, and 69.8 per cent.

The large increase in the volume of employment in March, 1920, when compared with March, 1919, is mostly due to improved industrial conditions and to a revival of business activities following the cancellation of Government contracts during the winter and spring of last year.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MARCH, 1919, AND MARCH, 1920.

Industry	Establishments reporting for March, both years.	Period of pay roll.	Number on pay roll in March.			Amount of pay roll in March.		
			1919	1920	Per cent of increase (+) or decrease (-).	1919	1920	Per cent of increase (+) or decrease (-).
Automobile manufacturing.	38	1 week..	91,668	126,434	+37.9	\$2,641,858	\$4,321,988	+ 63.6
Boots and shoes.....	70	do.....	58,392	63,710	+ 9.1	1,172,569	1,554,632	+ 32.6
Car building and repairing..	51	1 month.	55,501	48,635	-12.6	2,988,909	3,070,279	+ 2.7
Cigar manufacturing.....	56	1 week..	18,233	16,746	- 8.2	296,350	367,955	+ 24.2
Men's ready-made clothing.	49	do.....	23,666	36,770	+55.4	494,578	1,304,810	+163.8
Cotton finishing.....	16	do.....	8,758	12,808	+46.2	155,615	296,249	+ 90.4
Cotton manufacturing.....	52	do.....	45,973	53,815	+16.0	652,577	1,111,039	+ 70.3
Hosiery and underwear.....	65	do.....	28,495	34,802	+20.4	402,079	682,915	+ 69.8
Iron and steel.....	111	1 month.	160,467	170,963	+ 6.5	10,525,648	13,208,450	+ 25.5
Leather manufacturing.....	33	1 week..	15,793	17,496	+10.7	348,915	462,669	+ 32.6
Paper making.....	53	do.....	23,976	26,625	+11.0	527,995	724,623	+ 37.2
Silk.....	49	2 weeks..	15,138	16,750	+10.3	522,070	784,909	+ 50.3
Woolen.....	50	1 week..	24,986	48,861	+93.6	425,415	1,205,465	+183.4

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In comparing the reports of the same industries for March, 1920, with those for February, 1920, 11 industries show an increase in the number of persons on the pay roll, and 2 a decrease. Increases of 5.6, 4.5, and 2.2 per cent are shown in men's ready-made clothing, paper making, and woollen, respectively. Both automobile manufacturing and silk show a decrease of 0.7 per cent.

When compared with February, 1920, the pay rolls in March, 1920, show increases in all of the 13 industries. The greatest increases are 11.6 per cent in men's ready-made clothing; 10.4 per cent in cigar manufacturing; 9.3 per cent in hosiery and underwear; and 8.3 per cent in car building and repairing.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN FEBRUARY AND MARCH, 1920.

Industry.	Establishments reporting for February and March.	Period of pay roll.	Number on pay roll.			Amount of pay roll.		
			February, 1920.	March, 1920.	Per cent of increase (+) or decrease (-).	February, 1920.	March, 1920.	Per cent of increase (+) or decrease (-).
Automobile manufacturing.	38	1 week..	107,336	106,577	-0.7	\$3,447,931	\$3,671,850	+ 6.5
Boots and shoes.....	68	do.....	62,240	62,925	+1.1	1,442,554	1,538,664	+ 6.7
Car building and repairing..	51	½ month..	48,276	48,535	+ .5	2,833,971	3,070,279	+ 8.3
Cigar manufacturing.....	57	1 week..	16,717	16,941	+1.3	335,068	369,855	+10.4
Men's ready-made clothing.	49	do.....	32,534	34,346	+5.6	1,081,344	1,207,016	+11.6
Cotton finishing.....	16	do.....	12,787	12,808	+ .2	286,824	296,249	+ 3.3
Cotton manufacturing.....	52	do.....	54,193	54,977	+1.4	1,117,429	1,154,540	+ 3.3
Hosiery and underwear.....	63	do.....	33,511	33,741	+ .7	614,687	671,751	+ 9.3
Iron and steel.....	107	½ month..	163,810	166,732	+1.8	12,075,932	12,887,959	+ 6.7
Leather manufacturing.....	31	1 week..	17,228	17,335	+ .6	450,815	458,902	+ 1.8
Paper making.....	53	do.....	25,487	26,625	+4.5	679,368	724,623	+ 6.7
Silk.....	49	2 weeks..	16,875	16,750	- .7	744,513	784,909	+ 5.4
Woollen.....	50	1 week..	44,703	45,696	+2.2	1,120,901	1,147,555	+ 2.4

In addition to the data presented in the above tables as to the number of employees on the pay roll, 95 plants in the iron and steel industry reported 138,342 employees as actually working on the last full day of the pay period reported for March, 1920, as against 132,672 for the reported pay-roll period in March, 1919—an increase of 4.3 per cent. Figures given by 94 establishments in the iron and steel industry for March and February, 1920, show that 135,544 employees were actually working on the last full day of the pay period reported for in March, 1920, as against 132,567 for the period in February, 1920—an increase of 2.2 per cent.

Changes in Wage Rates.

IN 12 of the 13 industries there were establishments reporting increases in wage rates during the period February 15 to March 15, 1920, while a firm in one of these industries reported a decrease. A number of firms did not answer the inquiry relating to wage changes,

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but in such cases it is probably safe to assume that no changes were made.

Automobile manufacturing.—Approximately 10 per cent of the employees in one firm received an increase of approximately 12 per cent. One establishment gave an increase of 8.3 per cent to 12 per cent of the employees, while 16 per cent of the men in another plant were increased $6\frac{1}{2}$ per cent. An increase of 3.7 per cent, affecting 44.4 per cent of the employees, was reported by one establishment. All of the employees in one concern were granted an increase of 3 per cent and 10 per cent of the force in another plant received an increase of 2 per cent.

Boots and shoes.—Two establishments reported a 15 per cent increase, affecting 85 per cent of the employees in one factory and 7 per cent of the employees in the other plant. An increase of $13\frac{1}{2}$ per cent, affecting $6\frac{3}{4}$ per cent of the men, was reported by one concern. One firm gave an increase of about 10 per cent to about 5 per cent of the force, and an increase of 5 per cent, affecting $6\frac{1}{4}$ per cent of the employees, was reported by another establishment.

Car building and repairing.—Two establishments reported an increase of 10 per cent, affecting 89 per cent of the employees in one firm and 10 per cent of the men in the other concern. One firm gave an increase of 5 per cent to 25 per cent of the foundry men and an increase of 5 cents per hour to the car department hourly men. Forty per cent of the men in one establishment received an increase, but the amount of the increase was not given.

Cigar manufacturing.—One establishment granted an increase of 13.6 per cent to 65 per cent of the employees, while 40 per cent of the men in another factory received an increase of 12 per cent. Thirty per cent of the force in one concern were given an increase of 10 per cent. One firm gave an increase of 90 cents per 1,000 to rollers and 60 cents per 1,000 to bunch makers.

Men's ready-made clothing.—The entire force in one establishment received an increase of about 15 per cent and all the employees in another shop were given an average increase of \$5 a week. One concern granted an increase to 25 per cent of the men but failed to give the amount of the increase.

Cotton finishing.—Ten per cent of the employees in one establishment received an increase of 16 per cent.

Cotton manufacturing.—All of the employees in one firm were granted an increase of 10 per cent while the entire force in another plant received an increase of 8 per cent. One establishment gave an increase of $7\frac{1}{2}$ per cent to all the men and the entire force of one concern were given a 5 per cent increase. Two firms reported an increase of about 5 per cent, affecting all of the men in one factory and 90 per

cent of the men in the other establishment. One firm reported decreases ranging from 5 to 15 per cent, affecting 8 per cent of the employees.

Hosiery and underwear.—One establishment granted an increase of 25 per cent to 3 per cent of the employees. All of the men in one mill were given a 10 per cent increase and another firm reported an increase in the rates of wages but gave no further data.

Iron and steel.—One plant reported increases ranging from 10 to 40 per cent, affecting 72.6 per cent of the employees. Six establishments granted an increase of 10 per cent, which affected all of the employees in four of the plants, 34 per cent of the force in the fifth mill, while the sixth firm did not state the number of employees affected. Four establishments granted the common labor an increase of 10 per cent, affecting 30 per cent of the employees in two plants, 15 per cent in the third mill, and 12 per cent in the fourth firm. Five plants gave an increase of 10 per cent to the common labor, or 10 per cent of the employees, and an increase of 6.8 per cent to the puddle-mill men, or 80 per cent of the force; while another concern that also gave an increase of 10 per cent to the common labor, gave an increase of 10 per cent to the puddle-mill men, which constituted 70 per cent of the employees in that establishment. One plant granted the common labor, or 5 per cent of the employees, an increase of 10 per cent. Four establishments reported an increase of approximately 10 per cent, affecting the entire force in three firms and 88 per cent of the employees in the fourth concern. With the exception of the clerical force, all employees in one firm received increases ranging from $2\frac{1}{2}$ cents to $17\frac{1}{2}$ cents per hour. All the employees in one plant received increases ranging from 6 to 8 per cent, while the entire force in another mill were granted increases ranging from 5 to 8 per cent. Three firms gave an increase of $7\frac{1}{2}$ per cent, affecting 60 per cent of the force, about 20 per cent of the employees, and the bar department, respectively, and the third concern also gave an increase of 9 per cent to the men in the sheet department. One-half of the force in one establishment was given an increase of 7 per cent. One concern granted an increase of 6.8 per cent to 75 per cent of the employees, while another plant gave an increase of 6.8 per cent to the puddle-mill tonnage men, 5 per cent to the finishing-mill tonnage men, and 14 per cent to the remainder of the employees. Three establishments reported a 6 per cent increase, affecting 60 per cent of the employees in the first mill, 50 per cent of the men in the second concern, and $33\frac{1}{3}$ per cent of the force in the other plant. One establishment gave an increase of about 5 per cent to all employees, while another firm reported an increase of $2\frac{1}{2}$ cents per hour but made no further statement.

Leather manufacturing.—One establishment granted increases of $4\frac{1}{2}$, $7\frac{3}{4}$, and $12\frac{1}{2}$ per cent, affecting 20, 28, and 2 per cent of the employees, respectively. One firm gave a 10 per cent increase to all earning less than \$5 per day and a 5 per cent increase to the remainder of the force. Sixty-five per cent of the employees in one concern received an increase of 7 per cent, while 20 per cent of the men in another concern were given an increase of 6 per cent. Approximately 4 per cent of the force in one factory received an increase of about 4 per cent.

Paper making.—One establishment reported an increase of 20.6 per cent, affecting 13.8 per cent of the employees, while the entire force in two mills received an increase of $12\frac{1}{2}$ per cent. Three concerns granted an increase of 10 per cent, affecting all the employees in two plants and about 8 per cent of the men in the other establishment. One mill gave an increase of 8.7 per cent to 34.3 per cent of the force. About 20 per cent of the employees in one establishment were given an increase of about $6\frac{1}{2}$ per cent and another plant reported an increase but made no further statement.

Silk.—Two firms gave an increase of 10 per cent, affecting 60 per cent of the employees in the first establishment and 40 per cent of the force in the other mill. Six per cent of the men in one concern received an increase of 9 per cent, while another firm granted an increase of 8 per cent, affecting 75 per cent of the employees. One establishment gave 40 per cent of the force a wage-rate increase of 7 per cent.

Present Scope and Activities of the Federal Employment Service. ^a

THE Employment Service of the Department of Labor exists by reason of administrative arrangement by the Secretary of Labor. The specific provision of the act creating the department in 1913 states that one of the purposes of it is that of "advancing the opportunities of the wage earners for profitable employment." Prior to that date, that is, since 1907, the service of placement through the Division of Information of the Bureau of Immigration was limited to "promoting a beneficial distribution of aliens admitted to the United States." The division was looked upon merely as an agency for the better distribution of immigrant labor. With the creation of the Department of Labor in 1913 its activities were expanded into those of a National employment service. The coun-

^a For a comparative account of the British and the United States employment systems, see the MONTHLY LABOR REVIEW for August, 1919, pp. 144-156.

try was divided into eight principal zones, with head offices in each district.

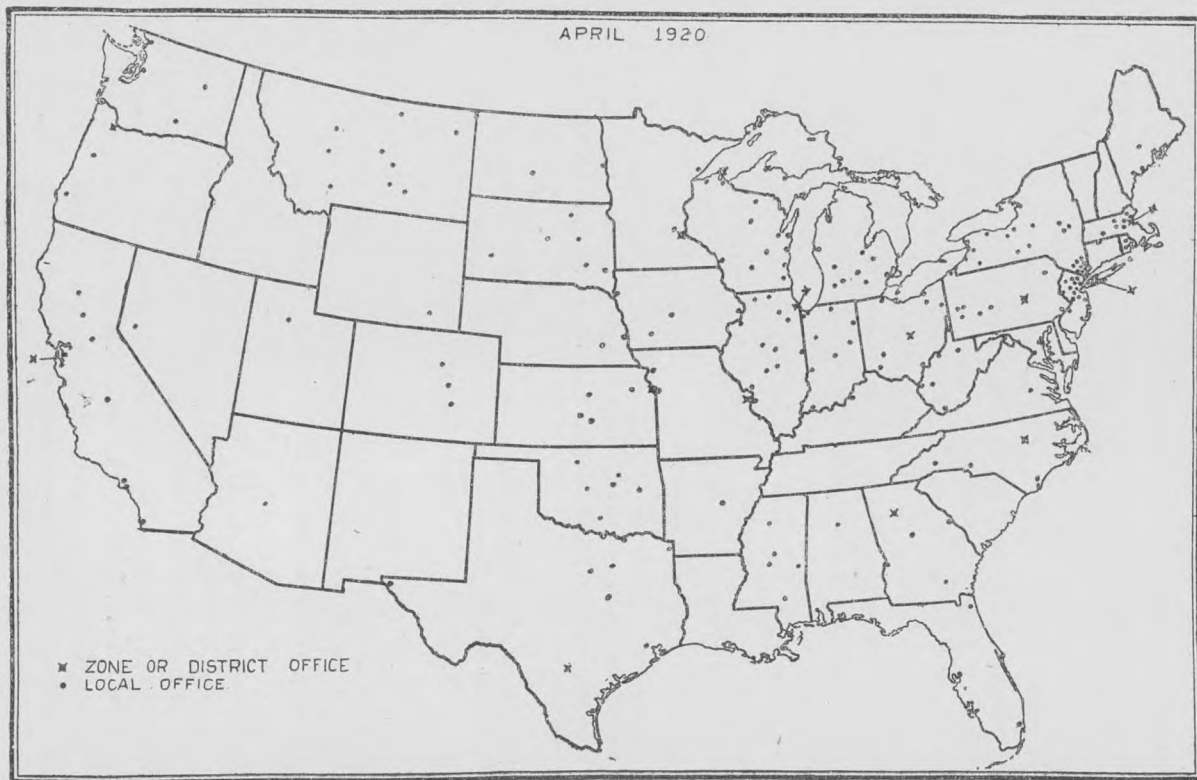
During the war the service greatly expanded under war-time Executive orders and with the aid of liberal appropriations. On October 6, 1917, six months after the United States entered as a belligerent into the World War, Congress appropriated \$250,000 for the service. Later the President allotted \$875,000 to the Department of Labor to be applied to the work of labor distribution. And for the fiscal year ending June 30, 1919, Congress originally made a liberal appropriation of \$5,500,000 and followed it by a deficiency allowance of \$272,000. During that period the service was in absolute control of the distribution of all labor of the country needed in the prosecution of the war. The recruiting activities of other agencies were restricted, if not entirely prohibited, and all the work of supplying labor was centered in the Federal Service, which had under its direction about 950 employment offices.

In 1919, following the termination of the war and a gradual reduction in scope and influence of the service, bills were introduced in both Houses of Congress for the continuance of the work and for placing it on a permanent basis. This was the purpose of House bill 4305 (66th Cong., 1st sess.), introduced May 31, 1919, by the Committee on Labor. Senate bill 1442, introduced June 6, 1919, was identical with the House bill, and was introduced by the Committee on Education and Labor. Senate bill 688 was introduced by Senator Robinson on May 23, 1919, and embodied the provisions of a draft bill drawn by a conference on unemployment which had been held April 23-25, 1919, at the request of the Secretary of Labor, and consisting of representatives chosen by the various State governors and of delegates from the United States Chamber of Commerce, the American Federation of Labor, and the directors and officials of the Employment Service. Joint sessions were held and extensive hearings were conducted on these bills.¹

The purpose of this pending legislation is to bring the State and municipal employment agencies into more effective cooperation with the Federal service by means of subsidies to the several States to encourage them to establish and maintain, according to standards laid down by the central Federal office, agencies for the placement of workers. The bills provide that the Federal Government shall contribute to each State an amount equal to the amount contributed by the State itself.

Thus far none of these bills has come to a vote in either house of Congress, and, coupled with a limited appropriation barely sufficient to maintain the Washington organization as little more than a clear-

¹ National employment system. Hearings before the Joint Committee on Labor, Congress of the United States, 66th Cong., 1st sess., parts 1, 2. Washington, 1919. 715 pp.



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ing house, the service has been compelled to play a very limited part in the placement of labor since the signing of the armistice. At the present time the active works of placement is done by the public employment offices of the States and cities, while the Federal service receives and tabulates the activities of the local offices which may desire to continue cooperating with the central organization in addition to coordinating and stimulating the activities of the States. The sundry civil bill for the fiscal year 1920 carried an appropriation of \$400,000 for the service. At the time it was hoped that the bills establishing a permanent service by law would be enacted by the end of 1919; hence it was proposed to spend this \$400,000 within the five months, until the permanent service should be reorganized. With the assistance being rendered by private organizations and by the States and municipalities, it would therefore have been possible to carry on the service upon a fairly adequate basis for the five months. It was soon realized that the bills creating a permanent service would not be passed in time, and it therefore became necessary to further retrench in expenditures. The annual report of the service for the fiscal year ending June 30, 1919, thus characterizes the result of cutting down its appropriations.²

The result of the necessary reductions has meant the separation from the service of at least 80 per cent of the personnel, the closing of approximately one-half of the placement offices throughout the United States, the entire elimination of such special services as the handicap section and the professional and special section, the discontinuance of the publication of the official organ of the service, known as the United States Employment Service Bulletin, and the temporary abolishment of the farm service division.

Present Organization.

THE present organization of the Federal service as a national clearing house is set forth in a circular of the Director General of March 8, 1920. The Federal service does not maintain any offices of its own but works through the public employment exchanges of the States and cities. In those States where a public system of employment agencies is operating, the head of that system is a dollar-a-year man of the Federal Employment Service. This is the case in the States of California, Colorado, Connecticut, Illinois, Indiana, Iowa, Kansas, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, and Wisconsin. In the other States the labor commissioner or his deputy or other person designated by the governor acts as the representative of the Federal service. There are 7 States in which no cooperation

² Annual report of the Director General, United States Employment Service, to the Secretary of Labor fiscal year ended June 30, 1919. Washington, 1919, p. 56.

between the State and Federal service has been established; that is, the service has at present cooperative arrangements with 40 States and the District of Columbia. In Maine the three offices communicate directly with the Federal service without the cooperation of the State. In Virginia one municipal office is cooperating with the Federal service. In Nevada, Utah, and Wyoming only one Federal office is maintained in each, and no Federal or cooperating offices exist in Idaho, New Mexico, Tennessee, and Vermont. Cooperative arrangements are in progress of completion in Delaware and New Hampshire. Altogether the Federal service has 227 local employment exchanges. The cities in which the offices in the various States are located are as follows:

PUBLIC EMPLOYMENT OFFICES COOPERATING WITH UNITED STATES EMPLOYMENT SERVICE.

State and city.	Number in State.	State and city.	Number in State.	State and city.	Number in State.
Alabama.....	2	Indiana.....	9	Michigan—Concluded.	
Birmingham.		Indianapolis.		Saginaw	
Mobile.		East Chicago.		Traverse City.	
Arizona.....	1	Evansville.		Minnesota.....	3
Phoenix.		Fort Wayne.		Minneapolis.	
Arkansas.....	1	Lafayette.		Duluth.	
Little Rock.		Muncie.		St. Paul.	
California.....	11	South Bend.		Mississippi.....	5
San Francisco.		Terre Haute.		Jackson.	
Chico.		Hammond.		Canton.	
Fresno.		Iowa.....	4	Greenwood.	
Long Beach.		Des Moines.		Hattiesburg.	
Los Angeles.		Creston.		Meridian.	
Marysville.		Clinton.		Missouri.....	3
Oakland.		Sioux City.		St. Louis.	
Sacramento.		Kansas.....	5	Kansas City.	
San Diego.		Topeka.		St. Joseph.	
San Jose.		Hutchinson.		Montana.....	9
Stockton.		Kansas City.		Helena.	
Colorado.....	3	Wichita.		Bozeman.	
Colorado Springs.		Salina.		Billings.	
Denver.		Kentucky.....	1	Chinook.	
Pueblo.		Frankfort.		Glasgow.	
Connecticut ¹	5	Louisiana.....	1	Great Falls.	
Five offices.		New Orleans.		Hardin.	
District of Columbia.....	1	Maine.....	3	Lewistown.	
Washington.		Augusta.		Roundup.	
Florida.....	3	Portland.		Nebraska.....	2
Jacksonville.		Bath.		Lincoln.	
Miami.		Maryland.....	1	Omaha.	
Tampa.		Baltimore.		Nevada.....	1
Georgia.....	5	Massachusetts.....	8	Carson City.	
Atlanta.		Boston.		New Jersey.....	14
Augusta.		Fitchburg.		Atlantic City.	
Columbus.		Framingham.		Asbury Park.	
Macon.		Lowell.		Bayonne.	
Waycross.		Lynn.		Camden.	
Illinois.....	13	Springfield.		Dover.	
Chicago.		Waltham.		Elizabeth.	
Alton.		Worcester.		Jersey City.	
Aurora.		Michigan.....	12	Newark.	
Bloomington.		Detroit.		New Brunswick.	
Danville.		Battle Creek.		Orange.	
Decatur.		Bay City.		Patersen.	
East St. Louis.		Flint.		Perth Amboy.	
Freeport.		Grand Rapids.		Phillipsburg.	
Joliet.		Jackson.		Trenton.	
Peoria.		Kalamazoo.		New York.....	28
Rockford.		Lansing.		New York City (10	
Rock Island.		Marquette.		offices).	
Springfield.		Muskegon.		Albany.	

¹ Bridgeport, Hartford, New Haven, Norwich, Waterbury; not shown on map, p. 129.

PUBLIC EMPLOYMENT OFFICES COOPERATING WITH UNITED STATES EMPLOYMENT SERVICE—Concluded.

State and city.	Number in State.	State and city.	Number in State.	State and city.	Number in State.
New York—Concluded.		Oklahoma—Concluded.		Texas—Concluded.	
Auburn.		Oklahoma City.		Texarkana.	
Binghamton.		Muskogee.		Waco.	
Bronx.		Sapulpa.		Utah.....	1
Buffalo.		Tulsa.		Salt Lake City.	
Brooklyn.		Oregon.....	3	Virginia.....	1
Dunkirk.		Eugene.		Richmond.	
Elmira.		Marshfield.		Washington.....	5
Jamestown.		Portland.		Bellingham.	
Newburgh.		Pennsylvania.....	9	Seattle.	
Niagara Falls.		Altoona.		Spokane.	
Rochester.		Erie.		Tacoma.	
Schenectady.		Harrisburg.		Yakima.	
Syracuse.		Johnstown.		West Virginia.....	7
Troy.		McKeesport.		Bluefield.	
Utica.		Philadelphia.		Charleston.	
Watertown.		Pittsburgh (2 of- fices).		Clarksburg.	
Yonkers.		Scranton.		Martinsburg.	
North Carolina.....	4	Rhode Island.....	2	Huntington.	
Asheville.		Newport.		Parkersburg.	
Charlotte.		Providence.		Wheeling.	
Raleigh.		South Dakota.....	6	Wisconsin.....	12
Wilmington.		Aberdeen.		Ashland.	
North Dakota.....	2	Huron.		Green Bay.	
Bismarck.		Mitchell.		La Crosse.	
Fargo.		Pierre.		Manitowoc.	
Ohio.....	7	Rapid City.		Milwaukee.	
Akron.		Sioux Falls.		Madison.	
Cincinnati.		Texas.....	8	Oshkosh.	
Cleveland.		Dallas.		Racine.	
Columbus.		Denison.		Rhineland.	
Dayton.		El Paso.		Sheboygan.	
Toledo.		Fort Worth.		Superior.	
Youngstown.		Houston.		Wausau.	
Oklahoma.....	6	San Antonio.		Wyoming.....	1
Ardmore.				Cheyenne.	
Enid.					

FEDERAL DIRECTORS AND REPRESENTATIVES.

[Except as designated, titles are "Federal Director."]

State.	Name.	Address.	City.
Alabama.....	H. K. Milner.....	1807 Jefferson County Bank Building.	Birmingham.
Arizona.....	Hywel Davies.....	121 North 2d Avenue.....	Phoenix.
Arkansas.....	T. A. Wilson.....	State Capitol (room 129a).....	Little Rock.
California.....	John P. McLaughlin.....	933 Mission Street.....	San Francisco.
Colorado.....	Wm. L. Morrissey.....	Statehouse.....	Denver.
Connecticut.....	Wm. S. Hyde.....	State Department of Labor.....	Hartford.
District of Columbia.....	Geo. C. DeNeale.....	1410 Pennsylvania Avenue.....	Washington, D. C.
Florida.....	J. C. Privett.....	120 West Bay Street.....	Jacksonville.
Georgia.....	H. M. Stanley.....	318 State Capitol.....	Atlanta.
Illinois.....	W. C. Lewman.....	116 North Dearborn Street.....	Chicago.
Indiana.....	Fred Kleinsmith.....	Statehouse.....	Indianapolis.
Iowa.....	A. L. Urick.....	114 Courthouse.....	Des Moines.
Kansas.....	J. H. Crawford.....	Statehouse.....	Topeka.
Kentucky.....	W. C. Hanna.....	State Department of Agriculture and Labor.	Frankfort.
Louisiana.....	Levering Moore.....	612 Carondelet Street.....	New Orleans.
Maine.....	H. B. Brawn.....	Box 22.....	Augusta.
Maryland.....	Chas. J. Fox.....	State Board of Labor and Statistics.	Baltimore.
Massachusetts.....	E. Leroy Sweetser.....	469 Statehouse.....	Boston.
Michigan.....	Perry J. Ward (deputy commissioner of labor).		Detroit.
Minnesota.....	John P. Gardiner.....	Federal Building.....	Minneapolis.
Mississippi.....	A. B. Hobbs.....	Box 776.....	Jackson.
Missouri.....	Wm. H. Lewis.....	11 North 7th Street.....	St. Louis.
Montana.....	W. J. Swindelhurst.....	State Capitol.....	Helena.

FEDERAL DIRECTORS AND REPRESENTATIVES—Concluded.

State.	Name.	Address.	City.
Nebraska.....	Frank A. Kennedy.....	Statehouse.....	Lincoln.
Nevada.....	Robert S. Cole.....	Commissioner of Labor.....	Carson City.
New Jersey.....	Lewis T. Bryant.....	State Capitol.....	Trenton.
New York.....	Henry D. Sayer.....	124 East 28th Street.....	New York City.
North Carolina.....	M. L. Shipman.....	State Department Building.....	Raleigh.
North Dakota.....	J. N. Hagan.....	Capitol Building.....	Bismarck.
Ohio.....	Geo. F. Miles.....	Majestic Building.....	Columbus.
Oklahoma.....	Claude E. Connally.....	State Capitol.....	Oklahoma City.
Oregon.....	W. W. Fitzgerald.....	Courthouse.....	Portland.
Pennsylvania.....	Jacob Lightner (director of employment, Department of Labor and Industry).	.....	Harrisburg.
Rhode Island.....	Geo. H. Webb.....	Statehouse.....	Providence.
South Dakota.....	Chas. McCaffree.....	State Capitol.....	Pierre.
Tennessee.....	H. W. Lewis.....	1306 South Flores Street.....	San Antonio.
Texas.....	Miss Carolyn I. Smith.....	Industrial Commission.....	Salt Lake City.
Utah.....	.....	.....	.....
Virginia ¹	E. J. Conway (Federal representative).	5 City Hall.....	Richmond.
Washington.....	W. C. Carpenter.....	.....	Spokane.
West Virginia.....	Thos. Cairns.....	126 Summers Street.....	Charleston.
Wisconsin.....	Geo. P. Hambrecht.....	State Capitol.....	Madison.
Wyoming.....	Harry C. Hoffman.....	Capitol Building.....	Cheyenne.

¹ Municipal office.

In most States where active public systems are in operation there is little difficulty in securing cooperation in the regular reporting of work done. In some States, where means are lacking, the Federal service makes small monthly allotments to assist in paying for necessary statistical work and the compilation of reports. In other States certain private organizations cooperate with the Federal authorities in maintaining the exchanges. Among such organizations are the community service, groups of business interests, chambers of commerce, the Young Men's Christian Association, the Red Cross, and the American Legion.

The State representatives and directors are merely channels of communication through which the State and municipal offices report. The local offices report their surplus of registrations or help-wanted calls to the State director or Federal representative and these are matched against each other, so that through the State director or representative there is presumably maintained a system of clearance between the local offices. The problem now before the service is to establish a more effective system of interstate clearance.

In its circular of March 8, 1920, the Employment Service took the first step toward a system of zone clearance for matching the surplus of labor in one State against the deficit in another. The country has been divided into 13 labor clearance zones corresponding generally with the Federal Reserve bank districts. The 13 zones with their headquarters and the States included under each are as follows:

[1207]

FEDERAL EMPLOYMENT SERVICE LABOR CLEARANCE ZONES.

Zone.	Headquarters.	States included.
1	Boston, Mass.	Massachusetts, Maine, Vermont, New Hampshire, Rhode Island.
2	New York, N. Y.	New York, Connecticut, New Jersey.
3	Harrisburg, Pa.	Pennsylvania, Delaware.
4	Columbus, Ohio.	Ohio, West Virginia.
5	Raleigh, N. C.	Maryland, Virginia, North Carolina, South Carolina.
6	Atlanta, Ga.	Georgia, Alabama, Mississippi, Louisiana, Florida.
7	Chicago, Ill.	Illinois, Indiana, Michigan, Wisconsin, Iowa.
8	St. Louis, Mo.	Kentucky, Missouri, Arkansas, Tennessee.
9	St. Paul, Minn.	Minnesota, North Dakota, South Dakota, Montana.
10	Kansas City, Kans.	Nebraska, Kansas, Oklahoma, Colorado, Wyoming.
11	San Antonio, Tex.	Texas, New Mexico.
12	San Francisco, Calif.	Arizona, Utah, Nevada, California.
13	Portland, Oreg.	Idaho, Oregon, Washington.

As soon as funds are made available for the purpose it is proposed to establish in each of the labor clearance zones a zone clearance office under a paid zone clearance officer. At present, however, it has been possible to put paid Federal directors in only three of the zones, namely, zone No. 6, centering at Atlanta, Ga., and comprising the States of Georgia, Alabama, Mississippi, Louisiana, and Florida; zone No. 7, with headquarters at Chicago, Ill., and including the States of Illinois, Indiana, Michigan, Wisconsin, and Iowa; and zone No. 10, with headquarters at Kansas City, Kans., and including the States of Nebraska, Kansas, Oklahoma, Colorado, and Wyoming. In the remaining 10 zones the unpaid representatives in the State where the headquarters of the zone is located act as zone clearance officers, in addition to their other functions of State representatives. Respecting the designation of the three zones with active paid zone clearance officers, Circular No. 2 of March 8, 1920, of the Employment Service, states that "these assignments have been made with a view to the best adaptation of the available resources to the industrial and agricultural requirements of the various zones." These zones represent in a general way the agricultural region of the Southern States, the harvest region of the Middle West, and the industrial district centering at Chicago, Ill.

Under the cooperative agreements which the various States have with the Federal service, all local placement offices within a State report direct to the Federal director for that State. Circular No. 2, already quoted, states further: "The national clearance system depends upon the existence in each State of a comprehensive and effective system of clearance within such State, and it is assumed that, so far as possible, each State will supply its immediate needs from its own resources of workers and of industrial opportunities. Any balances of either opportunities or applicants remaining undisposed of within any State should be reported by the Federal director for that State to the zone clearance officer, and, if undisposed of within the zone, eventually reported by the zone clearance officer to the national clearing house at Washington."

[1208]

The functions of the zone clearance officer can not be better defined than in the words of the circular in question:

It should be understood that the functions of zone clearance officers are merely executive and not supervisory in any sense. The Federal director is the sole representative of this service in his State so far as employment activities are concerned. The duties of zone clearance officers involve merely the coordination of the activities of the Federal directors for the various States within their zones and do not extend to soliciting opportunities for employment, recruiting workers, or placement work of any kind.

Under the plan of operation each State cooperating with the Federal service secures for its own use the following information:

(a) A daily report of labor surplus and of labor wanted from each of the public and affiliated employment offices operated in the State..

(b) Weekly or more frequent reports from labor organizations of men seeking employment.

(c) Weekly or more frequent reports as to labor wanted from local boards of trade, chambers of commerce, and other employers' organizations.

(d) Information as to men or women wanted derived from the advertising columns of newspapers, from communications from employers, or from systematic inquiries pursued from time to time among employers of labor.

These reports by the States will be collated by the zone clearance officer of the zone in which the respective States are located and forwarded to the Federal service at Washington.

After the State organization has effected the local shifting of labor on the basis of the information so gathered, the surplus is reported to the zone clearance officer on a prepared form. The same form is also adaptable for clearance between States and zones to the National office at Washington. The forms below are the ones used.

U. S. DEPARTMENT OF LABOR.

U. S. EMPLOYMENT SERVICE.

REPORT OF APPLICANTS NOT PLACED AND WILLING TO LEAVE THE CITY.

City _____

Date _____

Superintendent _____

Name of applicant.	Principal occupation.	Other experience.	Single, married, or widowed.	Age.	Sex.	Color.	Minimum wage demanded.	Do you recommend applicant?	Limit applicant can pay for transportation.

INSTRUCTIONS.—Fill out this report daily and send in with daily report. When registering applicants, be sure to ask if willing to leave the city, and enter answer on the card. Before dismissing applicants, after failure to place them, ask for those willing to leave locality. Report only those willing to leave. This report must show the situation at the close of the day, the latest canceling all previous reports on this form; all applicants, whether previously reported or not, should be included hereon.

[1209]

U. S. DEPARTMENT OF LABOR.

U. S. EMPLOYMENT SERVICE.

REPORT OF ORDERS FOR HELP UNFILLED AND IMPOSSIBLE TO FILL LOCALLY.

City _____

Date _____

Superintendent _____

Kind of work.	Number wanted.	Probable wages.	Hours.	Sex.	Color.	Age limit.	Duration of job.	Latest date for filling order.	Amount employer will provide for transportation.	Probable cost of board.

INSTRUCTIONS.—Fill out this report daily and send in with daily report. Report only those orders which will allow sufficient time to transfer applicants and obtain all of the information requested. If necessary, use more than one line in giving details of orders.

The form for reporting "male" placements is shown below. The form for "female" placements is identical. It is also further directed that the report should specify, whenever workers are wanted, the specific plant needing them, the wages paid, and the living conditions afforded. For this latter information no special form of inquiry is demanded, a letter giving the necessary information being sufficient. In addition, telegraphic reports should be submitted in any case of acute shortage or surplus of labor, indicating the need for immediate relief.

WEEKLY SUMMARY BY LOCAL OFFICES.

U. S. DEPARTMENT OF LABOR.

U. S. EMPLOYMENT SERVICE.

State of _____.

Week ending _____.

Sex, *male*.

Offices.	Registrations.	Help wanted.	Referred.	Reported placed.
_____ (name of city):				
Skilled.....				
Unskilled.....				
Clerical and professional.....				
Total.....				
_____ (name of city):				
Skilled.....				
Unskilled.....				
Clerical and professional.....				
Total.....				
Grand totals.....				

(Signature) _____,

Federal Director.

[1210]

From these office reports the statistical reports are made up. On the "male" report are shown occupations classified as skilled, unskilled, and clerical and professional, and on the "female" report the occupations are classified as "domestic," "industrial," and "clerical and professional."

The matching of the "labor surplus" against the "labor wanted" takes place daily within each zone, while interzone or national clearance will be effected by the national clearing house at Washington on the basis of weekly or more frequent reports of "labor surplus" or "labor wanted." The zone clearance officers are also required to report weekly, or more frequently, the state of the labor market in all parts of their respective zones. While the zone clearance officers usually communicate only through the national office at Washington, they are permitted in case of emergency to communicate directly with the zone clearance officer of an adjoining zone with a view to effecting directly and without loss of time the adjustment of labor surplus and demand as between such two or more zones.

The Federal service hopes to be able to furnish a weekly bulletin of such information as has been described above covering the entire country, and also by the publication of a monthly summary of labor and employment conditions throughout the United States, with reports of registration placements and clearances and full information as to industrial conditions and prospects in this and foreign countries.

Statistics of Operations.

EXCEPT for the period of the war, the Employment Service has never had a monopoly of the placement of labor, and although it practically dominated the field during the war, naturally a considerable amount of labor was placed and moved without its intervention. In a time of great demand for labor the workers are not likely to make full use of the employment exchanges. For these reasons, therefore, the statistics of operations of the Service can not be used as an index or criterion of the state of the labor market. At the most, they reflect a varying and fluctuating amount of public service rendered to employers and employees of the country.

TABLE 1.—EMPLOYMENT WORK OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION, MAY, 1915, TO DECEMBER, 1917.¹

Year and month.	Help wanted.	Registrations. ²	References to positions.	Positions filled.
1915: May	3,826	12,132	3,752	3,495
June.....	3,601	14,530	5,131	4,646
July.....	8,665	18,061	6,360	6,035
August.....	7,931	17,827	7,321	6,757
September.....	4,551	13,334	5,671	5,405
October.....	5,423	12,215	5,460	5,006
November.....	4,650	11,908	4,459	4,146
December.....	3,588	11,902	2,622	2,170
Total.....	42,235	111,909	40,776	37,660

¹ Figures for 1915 and 1916 are from Bulletin 241, U. S. Bureau of Labor Statistics, p. 52; figures for 1917 are from the MONTHLY REVIEW, U. S. Bureau of Labor Statistics, March, 1918, pp. 152 and 153.

² Includes re-registrations.

TABLE 1.—EMPLOYMENT WORK OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION, MAY, 1915, TO DECEMBER, 1917—Concluded.

Year and month.	Help wanted.	Registra-tions.	References to positions.	Positions filled.
1916: January.....	5,063	15,015	4,300	3,419
February.....	6,413	14,257	5,036	4,185
March.....	10,209	19,484	8,113	7,020
April.....	12,104	13,498	8,843	7,653
May.....	21,326	17,614	12,938	11,453
June.....	17,402	18,824	13,839	11,960
July.....	23,657	24,058	17,608	16,309
August.....	26,791	23,720	18,062	16,313
September.....	27,185	26,276	19,643	17,169
October.....	27,985	28,504	21,789	19,044
November ³	25,995	27,313	24,613	18,822
December.....	21,533	26,805	21,139	16,597
Total.....	225,663	255,373	175,923	149,954
1917: January.....	26,002	33,780	26,698	20,008
February.....	28,482	29,701	23,532	13,367
March.....	36,950	23,933	35,452	27,271
April.....	42,074	39,247	37,451	28,745
May.....	46,125	48,099	41,301	32,061
June.....	51,718	43,145	40,678	32,330
July.....	64,406	50,866	46,239	38,113
August.....	81,350	65,000	57,247	46,859
September.....	84,226	57,031	56,552	46,586
October.....	83,928	69,031	62,104	51,093
November.....	90,722	78,139	67,225	58,027
December.....	82,029	81,898	62,840	51,439
Total.....	718,012	619,870	557,320	445,899

³ Inclusive of activities in cooperation with State and municipal employment offices in the State of New York.

TABLE 2.—SUMMARY ACTIVITIES OF THE UNITED STATES EMPLOYMENT SERVICE AS REORGANIZED AS AN INDEPENDENT SERVICE.

Year and month.	Help wanted.	Registra-tions.	References to positions.	Positions filled.
1918: January.....	89,002	82,253	62,642	51,183
February.....	92,594	92,452	70,369	58,844
March.....	177,831	144,156	118,079	100,446
April.....	320,328	195,578	171,306	149,415
May.....	328,587	206,181	179,821	156,284
June.....	394,395	246,564	221,946	192,798
July.....	484,033	282,294	250,152	217,291
August.....	1,227,705	555,505	500,510	395,530
September.....	1,476,282	531,226	513,662	362,696
October.....	1,588,975	594,737	606,672	455,931
November.....	1,724,943	744,712	748,934	558,469
December.....	1,024,330	549,593	525,486	392,934
Total.....	8,929,005	4,225,251	3,969,579	3,091,821
1919: January.....	730,881	587,200	514,436	372,186
February.....	487,475	496,299	406,824	299,118
March.....	539,393	523,736	440,833	327,660
April.....	387,256	364,061	309,158	232,135
May.....	510,689	487,929	424,738	333,587
June.....	519,485	449,155	404,943	319,813
July.....	373,577	345,759	291,076	236,540
August.....	444,802	390,629	340,403	266,872
September.....	327,991	260,275	240,345	188,054
October.....	159,408	135,565	123,947	95,568
November.....	203,139	181,647	174,169	137,727
December.....	158,245	134,065	135,295	110,431
Total.....	4,842,341	4,356,320	3,806,172	2,919,691
1920: January.....	234,457	180,242	193,972	160,969
February.....	197,567	142,717	150,844	131,659
March.....	209,229	169,116	169,658	141,944
April.....	238,718	180,201	179,464	165,042

TABLE 3.—PERCENTAGE ANALYSIS OF WORK OF FEDERAL EMPLOYMENT OFFICES, MAY, 1915, TO APRIL, 1920, AND OF OTHER PUBLIC EMPLOYMENT OFFICES DURING 1917.

Period.	Per cent—			
	Help wanted is of registra- tions.	Positions filled are of help wanted.	Positions filled are of registrations.	Positions filled are of persons referred to positions.
1915 (8 months).....	37.7	96.5	33.6	92.4
1916.....	88.4	66.5	58.7	85.2
1917 (public other than Federal).....	110.4	82.1	90.6	95.9
1917 (Federal).....	115.8	62.1	71.9	80.0
1917 (public and Federal).....	112.0	76.0	85.2	91.4
1918.....	211.3	34.6	73.2	77.9
January.....	108.2	57.5	62.2	81.7
February.....	100.2	63.6	63.7	83.6
March.....	123.4	56.5	69.7	85.1
April.....	163.8	46.4	76.4	87.2
May.....	159.4	47.6	75.8	86.9
June.....	160.0	48.9	78.2	86.9
July.....	171.5	44.9	77.0	86.9
August.....	221.0	32.2	71.2	79.0
September.....	277.9	24.6	68.3	70.6
October.....	267.2	28.7	76.7	75.2
November.....	231.6	32.4	75.0	74.6
December.....	186.4	38.4	71.5	74.8
1919.....				
January.....	124.4	50.9	63.4	72.3
February.....	98.7	62.4	61.2	74.0
March.....	102.7	60.7	62.5	73.5
April.....	106.3	50.9	63.7	74.9
May.....	104.6	65.5	68.3	78.5
June.....	113.4	61.5	68.9	78.9
July.....	108.3	63.3	68.4	81.2
August.....	113.8	59.9	68.3	78.3
September.....	126.0	57.3	72.2	78.2
October.....	117.3	47.4	70.5	77.1
November.....	111.7	67.7	75.2	79.0
December.....	118.0	69.6	82.3	81.6
1920.....				
January.....	130.1	68.6	89.3	83.0
February.....	138.4	66.0	92.2	86.6
March.....	123.7	67.8	84.0	83.7
April.....	132.5	63.3	83.8	84.2

Junior Division.³

WITH the curtailment of the Service at the end of 1918 following the armistice, among other divisions discontinued was the Boys' Working Reserve. The elimination of this service would have left uncared for, and without means of assistance in finding positions, the thousands of boys then in agriculture for whom the division had been established. Other thousands in industry for whom no provision as respects placement and entry into industry had ever been made were also to be considered.

The purpose of the Junior Division, which took the place of the Boys' Working Reserve, was the "guidance and placement of boys and girls under 21 years of age." The junior work is done in close cooperation with the public schools and with other agencies interested in juvenile problems.

³ See also Monthly Labor Review of the U. S. Bureau of Labor Statistics, February, 1919, pp. 117-119.

The enterprise is still in its initial stages, although begun actively in March, 1919. Cooperation has been established with the educational authorities in New York City, Boston, Mass., Providence, R. I., Philadelphia, Pa., Pittsburgh, Pa. (where two offices are maintained), Cleveland, Ohio, South Bend, Ind., Milwaukee, Wis., St. Paul, Minn., and Benton Harbor, Mich. The National Employment Service generally pays half the expenses and the local school system half. Local school officials are in charge of the active work of placement. The Federal office sets standards and furnishes guidance and counsel in the work.

In order to build up a staff of trained vocational guidance workers the National Employment Service has undertaken to establish or pay for study scholarships in the universities. Thus far only four scholarships—at the University of Chicago—have been created. It is not claimed that the service has accomplished very much as yet. Its main significance lies in the fact that it has made a practical beginning in vocational guidance and placement on a national scale. It may succeed in nationalizing the problems of juvenile placement.

Labor Market in Germany and Switzerland.

Germany (January, 1920).

ACCORDING to a report of the German Statistical Office summarized in the *Deutsche Allgemeine Zeitung*¹ the German labor market in January was still dominated by the coal shortage. The effect of the railway strikes and the stoppage of traffic on the most important waterways was very manifest.

Reports from 35 trade-unions showed that 153,566 members out of 4,719,225, i. e., 3.3 per cent, were out of work in January. On December 30, 1919, the trade-unions reported 131,598 out of 4,495,743 members, i. e., 2.9 per cent, out of work. In January, 1919, 165,178 out of a total of 2,520,585 trade-union members, or 6.6 per cent, were unemployed. The number of persons receiving unemployment allowances on February 1, 1920, was 371,675, according to the report of the demobilization commissioners (on Jan. 1, 1920, their number was 386,818). For every 100 vacant positions reported to the public employment offices in January there were 183 male or 109 female applicants, as compared with 189 and 125 in December, 1919. Another index of the state of employment is the membership of the sick funds, for every employed worker must be a contributory member of such a fund. According to the reports of 4,910 sick funds the number

¹ *Deutsche Allgemeine Zeitung*. Berlin, Feb. 28, 1920. Evening edition.

of compulsorily insured members increased during January, 1920, by 37,924, or 0.4 per cent, the number of male members increasing by 0.6 per cent to 5,283,565, and that of female members by 0.2 per cent to 3,280,029.

Switzerland (February, 1920).

THE monthly report of the Swiss Federal Central Employment Office² for February, 1920, indicates a marked improvement of the labor market. In the case of men there were in February 7,053 vacant positions as against 5,810 in January, an increase of 1,243. The number of male applicants, on the other hand, decreased from 8,759 in January to 7,752 in February. For every 100 vacant positions for men in February there were 110 applicants, as compared with 151 in January, 1920, and 197 in February, 1919. Unskilled building trades' workers, electricians, plumbers, firemen, machinists, saddlers, bakers, butchers, and printers were still unemployed in large numbers. Considerable unemployment prevailed also among certain groups of workers of the watch, embroidery, and hotel industries, clerks, stockkeepers, packers, and factory workers. About 300 peddlers were idle, peddling in the country having been prohibited owing to a live-stock epidemic. More than 200 professional men were also idle. In agriculture the demand for labor exceeded the supply. Blacksmiths, carriage makers, masons, and miners were also in great demand.

In the case of female workers the demand exceeded the supply. The number of vacant positions for women increased from 3,277 in January to 3,330 in February. There were only 2,261 applicants to fill these 3,330 vacancies. The number of applicants per 100 vacant positions for women was 68 in February as against 65 in January. Female help is most in demand for domestic service, in the hotels, and in the textile industry.

² Eidgenössische Zentralstelle für Arbeitsnachweis. Monatsbericht No. 2, February, 1920.

INDUSTRIAL HYGIENE.

Opportunities for the Study of Industrial Medicine in the United States.

By AUGUSTA SHUFORD.

MODERN industrial medicine has received the endorsement of economists, sociologists, and physicians as one of the principal means upon which hope of securing better industrial and social conditions must be based.

The "new specialty," or "mass medicine" as it is frequently called, has been variously defined. Many physicians use the term "industrial medicine" as if its meaning were limited to the treatment of industrial accidents and occupational diseases, but this idea is rapidly giving place to a larger conception of its scope, based upon the growing recognition of industrial medicine, and particularly of that important part of it known as industrial hygiene, as a very vital factor in preventive medicine. Perhaps the best definition is that which recognizes it as all branches of medicine and surgery in their application to the prevention and treatment of accidents and sickness in industrial workers. The term will here be used in this last sense, though the exactness or consistency with which it is applied to the curricula of the different institutions cited is not vouched for.

The study of specific poisons and diseases in relation to certain occupations is an old one, but it has never been a popular branch of medicine. In the last few years employers of large numbers of people have begun to estimate the advantage to themselves of retaining the services of special physicians to supervise the hygienic conditions in their plants and to attend their sick and injured employees, so that at present a considerable number of physicians are thus employed, while others are engaged in the care of Federal and other public employees. A few public clinics for the treatment of industrial accidents or diseases, or both, have also been established. But while such avenues have been opened for the practice of industrial medicine, physicians who wished to specialize on this subject have, up to the present time, found meager facilities offered for training for their work. The lessons of the war and of reconstruction have, however, drawn marked attention to economic waste through accident and ill health and to the rôle which industrial medicine can be made to play, by reducing these, in the adjustment of industrial and social problems. Very recently steps have been taken to provide adequate training in industrial medicine in a few of

our educational institutions, while the subject is receiving more or less attention in a number of others.

This article is based mainly upon answers to letters sent to the heads of medical colleges and of the medical faculties of universities, inquiring as to the facilities offered by educational institutions and in clinics for the study of industrial medicine. No attempt is here made to give an exhaustive list of educational institutions including industrial medicine or hygiene in their curricula or of clinics specializing in the treatment of industrial diseases or accidents, but merely to present a substantially true picture of the situation regarding the facilities offered for the training of industrial physicians, by noting the most conspicuous work being done along this line and citing typical but less ambitious efforts.

Educational Institutions Offering Courses in Industrial Medicine.

INDUSTRIAL medicine, where it has received any attention at all in the curricula of medical colleges and of universities in this country, has been an outgrowth from a course devoted to public health and has usually been offered as part of such a course.

Courses Leading to Degree in Industrial Medicine or Hygiene

Harvard University Medical School, Boston, Mass., was the first institution to establish a course leading to a degree in industrial hygiene and is the only institution which offers a doctorate in the subject. Work was begun during the session of 1918-19, and according to the plan then inaugurated and which was adopted for the session of 1919-20, when the enterprise was affiliated with the work in public health already established by Harvard University and the Massachusetts Institute of Technology, courses leading to two degrees are open to students holding the degree of doctor of medicine—a certificate in public health in industrial hygiene, obtained after one year's work (eight months in residence), and a doctorate in public health in industrial hygiene, obtained after two years' work. For the session of 1920-21 elective eight-month courses in industrial medicine are to be open to members of the fourth-year class in the medical college.

Courses leading to the certificate in public health in industrial hygiene include the following subjects: Applied physiology of industry, methods of air analysis, industrial toxicology, vital statistics, industrial sanitation, preventive medicine and hygiene, industrial health administration, employment management, workmen's compensation and the legal aspects of industrial disease, nutrition, industrial surgery, orthopedic surgery, and industrial medicine. These subjects also form the work of the first year for candidates for the degree of doctor of public health in industrial hygiene, the second

year being devoted to an investigation upon some phase of industrial health. Among adjunct lectures and accessory courses available for students this year are the Cutter lectures in preventive medicine and a course of Lowell lectures, both by Dr. Thomas M. Legge, chief medical inspector of factories in Great Britain.

Work in the occupational disease clinic of the Massachusetts General Hospital is required of all students of industrial medicine who possess the medical degree.

The school of public health offers two degrees to graduate non-medical students: Doctor of philosophy in hygiene and a certificate in public health. Candidates for these degrees may also take selected courses in industrial hygiene. Women are admitted, through Radcliffe College, as candidates for these degrees, and to all individual courses in industrial hygiene, but not as candidates for the medical degrees in industrial hygiene.

A general survey of psychiatric work in relation to industry is being made and it is hoped soon to extend the work in industrial hygiene into this almost unworked field.

The University of Cincinnati Medical School, Cincinnati, Ohio, established in 1919 a department of industrial hygiene and public health.

By the plan outlined for the term beginning in October, 1919, the course of instruction is to occupy one school year, be open to graduates in medicine, and lead to a certificate of public health in industrial medicine. The program calls for (1) the training of students in industrial medicine and public health, and (2) field work in industrial medicine among industries in the district. The field work undertaken has consisted largely of surveys and inspections of plants in terms of safety hazards, occupational disease hazards, general sanitation, physical examinations, medical relief, absenteeism, turnover, etc. Up to December 19, 1919, surveys of about 60 plants in Cincinnati had been made.

The plan also includes the cooperation of the department with the National Safety Council, the safety director of the department being the local secretary of the council. A course of 15 lectures, covering the fundamentals of safety and sanitary principles, is given at the university in the evening and is open to students of the medical college, safety engineers in the city, and students in engineering; and a course of eight lectures on industrial relations for executives is open to medical students and employment managers of the various plants.

The training of students in the clinical aspects of industrial medicine is provided by intimate contact with the industries of Cincinnati. In addition, an occupational disease clinic in the Cincinnati General Hospital is being organized.

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Medical Courses Which Include Industrial Medicine.

A number of medical colleges include courses in industrial hygiene, either elective or prescribed, in their work leading to the degree of doctor of medicine.

Rush Medical College, of the University of Chicago, Chicago, Ill., offers in the senior year a 48-hour clinical and conference course, limited to 10 students, dealing with the human maintenance department in the industries, including preventive medicine. Another course, covering dangerous trades, industrial health hazards, and occupational diseases, and to which sociological as well as medical students are admitted, is given in the department of hygiene and bacteriology. Both courses are elective, but when taken they count on the requirements for the degree of doctor of medicine. Clinical work is offered in connection with the evening clinic in the Central Free Dispensary, located in the heart of the industrial region of Chicago. The college hopes, in the near future, to elaborate these courses in connection with the post-graduate school which is contemplated by the University of Chicago.

Ohio State University College of Medicine, Columbus, Ohio, offers, in its department of public health and sanitation, elective courses in industrial hygiene and preventive medicine to undergraduate medical students. The courses in industrial hygiene were established in 1915. During the war, however, only an elective course in personal hygiene for freshmen students and a prescribed course in preventive medicine for senior students were given, and for 1919-20 too few students registered to warrant giving any of the other courses.

While the university gives no curriculum termed "industrial medicine," students in the graduate school have been permitted to specialize in industrial hygiene and preventive medicine. These courses also were dropped at the beginning of the war, but during 1919-20 a few students, candidates for the degree of master of science, are specializing in industrial hygiene.

With the opening of the session of 1919-20, in order to meet the demand for health commissioners in the State of Ohio, an extension course, in which industrial medicine was stressed, open to graduate physicians only, was substituted for the first two and a half months of the published graduate courses. This course was given in cooperation with the Ohio State department of health and included among its faculty members of the department.

In addition to these courses, the department of public health and sanitation gives minor courses, elective in nature, in personal hygiene, public health problems, industrial hygiene, and public health administration, to undergraduate students in the colleges of arts, philosophy, and science, education, and commerce and journalism.

University and Bellevue Hospital Medical College, New York City, includes in its regular work a course of 11 hours in industrial hygiene and occupational diseases, comprising seven didactic lectures and four quizzes, in which industrial environment and occupational diseases are discussed.

Columbia University College of Physicians and Surgeons, New York City, devotes one hour to industrial hygiene in its course leading to the medical degree. This subject was introduced in the session of 1918-19 as part of the public health course.

Johns Hopkins Medical School, Baltimore, Md., while giving no specific course in industrial hygiene, considers many of the problems involved in the subject in courses upon general medicine, surgery, and hygiene.

Detroit College of Medicine and Surgery, Detroit, Mich., has, for the session of 1919-20, added the subject to its regular course for medical students.

The University of Michigan Medical School, Ann Arbor, Mich., includes the subjects of industrial hygiene and occupational diseases in a course of lectures in hygiene.

Northwestern University Medical School, Chicago, Ill., gives a course of lectures on public health, which includes industrial medicine, to its fourth-year students.

Washington University College of Medicine, St. Louis, Mo., has recently introduced a course of 11 lectures on social medicine, in which a number of industrial problems are discussed by men who have had special experience. Clinical work is afforded by the industrial clinic in the out-patient department of the school.

Courses in Public Health.

A number of institutions offer work in industrial hygiene as part of their post-graduate courses in public health.

The University of Pennsylvania, Philadelphia, Pa., is placing considerable emphasis upon a course in industrial medicine and hygiene which is incorporated with the course in public health leading to the degree of doctor of public hygiene. The course includes visits to representative industrial plants, and service in connection with the first-aid stations and emergency hospitals in some of the larger plants. Clinical advantages are afforded by the occupational disease clinic of the university hospital.

Yale University, New Haven, Conn., while it offers no special degree in industrial hygiene, offers two degrees, a certificate and a doctorate, in public health, and some of the students working for these degrees specialize in industrial hygiene, including a course in industrial diseases. Those who so desire do special research work along industrial lines. The university, in conjunction with the

United States Public Health Service, has an experimental laboratory for the study of factory ventilation and the industrial dust hazard.

Syracuse University, Syracuse, N. Y., the *University of Illinois*, Urbana, Ill., and other institutions devote some measure of attention to industrial hygiene in connection with public health courses.

The following institutions offer courses leading to one or more of the four degrees in public health—doctor of public health, doctor of philosophy or doctor of science in public health, certificate in public health, and bachelor of science in public health or hygiene: The University of California, Berkeley, Calif.; Johns Hopkins Medical School, Baltimore, Md.; Harvard University Medical School, Boston, Mass.; Detroit College of Medicine and Surgery, Detroit, Mich.; the University of Michigan Medical School, Ann Arbor, Mich.; University and Bellevue Hospital Medical College, New York City; the University of Pennsylvania, Philadelphia, Pa.; the University of Wisconsin, Madison, Wis.; Ohio State University, Columbus, Ohio; Yale University School of Medicine, New Haven, Conn.; Chicago Hospital College of Medicine,¹ Chicago, Ill.; Tulane University of Louisiana,¹ New Orleans, La.; Union University,¹ Albany Medical College, Albany, N. Y.; and University of Colorado,¹ Boulder, Colo. The standardization of the courses leading to the four degrees has been the subject of considerable discussion. Representatives of several universities met at Yale in February, 1919, to consider the subject, and resolutions leading to such standardization were passed. It may reasonably be expected that, when secured, such standardization will involve the placing of some measure of emphasis upon the subject of industrial hygiene.

Related Courses.

The Phipps Institute, Philadelphia, Pa., and a few other institutions have carried on special research work in subjects pertaining to industrial hygiene.

The *Chicago School of Civics and Philanthropy*, Chicago, Ill., in cooperation with public health agencies of Chicago; *Simmons College*, Boston, Mass., in connection with the Instructive Nursing Association; and *New York University*, New York City, are prominent among institutions now offering industrial nursing as a course of study.

New York University, School of Commerce, Accounts, and Finance, offers in the second semester, February to June, 1920, a course in standardization of nursing service in industry, especially arranged for industrial nurses, welfare workers, and those intending to enter the field of industrial welfare work. The course includes lectures and group discussions of industrial nursing methods, first-aid equipment,

¹ Included in list given by Eugene C. Howe, in *American Journal of Public Health*, Chicago, August, 1918, pp. 600-607.

and preventive work in industrial plants. The class meets once a week for 15 consecutive weeks.

Smith College School for Social Work, Northampton, Mass., plans to establish permanently courses in psychiatric social work, medical social work, child welfare, and community service. The plan is the outcome of a successful experiment, tried in the summer of 1919, in training a group of social workers for the purpose of aiding in the reeducation and treatment of soldiers suffering from war neuroses and psychoses. The course embraced two months of didactic work at Smith College, followed by six months of practical work at various mental hospitals and clinics, which afforded a continuation of psychiatric instruction. Forty students completed the course and are holding positions as psychiatric social workers. This type of worker gives promise of meeting a special need, that of a medium between the psychiatrist and the homes of the community, in which maladjustments and incipient mental diseases are seldom brought to the knowledge of the physician.

The *Philadelphia School for Social Service*, Philadelphia, Pa.; the *New York School of Philanthropy*, New York City; the *Chicago School of Civics and Philanthropy*, Chicago, Ill.; and *Simmons College* and the *Boston School of Social Work*, Boston, Mass., offer somewhat similar courses.

The *Missouri Association for Occupational Therapy*, St. Louis, Mo., deals with various problems in which medicine and industry touch, and is prepared to make surveys of hospitals, sanitariums, and such institutions, to outline for them a system for installing an occupational department, and to furnish them with trained teachers. It maintains an occupational department in the city hospital, the city sanitarium, Barnes Hospital, and, in cooperation with the city board of health and the board of religious organizations, in the Girls' Detention Hospital.

The course of instruction offered by the association consists of seven months' training, which includes three months of practice work in hospitals. A certificate is given upon completion of the work. The class is limited to 15 members.

Public Industrial Clinics.

THE history of industrial clinics open to the public is a brief one. The first clinic of this nature in this country was established by Dr. W. Gilman Thompson in his department at the Cornell University Medical College, New York City, about 1907, but this clinic has since been discontinued. Besides several industrial clinics of widely distinct types which have abundantly proved their worth during the last few years, a number of more or less specialized clinics,

under both public and private auspices, are now doing or planning to do work along various lines of industrial medicine.

The Clinic for Functional Reeducation of Disabled Soldiers, Sailors and Civilians, New York City, was established by Dr. Thompson in February, 1918, as a war service, but it has from the first dealt with civilian as well as military cripples. The first patient was received July 15, 1918, and during the first year of the clinic's work 1,150 cases were treated, about 50 per cent of them coming from military and the other 50 per cent from civilian sources. The clinic now averages 100 treatments a day and has been forced to open night classes.

Cases have been referred to the clinic from various branches of the Federal Government, accident insurance companies, the Red Cross, railroad corporations, and industrial corporations. Private patients also are treated.

The clinic conducts departments of hydrotherapy, electrotherapy, thermotherapy, and massage, a social service department, and a department of occupational therapy.

With the exception of the clinic described, industrial clinics may be divided into three classes, according to whether they are operated in connection with (1) public hospitals, (2) medical colleges, or (3) State or municipal departments of health or of labor. In many cases cooperation between two of these in the use of the clinic is very close, as is instanced in the clinic of the Massachusetts General Hospital, which serves both the hospital and the Harvard Medical School. There are also a few other types of clinics which come under none of these classes. The work of the United States Public Health Service and clinics in industrial plants will not be here considered.

Clinics Connected with Public Hospitals and Medical Colleges.

The Occupational Disease Clinic of the Massachusetts General Hospital, Boston, Mass., was opened in March, 1916. A sketch of its work was published in the MONTHLY REVIEW for December, 1917 (pp. 185-193).

The total number of industrial diseases diagnosed at the clinic from February, 1919, to December, 1919, was 270. During this time more than 1,140 patients received attention, including 30 cases of various kinds of industrial poisoning, distributed as follows: Lead, 22 cases; anilin, 1 case; gasoline, 1 case; methyl alcohol, 1 case; trinitrotoluol, 1 case; benzol, 1 case; and 3 ill-defined cases. There were 13 cases of tuberculosis believed to be of occupational origin; 10 cases of occupational neurosis; 9 of trade eczema; and 32 of occupational strain.

The clinic is at present tabulating, according to age, sex, industry, and disease, the 30,000 new cases admitted to the out-patient depart-

ment of the hospital during 1919. Beginning with January, 1920, by means of a punch-card system, data relating to the incidence of disease in various industries and occupations will be constantly collected and made readily available.

The Hospital of the University of Pennsylvania, Philadelphia, Pa., organized an occupational disease clinic in 1914, the plan being to conduct it as a center for consultation and investigation, rather than as a place for treatment of numerous cases of varied character. Investigations of industrial problems so far undertaken embrace hygienic conditions in the cigar-making industry and among tobacco makers generally; pulmonary disease in potters and cement workers; conditions surrounding the employment of women in textile trades; and comparative investigations of dust within and outside industrial plants. Psychiatric cases are referred to the psychopathic clinic of the Department of Psychology of the university.

The Cincinnati General Hospital, Cincinnati, Ohio, is planning to open an occupational disease clinic by the fall of 1920 for the purpose of meeting the teaching requirements of clinical science which can not be fully met by the clinics in the industrial plants to which the college now has full access. In this clinic all the services of the hospital—including medicine, surgery, dermatology, ophthalmology, neurology, and pathology—will participate.

The Delray Industrial Hospital, Detroit, Mich., although originally founded by a commercial company for the use of its own employees, has now so far extended its scope that it may be considered an institution for the public. Primarily the object of the hospital has been to create an industrial institution, the scope of which would be limited to the handling of industrial accidents and diseases, but, owing to the lack of hospital facilities in general, and particularly in that portion of the city, it has been compelled to serve the community as well.

This hospital was organized as the Solvay General Hospital, Detroit, Mich., some 15 years ago by the Solvay Process Co. for the care of its injured employees. As it gradually expanded other firms and the local physicians were allowed to take advantage of it. It was reorganized in 1917 as a corporation under its present name.

There is a dispensary which serves as an out-patient department of the hospital and is responsible for all ambulatory sick cases, minor accidents, and physical examinations of the men when they are engaged for work. Whenever the case is serious enough to warrant it, a patient is referred to the hospital, where a thorough diagnosis, including X-ray and laboratory findings, can be made.

The report for 1918 shows that during the year there were 4,801 treatments in the out-patient department, including physical examinations, and 32,418 treatments in the dispensary, including physical examinations.

The following table shows the nature of the diseases treated:

MEDICAL AND SURGICAL CASES TREATED IN THE DELRAY INDUSTRIAL HOSPITAL DURING THE YEAR 1918.

Nature of case.	Medical.	Surgical.	Nature of case.	Medical.	Surgical.
Alcoholic.....	7	.....	Infections.....	63	67
Appendicitis.....	12	66	Injuries.....	.....	220
Arthritis.....	26	.....	Luetic.....	17	.....
Biliary tract.....	6	7	Lungs.....	25	4
Burns.....	.....	30	Malignant growths.....	12	7
Cardiovascular.....	4	.....	Miscellaneous.....	126	25
Diabetes.....	2	.....	Nose and throat.....	46	189
Eye and ear.....	36	3	Obscure.....	2	.....
Fevers.....	39	.....	Observation.....	27	.....
Fractures.....	.....	113	Obstetrical.....	97	7
Gastrointestinal.....	69	24	Pneumonia.....	240	.....
Genitourinary.....	22	15	Poison.....	7	.....
Goiter.....	1	4	Tuberculosis.....	28	6
Gunshot wounds.....	.....	7	Tumors.....	2	.....
Gynecological.....	25	100	Total.....	953	906
Heart.....	12	.....		
Hernia.....	.....	21			

The American Hospital, Chicago, Ill.,² has established an industrial department, and a special equipment for handling casualty cases is planned.

Rush Medical College Occupational Disease Clinic, Chicago, Ill., was the first established in the Middle West. It was founded by the Sprague Memorial Institute of Chicago University in July, 1911. After several changes, it was reestablished as an evening clinic at Rush Medical College.

Ohio State University Medical College Occupational Disease Clinic, Columbus, Ohio, the next industrial clinic in that section of the country, was established in 1915.

Washington University School of Medicine, St. Louis, Mo., holds each week an industrial clinic in its out-patient department. The placement officer of the bureau for the placement of the physically handicapped, conducted by the Red Cross, cooperates with the school physicians as regards the industrial problems and placement of patients attending the clinic. Attached to the dispensary is a workshop in which handicapped patients can be put to work under observation and their working capacity determined. The types of cases seen in the industrial clinic and the workshop are nervous, orthopedic, cardiac, and a few tuberculous cases.

Clinics Connected with State or Municipal Departments.

The Occupational Disease Clinic of the New York City Department of Health is a feature of the work in industrial hygiene which was organized in 1915. It is described in an article in the MONTHLY LABOR REVIEW for September, 1919 (pp. 298-300).

² Modern Hospital, Chicago, January, 1920, p. 60.

The Rehabilitation Clinic of the New Jersey Rehabilitation Commission, at Newark, N. J., under the State Department of Labor, promises to become an interesting development in this line of clinics. The clinic is to be fitted with the best appointments for orthopedic treatment, and the work of rehabilitation of those disqualified in industry completed by their reeducation, when necessary, and placement in employment.

The Newark Antituberculosis League, in cooperation with the State Department of Labor, has announced a plan for the institution of a night pay clinic for the diagnosis of industrial diseases.

The Ohio State Department of Health has a very active division of industrial hygiene, which, although it does not maintain a clinic, includes in its work the investigation of occupational disease complaints, by field work when required, gives advice to industrial plants, employees, or the industrial commission, and also does special research work and investigations.

Similar work of more or less extended scope is being carried on by other States and by local authorities.

Clinic for Workers in the Cloak and Suit Industry.

The Board of Sanitary Control of the Cloak and Suit Industry, New York City, has established a clinic for workers in that industry which may be considered as standing midway between the public clinic and the plant clinic or dispensary. It is supported by joint contributions from employers and employees.

Related Work.

Other institutions as well as individual workers are doing work of more or less value along the line of industrial medical research and treatment. Many clinics established for the treatment of special classes of diseases have a very close relation to some phases of industrial medicine, notably the Cardiac Clinic which was started at the Central Free Dispensary, Chicago,³ in 1918, and reestablished in March, 1919. Patients are referred to it from a number of different organizations, and much placement work is done through the Henry Favill School of Occupation. A vocational department in connection with this clinic is being discussed.

Medical Students and Industrial Medicine.

SUCH are the facilities which may be considered representative of the best that is offered for the study of industrial medicine and the training of industrial physicians in the United States. A few educational institutions besides those mentioned offer work which

³ The Cardiac Clinic of the Central Free Dispensary of Chicago, by Leo L. J. Hardt and Helen Beckley, in *Journal of the American Medical Association*, Chicago, Dec. 6, 1919, pp. 1792, 1793.

approximates the minimum afforded by the ones named. Still others are planning more extended work along this line than has so far been attempted by them, but are not ready to make their plans public. Even among those mentioned, however, very few are giving any but the most general attention to the subject. Only a small proportion of the clinics or hospitals specializing on the treatment of industrial accidents and diseases are making a special study of diseases in their relation to occupational conditions.

That this apparent ignoring of the importance of industrial medicine is not due to any lack of public interest in general health conditions is argued by the multiplication in all parts of the country of clinics, dispensaries, and other means for safeguarding the public health and teaching general hygiene. Indeed, the country seems to be thoroughly aroused to the importance of conserving the public health, and partly awakened to a realization of the predominant rôle which preventive medicine must play in such work. But the extent to which preventive medicine is bound up with the conditions under which the workers do their work, the action of such conditions upon the physical and mental health of the workers, and the consequent reaction of the workers thus affected upon the community have apparently not yet made any strong appeal to the imagination or the sympathy of the public. The subject has not even made a claim, in any proportion to its importance, upon the attention of the medical profession.

The most plausible explanation of this latter fact lies in the slight encouragement which, in the past, has been given by educational authorities for the study of this branch of medicine. For no matter what degree of public or of other interest may be enlisted in the subject, the burden of practical accomplishment in industrial medicine rests with the medical profession. This view is stressed by authorities in the matter in replies received to the letters sent out by the Bureau. Dr. Emery R. Hayhurst, of the Ohio State University, says that the work included under the "rather new term 'industrial medicine'" does not seem to be attractive enough to the recent graduate medical students, and adds:

Our graduates [who have received the medical degree] seem all bound up with the idea of taking a year or two hospital work, and after that going into private practice. It has so far seemed impossible to instill the ideas of "mass" medicine in our medical [post-graduate] students. On the other hand, our university students [sociological and other nonmedical students] seem overenthusiastic about the whole concept of "mass" medicine, hygiene, and public health.

Nor are the undergraduate medical students, in his opinion, attracted to the subject, as evidenced by the fact that none are taking the elective courses offered by the university. Additional evidence of this apathy toward the subject on the part of medical students

is afforded by the failure of any students to enroll for the full course in industrial medicine offered this year by the University of Cincinnati, and by the small number of medical students enrolled in any of the elective courses in the subject offered by other institutions.

In this connection Dr. Hayhurst says:

This seems to be due to the fact that the curriculum specified by the Council on Medical Education of the American Medical Association, which is the standard for A-class medical colleges (to which some 78 of the existing 87 medical colleges in the country belong), is so filled with prescribed work as to allow little opportunity for undergraduate medical students to carry any electives. There is some question in my mind whether, in view of the socialization of medicine, the character of the prescribed work should not be modified by the Council on Medical Education so as to admit proportional training in medical sociology, medical economics, "mass" medicine, etc.

The result of the neglect of the subject by medical students is that industries are employing persons for industrial medical service who, it is said by industrial medical specialists, are not trained or especially qualified for the work, and who in consequence bring discredit upon such service. Dr. Hayhurst thinks the most urgent feature of the situation at present is that of ways and means of arousing the interest of educational institutions in the subject, and he suggests, as a possible help in meeting the demands of the time for industrial physicians, the establishment of scholarships and fellowships in industrial medicine so as to encourage medical students to enter this field.

Now that a few of the more prominent medical schools are offering special courses in industrial medicine, and others are providing better facilities than formerly for training physicians along this line, there is ground for hope that a new interest may soon replace the apathy which has been displayed towards "mass" medicine by medical students. This hope gains its strongest force from the demand which is growing for the employment of well-equipped and socially minded men as physicians in industrial plants.

Protection of Sand Blasters Against the Dust Hazard.

THAT a type of installation has been found which is adequate to safeguard the worker in a sand-blasting cabinet against the dust hazard incident to his employment is the belief expressed by Dr. C.-E. A. Winslow and others in the report of an investigation conducted by them for the United States Public Health Service and described in Public Health Reports for March 5, 1920 (pp. 518-534).

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The investigation was made in connection with problems that had arisen in the sand-blasting department of a large automobile factory in Connecticut, and the Palmer water-spray apparatus which the authors had found satisfactory in previous investigations was used. The immediate object of the investigation was "to determine the efficacy of the respirator and helmet used in the plant under observation, and if it was found, as was to be expected, inadequate, to determine the modifications in construction or operation necessary to secure a satisfactory degree of protection."

The dust problem in sand blasting is first discussed as follows:

In most industrial plants the protection of the worker against the hazard of industrial dusts can be best accomplished by keeping the dust content of the air of the workroom itself down to a reasonable level. The control of the dust in the workroom air is effected, in such cases, either by substituting wet processes for dry grinding procedures and the like, by carrying on dust-producing operations in inclosed spaces, or by equipping such devices as emery wheels and buffing wheels with exhaust hoods and suction fans. The success which may be attained by the last of these three means was discussed in a paper published in *Public Health Reports* for March 7, 1919 (pp. 427-449).

In other industrial processes, as in certain packing operations, in marble and granite working, and in the sand blasting of large castings, it is impossible to render the general air of the work place sufficiently free from dust to avoid danger of injury to the respiratory tract of the worker. In such cases as this, protection against the dust hazard can only be attained by the wearing of helmets, masks, or respirators, which will either filter out the dust particles from the air before it is drawn into the respiratory tract, or exclude the surrounding air more or less completely from the nose and mouth and supply pure air for breathing from some other source. It is difficult to accomplish these ends without interfering seriously with the comfort of the person wearing the helmet or respirator. A large number of devices designed to protect the worker against dust are on the market, but the discomfort produced in practice prevents the use of many of them; while those of simpler construction, which are less objectionable to the worker, are frequently of more than doubtful efficiency.

It seems essential as a prerequisite for the standardization of protective measures in this field to determine first what results may be actually accomplished in the way of dust control by different types of masks, helmets, and respirators, and then to weigh carefully the efficiency of each piece of apparatus as balanced against the discomfort which may reasonably be expected to militate against its actual use.

The report then considers briefly the previous studies made of the efficiency of helmets and respirators designed for the protection of the workers in dusty trades, describes in detail the installation and methods employed in the present study and the results of the present study, and gives a summary and practical conclusions in regard to the protection of sand-blast operators.

Recommendations.

IN CONCLUSION the report recommends that where the nature of the operation is such as to require the presence of workers within the sand-blasting cabinets of the types studied, all such

workers should be protected by helmets provided with positive air pressure and with respirators of the general type described. It is believed that under such conditions substantially complete protection will be secured.

In regard to the amount of air to be supplied to the helmet in practice the report states that in the tests on the average somewhat less than 3 cubic feet per minute were used, while the Palmer apparatus was constantly removing 2 cubic feet per minute. "In other words, the pressure at the front window of the helmet was produced by an excess of air supply over air exhaust through the Palmer apparatus of less than 1 cubic foot per minute." This suggested that in practice it would only be necessary to maintain a corresponding excess of air supply over the amount withdrawn from the helmet during inspiration.

Assuming that for the type of physical effort required in sand blasting each inspiration removes 90 cubic inches of air in a period of 1.5 seconds the draft upon the air in the helmet, during the inspiration period, would be at the rate of approximately 2 cubic feet per minute. A gross air supply to the helmet of 2.5 to 3 cubic feet per minute should therefore prove ample to maintain satisfactory conditions in practice.

The solution of the odor problem appears to have proved comparatively simple. It was found that only when large quantities of air were allowed to enter the helmet was the odor of oil noticeable, and that with the air supply to the helmet reduced to 3 cubic feet per minute it was impossible to detect any odor in the air supplied. If trouble of this kind should be experienced, the report adds, there are on the market simple and inexpensive air filters which may be placed in the air line to remove any impurities present. An experiment was made with one such filtering device, and it was found that the helmet supplied with air passed through this filter could be worn for over half an hour without the slightest inconvenience due to odor. It is stated that on actual test an amount of oil which would equal two or three drops collected in the filter during such a period. In order to avoid possible complaints the inclusion of such a filter in the air would seem to be desirable. The use of a small impeller type blower, which does not use lubricating oil internally for the fresh-air supply, would, of course, solve this difficulty completely, according to the report.

The introduction of $2\frac{1}{2}$ to 3 cubic feet of air per minute through a $\frac{1}{4}$ -inch hole at the top of the helmet would produce an uncomfortable draft on the top of the uncovered head, particularly in cold weather. The operators in using the apparatus as recommended by us wore their caps and in testing it ourselves we placed a folded handkerchief on the top of the head. It would seem desirable, however, to construct the helmet with a deflector plate under the air inlet so as to distribute the air more evenly and avoid the necessity for other protection. It would also be well to provide an air chamber equipped with a small heating coil to temper the incoming air in cold weather.

Finally, there are a few minor points in construction which will contribute materially to the success of such protective devices as those described. The tubing connecting the air line to the helmet should be of light weight so as to avoid a drag on the head of the operator, and it should be connected to the supply pipe overhead and near the center of the chamber so that its length may be as short as possible. We would recommend that about 2 feet of the tubing should be permanently connected to the helmet and equipped with a connecting joint (which might be merely a 2-inch section of brass tubing) so that the worker could enter the chamber fully equipped and make his air-line connection without removing his helmet. It would seem advisable to provide no air valve within reach of the worker, but to keep the air control under the supervision of the foreman. The air valve should be set to deliver 2.5 to 3.0 cubic feet of air per minute, and this air supply should be continuously maintained during working hours. The additional cost required to maintain a continuous air supply would be a minor item compared with the danger arising should individual workers fail to turn on the air supply.

INDUSTRIAL ACCIDENTS.

Hours of Work as Related to Output and Accident Rate.

IN 1917, when the question of output was of paramount importance, the Public Health Service, in conjunction with the committee on industrial fatigue of the Council of National Defense, and the committee on fatigue in industrial pursuits of the National Research Council, began an investigation of the effects of certain industrial conditions on output, especially the influence of fatigue, as shown by the relative production under different working hours when other conditions were reasonably similar. The close of the war did away with the particular motive which had led to the undertaking, but did not diminish in the least the need for information as to the effect, both on output and on worker, of different conditions of employment, so the investigation was continued and enlarged. The first report of its findings, giving the conclusions reached as to output and incidence of accidents under different schedules of hours, together with some related factors, is about to appear.¹ The scope of the work is shown in the following paragraph:

"The present report deals primarily with the study of two objective tests of working capacity among factory employees, working under normal factory conditions, namely, the variations in actual hourly output and the variations in hourly incidence of accidents in two factories working, respectively, under an 8-hour and 10-hour schedule. The difference in work at these two plants is further illustrated by a study of time lost at each factory, as shown by direct observation and by records of power consumption. An examination of labor turnover by departments at both plants furnishes statistical evidence of the relation of physical environment to the stability of the labor force. A study of recesses shows their effect on production. A preliminary statement of extended researches into the phenomenon of rhythm in industrial work now being carried on by Dr. P. S. Florence and Dr. A. H. Ryan closes the report."

The two plants chosen for investigation were engaged, one in the manufacture of munitions, the other in the manufacture of automobiles. The munition plant worked two shifts, the day shift being

¹ Treasury Department, United States Public Health Service. Studies in industrial fatigue: Fatigue in relation to working capacity. Comparison of an eight-hour plant and a ten-hour plant. Report by Josephine Goldmark and Mary D. Hopkins on an investigation by Philip Sargent Florence. Public Health Bulletin No. 106, February, 1920.

on duty from 7 a. m. to 12, and from 1 to 6 p. m., while the night shift worked full 12 hours, from 6.20 p. m. to 6.40 a. m., with a break of 20 minutes at midnight. The other plant worked three shifts of 8 hours each. Comparisons were made only for the day shifts, since in the 8-hour plant only 8 per cent of the force were in the night shift, and there were other differences which made it difficult to compare results fairly. In each plant certain repetitive processes, comparable with those selected in the other, and giving an output which could be counted or measured during the period of observation, were chosen, and repeated records were made of the output in each. For each process an average output for each hour of the working day was obtained, based on many single observations of each individual worker, and of many different workers, in order to obtain a result which should not be affected by the chance variations which might appear in the case of a single worker. This average having been secured, the maximum hourly production for each process was taken as the norm for that process, and the output of the other hours was expressed as a percentage of this. This method, which differs from the customary method of using the average hourly output as the norm, is defended on the following grounds:

Absolute output at the two plants can plainly not be compared. Different workers are employed; the processes, though comparable, are not the same; the product is diverse. Even the deviations from the average output at the two plants can not fairly be compared, as may be readily shown. In such an average the drop of a single hour, if great, may lower the general level so far as to make it wholly unrepresentative of the entire day's work, and thus prevent us from comparing the deviations hour by hour with similar deviations from a more representative average. This is the case at the 10-hour plant, where the depression of the average by the deep drop of the final hour to 80 invalidates a comparison of the hourly deviations with the wholly representative average of the 8-hour plant, which is based on hourly figures varying within narrow limits and a last hour falling only to 95.5.

Production Curves in Different Types of Operations.

THE output curve in general begins at something under its full height, works up within the second or third hour to a peak, and then declines, the last hour showing a considerable fall. The second spell of work follows the same general outline, though on a lower level. The operations studied were divided into four types—dexterous handwork, muscular handwork, lathe machine work, and miscellaneous machine work. These showed some interesting variations in their output curves. In both plants the dexterous handwork processes showed a pronounced tendency to reach their maximum output in the third hour; apparently a considerable amount of practice was required to get the workers into their full swing. After the lunch interval practice was again required to bring up the workers' efficiency, but by the second hour this was

accomplished, and in the 8-hour plant production then continued high until the last hour, when the customary drop occurred. In the 10-hour plant the afternoon level was relatively lower than in the 8-hour, and the drop of the final hour was far more pronounced.

The curve of output in the muscular handwork processes reaches its maximum earlier than is the case with the dexterous processes, and the fall begins sooner, and is more marked throughout the day than is the case with any other type. As the main requirement in this work is physical strength, fatigue shows itself more plainly than in types where dexterity is required, and the heavier the process the more marked is the effect of fatigue, as shown by the fall in output. The output of the first hour after lunch is in general larger than that of the second, showing the effect of the rest, the output not being affected by the loss in practice shown by the dexterous types. The afternoon fall is much greater and begins earlier than in the other types.

The curves of the two types of machine work differ from each other, but both are marked by a singular maintenance of output through the second spell of work, and a relatively slight decrease in the last hour. In one operation the output of the last hour is actually the highest of the day. It is pointed out that this does not necessarily mean that fatigue has not developed. In the case of the miscellaneous machine processes the output is governed to a large extent by the machine, and the fatigue of the operator has little effect on it. In the case of the lathe machine operations, the theory is put forth that fatigue is masked by the rhythmic nature of the work.

Comparative Output of the Two Plants.

IN EACH of the separate types of work the 8-hour plant showed a greater steadiness of production than the 10-hour, but to see how far this might be true for total output, the four types were combined, care being taken to eliminate operations which were not strictly comparable. Since in each type of work, and in each operation within the type, the hour of maximum production might vary from that of the next operation or type, the combination naturally does not show an index figure of 100 for any one hour. For the two plants the index figures of production are as follows:

INDEX NUMBERS OF HOURLY OUTPUT OF TWO PLANTS, SHOWING FALL FROM MAXIMUM.

Spell.	8-hour plant.				10-hour plant.				
	First hour.	Second hour.	Third hour.	Fourth hour.	First hour.	Second hour.	Third hour.	Fourth hour.	Fifth hour.
Morning spell.....	89.6	96.4	97.4	94.4	82.7	93.8	95.6	97.2	90.4
Afternoon spell.....	95.7	94.4	94.2	89.8	90.1	91.6	91.1	90.7	79.1

[1234]

The disparity between the two sets of figures is striking. The lowest hourly output of the 8-hour plant differs by less than 10 point from the highest, while for the 10-hour plant the variation is not far from 20 points. The difference is noticeable not only in the first and last hour of each spell of work, but in the lower level of the entire second spell in the 10-hour plant. Summing up the situation, the authors declare that the outstanding feature of the 8-hour system is steady maintenance of output, while the outstanding feature of the 10-hour system is the decline of output.

Relation between Fatigue and Industrial Accidents.

THE report takes up, in considerable detail, the theories advanced to account for the customary accident curve. In this, accidents are uniformly low in the first hour of the working spell. They then rise gradually to a peak, most frequently in the penultimate hour of the spell, from which they gradually decline. In the second spell there is a generally similar rise and fall, often at a somewhat lower level. Speed of operation is admitted as an important cause of accidents, the exposure to risk increasing as the number of operations per hour or per minute rises. Fatigue has been advanced as an additional and important cause, but this theory has been attacked on the ground that in the final hours of the working spell, when fatigue should be at its height, the accident curve is falling. In this study, after making careful allowance for such items as lost time, change in work, and the like, which might interfere with the normal incidence of accidents, an index figure is worked out, showing the hourly accident rate per unit of output. This presents a striking contrast to the customary accident curve, for although in the latter hours of the spell or the day the accident rate declines, yet the rate per unit of production shows an increase. The main conclusions reached in this study of accidents are as follows:

- (a) In the absence of fatigue, accidents vary directly with speed of production, owing to increased exposure to risk.
- (b) The breaking up of this regular variation by fatigue is indicated by—
 - (1) The rise of accidents with the fall of output.
 - (2) The disproportionate rise of accidents with the rise of output, and the lack of a proportionate fall of accidents with the fall of output in the final hours of the day.
- (c) The importance of fatigue in the causation of accidents is emphasized by the fact that the higher accident risk accompanies the deeper decline of working capacity—
 - (1) In the second spell as compared with the first.
 - (2) In muscular work as compared with dexterous and machine work.
 - (3) At the 10-hour plant as compared with the 8-hour plant.
- (d) The level of the accident rate varies with the inexperience of the workers.

Other Factors Affecting Production.

IN BOTH plants a study was made of such matters as the amount of lost time, limitation upon output, and the like, which would affect output. The difference between the two in the matter of lost time was striking, being very evident in respect to time lost in beginning and ending work. This was checked up by a study of power consumption with the following results:

At the 8-hour plant 90 per cent of average power was maintained until 6 minutes, on the average, before the close of work; at the 10-hour plant more than 21.5 minutes before the close of work the percentage of average power had dropped below 90. In other words, work continued at the 8-hour plant practically under full power until 6 minutes before the end of the shift; at the other factory power began to decline three and one-half times as long before closing time—at exactly 5.30 p. m., when the investigators began afternoon readings, only 87 per cent of average power was in use in the entire building.

An investigation of time lost during the day showed even more striking differences. In both cases the workers were paid by the piece, so that voluntary loss of time was at their own cost. At the 8-hour plant, in two out of three operations studied, no time whatever was noted as voluntarily lost, and in the third, a particularly heavy and taxing operation, the voluntary loss was only $7\frac{1}{2}$ minutes. In the 10-hour plant in five operations studied the time lost voluntarily was, respectively, 5, 10, 30, 41, and 42 minutes. There was an evident relation between voluntary and involuntary loss of time; as the latter rose the former fell.

In each plant a certain amount of time was lost through faults of management, but apart from this there was a manifest tendency for the workers in the 8-hour plant to work to capacity, while in the 10-hour plant there was as manifest a tendency to work below capacity.

Another point of difference between the two plants was the prevalence of a limitation on output at the 10-hour plant. The investigators found that in many of the operations there seemed to be a tacit acceptance of some fixed quantity as a suitable output for the day, and this was rarely exceeded. If, however, some accidental delay or interruption made it likely that the worker, producing at his accustomed rate, would not reach this quantity, he could and did work at a very much faster rate until he felt assured of his output. It is not suggested that this spurt could have been maintained throughout the day, but there was considerable ground for believing that the actual output was decidedly below the potential output. At the 8-hour plant there was little, if any, evidence of this stereotyping of output.

This restriction of output can not be attributed to union practice, for the 10-hour plant has only a few union workers, nor can it be

attributed solely to faults of management. In part, it is thought, it may be due to the fear of the workers that if they exceed the customary output to any extent piece rates will be cut, so that they will have to work harder for the same or a smaller return. But this is not the most important reason.

The fundamental cause for limitation of output, however, lies deeper. No group of workers could continue, without physical disaster, to work at full capacity for a stretch of 12 hours at night or 10 hours in the daytime, not to mention the 3 hours overtime irregularly worked at the 10-hour plant. Low speed, wasted time, limited output are in large part the workers' automatic defense against exhaustion, against the overstrain of excessive hours of labor.

No attempt was made to compare the output of the night shift in the two plants, but a study was made of conditions and production of the night shift in the 10-hour plant. The most striking features were the sharp drop in production during the last two hours and the progressive slowing down, as the night wore on, in rate of production, as shown by the time required for a single operation. The voluntary loss of time due to sleeping, resting, eating, and so on was also noticeable.

The study of labor turnover led to the conclusion that it is directly associated with distasteful working conditions—such as long hours, low wages, and undesirable working conditions—and that it may be lowered by systematic effort to improve conditions and to fit workers to their jobs.

The report closes with a preliminary discussion of rhythm in industry, a topic which, it is explained, will be treated more fully in a future report.

WORKMEN'S COMPENSATION.

Recent Reports on Operation of Workmen's Compensation Laws.

Federal Employees' Compensation Commission.¹

THE third annual report of the commission charged with the administration of the law granting compensation to civil employees of the United States consists of two parts, the first statistical, covering the first 95 pages, and the second, decisions of the commission, pages 97 to 185. The act went into effect September 7, 1916, and the present report presents data through October, 1919, a period of 38 months. During that time final awards have been made in 29,772 cases, of which 613 were deaths, 18 permanent total disabilities, and 885 permanent partial disabilities. The number of claims received during the same period was 30,981, which was just about one-half of the number of the injuries reported (61,628). The number of compensable injuries as compared with the number reported is obviously much greater than under the average State law, and this may be explained in large part by the fact that compensation is payable for disabilities of over three days' duration. This appears from the report as to period of disability for 28,256 cases of temporary total disabilities reported, of which 5,401 caused disability of from 1 to 3 days; 6,718 from 4 to 7 days; and 6,267 from 8 to 14 days. Under this act only the first number, or 19.1 per cent of the total, would be eliminated, while under a law allowing a 7 days' waiting time 42.9 per cent would be excluded; a 2 weeks' waiting time, still found in many States, would eliminate 65.1 per cent.

One point which receives considerable attention in the report is the relation between compensation and the wages lost. The statute allows two-thirds of the wages as benefits, no wage in excess of \$100 per month to be considered. This limits the amount of compensation possible to \$66.67 per month as a maximum. The recent great advance in cost of living, and the rising wage rate in industrial employments, as in the arsenals and navy yards, make a wide gap between the income of the worker and his benefits during disability. Thus it was found that for temporary total disabilities but 44.1 per cent of the wage loss was paid in compensation, while for per-

¹ Third annual report of the United States Employees' Compensation Commission, July 1, 1918, to June 30, 1919. Washington, 1919. 185 pp.

manent partial disabilities the percentage is 58.8, making for all classes of disabilities 45.5 per cent of the wage loss repaid in compensation. It was recommended therefore that the law be amended so that compensation would be based on a maximum of \$150 per month and a minimum of \$75, thus permitting benefits ranging from \$50 to \$100, instead of from \$33.33 to \$66.67 as at present.

The number of injuries and duration of disability for tabulatable accidents, and awards for compensated cases, are shown separately for each department and important bureau or establishment. The number of cases of temporary total disability for the period of the existence of the law amounts to 28,256, with a total duration of 475,584 days, or an average of 17 days per case. The number of these cases compensated amounted to 15,374, awards for the same making a total of \$615,912, or an average of \$40.06 per case. A certain amount of annual leave is available to most employees, during which wages are continued. The amount of leave taken in compensated cases was 12,994 days, and disability absence of 366,061 days was involved in addition. In 2,798 cases no compensation was called for because the absence was covered by leave, while in 4,720 cases no claims were filed; 5,401 cases were of not over 3 days' duration.

The cost of medical treatment can not be determined in a manner comparable with State reports by reason of the fact that where available, Government medical officers and Government hospitals furnished at departmental expense the necessary aid and treatment for employees within their respective divisions of service.

The act compensates permanent partial disabilities on the basis of the actual wage loss, there being no schedule or fixed standards of benefits. This leads to a cessation of payments on account of injury when a workman returns to work after a mutilation if he is reinstated at his prior rate of wages, which results in a low rate of compensation for serious injuries in many cases. Thus in 23 cases of loss of eye, the average award was \$116.61; in 6 cases of loss of right hand, the compensation averaged \$175.05, while by some reversal of conditions 4 cases of loss of left hand averaged \$204.15 each. In 1 case a man returned to work after 76 days of absence with a loss of the right forearm and a compensation award of \$137.03—less than the amount for either a right or left hand, and only a little more than the average for 16 cases of loss of the right index finger at the proximal phalanx, for which the average benefit was \$116.40. Three cases of loss of thigh received average benefits of \$319.99, while 5 cases of loss of leg were disposed of by average awards of \$357.48. For a foot \$211.54 was paid and for a left arm at the shoulder \$42.47.

Under the provisions of the compensation act further claim may be made in any of these cases upon a showing of loss of wages because of the disability. Doubtless

such a right is of distinct value to a disabled employee, but many will not understand their rights clearly, and will fail to present to the commission claims which are perfectly legitimate. In many of these cases, therefore, no further compensation will ever be paid. The commission feels that a compensation act which permits the limit of compensation for a serious permanent disability at as low a rate as is shown in these cases is not adequate even though these employees should be able to continue at work at the same wage as at the time of injury. There is the loss of the right hand, which is a constant handicap to the employee, preventing him from improving his position and becoming a serious inconvenience in all the activities of life.

Detailed tables are given showing the nature of the injury by kind, location and effect, distribution by duration and extent of disability, cause of accident by extent of disability, number of dependents in case of death, nature of disability and amount of awards in permanent total disability, etc. This material, with its continued accumulation, will furnish valuable data for a study of accidents, their distribution, and results.

Maryland.²

THE fifth annual report of the Maryland Accident Commission shows a total of 46,875 industrial accidents reported during the year covered. This was in excess of the number reported in the preceding year by 4,305 accidents. These accidents gave rise to 4,377 claims for compensation, or somewhat less than 1 claim to each 10 accidents. There were 4,370 claims disposed of during the year, of which 173 were for death. Awards amounted to \$980,469 in compensable cases, including medical expenses in such cases, while an additional amount of \$188,997 was awarded as medical expenses in cases where no claim for compensation accrued. The aggregate total from the year's work of the commission was \$1,169,466.

The nature of the disabilities is set forth in a brief table showing that of the 4,377 claims submitted 183 were for death, 5 for permanent total disability, 415 for permanent partial disability, 4 for temporary partial disability, and 3,770 for temporary total disability. A schedule for permanent partial disability cases is embodied in the law, and 688 cases of this nature were disposed of during the year, including permanent loss of use of a member or part of a member as well as its dismemberment. Of the 265 cases of loss or loss of use of a member 53, or exactly one-fifth, were of the eye. The next highest number, 36, was of the first finger, while there were 35 of the fourth finger, 30 of the second finger, 23 of the third finger, and 22 of the thumb. Of the 423 injuries involving partial loss or loss of use, 109, or about one-fourth, affected the first finger, 98 the second, 66 the third, and 37 the fourth. Only 14 eye injuries come within this class.

² Fifth annual report of the State Industrial Accident Commission of Maryland, Nov. 1, 1918, to Oct. 31, 1919. Baltimore, Md., 1920. 27 pp.

There were 37 injuries to the feet, of which 19 involved total loss or loss of use and 18 had partial effect.

The number of contested cases was 577; 158 hearings were requested by the employer and 255 by the insurer; claimants asked for but 56, while 108 were held on motion of the commission. Of these, 340 were decided directly for the claimant and 175 directly against him, others resulting in mixed decisions or continuances. Appeals to courts were taken in 46 cases, one-half by the claimant and one-half by employer or insurer.

The total number of employers insured under the law is given as 9,031. There is a State accident fund which had at the beginning of the year 1,438 policies in force, and at the end 1,652. Net premiums written during the year amounted to \$193,882. Losses during the year amounted to 49 per cent of the premiums written and the expense of operation was 8.4 per cent. An adequate catastrophe fund has been developed and a liberal surplus and reserves are now on hand; it is claimed that, due to the rates charged and the services rendered, the fund offers an economical and satisfactory means of insuring employers, which fact is believed to be quite generally recognized.

Reference is made in the introductory statement to anticipated amendments to the law which were submitted to the legislature in a special communication. The report does not indicate what the proposed amendments were, and its publication preceded the meeting of the legislature. The amendments enacted have been reported by an officer of the commission showing the principal changes effected. These include better control of insurance companies and self-insurers, an extension of the act to include all work of an extrahazardous nature instead of extrahazardous employment only, an increase of the benefits from 50 to 66 $\frac{2}{3}$ per cent of the average weekly wages, with an \$18 maximum instead of \$12 and an \$8 minimum instead of \$5. The total maximum is advanced from \$4,250 to \$5,000 and medical expense from \$150 to \$300. The waiting time is reduced from two weeks to three days, and the employments formerly specifically exempted may now come under the act by election. Other changes involve compensation for disfigurement and the vesting of specific awards for permanent partial disability, so that they shall not terminate upon the death of the beneficiary during the compensation period. This does not exhaust the list of changes made, but does include the principal ones, and shows a very marked and satisfactory advance in the liberality of the law.

Virginia.

THE workmen's compensation law of Virginia came into effect January 1, 1919. A pamphlet presented as the first annual report of this commission³ really covers but nine months, the fiscal year ending September 30. Being the first report, it is taken up in part with an account of the preliminary work of organization and adoption of plans. Special attention is given to the question of insurance, particularly through the agency of reciprocal exchanges. The general insurance law of the State does not permit the operation of reciprocal exchanges, but the compensation act contains provisions that seem to contemplate their admission for compensation insurance. After a careful study of the subject the commission adopted regulations for the government of foreign mutual or reciprocal associations or exchanges, with which three exchanges have complied. The recommendation is made that the subject be given attention by the legislature, inasmuch as it is properly a matter to be supervised by the State commissioner of insurance rather than the industrial commission.

Self-insurance is permitted by the act, and is naturally availed of mainly by larger employers; 94 certificates have been granted, covering approximately 55,000 employees, or between 20 and 25 per cent of the total number of employees under the act. Twenty-five casualty companies are authorized to do business in the State, of which eight wrote approximately 70 per cent of all compensation business. The universal standard workmen's compensation policy, in use in about 20 States, was adopted as the standard policy for the State, though existing policies expiring not later than December 1, 1919, were permitted to continue by the attachment of an approved form of indorsement.

The act is elective, election being presumed where the employer has 11 or more employees. Farm labor, domestic service, and common carriers using steam as a motive power are excluded. The act is compulsory in its application to State and municipal employees without regard to their number. The records show 4,695 private employers with between 225,000 and 250,000 employees under the act. Only 35 employers, mostly small employers of labor, and 24 employees rejected the provisions of the act.

Compensation is paid on a basis of 50 per cent of the employees' wages. What this actually amounts to is shown by computations covering 10,776 nonfatal cases. Of these, 2,767 involved disability for longer than two weeks and were compensable. Two of these

³ First annual report of the Industrial Commission of Virginia for the year ending Sept. 30, 1919. Richmond, Va., 1920. 123 pp.

were cases of permanent total disability and received awards amounting to \$4,000 and \$3,980 respectively. The time loss for the 8,009 noncompensable cases was 51,874 days. At the average weekly wage the total time lost represented a wage loss of \$863,442. The compensation to be awarded, on an average basis, amounted to \$223,163 in addition to medical and hospital attention, or just above one-fourth of the amount lost by the worker.

Of 144 fatal accidents 88 had been disposed of, all but 3 leaving dependents. In 71 cases there were total dependents and in 14 partial dependents. The estimated value of awards in death cases with dependents made an average of \$2,221.

In commenting on the nine months' experience, the opinion is expressed that the law "has, without question, fulfilled the expectation of its supporters." Relief has been prompt and though moderate it has not been reduced by costs; while the removal of friction developed in suits for damages has "promoted community of spirit between employer and employee." The elimination of court costs and the relief of poverty are also factors to be considered.

Recommendations for changes in the law cover a simplification of the method of computing wages, and an amendment making the law applicable to employers of 5 or at most 7 workmen, instead of 11 as at present, as this number "deprives a great many employees of the benefits of the act and creates too much discrimination in certain classes of industries." As a matter of both justice and economy, medical aid should cover the whole period of disability, unless the commission found an earlier discontinuance fair and proper, instead of limiting it to 30 days. The waiting time should also be reduced from 14 days to 7. Other changes are also recommended, including the increasing of the burial allowances and the allowances where a father or mother or infant brothers or sisters survive as partial dependents of the deceased workman, compensation for a loss of use as well as for loss of a member, a full report of accidents, etc.

SOCIAL INSURANCE.

Report on Proposed Scheme for Mothers' Allowances in Ontario.

THE Department of Labor of the Province of Ontario has recently issued a report,¹ setting forth the results of an investigation into the problems which would be incident to the inauguration of a proposed scheme of mothers' allowances in Ontario, including the demand for such a system, the need of it, the extent of its application, an estimate of the cost involved, and the administrative problems which would have to be met.

The information for the report was gained through a study of the experience of jurisdictions in which mothers' allowance schemes are now working, from charitable and rural organizations, and from personal visitations.

A study of widowhood in Ontario was first undertaken, and statistics were compiled showing the actual number of widows with children under 16 years of age in the Province, on June 22, 1918. These statistics show the number of children in each family and their nationality. From representative districts names of 500 widows with children, exclusive of soldiers' widows, were chosen, 400 of whom were visited by special investigators and information secured as to the circumstances of the home. The aim of these investigations was to discover in how many instances the welfare of children was jeopardized by poverty and in what percentage of cases the Government would be justified in contributing toward the support of these children in order that they might be assured of adequate sustenance and home care.

Public hearings were held in four cities of the Province to give as widespread opportunity as possible for expression of public opinion. Opinion expressed at these hearings was uniform and positive in its statement of the need for a mothers' allowances act in Ontario.

It was found that there were 16,048 widows in Ontario with a total of 31,223 children. Of the 400 representative families visited it was found that there were 80 needy widows and 224 needy children. By proportionate computation it was estimated that there are 3,210 needy widows, exclusive of soldiers' widows, and 8,987 needy children under 16 years of age in the Province.

¹ Ontario. Department of Labor. *Mothers' Allowance; an Investigation*. Toronto, 1920. 126 pp.

The average cost of maintaining these children in institutions, based on the report of the inspector of public charities, would be \$1,078,440 per year.

Based on the comparison with the cost of mothers' allowances in 11 States of the United States, by number of children benefiting, the cost of such a scheme for Ontario would be \$817,000. Based on comparison with the expenditure of Manitoba for the same purpose, by number of children benefiting, the cost for Ontario would be \$1,027,064.

This estimate includes provisions for widows only. The report discusses the advisability of including in the proposed act for Ontario wives of the incarcerated insane, of the permanently incapacitated, wives of prisoners in penal institutions, deserted wives, and unmarried mothers. Estimates are made of the additional cost of including such cases. Estimates of the cost of such a system, in case one-child families and children over 14 years of age are excluded, are also made.

Mothers' aid laws operating in the Canadian Provinces are reprinted in an appendix to the report.

LABOR LAWS AND REGULATIONS.

German Works Council Law.¹

Origin of the Works' Councils.

THE works council law, passed on January 18, 1920, by the German National Assembly, has been called the "acid test" for the new German Government. This Government, being revolutionary and socialist, started forth with the most honest intentions of socializing industry; perhaps not all industry and perhaps not all at once, but nevertheless the "socialization of the means of production" (to use the old Marxian phrase) was to replace the capitalistic order. Bit by bit the program of socialization has been abandoned; first, because the German Government, which is strongly anti-Bolshevik, was frankly terrified at the results of the socialization of industry as reported from Bolshevik Russia and Bolshevik Hungary, and second, because the industrial state of the country seemed to the Government so entirely abnormal and so extremely unpromising that it did not venture to embark on any big industrial schemes which would in all probability be foredoomed. Yet for 60 years the German socialists had talked socialization. With the advent of revolution no power on earth could prevent a renewed outburst of scheming, planning, and contriving as to the best methods of socialization. Some of these schemes are very interesting; only a few of them have been realized, and one of these few is the works council law.

A discussion of the law may be preceded by a few remarks on the origin of the works councils. As is well known, at the outbreak of the revolution there were formed in the big German industrial and commercial concerns workers' councils (*Arbeiterräte*) which bore an essentially political character. They set themselves the task of converting society from its old institutions into new forms, and their work seems indeed to have been very useful in many instances. But when, after the revolution, the new régime had established itself and the task of the workers' councils was thus accomplished, these councils were not very much inclined to dissolve. The reason

¹ This article is based on the following sources: Deutsche Nationalversammlung 1919-20, 140th session, Jan. 18, 1920; Deutsche Nationalversammlung 1920, No. 2028, Entwurf eines Betriebsrätegesetzes; German Works' Council Law, by Miss L. N. Matthaei, Welfare Work, London, March, 1920, p. 35; The German Works' Council Bill, The Nation, New York, Jan. 31, 1920, p. 157; Workmen's shop councils in Germany, U. S. Bureau of Foreign and Domestic Commerce, Commerce Reports No. 294, Washington, Dec. 16, 1920, pp. 1540-1544.

See also "German Workers' Councils—Their Organization and Functions," in MONTHLY LABOR REVIEW, September, 1919, pp. 125-133.

was not far to seek. The councils had not limited themselves to the field of politics, but were active upon economic grounds as well. They had stood before the employers as the representatives of the workers, and in those tumultuous times which immediately followed the downfall of the old régime had often wrung important concessions from the frightened employers by means of "wild" (unauthorized) strikes.

These successes of the workers' councils turned the workers away from the tactics of the old trade-unions and created a strong distrust of the experienced union leaders. The German trade-unions have not let the revolution carry them away from the path which they have steadily followed for many years. In November, 1918, they had concluded a working agreement with the united employers' associations² whereby, among other things, the right was extended to the workers of a voice in the management of the business in which they were employed, as well as of the 8-hour day and other improvements in the conditions of labor. A large proportion of the workmen, however, were not content with these results obtained by peaceful means. They saw the opportunity opened to them by means of the workers' councils to turn to advantage the straits in which many employers found themselves and to introduce the most extraordinary demands. When they saw that the leaders of the trade-unions were not inclined to support them in their destructive policy, opposition arose to the old line and conservative organizations. The latter had achieved their task and could vanish from the scene; the workers' councils were to take over their prerogatives.

Even when the Government itself decided that the workers' councils had become superfluous now that normal conditions were more nearly restored, it soon became evident that they could not be reduced to their former place. It was when enthusiasm for a socialization program was somewhat waning, and the Government was being pushed into a conservative position, that *Vorwärts*, the leading socialist paper, declared that the works council law should be the acid test; if the Government were to give way on this last point, then it might as well save itself the trouble of calling itself socialistic at all.

Yet the Government, for all its good will, might have been forced to give way had not the workers taken precautions. In the spring of 1919 they bound the Government by a kind of signed contract to certain fundamental principles. The Government issued a statement which assured the continuance of the workers' councils. The statement was as follows: "The workers' councils are fundamentally recognized as representatives of economic interests and are grounded on

² See MONTHLY LABOR REVIEW, April, 1919, pp. 158-160.

the constitution." The curious thing about this guaranty is that it was hastily given before the rest of the constitution had been even discussed. Afterwards it was embodied, somewhat enlarged, as article 165 of the new German constitution.³ This article embodies two basic principles: Absolute equality of representation as between employers and employed on all industrial bodies of whatsoever kind, from the top to the bottom of industry, to be established as an inviolable constitutional principle. This is really a kind of base-defense line; if hard pressed the workers could always fall back on it; protected by entire parity of representation on all joint bodies, they could not be ousted from all their positions in industry. The worker is to be treated no longer as a mere cog in the machine, but is to be recognized as an active and conscious agent of production, endowed with the power to offer or withhold his cooperation in making the productive system work.

The constitutional principles are sometimes the most shadowy of safeguards, and the workers had the prudence to bargain for certain definite machinery as well. This machinery has an apex, a middle, and a base. The apex, the national workers' council (*Reichsarbeitererrat*) is to be a "chamber of labor," i. e., a great parliament of all workers called together to advise the country in a professional capacity on industrial and social legislation. The middle is to be a system of district workers' councils (*Bezirksarbeiterräte*), feeders to the national council; but the foundation is to be the works council (*Betriebsarbeiterrat*), i. e., councils in the individual establishments, the worker in the factory itself, so to say.

The system, then, is to be worked from the inside outward. First, the worker is to establish himself as a controlling agent in his own factory, and then to advance to organize national production. No one is as yet troubling much about the rights and duties of district councils or of the national workers council, though the Government is said to have worked out a complete scheme. It is too obvious that the first step of establishing control over the employer within the factory will be so stupendous a task as entirely to dwarf all others. Or, to put it this way: The great fight of the nineteenth century was for the protection of the workers; the great fight of the twentieth century will be for control by the workers, and it is this fight which has been inaugurated on the Continent by the German works' council law.

Terms of the Law.

THE works' council bill as originally submitted to the National Assembly was composed of 56 articles. Its first formal reading in the assembly took place on August 21, 1919, its first reading in

³ A translation of the sociopolitical provisions of the new German constitution may be found in the MONTHLY LABOR REVIEW of December, 1919, pp. 132-135.

committee November 28, 1919. It was discussed by the committee in 43 meetings, lasting seven weeks, 127 amendments being brought in. As passed on January 18, 1920, after its third reading, the law contains 106 articles. Lack of space does not permit printing the text of the law in the MONTHLY LABOR REVIEW. Briefly summarized, its provisions are as follows:

Establishment, election, and composition of works councils.—Works councils (*Betriebsräte*) are to be elected in all establishments employing 20 or more persons, whether manual workers or salaried employees. In establishments employing less than 20 but at least 5 persons a single shop steward (*Betriebsobmann*) is to be elected in place of a works council. The law is applicable also to agriculture and to home workers. A special law is to regulate the establishment of workers' representation in ocean and inland navigation. (The efforts of the reactionary employers to omit agriculture and all small industrial establishments were defeated.)

In establishments employing less than 50 persons the works' council is to consist of 3 members, in those employing 50 to 99 persons, of 5 members, and in those employing 100 to 199 persons, of 6 members; after that the membership of the works council is increased by one member for each 200 employees in establishments employing 200 to 999 persons, for each 500 employees in establishments employing 1,000 to 5,999 persons, and for each 1,000 employees in establishments employing 6,000 or more persons. The maximum membership of a council is limited to 30 members. If in a single commune, or in two or more economically interdependent communes, there are several similar or economically interdependent establishments owned by the same firm, then, by unanimous resolution passed by all the individual works councils, a central works council (*Gesamtbetriebsrat*) may be formed in addition to the individual works councils. Under the same conditions there may also be formed a joint works council (*Gemeinsamer Betriebsrat*), which takes the place of the individual works councils.

The manual workers (*Arbeiter*) and the salaried employees (*Angestellte*)—this careful distinction between manual and nonmanual workers runs through the entire law—elect separately members of the works council by secret ballot and from their own midst. The works council is to safeguard the common economic interests of both manual workers and salaried employees as against the employer. In addition to the works council, there are to be formed in each establishment a workers' council (*Arbeiterrat*) and a salaried employees' council (*Angestelltenrat*) to represent the special interests of each of these two groups of employees. The members of the works council elected by the manual workers form the workers' council and the

members elected by the salaried employees form the salaried employees' council.

All manual and nonmanual workers, without distinction of sex, who are over 18 years of age and in possession of their civic rights have the right to vote at the election of works councils. Eligible to the works councils are all persons entitled to vote who are German citizens over 24 years of age, have finished their vocational training, and on election day have worked at least six months in the establishment and at least three years in the trade or occupation in which they are engaged. Members of the works council are elected for a term of one year. Their reelection is permissible.

Meetings of the council.—The works council, if composed of less than 9 members, elects from among its members a chairman and a vice chairman. If composed of more than 9 members, it elects from among its members an executive committee of 5 members. The chairman of the works council represents the council before the employer and before the arbitration board; he also calls the meetings of the council and determines the agenda. On request of at least one-fourth of the members of the council or on request of the employer a meeting must be called by the chairman. The employer has the right to be present at meetings called on his request, and he may also be invited to be present at other meetings. The meetings of the council shall, as a rule, take place outside of working hours, and are not open to the public. Every meeting which is to take place during working hours shall be reported to the employer. A resolution of the works council is valid only if all the members have been requested to attend the meeting, have been informed of the questions to be discussed, and if the number of members present is equal to half the number of members of the council. Members of the works council and their alternates are to exercise their office without compensation. Necessary loss of time due to attendance of meetings of the council shall not entail reduction in wages or salary. The necessary costs of management of the works' council are to be borne by the employer, unless otherwise provided by collective agreement. He must put at the disposal of the council the rooms and equipment necessary for the holding of its meetings and the transaction of its business.

Termination of membership.—Membership in a works council comes to an end when any member resigns, ceases to be employed in the establishment for which the council has been formed, or loses his qualification for election. On the proposal of the employer or of at least one-fourth of the workers entitled to vote, the district economic council, or, as long as such a council does not exist, the conciliation board may decide that any member guilty of gross neglect of his civic duties shall cease to be a member of the works council.

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Under the same conditions the district economic council or the conciliation committee may dissolve the works council.

The works assembly.—The law also provides for a works assembly (*Betriebsversammlung*) composed of all the manual and nonmanual workers of the establishment. This assembly really stands in authority above the works council, for on demand of the employer or of at least one-fourth of the workers entitled to vote the chairman of the works council must convene the works assembly, and, as has been said above, a minority of only one-fourth of the workers entitled to vote may bring in a motion that the district economic council dissolve the works council. The works assembly can make demands and proposals to the works council. Separate works assemblies may be held by the manual workers and by the nonmanual workers. The employer has the right to be present or to be represented at works assemblies and to take part in the proceedings, but can not vote. Meetings of the works assembly shall as a rule take place outside working hours; if this rule is departed from in urgent cases, the consent of the employer must be obtained.

Trade-union representation.—In the preceding pages it has been stated that the movement toward works councils proceeded particularly from those who were opposed to the conservatism of the trade-unions. Is it the endeavor of the present law to make the trade-unions superfluous and to have their tasks taken over by the new system of works councils? The provisions of the law make it evident that this is in no sense the case. Article 8 seems to permit no misunderstanding on this point; it says: "The right of the economic organizations of manual workers and salaried employees to represent the interests of their members is in no way prejudiced by the provisions of this law." The law, however, does not stop at this declaration; it is evident from a number of its provisions that there is no intention of driving the trade-unions from their chosen field of activity. Article 31, for instance, provides that on motion of one-fourth of the members of a works council one representative each of the economic organizations represented in the council shall be admitted to the meetings in an advisory capacity. The same right, to be sure, is granted to the employer, who may demand that representatives of the economic organizations to which he belongs shall be admitted to the meetings of the council in an advisory capacity. Articles 66 and 78, prescribing the duties of works councils and of the group councils of manual workers and salaried employees, provide that they shall see to the fulfillment of the collective agreements concluded by the trade-unions, and that if such agreements do not exist they shall cooperate in the establishment of wage and working conditions in deliberation with the economic organizations of employees that may be concerned therein. Finally—and this is the farthest step of all—article 62

provides that if in a collective agreement declared by the Government to be binding on a whole industry, a method of representation for the employees is adopted different from that introduced by the present law, the works councils provided by the law shall not be introduced in that industry; and if they already function in that industry, they are to be dissolved.

It is evident from all these quotations that the Government has desired workmen's councils only in addition to and cooperating with the trade-unions, and this is no wonder, for the socialistic members of the Government are recruited, for the most important part, from the leaders of the modern German trade-union movement.

Duties of the works councils.—The law assigns to the works councils the following duties:

1. In establishments with economic (commercial or industrial) aims to support the management with advice in order to assist it to bring the establishment to the highest possible state of efficiency.
2. To cooperate in the introduction of new labor methods.
3. To safeguard the establishment from violent disturbances, and, without prejudice to the rights of economic organizations of manual workers and salaried employees, to invoke the conciliation committee or some other conciliation or arbitration board agreed upon in case of disputes between the works council, the workers, or a part of the workers, and the employer which can not be settled by agreement.
4. To see to it that awards made by a conciliation or arbitration board in matters concerning the entire establishment and accepted by the interested parties be carried out.
5. To fix, in agreement with the employer, general shop regulations and any modifications of the same within the terms of collective agreements then in force.
6. To promote harmony among the workers and between them and the employer and to safeguard the workers' right of combination.
7. To receive complaints of the workers' and salaried employees' council and to dispose of them in agreement with the employer.
8. To take measures to combat danger to health and accidents in the establishment; support the factory inspectors and other officials in the task of combating these dangers by information, advice, and calling them in when necessary, and by supervising the carrying out of the orders of the industrial authorities and of the provisions for the prevention of accidents.
9. To take part in the administration of pension funds, company-owned workmen's dwellings, and other welfare institutions of the establishment.

The duties enumerated under 1 and 2 are not applicable to councils in establishments with political, trade-union, military, scientific, artistic, and similar aims.

In the exercise of its duties the works council must see to it that the workers as well as the employer abstain from making demands or taking measures which are apt to injure the common interests. The carrying out of resolutions adopted conjointly with the management of the establishment is to be effected by the management. The works council is prohibited from interfering with the management by making arrangements independently.

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Duties of the group councils (workers' and salaried employees' councils).—The duties assigned by the law to the group councils, that is, to the workers' council and the salaried employees' council, are essentially the same as those assigned to the works council which represents the entire personnel, with the sole distinction that the group council can discuss or act only in matters concerning the group represented by it. In addition to the duties which the group council has in common with the works council it shall—

1. In so far as no regulation by collective agreement exists, in conjunction with the economic organizations of the workers or salaried employees, cooperate in the fixing of wages and other working conditions, especially in the fixing of piece rates or the bases for fixing such rates; in the introduction of new methods of payment; in the fixing of working hours, especially in extensions or reductions of the regular working hours; in fixing the annual leave of the workers, and in arranging conditions of apprenticeship;

2. See to it that war invalids and persons injured through accidents shall obtain employment suitable to their physical and mental ability and intervene in this sense with the employer and fellow workers in the establishment;

3. Cooperate with the employer in establishing rules for the hiring and discharging of workers and employees.

Control by the workers.—The most disputed provisions of the bill concerned the participation of the works councils in the management of the establishment and their right to interfere in the hiring and discharging of employees. These provisions were the crux of the law.

As has already been stated here, the works council has the right to "support the management with advice," with the object of increasing output, and to "cooperate in the introduction of new labor methods."

In undertakings in which there is a board of directors the works council has the right to delegate one or two of its members to that board who shall represent the interests and demands of the employees as well as their views and wishes concerning the organization of the establishment. These delegates of the works council have a seat and vote in the board of directors but do not draw directors' fees. They are under obligation to maintain secrecy with respect to confidential information given to them.

In an undertaking which is obliged to keep books and which employs as a rule at least 300 workers or 50 salaried employees the works council may request that, beginning with January 1, 1921, a balance sheet and profit and loss account for the past financial year be submitted to the executive committee of the council, or, in the absence of such a committee, to the council itself six months after the close of the financial year, at the latest. In this case also the council must maintain secrecy with respect to information of a confidential character.

The rights of the works councils described in the two preceding paragraphs are somewhat limited by the provision of the law that establishments of the two classes specified may on their request be exempted by the National Government from granting these rights if important State interests require it.

In order that the works council may fulfill its duties it has in all establishments with economic aims the right to request the employer to give to the executive committee, or, where such a committee does not exist, to the council itself, information as to all the transactions of the establishment which affect the labor contract and the work of the employees. In particular the employer shall on request show the wage sheets and make a quarterly report as to the condition and output of the establishment and the expected demand for labor. This information is to be considered confidential.

The employers' associations strongly opposed granting to the works councils an insight into the financial affairs of industrial establishments. But the concessions made by the law to the workers are not of great value. It is true the works councils are given representation on the board of directors of stock companies, and in other concerns they are entitled to receive an annual balance sheet and a copy of the profit and loss account, but, as secrecy must be maintained on all information obtained in this manner, the councils can not report back to the workers. This provision of secrecy was attacked by both socialist groups, but they were unsuccessful in the National Assembly. The council may inspect wage sheets but none of the books, or, in other words, it can not get a real grip on the finances of the establishment.

On the equally vexed question of hiring and discharging, the workers have lost in committee the right, as originally suggested, of cooperating by means of a confidential delegate in the engagement of workers, but retain a modified right to be heard as to dismissals, namely, as to dismissals for political, military, religious, or trade-union activities, or where no reasons have been given for discharge, or where unjustifiable dismissal has taken place not occasioned by the conduct of the employee or by the state of the business, or where dismissal has taken place because the worker refused to perform other work than that contractually agreed upon on his engagement. In such cases the employee may appeal to the workers' or salaried employees' council, which, after investigation may negotiate with the employer. If no agreement is reached the case goes to the arbitration board, whose decision is final.

Protective and penal provisions.—The law prohibits the employer and his representatives from interfering with their workers in their right of electing members to the works councils or in the acceptance of membership on such a council and exercise of its functions or from

discriminating against them for this reason. Before giving notice of discharge to a member of a works' council or before transferring him to another establishment the employer must obtain the consent of the works council, unless the discharge is due to a legal obligation or one arising out of a collective agreement or an award of a conciliation or arbitration board, or is given without notice for adequate reasons which are justifiable under the law dealing with the termination of labor contracts without notice. Employers or their representatives who contravene these provisions or fail to furnish to the works' council the business information prescribed by the law are liable to a fine up to 2,000 marks (\$476, par) or imprisonment. If an employer, or his representatives, willfully suppresses facts or gives false information to the works council in submitting data to it concerning the financial condition of the establishment he becomes liable to imprisonment up to one year or a fine up to 10,000 marks (\$2,380, par) or both.

Transitional provisions.—The law authorizes the national minister of labor to issue, with the consent of the Reichstag and of a committee consisting of 28 members of the latter, regulations for the carrying out of its provisions. The law comes into force on its promulgation, and within six weeks after its coming into force a works' council must be elected in each establishment. After the election of a works council all workers' councils and workers' and employees' committees existing in an establishment cease to function.

With the coming into force of the works council law a number of contradictory provisions in other laws and in the Industrial Code are abrogated.

New Regulation of Unemployment Relief in Germany.

A NEW order regulating unemployment relief was published in Germany on January 26 of this year.¹ It came into force on February 1 and contains the following provisions:

The cost of the unemployment relief is to be borne, one-half by the nation, one-third by the Federal State, and one-sixth by the commune or communal union. In the case of poor communes the grant from the nation may be increased. The commune obligated to grant relief is that in which the person entitled to relief was residing when the period of unemployment began. Unemployed persons who since August 1, 1914, have moved to another locality are as far as possible to return to the district where they lived at

¹ Kölnische Zeitung. Cologne, Feb. 2, 1920. Noon edition.

that date. Relief will not be granted to them in any other district for longer than four weeks. Communes and communal unions are ordered to refuse relief to any person who declines an offer of work, even though it lie outside his usual occupation and place of residence, if it is within his physical capacity.

The districts of Germany have been classified under A, B, C, D, and E, in accordance with the average daily earnings of day laborers in the various localities as established by the sick funds, and different maximum relief rates have been fixed for these classes. These rates are the following:

MAXIMUM UNEMPLOYMENT RELIEF RATES IN GERMANY, EFFECTIVE FEBRUARY 1, 1920.

[Par value of the mark is 23.8 cents.]

Item.	Maximum rates per day in districts of class—			
	A.	B.	C.	D and E.
	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>
Males over 21.....	6.00	5.00	4.00	3.50
Males under 21.....	4.25	3.50	3.00	2.50
Females over 21, not members of another person's household.....	5.00	4.50	3.50	3.00
Females over 21, members of another person's household.....	4.25	3.50	3.00	2.50
Females under 21.....	3.00	2.50	2.25	2.00
Family allowances: ¹				
Wife.....	2.50	2.25	2.00	1.75
Each child and other dependent.....	1.75	1.75	1.50	1.25

¹ The total relief granted to an unemployed man for his family may not exceed $1\frac{1}{2}$ times the amount granted to himself.

Proposed Labor Law of Switzerland.¹

THE Swiss Federal Assembly promulgated an act on June 27, 1919, providing for the establishment of (1) a Federal labor department in the ministry of economics, (2) a Federal wage commission, and (3) Federal wage boards. Subsequent to the passing of this measure the demand was made that it should be submitted to the referendum; the requisite number of signatures was obtained, and it is now announced² that the act will be put to the popular vote upon a date to be fixed later.³ Meanwhile a summary of the leading principles of the act may be of interest.

A labor department is to be established for the purpose of studying labor conditions in "home industries," factories, workshops, mines, etc., arts and crafts, and commerce. Its functions are: To inquire into labor conditions in general, the labor market, the standard of living and housing conditions of workers, and migration of

¹ Extracted from the *Labour Gazette*, London, January, 1920, p. 11. Data taken from *Feuille Fédérale Suisse*, July 2, 1919.

² *Feuille Fédérale Suisse*, Dec. 24, 1919.

³ The Bureau has been advised by the Swiss Legation that the referendum, which was held on Mar. 21, 1920, resulted in rejection of the proposed labor law by a vote of 252,662 to 252,243.

labor; to prepare schemes for improving working conditions and raising the standard of living of workers; to give effect to the decisions of the Federal wage commission; to decide in cases of appeal relating to the nonobservance of legally established working conditions; to express an opinion, at the request of the Federal Council, on proposals put forward by the wage commission and the wage boards; to formulate proposals regarding "common rule" declarations for collective agreements covering groups of workers for whom no wage boards exist, and proposals connected with the question of permitting different types of agreements; and to supervise the administration of the wage boards.

The labor department is also empowered to institute inquiries, to examine pay sheets, and to interview heads of firms and members of the staff, all of whom are bound to supply the information desired. It may demand the assistance of cantonal and communal authorities, public labor exchanges, statistical offices, and the employment exchanges of the trade organizations concerned. These powers are also granted to the wage boards.

A wage commission and wage boards are established for the purpose of regulating wages and collaborating with the labor department in the tasks which devolve upon it.

The Federal wage commission is empowered to decide appeals against wage rates fixed by the wage boards; to lay proposals before the Federal Council relative to "common rule" declarations and standard agreements; and to give advice, at the request of the labor department, on matters which come within the province of the latter. The wage commission is to consist of a president—this office being filled by the director of the labor department—two independent members, and at least three representatives of employers and three representatives of employees. Women are to be "adequately" represented upon the commission. The members are appointed by the Federal Council for periods of three years. The trade organizations concerned are to be consulted in regard to nominations.

Wage Boards.

THE wage boards are commissioned to fix wages in cases submitted to them by the labor department; to carry out the instructions of the labor department; to supervise the observance of legal working conditions; to submit to the Federal wage commission proposals relative to "common rule" declarations and standard agreements; to give advice on questions submitted by the labor department; and to report on their activities to the labor department. A wage board will consist of an independent chairman, at least three representatives of employers and three representatives of the workers. Women

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are to be "adequately" represented. The powers of the wage boards to fix wages are for the present restricted to the fixing of minimum rates of wages for workers employed in "home industries"; but the Federal Assembly may extend these powers, enabling the wage boards to regulate wages generally. For the purpose of dealing with the regulation of working conditions of nonmanual workers special wage boards, with representatives of such workers as members, will be set up. The wage boards are to be appointed by the Federal Council for periods of three years. The members are to be appointed upon nomination by the wage commission. There are to be wage boards for the various trade groups, and, when necessary, for certain districts or parts of the country. The trades concerned are to be consulted.

Wage rates are to be fixed after due consideration has been given to all circumstances, and, so far as possible, on the basis of equal pay for equal work, without distinction of sex. Wages may be graded according to local conditions, trade groups, or the capacity of the worker.

All requests for the fixing of wage rates must be addressed to the labor department, which shall transmit them to the competent wage board. After hearing the parties concerned and ascertaining all necessary facts the chairman of the board will endeavor to secure a unanimous decision by the board. If he succeeds, the wage rates fixed will be enforced immediately. If the board is not unanimous, the verdict of the majority shall be accepted. In this case any person concerned may enter an appeal against the decision. The appeal must be made within a period to be fixed by the wage board, but in any case not less than 10 days, to the wage commission through the medium of the labor department. If the fixed period expires without appeal having been made the decision shall enter into force. The decision of the wage commission in cases of appeal shall be final.

Provision for Drafting Standard Agreements.

IF THERE is a manifest need the Federal Council may, on the proposal of a wage board, after consulting the trade organizations concerned, make a "common rule" declaration for a collective agreement, and may draft standard agreements, from the provisions of which it shall not be permissible to depart. If such collective agreements and standard agreements specify rates of wages, the power to fix wages granted to the wage boards shall be replaced by the right to lay proposals before the Federal Council. Collective agreements in those trades for which no wage boards exist may be made subject to "common rule" declarations without any proposal being made by wage boards.

Applications made to the Federal Council for "common rule" declarations must be addressed to the labor department, which shall transmit them to the competent wage board after hearing the views of the trade organizations concerned. The opinion of the wage board shall be submitted to the wage commission, which shall decide whether or not the application shall be laid before the Federal Council. If the commission decide in the negative the matter shall not be proceeded with; if in the affirmative, the labor department shall express its opinion on the proposal to be submitted to the Federal Council. The labor department must ascertain that the proposal is not at variance with wage rates which may already have been fixed by wage boards.

Every decision involving the laying down of working conditions must be accompanied by a statement of the date on which the decision is to come into force and of the date after which a revision may be demanded. If a considerable change of circumstances should arise a demand may be made for a revision before the fixed date.

During the period when the question of regulating working conditions is being considered, and during the period of validity of orders and decisions, the parties concerned are bound under penalty of fine to avoid all disputes connected with the working conditions under consideration or which are the subject of orders or decisions.

Fines ranging from 10 to 500 francs [\$1.93 to \$96.50, par] are to be imposed for contravention of measures adopted by the labor department and wage boards to obtain information; for nonpayment of fixed wage rates, if payment is refused maliciously or in defiance of regulations; for contravention of regulations laid down in other acts for regulating working conditions; and for failure to observe the obligation to avoid disputes in the conditions stated above.

In case of need, and after consulting the cantonal governments, the Federal Council is to establish Federal conciliation boards, and to determine their methods of procedure and the relations between them and the cantonal and communal authorities.

HOUSING.

Company Housing in Anthracite Region of Pennsylvania.

By LEIFUR MAGNUSSON.

COAL was first commercially shipped from the Lehigh Valley of Pennsylvania in 1820; 365 tons constituted the shipment for the year. The anthracite region occupies an area of about 500 square miles in the northeastern part of Pennsylvania. The region being compact and having become densely populated by reason of the development of other industries both depending upon and contributing to the anthracite industry, the isolation of the anthracite mining town is at present not so great as that of other mining towns. Many of the present company-owned houses are now situated in populous cities like Scranton and Wilkes-Barre.

Scope of Survey.

THE Bureau's survey in the anthracite region covered 24 companies, employing altogether 116,208 men and operating 104 establishments or groups of mines. Taking those companies which reported the number housed it appears that they employ 90,608 men, and house 20,660, or 22.8 per cent, of their entire forces. The largest company supplying information employs approximately 22,000 men. One company employing 11,115 men houses only 2,400, or 21.6 per cent; and another employing 725 men houses only 76. The survey in the anthracite region included 6,853 dwellings.

The Anthracite Town.

THE anthracite town is almost always situated in close proximity to the mine and along any natural highway passing through the region. None has been scientifically planned and practically all are laid out in rectangular fashion.

The towns are almost all situated near larger cities, with which they are connected by rail or electric lines. Consequently they are not much more than groups of houses near the shafts and breakers; they are not complete towns in the sense of being self-sufficing, with stores and means of recreation. In that respect they are depending more and more upon the neighboring cities.

As a rule, no paved streets are provided in anthracite mining towns; and no paved alleys were observed by the investigators. Only a few communities of the 30 visited by the agents of the Bureau were reported as having a street paved with tarvia, macadam, or concrete. The principal street was frequently the principal township highway. Dirt roads, covered in some instances with coal-dust waste, are the rule. There is a general lack of care for alleys and roads, although a few notable exceptions are reported.

The streets are generally about 45 feet in width. In certain hillside towns the houses all face one way and no question as to street widths is involved. Alleys average about 17 or 18 feet in width.

There is no evidence of lot crowding in this region. Lots for each family in the semidetached houses range from 25 to 50 feet or even from 50 to 60 feet in width. For the single houses the width of the lots varies from 50 to 60 feet.

Early Housing Conditions.

THE early miner's house was of the double or semidetached type made of board and batten sides on the framing. A mere dugout served for a cellar. While the type still persists, the houses recently built show an improvement in appearance and substantialness. The early houses were neither ceiled nor plastered inside and rarely painted on the outside. To each family, occupying half of the house, was allotted three and one-half rooms, so called, two on the first floor, a fair-sized room on the second floor, and back of that, formed by the pitch of the roof, the half room, more in the nature of a storage room or attic than a sleeping room. The houses built in those days i. e., during the Civil War times up to the seventies, naturally had no bath nor even running water in the kitchen. The occupants were fortunate if they had a common hydrant within the distance of an ordinary city block.¹

An interesting view of some housing conditions prevailing in 1898 is given in a report of the local resident engineer to the president of a company operating in the Hazleton mining district. Describing "the present [1898] condition of the dwelling houses on the property" the engineer states:

Many of the roofs do not leak very badly, but, in attempting to patch an old shingle roof, such as those mentioned as requiring to be renewed, the work of repairing many times will be found to cause new leaks.

The cellars (with the exception of Nos. 90 to 99 inclusive, and all the houses recently built) have been excavated under one half, or along the side of the block; generally under the front side, and have but one window of two panes of glass, with a screen over the outside, so that the window can be taken out for ventilation. In some cases the occupants have excavated the earth from the other half of the cellar. There should be an additional window in the cellar so as to afford proper ventilation, and aid in

¹ Edward W. Parker: Workmen's houses in the anthracite regions. *Housing problems in America. Proceedings of the fifth national housing conference, Providence, R. I., October, 1918, pp. 54-66.*

drying up dampness that we found to exist. In one case, Nos. 116 and 117, there was a drain stopped up, causing about 2 to 3 feet of water standing in the cellar.

The privies, in all cases but where the new or recently built houses are located, are in very bad shape; in most cases the appearances would indicate that the contractor was obliged to put down the pits a certain depth, and plank up the sides. In sinking these pits rock probably was encountered and the regulation height of plank curbing put in, thus bringing the floor of the privy several feet above the surface. The privy walls are full up to the top of the ground, and the contents of the wells flow out into surface ditches, new houses excepted. In the older houses the privy buildings have the appearance of having been built by the tenants, and are poor apologies for the purpose. My opinion is that if these premises came under the inspection of the health officer, these affairs would be badly criticized.

Not many of the houses have any protection over the front doors, thereby permitting the storm to drive into the houses under the doors, that do not fit very closely to the floor. A weatherstrip on the bottom of the door in such cases would assist in remedying this; and a small porch would also be of service; which if made, would prevent the building of such porches by the tenants as is sometimes the case, and so built do not always improve the external appearances.

If it is concluded to paint the houses—the older ones—the new have been painted) in most cases it will be necessary to new weatherboard one side only, and re nail the other three sides of these buildings. If, however, it is not expedient at this time to expend so much money in painting, some patching and re nailing of the siding could be made to pass for a while longer, and probably, too, some of the roofs might be left untouched in the same way.

The chimneys, where they start from the third or attic floor, should be changed so as to start from the bottom, as now in these cases the stovepipe is carried up through the floors, enters the chimney in the attic, and is positively dangerous from fire.

We found many of the houses clean and neat; others just the opposite. The best houses are occupied by Americans, but the majority of the occupants are foreigners.

Age of Houses.

SOME of these early constructed houses are still in existence and in use by the companies. One company has 20 semidetached houses, built in 1857; another has 88, built in 1876, and still another has 137 erected in 1885. A fourth company has houses dating from 1851. Of the 1,323 houses for which the year of construction is known, 480, or 36.3 per cent, had been erected before 1881 and 753, or 56.9 per cent, before 1890.

Observation of some of the older houses showed them to be of substantial timber, the boards fully an inch in thickness, and free from knots. By removing the battens, papering, and then weatherboarding, warm and comfortable houses may be made out of them.

Types of Houses.

THE type of house at present prevailing in the region has not changed greatly since the beginning of the industry. The tendency has been to enlarge the original type of house.

With few exceptions the houses are of frame, are weatherboarded, have shingle roofs, and are plastered or ceiled inside. They differ very slightly from the houses of the soft-coal region.²

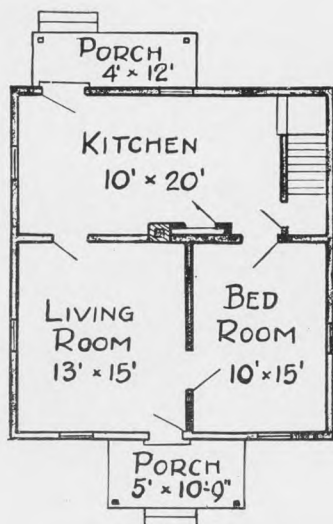
² See MONTHLY LABOR REVIEW, April, 1920, pp. 215 to 222.



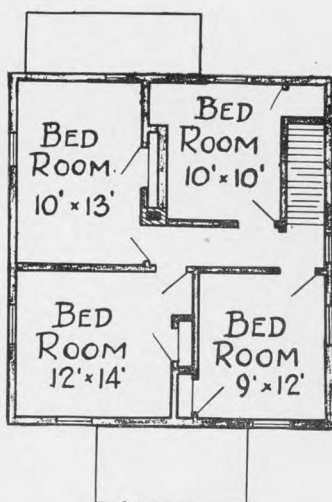
FIG. 1.—Detached houses for miners in the anthracite coal region. Decidedly larger and superior to the average.



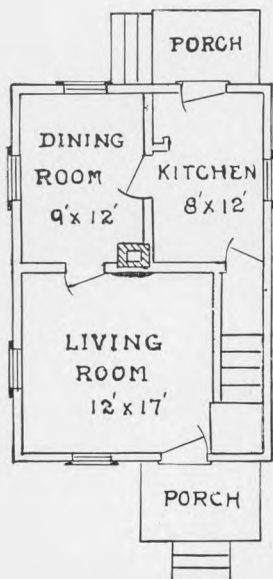
FIG. 2.—Eight-room semidetached houses in anthracite region, built in 1870. Probable cost at time of survey (1916), \$1,200 per dwelling (family unit); rent, \$8 per month per dwelling. Stove heat, running water in kitchen, outside privies. Larger and superior to the average house in the region.



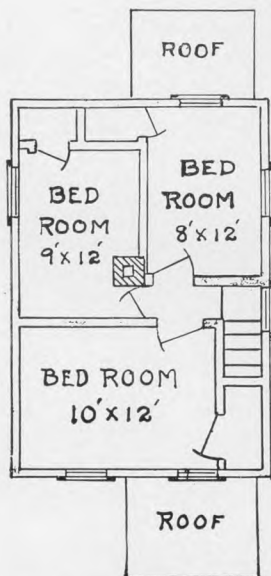
FIRST FLOOR.



SECOND FLOOR.



FIRST FLOOR.



SECOND FLOOR.

FIG. 3.—First and second floor plans of detached frame houses for miners in anthracite region.

Of the 6,853 dwellings covered by the survey 6,708, or 97.9 per cent, are frame dwellings. Only 43, or less than 1 per cent, are of brick, and 102, or 1.5 per cent, are of stone, tile, or concrete, or other combination of materials.

There is a greater proportion of semidetached houses in the anthracite region than in any other locality studied by the Bureau, 4,923, or 80.9 per cent, of the houses here being double or semidetached, 728, or 12 per cent, single or detached, and 438, or 7.1 per cent, row dwellings. The type is not reported for 764, or 11.2 per cent of the total of 6,853 included.

Size of Dwellings.

THE distribution of dwellings according to the number of rooms shows that of the 5,320 for which this information has been furnished, the largest proportion, 1,724, or 32.4 per cent, have 6 rooms; the next largest proportion, 1,604, or 30.2 per cent, have 5 rooms. The average size of the miners' family quarters in the anthracite region is 5.5 rooms, as compared with 4.4 rooms in the soft-coal region. The distribution of dwellings by number of rooms is as follows:

NUMBER AND PER CENT OF DWELLINGS HAVING EACH CLASSIFIED NUMBER OF ROOMS, IN THE ANTHRACITE REGION OF PENNSYLVANIA.

Size of dwelling.	Number of dwellings.	Per cent of total.
2 rooms.....	37	0.7
3 rooms.....	247	4.6
4 rooms.....	920	17.3
5 rooms.....	1,604	30.2
6 rooms.....	1,724	32.4
7 rooms.....	479	9.0
8 rooms.....	237	4.6
9 rooms and over.....	72	1.4
Total.....	5,320	100.0

For 1,533, or 23.4 per cent, of the total number of 6,853 reported no information as regards number of rooms was secured.

Rent.

OF THE 5,303 dwellings for which rent per month in relation to number of rooms has been reported, the rent for 4,589, or 86.5 per cent, is below \$8 per month. Taking the dwellings which are typical as respects the number of rooms, namely, 5 and 6 room dwellings, it appears that of the former the largest proportion—436, or 27.3 per cent—rent for \$3 and under \$4 per month, and of the latter the greatest proportion—517, or 30 per cent—rent for \$6 and under \$7 a month.

The rents charged for dwellings according to the number of rooms are brought out in the table below.

NUMBER AND PER CENT OF DWELLINGS OF EACH SPECIFIED NUMBER OF ROOMS RENTING AT EACH CLASSIFIED AMOUNT PER MONTH, IN THE ANTHRACITE REGION OF PENNSYLVANIA.

Number.

Rent per month.	Dwellings having—								Total.
	2 rooms.	3 rooms.	4 rooms.	5 rooms.	6 rooms.	7 rooms.	8 rooms.	9 rooms and over.	
Under \$3.....	17	67	121	109	15	3	1	1	334
\$3 and under \$4.....	16	106	138	436	19	57	2	1	775
\$4 and under \$5.....	1	60	345	284	189	3	3	1	886
\$5 and under \$6.....		5	199	364	414	55	5	2	1,044
\$6 and under \$7.....		5	85	287	517	70	61	3	1,028
\$7 and under \$8.....			16	71	358	50	26	1	522
\$8 and under \$9.....			13	42	88	31	72	13	259
\$9 and under \$10.....					71	10	22	9	112
\$10 and under \$11.....					45	65	17	19	146
\$11 and under \$12.....				6		8	2	1	17
\$12 and under \$14.....					2	89	5	7	103
\$14 and under \$16.....					3	2	13	9	27
\$16 and under \$18.....					1	25		2	28
\$18 and over.....						11	8	3	22
Total.....	34	243	917	1,599	1,722	470	237	72	5,303

Per cent.

Under \$3.....	50.0	27.6	13.2	6.8	0.9	0.6	0.4	1.4	6.3
\$3 and under \$4.....	47.1	43.6	15.0	27.3	1.1	11.9	.8	1.4	14.6
\$4 and under \$5.....	2.9	24.7	37.6	17.8	11.0	.6	1.3	1.4	16.7
\$5 and under \$6.....		2.1	21.7	22.8	24.0	11.5	2.1	2.8	19.7
\$6 and under \$7.....		2.1	9.3	17.9	30.0	14.6	25.7	4.2	19.4
\$7 and under \$8.....			1.7	4.4	20.8	10.4	11.0	1.4	9.8
\$8 and under \$9.....			1.4	2.6	5.1	6.5	30.4	18.1	4.9
\$9 and under \$10.....					4.1	2.1	9.8	12.5	2.1
\$10 and under \$11.....					2.6	13.6	7.2	26.4	2.8
\$11 and under \$12.....				.4		1.7	.8	1.4	.3
\$12 and under \$14.....					.1	18.6	2.1	9.7	1.9
\$14 and under \$16.....					.2	.4	5.5	12.5	.5
\$16 and under \$18.....					.1	5.2		2.8	.5
\$18 and over.....						2.3	3.4	4.2	.4
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Considering the rent paid per room per month, the details of which are not shown here, it is seen that the largest number (171, or 36.4 per cent of the 470 for which data were reported) of single or detached frame dwellings rent for from 50 cents to less than \$1; the next largest number (141, or 30 per cent) rent from \$1 to less than \$1.50. In the case of double or semidetached frame dwellings, the largest number (1,998 out of 3,984, or 50.2 per cent) range from \$1 to less than \$1.50 per month, and the next largest number (1,563, or 39.2 per cent) from 50 cents to less than \$1. The fact that the single houses rent for relatively less per room is explained by the fact that the semidetached houses cost more per room and therefore to bring the same return must be rented at a higher rate.

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Modern Improvements.

INFORMATION as to conveniences and sanitary equipment provided has been given concerning 4,034 dwellings, or 58.9 per cent of the 6,853 covered in the anthracite region. Of the 4,034 dwellings, 1,824, or 45.2 per cent, have gas or electric light, but in practically all cases it is electricity and not gas which is used. All modern conveniences, including complete three-piece bathroom with sewer or cesspool connections are found in 255, or 6.3 per cent of the total reported. On the other hand, 1,813, or 44.9 per cent, have no modern conveniences at all, and have outside privies.

The 4,034 dwellings are distributed as to types of conveniences provided as follows:

NUMBER AND PER CENT OF DWELLINGS HAVING SPECIFIED MODERN IMPROVEMENTS, IN THE ANTHRACITE REGION OF PENNSYLVANIA.

Improvements.	Number of dwellings.	Per cent of total.
Bath, water-closet, running water, and electric light.....	1 234	5.8
Bath, water-closet, running water.....	21	.5
Bath, gas or electric light.....	62	1.5
Water-closet, running water, gas or electric light.....	170	4.2
Water-closet, running water.....	360	8.9
Running water, gas or electric light.....	418	10.4
Running water only.....	16	.4
Gas or electric light only.....	940	23.3
Outside privies only.....	1,813	44.9
Total.....	4,034	100.0

¹ 40 have combination bath and laundry tub in kitchen.

Maintenance.

AMONG different features of company management it may be noted that lawns are made and maintained by the tenants, while fences, where provided, are built and maintained by the company. Only four companies attempt to encourage gardening by giving prizes, while practically all the companies have either written rules or an unwritten agreement that tenants must either keep their houses in fair and habitable condition or vacate. The enforcement of the rule, however, depends largely upon the labor supply.

One informant observed at the time the investigation was made (1916), that he was putting up with tenants that he would not tolerate when the labor supply was abundant.

Ten of the 24 companies report that they undertake garbage collection for their tenants. However, as 3 of the 10 companies report that collection is made every two months, or even less frequently, the statement can apply only to rubbish and waste, certainly not to kitchen and table waste. In one instance the duty rests with the city, as the company houses are within an incorporated city.

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Except in a few instances the open-vault privy is still used in the region. With regard to the frequency of cleaning, it appears from the reports of the companies that three report this as annual, three as biennial, one triennial, one as every 18 months, and two semi-annually; two companies report that the matter is left to the tenant, and two report that privies are moved to a new place when necessary. Other companies report that all privies are cleaned when necessary and not at any regular intervals.

Cost of Maintenance.

SEVENTEEN out of 24 companies covered in the anthracite region reported both rent receipts and annual expenses of maintenance of company houses. These companies may be placed in two groups according to the comparability of the data furnished. In the first group have been placed those which charge to their maintenance account not only ordinary labor and material for upkeep of the company houses, but also insurance, taxes, and additions and improvements, remodeling, etc., of the houses; in the second group, those which do not charge additions, improvements, and remodeling to that account. For the first group maintenance expenses absorb 69 per cent of the average annual rent receipts, and for the second group 32 per cent. The details are disclosed in the following table:

RELATION OF EXPENDITURE FOR MAINTENANCE AND THE AMOUNT INVESTED IN HOUSING TO RENT RECEIPTS OF CERTAIN COMPANIES IN THE ANTHRACITE REGION OF PENNSYLVANIA, 1911 TO 1915.

Company.	Value of houses.	Average annual rent receipts, 1911 to 1915.	Expenditure for maintenance.		Return on investment after deduction of charges to maintenance.		
			Amount.	Per cent of rent receipts.	Amount.	Per cent.	
Group I: ¹							
Company No. 1.....	\$311,700	\$16,564.92	\$18,108.88	109	(²)	.....
Company No. 2.....	78,900	6,082.32	7,468.14	123	(²)	.....
Company No. 3.....	38,330	4,368.54	2,775.63	64	\$1,592.91	4.2	
Company No. 4.....	203,400	34,597.41	34,596.30	100	1.11	.....
Company No. 5.....	77,000	6,672.75	5,883.62	88	789.13	1.0	
Company No. 6.....	1,134,000	65,640.12	36,887.24	56	28,752.88	2.5	
Company No. 7.....	1,469,000	101,321.27	56,365.94	56	44,955.33	3.1	
Company No. 8.....	(³)	45,670.06	31,414.72	69	14,255.34	(³)	
Total.....	(²)	280,917.39	193,500.47	69	87,416.92	(³)	
Group II: ⁴							
Company No. 1.....	553,138	118,101.79	32,099.54	27	86,002.25	15.6	
Company No. 2.....	(³)	6,318.39	5,369.77	85	948.62	(³)	
Company No. 3.....	(³)	7,189.78	1,673.30	23	5,516.48	(³)	
Company No. 4.....	(³)	35,706.00	13,463.00	38	22,243.00	(³)	
Company No. 5.....	18,000	3,138.59	1,411.29	45	1,727.30	9.6	
Company No. 6.....	92,500	11,826.74	1,865.76	16	9,960.98	10.8	
Company No. 7.....	96,300	5,904.35	3,147.86	53	2,756.49	2.9	
Company No. 8.....	26,100	3,166.44	161.45	5	3,004.99	11.5	
Company No. 9.....	(³)	10,726.91	5,250.72	49	5,476.19	(³)	
Total.....	(³)	202,078.99	64,442.69	32	137,636.30	(³)	

¹ Maintenance includes upkeep, insurance, taxes, additions, improvements, and remodeling.

² Deficit.

³ Not reported.

⁴ Maintenance includes upkeep, insurance, and taxes.

Administration.

THE larger coal companies in the region conduct their housing through a separate land department; for all other companies the housing enterprise is a part of the general operating business, segregated only in the accounting of the company. At each mine the local superintendent oversees the housing and community activities connected with the operation of the mine, so that a rather widespread paternalism still exists in the region.

Rents for company houses are collected by deduction from the employee's wages, 8 companies of the 24 included in the survey making deductions semimonthly and 16 monthly. Only two companies deduct rent in advance. A liberal policy appears to be observed in the matter of deferring collection of rent during the illness or unemployment of the worker. A few companies have no rule in that respect, but decide each case on its merits as it arises. Instances were found, too, where pensioners or widows of deceased employees were living rent-free in company houses.

Special Anthracite Communities.

THE changes in housing in the anthracite-coal region have consisted in remodeling and repairing existing structures. There has been, as already stated, no building of extensive model communities. Two exceptional groups of houses have been built, very largely as an experiment, by one of the larger corporations in the region. These developments, however, have not, because of their limited size, had any very noticeable effect in improving housing. Each group in question contains 40 semidetached dwellings, one group consisting of concrete houses, the other of brick houses. Thus only 40 households are accommodated in each development, whereas at one mine 2,100 men are employed, and at the other 1,500.

Anthracite Community A.

The group of concrete houses consists of 20 semidetached houses or 40 dwellings arranged along the sides of a rectangular area 375 by 430 feet, four semidetached houses facing the short sides and six facing the long sides of the rectangle. Between the rectangular space and the houses there is a roadway about 25 feet wide, graveled and provided with gutters; a strip of parking about 5 feet wide; and a concrete side walk about 4 feet wide. The houses are set about 15 feet back from the sidewalk line. A strip of parking surrounds the whole development.

The central area provides a playground and park space of approximately 3.5 acres. A few trees have been planted here, but at the time the study was made this space had not been developed; it has been used as a playground, though unequipped for this purpose.

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The lawns around all of the houses have been exceptionally well maintained; flowers and shrubbery have been tastefully arranged, relieving the plain white painted concrete exterior of the houses. (Fig. 4.) Gardens are planted on the rear lots between the dwellings and the outhouses.

The ground on which the development is located is depressed in the center and rises to form a terrace behind the houses. The lowest point of the site is the northwest corner, from which point drainage is effected. On the whole the drainage situation is not overfavorable and in the spring the cellars of the houses are frequently flooded.

Each dwelling or family unit has a lot 40 by 150 feet.

The shell of the house is made of concrete poured into sectional metal molds, a special patented system. The floors are of reinforced concrete, as are also the stairs, stair casings, and all partitions. The walls are without air spaces. Since coal cinders were used in the concrete aggregate, it was believed that dampness would not develop. This, however, has not been the case. One tenant interviewed complained of dampness. The plaster in the three houses which have been plastered on the inside has peeled off, and the paint both inside and out has blistered in spots, evidencing the condensation and passing of moisture through the walls.

The roof is flat and is made of a concrete slab covered with slag roofing. Rain gutters and down spouts are provided. A small concrete slab is suspended over both front and back doors. Flower boxes are placed on either side of the front doors.

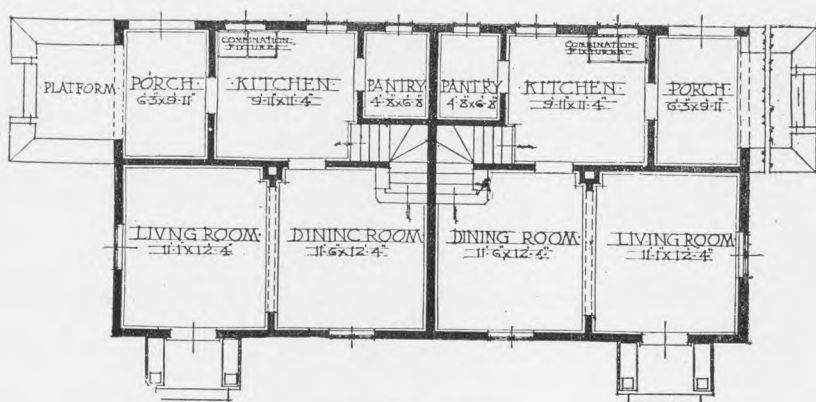
The plan of each dwelling is simple: three rooms downstairs and four upstairs; one of the latter was originally planned as a sleeping porch, but that feature was abandoned as not acceptable to the class of labor to be housed. There is a cellar under part of the house. The outside dimensions of each unit are 24 by 24 feet. Each house is equipped with a water system in the kitchen and a hot-water tank connected to a water back in the range. A combination laundry and bath tub is installed in the kitchen; this may also be used as a kitchen sink. The kitchen is of fair size and is used also as the dining room.

The outhouse is of concrete and contains both the toilet, with a concrete vault, and the coal bin.

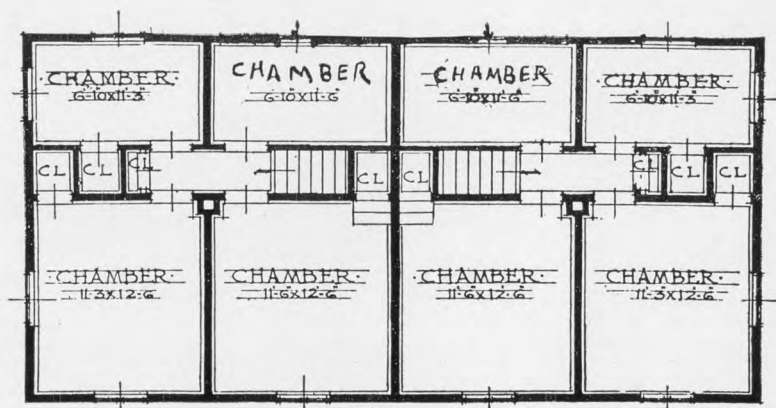
These houses were erected in 1911-12 and cost \$2,033 per family unit. The cost for improvements—grading and planting, drainage lines and piping for water system in kitchen, fencing, concrete walks, road work, electric light, etc.—cost about \$456, which brings the cost of each dwelling, not including land, to \$2,489. The outhouses cost about \$68.50 per dwelling.

The houses are rented only to English-speaking workmen. The rate is \$12 a month, which is 5.8 per cent of the investment, not including land. An additional charge of \$1 a month is made for water.

[1268]



FIRST FLOOR.



SECOND FLOOR.

FIG. 4.—Pictures and plans of group of poured concrete semidetached houses in anthracite region.

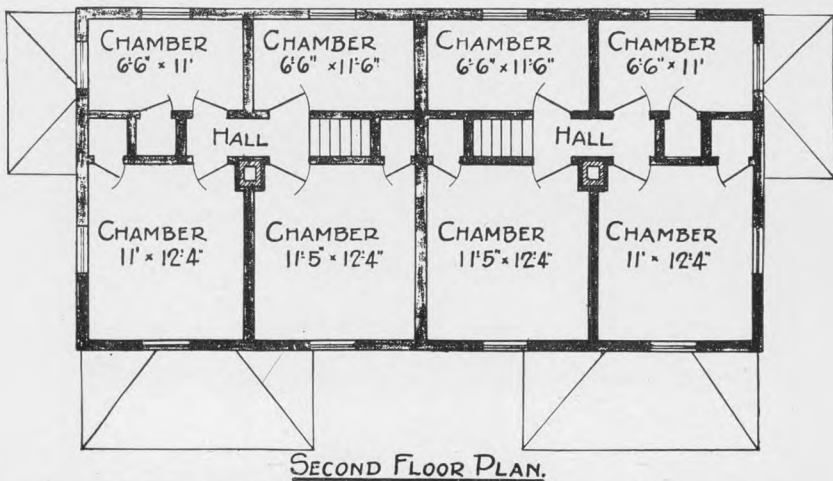
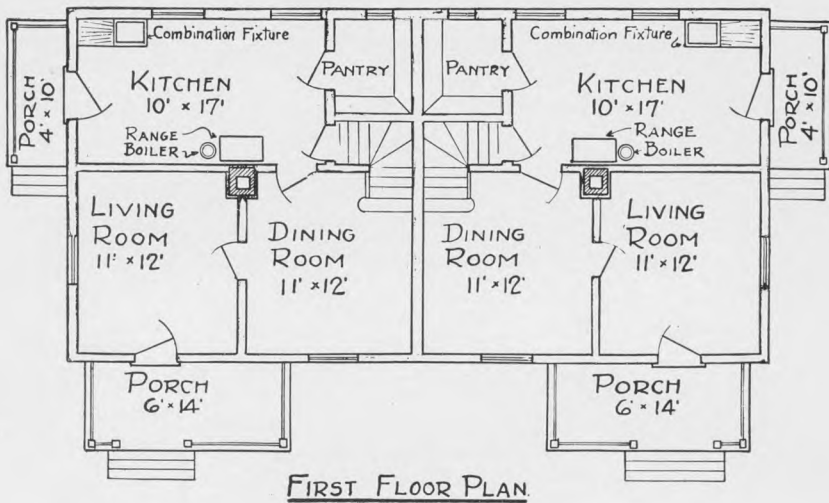


FIG. 5.—First and second story plans of modern improved houses—group of 40 dwellings (brick, semi-detached)—built in 1916 in the anthracite region. The water-closet is in the basement (not shown). The combination fixture in the kitchen is used as a bath and laundry tub as well as a sink.

Backyard wire fences are provided by the company; gardening is encouraged by giving prizes. The tenants maintain their own lawns. These were in excellent condition at the time of the agent's visit.

The interior of the house is not so attractive as the exterior. The concrete floors are chilling and uncomfortable. A broken stair coping remains broken, as it seems difficult if not impossible to repair it. No wall finish appears to last long on account of the dampness.

Anthracite Community B.

The same company which erected as an experiment the 40 concrete dwellings described also put up 20 semidetached blocks (40 dwellings) of brick, furred and plastered inside, for the foremen of another of its mines. These houses were built along the curving brow of a hillside overlooking a rather picturesque valley. They are modern houses having such improvements as a water-closet, and a combination fixture in the kitchen adaptable as a two-tray laundry tub, kitchen sink, and drain board, and bathtub. The placing of the water-closet in the basement is rather an undesirable feature. The houses are steam heated. Each dwelling unit has a lot 40 by 150 feet.

These dwellings were erected in 1915-16, and each family unit of seven rooms and a cellar cost \$1,635. The outside improvements consisting of paving and street work, fencing, sewer, septic tanks, water piping, concrete sidewalks, trees and planting, when prorated to each dwelling, amounted to \$526, bringing the cost of each unit of the semidetached block to \$2,161. This is \$328 less per unit than the cost of the concrete semidetached blocks erected in 1911-12 which furnish the same amount of room space, but have neither steam heat nor inside water-closets as do the brick houses described.

The rent for the brick houses is \$12 a month, which is 6.7 per cent on the investment not including the cost of the land.

Plans of these houses are shown in Fig. 5. There are three rooms downstairs and four upstairs; closet space is provided. There are front and rear porches, and rain gutters and down spouts, the latter a very unusual feature on company houses anywhere.

State Aid to Solve Housing Problems in Italy.

BY GOVERNMENT loans to building organizations, cooperative societies, and municipalities, and by exemption of imported building materials from the payment of customs duties, the Italian Government appears to be making an effort to afford relief from the situation caused by lack of proper housing facilities. The United States trade commissioner at Rome, under date of January

[1269]

15, 1920, submitted to the Department of Commerce the following statement on this subject, which was published in Commerce Reports (Washington) for March 14:

Under the existing provisions, whereby the State participates in the payment of the interest on loans made to building organizations and cooperative societies, the Government has already assumed annual interest charges amounting to about 2,500,000 lire [\$482,500, par], representing loans for building purposes totaling approximately 120,000,000 lire [\$23,160,000, par]. The following municipalities have so far been granted aid by the State in this connection: Milan, Reggio Emilia, Pozzuoli, Caldebosco, Sivignano, and Vezzano, as well as the institutes for popular houses of Catania, Bergamo, Bologna, Florence, Milan, Modena, Rome, Turin, Treviso, and Venice, and various cooperative organizations at Rome, Parma, and Reggio Emilia. Many additional proposals are now under consideration, and a number of local bodies have already begun construction without awaiting the definite allotment of funds from the Government. It is calculated that at this time there are under construction in Italy popular houses the cost of which will exceed 200,000,000 lire [\$38,600,000, par], without including in this sum the construction undertaken at Rome, where the work already under way will provide 25,000 rooms.

Every effort is being made to simplify the formalities connected with the granting of loans, and provision has now been made whereby commercial, industrial, and agricultural organizations can also obtain aid from the State for the construction of houses for their own employees, provided separate accounts are kept in this connection, and the interest derived from their investment does not exceed 5 per cent. Such houses can not be used for any purpose other than that for which they were originally intended. There has been a demand for such aid on the part of certain large industrial establishments, especially at Milan, and it is believed that these companies will now undertake construction on a large scale.

Another stimulus to building activities will consist in the complete exemption from customs duties of building materials imported. The exemption from the normal tax and the supertax will also be considerably extended. Houses coming under the definition of popular or economical houses, as well as popular hotels and dormitories constructed by municipalities and bodies not organized for profit, will enjoy such exemption for 20 years; other houses not belonging in the above classes, but at the same time not of a luxurious character, will be exempt for 10 years, and this exemption may be extended for an additional 15 years.

In addition to encouraging new construction, efforts are being made to assure the most advantageous use of housing facilities already available. By a decree just published, Government commissioners will be appointed in cities possessing over 100,000 inhabitants on December 31, 1919, to see that tenants receive the full protection afforded them by law in connection with the leasing of apartments, furnished rooms, etc., and in regard to evictions. By this decree it is also provided that civil and military offices of the Government, having a temporary character owing to the war, must be removed within three months from private buildings heretofore occupied, and established in temporary buildings which will be constructed. Furthermore, by virtue of a decree of the Ministry of Industry, Commerce, and Labor, buildings intended for use as hotels previous to the war, which have been sold for other purposes but are not yet converted, can be redeemed at the selling price, without further compensation, for their transfer to persons who will use such buildings as hotels and guarantee to continue to make such use of them for not less than 10 years.

From the energetic manner in which the Italian Government is attacking the housing problem there is every reason to believe that a considerable improvement in prevailing conditions will take place within a reasonable period.

LABOR BUREAUS.

The International Labor Office.

THE labor sections of the covenant of the League of Nations provide for a permanent organization for dealing with labor conditions internationally. An international labor conference composed of delegates representing governments, employees, and employers from the several countries belonging to the league, is to meet annually to discuss and pass upon proposals submitted regarding labor standards. A permanent international labor office is also established, with a governing body consisting of 24 members, 12 representing governments and 6 each the employees and the employers. The permanent office staff under the direction of a director and such assistants and heads of divisions as may be found necessary is provided for.

The new international labor office has already been partially organized with Mr. Albert Thomas as director, Mr. H. B. Butler, deputy director, and Mr. Lomercier acting as private secretary, and is in operation with offices at the temporary seat of the League of Nations in London. A periodical bulletin, to be published in French and English and such other languages as the governing body may think desirable, will be issued shortly. In the meantime, the office issues statements of its initial activities to the members of the governing body, the delegates to the Washington conference, and others who are interested in or in sympathy with the work.

The inquiry into Bolshevism projected by the League of Nations is in charge of Dr. Pardo, who has made preparations for the inquiry and the preliminary questions connected with it.

The executive work and preliminary organization of conferences are in the hands of Mr. Phelan and Mr. Pône. Mr. di Palma Castiglione has charge of the study of agricultural problems, and questions relating to seamen are being handled by Commander Crimms of the British mercantile marine.

The first duty devolving upon the international labor office under article 405 of the peace treaty was the official notification of all the governments, through the secretary general of the League of Nations, of the text of the conventions and resolutions which were adopted by the Washington conference. It is also the duty of the international labor office to see that the governments bring the conventions before

their competent authorities within a year, or in special cases within 18 months, with a view to their ratification.

Among other duties of the office is that of the preparation of the agenda for the meetings of the conference and in accordance with this provision an agenda has been prepared and invitations issued for the Seamen's Conference at Genoa, June 15. A questionnaire has been drawn up which, under the terms of the peace treaty, has been forwarded to the governments. Ship owners and seamen's organizations have also been given an opportunity to contribute to the preliminary inquiries as it was considered that this would increase the effectiveness of the conference. The following agenda¹ as adopted by the governing body has been communicated to the different governments:

Agenda for Seamen's Conference.

1. Application to seamen of the convention drafted at Washington last November, limiting the hours of work in all industrial undertakings, including transport by sea and, under conditions to be determined, transport by inland waterways, to 8 hours in the day and 48 in the week.

Consequential effects as regards manning and the regulations relating to accommodation and health on board ship.

2. Supervision of articles of agreement. Provision of facilities for finding employment for seamen. Application to seamen of the convention and recommendations adopted at Washington in November last in regard to unemployment and unemployment insurance.

3. Application to seamen of the convention adopted at Washington prohibiting the employment of children under 14 years of age.

4. Consideration of the possibility of drawing up an international seamen's code.

Other plans of the office include the distribution week by week of information that it has collected on important articles that have appeared in the press of the various countries. It is not the intention to establish a methodical or exhaustive bulletin of the social movement, but rather to send to the employers' and workers' organizations and to the press some of the more important articles dealing with social questions that are published in the various countries.

Examples of such articles already sent out by the office are "The application of the eight-hour day," "A plebiscite on the Swiss bill to regulate conditions of labor," and "Labor conditions in British India." The first article outlines the general provisions of the laws in the different countries and lists the principal exceptions. The Washington conference drew up a draft convention on the 8-hour day which the 41 signatory nations there represented pledged themselves to submit to their parliaments for ratification within one year. This convention which applies to all industrial enterprises—that is, to all factories in which a workman labors for an employer—provides

¹ An article giving the laws and agreements governing working conditions among American seamen, covering in detail the different items of the agenda, appears on pages 1 to 20 of this issue of the REVIEW.

for exceptions for countries in which climatic conditions or the imperfect development of industrial organization would make its application impossible. China, Persia, and Siam are excepted from the convention; Greece and Roumania are granted a certain period in which to put it into operation; and certain special provisions apply to British India and to Japan. The international labor office has supervision of the execution of these measures and will present for consideration at the annual conferences in 1920 and 1921 the question of extending the 8-hour day to seamen, farm laborers, and other industries and occupations.

The Swiss bill relative to the regulation of conditions of labor was to be referred to the people on March 21. The demand for a referendum came from considerably more than the 50,000 citizens necessary before a bill can be submitted to popular vote. The outstanding feature of the bill lies in the fact that it makes compulsory the collective agreements drawn up by a series of official commissions in which workers and employers are equally represented. Great extension of power is given to these official bodies and the opponents of the bill criticize its bureaucratic features and hold that it will subject the entire country to the arbitrary will of a series of commissions over which public opinion will have no control.

Recent Changes in Personnel of State Industrial Commissions.

New York.

THE New York State Industrial Commission, under date of April 19, 1920, announced the appointment of Dr. Leonard W. Hatch as manager of the State Insurance Fund. For the past 12 years Dr. Hatch has been in charge of the Bureau of Statistics and Information of the commission. He brings to the new position close acquaintance with the problems connected with industrial accidents and workmen's compensation in that State from the time of the first New York compensation law to the present. In the field of accident and compensation statistics he is a recognized authority of national reputation. Prior to entering State work Dr. Hatch was for two years a teacher of economics at Columbia University and in Bowdoin College.

Oklahoma.

The State Industrial Commission of Oklahoma has notified this Bureau of the death of its chairman, W. C. Jackson, on April 25, 1920. The vacancy has not been filled.

[1273]

LABOR ORGANIZATIONS.

Growth of Trade-Union Movement in Belgium.

AN ARTICLE in the *Correspondenzblatt*¹ states that while the Belgian trade-unions survived the war, they emerged from it in a very enfeebled condition. Their coffers were empty and their members were almost entirely unemployed. The turmoil of the war drove the workers from one place to another and it was impossible for the trade-unions to keep in touch with them. By degrees the membership declined to the 1902 figure, but the organizing staff remained intact and its hopes of better times in store were fulfilled with the signing of the armistice. The unions issued an appeal to their members and expressed their firm determination to obtain an 8-hour day and a minimum wage of 1 franc (19.3 cents, par) per hour. The appeal was not without effect on the underpaid or unemployed masses. Everywhere members joined the 8-hour-day movement, though it must be conceded that they were largely induced to join by the promise of the unions to give financial support to workers who declined to work more than 9 hours a day and for less than 1 franc per hour.

The result has been a large addition to the trade-unions' membership. In 1913 the total membership was 128,759; in 1919 it had increased to 613,500. The following table shows the numerical strength of the various unions.

MEMBERSHIP OF BELGIAN TRADE-UNIONS, 1913 AND 1919.

Occupational group.	Membership in—		Occupational group.	Membership in—	
	1913	1919		1913	1919
Mining.....	18,546	117,000	Clothing.....	4,617	9,000
Metal workers.....	26,606	100,000	Shoe factories.....	4,265	9,000
Railroad workers.....	.....	85,000	Printing trades.....	1,834	7,000
Building trades.....	10,245	50,000	Hotel and restaurant workers.....	170	6,000
Textile mills.....	21,500	50,000	Workers in theaters and orchestras.....	.....	6,000
Factory workers.....	3,510	45,000	Glass workers.....	1,500	6,000
Transport workers.....	4,705	40,000	Workers in schools.....	80	1,500
Quarries.....	14,885	21,000	Street car employees.....	.....	5,000
Diamond cutting.....	3,831	13,000	Various trades.....	3,890	.....
Government employees.....	3,205	12,000			
Tobacco workers.....	2,900	11,000			
Clerks.....	1,570	10,000			
Foodstuff industry.....	900	10,000	Total.....	128,759	613,500

¹ *Correspondenzblatt der Generalkommission der Gewerkschaften.* Berlin, Jan. 17, 1920.

Amsterdam Conference of International Union of Woodworkers.

THE fourth conference of the International Union of Woodworkers, the first after the end of the war, was held at Amsterdam December 8-10, 1919.¹ It was attended by 27 delegates from 12 different countries (France, England, Belgium, Luxemburg, Austria, Bulgaria, Germany, Denmark, Sweden, Norway, Holland, and Switzerland), representing 23 affiliated organizations. All delegates seemed to be animated with the earnest desire to heal the wounds inflicted by the war, to mend what had been broken. So great was the desire of the delegates to rebuild the International Union within the shortest time possible and to turn it into an organization for the welfare of the woodworkers all over the world, that the discussion on all items led to unanimous decisions.

It was resolved to remove the headquarters of the International Union to Amsterdam. The former secretary, Leipart, resigned owing to his appointment as minister of labor of Wurttemberg, and C. Woudenberg was elected secretary. The conference appointed a commission charged with the drafting of a new constitution and rules for the union. The contributions were fixed by the conference at 15 guilders (\$6.03, par) per 1,000 members, from January 1, 1920, at the prewar rate of exchange. The secretary reported that at present the union had a debt of 8,000 marks (\$1,905.60, par) owing to the fact that a number of organizations were not in a position to meet their financial obligations during the war. The conference resolved that the arrears should be paid.

The conference adopted the following resolutions:

1. *Declaration of principle.*—*Resolved*, That peace between the nations and entire emancipation of the working classes of all countries can be effected only by the complete understanding and serried unity of all nations. This unity will have to be supported by an energetic action in all countries of all trade-unions against militarism and for the abolishment of the standing armies. Only capitalism is interested in the maintaining of armies and navies. Consequently the working classes all over the world must more than ever make their utmost exertions to overthrow the capitalist system and create a society wherein exploitation of man by man will have disappeared and where labor will be honored and dominative.

These general considerations being admitted, the conference states with great satisfaction that in the Woodworkers' Union the ancient brotherhood has been restored.

The conference registers that between the woodworkers of those countries belonging to the union hostility or distrust do not exist any more and calls upon the woodworkers of all countries to join the international combination in order to fight upon a united front for the mutual interests.

2. *The blockade of Russia.*—*Resolved*, That the International Conference emphatically protests against the blockade of Russia and calls on the national sections to use

¹ Bulletin der Internationalen Union der Holzarbeiter, No. 1/17. Amsterdam, January, 1920.

their utmost exertions together with the other organizations in their countries so as to bring to bear influence upon the governments of their countries in order immediately to stop all intervention which is an attack upon the right of self-determination of all nations.

The conference hails with delight those workers who with a firm conviction attack the capitalist citadel, with the aim of founding a social democracy.

The conference declares that the woodworkers of all countries, by working for the socialization of all trades and industries, will also contribute to the abolishment of social contrasts so that peace between the nations will be attained and assured.

3. *Prisoners of war.*—*Resolved*, That the members of all organizations represented in the conference demand the release of German and Austrian prisoners of war in France. The conference protests against the fact that this release has not yet taken place.

4. *The distress in Austria.*—The International Conference considering that the population of Austria is suffering very much expresses its sympathy and calls on its members to support all measures, moral as well as financial, which may contribute to saving Austria from starvation.

Resolutions 2 and 3 were transmitted to the Supreme Allied Council.

STRIKES AND LOCKOUTS.

Strikes and Lockouts in Canada in 1919.

A REVIEW of strikes and lockouts occurring in Canada during the year 1919 is contained in the March issue of the Labor Gazette (Ottawa). It is stated that both the number of disputes and the time lost were the greatest in the history of the Department of Labor. There were 298 strikes and lockouts which started in 1919, eight being carried over from the preceding year. The number of employees involved was 138,988, and the number of employers was 1,913; the total number of working days lost was estimated at 3,942,189. For statistical purposes, only those strikes and lockouts which involved a cessation of work by six or more employees for a period of not less than 48 hours are counted. The report states that in about 90 per cent of the strikes not more than 1,000 persons were involved, and in about 34 per cent of the strikes not more than 50 employees were involved.

As to duration, 44 per cent of the strikes lasted for more than 10 days; 55 per cent were under 15 days' duration; and about 20 per cent lasted more than 30 days. The following table gives the number of industrial disputes, the number of workpeople involved, and the number of days lost, by industry:

NUMBER OF DISPUTES, NUMBER OF WORKPEOPLE INVOLVED, AND NUMBER OF DAYS LOST IN STRIKES IN CANADA IN 1919, BY INDUSTRY.

Industry.	Number of disputes.	Number of employees involved.	Time loss.	
			Working days.	Per cent of total.
Lumbering.....	21	4,127	100,785	2.6
Mines, smelters, quarries, clay products, etc.....	20	12,196	714,340	18.1
Railway, canal, and harbor construction.....	4	1,591	69,454	1.8
Building and construction.....	40	10,779	287,146	7.3
Metals, machinery, and conveyances.....	75	70,268	1,993,704	50.6
Woodworking.....	6	843	16,312	.4
Pulp and paper.....	5	1,108	29,910	.8
Printing and publishing.....	5	225	2,732	.1
Clothing.....	23	7,639	189,141	4.8
Textiles.....	8	4,886	210,362	5.3
Foods, liquors, and tobacco.....	21	6,268	56,708	1.4
Chemicals and explosives.....	3	96	1,971	.....
Leather.....	1	40	320	.....
Transportation:				
Steam railway service.....	5	2,700	26,500	.7
Electric railway service.....	7	3,294	40,300	1.0
Miscellaneous transport.....	12	5,608	83,504	2.1
Navigation.....	3	1,131	35,096	.9
Public utilities.....	10	1,657	30,716	.8
Municipal employment.....	7	563	2,434	.1
Miscellaneous.....	22	4,069	50,754	1.2
Total.....	298	138,988	3,942,189	100.0

Classified by cause, the report lists 223 of the 298 strikes as due to demands for increases in wages and for shorter hours, or as due to reduction in wages. The record shows that 157 terminated in favor of employees and 88 in favor of employers; 23 were compromise settlements, while 30 were indefinite and unterminated. Direct negotiations between the parties resulted in the settlement of 154 strikes, while conciliation or mediation by the Department of Labor terminated 41 strikes.

Strikes of Italian Government Employees.¹

Compiled by ALFRED MAYLANDER.

SINCE the termination of the war Italy, in common with other countries, has experienced extensive labor unrest. During 1919 strikes of varying duration in the textile, iron and steel, electrical, and other important industries were an everyday occurrence. Nearly all these strikes had a strictly economic character, being caused by demands for wage increases proportionate to the steadily increasing cost of living and for a shorter working day, i. e., the 8-hour day. Only in a few of the industrial strikes were the economic demands coupled with a demand for shop councils. The Italian Government showed its solicitude for improving the economic conditions of the working classes by creating a well-planned system of employment exchanges, by granting generous unemployment allowances, by developing its social insurance system (through the introduction of compulsory old-age, invalidity, and unemployment insurance), and by enacting numerous protective labor laws. The Government failed, however, in its attempts to lower the cost of living, the chief cause of the present labor unrest. Italian exchange fell steadily in foreign money markets and with this fall of exchange the cost of living rose to new heights, for Italy, in common with other European countries, must to-day largely obtain from abroad its supply of foodstuffs, raw materials, and coal.

Thus, the unrest of labor, instead of abating, grew more intense at the beginning of the present year, and, while previously confined to workers in private employment, it now began to spread also among the vast army of workers in the employment of the State. In January, 1920, the employees in the postal, telegraph, and telephone services and those in the operating departments of the State railroads made demands for large wage increases, improved service conditions and participation in the administration. In both instances these

¹ Compiled from various articles on the subject in January, 1920, issues of the *Giornale d'Italia* of Rome and *Il Secolo* and *Corriere della Sera*, both of Milan.

demands were initiated by organizations of radical socialistic tendencies with which only a small minority of the employees was affiliated. The Government entered into negotiations with committees of the employees' organizations, but while willing to make far-reaching concessions in order to avoid a strike in the communication and transportation systems of the country which would paralyze all industry and commerce and seriously affect the food supply, it could not see its way to granting unconditionally all the demands of the employees. It emphasized that, in view of the heavy indebtedness of the State, a wage increase requiring an additional annual expenditure of hundreds of millions of lire would further impair the greatly strained credit of the State at a time when a new issue of bonds was being offered for subscription, and would also tend to lower still more the rate of exchange, which in turn would cause a further rise in the cost of living. For all these reasons the Government declared itself unwilling to ask Parliament to grant such large increases as were demanded by the employees. It was also strongly opposed to the political demand of the employees for representation on the administrative boards of the services and resented the accusation of inefficiency of these boards as composed at present. In this attitude the Government was strongly supported by public opinion and by the metropolitan press, with the sole exception of the organs of the Socialist Party. The Government also hoped that the unlawfulness of a strike of public servants and the disciplinary measures provided in the civil-service regulations for participation in a strike would deter the employees from taking part in such a movement. But it was mistaken in this belief, for after an abrupt breaking off of negotiations a strike was called by the lower-grade employees of the postal, telegraph, and telephone services, and a week later, before this strike had terminated, the railroad men also went on strike.

A brief account is here given as to the demands of the workers in both of these strikes, the negotiations preceding the strikes, the course of the strikes, and their final settlements.

Strike of Postal, Telegraph, and Telephone Employees.

Situation of Employees Before the Strike.

UP TO January, 1919, the salaries of employees of the postal and telegraph services had practically remained on the prewar basis. At the end of the winter of 1918-19 the central committee of the Federation of Postal and Telegraph Employees submitted to the minister of posts a memorial in which, in addition to a number of demands relating to service conditions, it was demanded that the minimum annual salary of employees of group 3 (clerks, letter carriers,

messengers, etc.) should be raised to 3,500 lire (\$675.50 par), that of employees of group 2 (administrative officers) to 4,500 lire (\$868.50 par), and that of employees of group 1 (higher officers with a university degree, so-called *segretari*) to 5,000 lire (\$965 par). Through agitation and by adoption of passive resistance during the Christmas season of 1918 the employees had obtained an increase of 600 lire (\$115.80 par). A threat of strike in April, 1919, brought them a temporary bonus of 1,200 lire (\$231.60 par), which was granted to all Government employees without distinction. The minister of posts, after consideration of the memorial of the employees' federation, prepared a new salary schedule and new service regulations for submission to the Council of State and to Parliament, but before he could submit this proposal the entire cabinet resigned. The new minister, after examining the reforms proposed by his predecessor, entered into lengthy negotiations with the employees' federation which centered around the salary demands, and together with the prime minister and the minister of finance, finally declared to the federation that the salaries of Government employees had been fixed on a uniform basis for all Government departments by a special royal commission of seven previously appointed and that no change could be made in favor of the postal, telegraph, and telephone employees, as this would mean unfair discrimination against employees of other departments. In view of this incontestable declaration the federation had to content itself for the time being with concessions of a few disciplinary and organic reforms.

Three months later, however, the declaration made by the ministry was disproved by a decree of December 6, 1919, which granted to all classes of Government employees an annual increase of 1,000 lire (\$193 par), but specially excluded from this grant the postal, telegraph, telephone, and railroad employees. An inquiry as to the cause of this discrimination elicited the reply that owing to the large number of employees in the postal, telegraph, telephone, and railroad services and the unfavorable condition of the State's finances no increase could be granted to employees of these services without the approval of Parliament.

Final Demands of the Employees.

On January 8, 1920, a committee of the employees' federation, accompanied by members of the Lower House of Parliament representing all political factions, presented to the minister of posts the following demands: (1) Revision of the basic salary schedules and their equalization with those for other Government departments; (2) increase of compensation for overtime and night work, this increase to correspond to the increased cost of living; (3) extension of the

premiums for intensive work to all the personnel of the postal, telegraph, and telephone service; and (4) revision every three months of the cost-of-living bonus.

On January 10 the minister of posts replied to the demands of the federation by offering the following concessions:

Employees of group 1.—The basic salaries to be equalized to those in other Government departments.

Employees of group 2.—Chiefs of offices (*capi-ufficio*): Minimum salary, 5,600 lire (\$1,080.80, par); after 4 years' service, 6,200 lire (\$1,178.60, par); after 8 years, 6,900 lire (\$1,331.70, par); after 11 years, 7,600 lire (\$1,466.80, par); and after 14 years, 8,300 lire (\$1,601.90, par). Chief clerks and higher grade officers (*primi ufficiali, ufficiali*), etc.: Minimum salary, 3,500 lire (\$675.50, par); after 4 years' service, 4,000 lire (\$772, par); after 10 years, 4,500 lire (\$868.50, par); then through 7 promotions of 500 lire (\$96.50, par), each rising to 8,000 lire (\$1,544, par). Special officers (*applicati*): Minimum salary, 3,000 lire (\$579, par), then through 7 promotions of 300 lire (\$57.90, par), every 4 years, rising to 5,100 lire (\$984.30, par), and after a further 4 years to 5,500 lire (\$1,061.50, par).

Employees of group 3.—Clerks: Minimum salary, 2,800 lire (\$540.40, par) rising to a maximum of 5,400 lire (\$1,042.20, par) through 4 promotions at 3-year intervals and 3 further promotions at 4-year intervals.

Messengers and female clerks: Minimum salary 2,400 lire (\$463.20, par), rising to 3,000 lire (\$579, par) through 3 promotions at 4-year intervals of 200 lire (\$38.60, par) each, and thereafter rising to 3,600 lire (\$649.80, par) through 2 promotions at 4-year intervals of 300 lire (\$57.90, par) each.

Overtime: For officials the compensation to be increased from 1.25 to 2.25 lire (24.1 to 43.4 cents, par) per hour and for other employees from 0.75 to 1.25 lire (14.5 to 24.1 cents, par) per hour.

Nightwork: The extra compensation for work from 8 p. m. to midnight to be raised to 0.70 lire (13.5 cents, par) per hour and for work from midnight to 7 a. m. to 1 lire (19.3 cents, par) per hour.

Acting officers performing the duties of statutory officers to be promoted to full rank, retroactive to January 1, 1918.

The representatives of the federation declared themselves not satisfied with these concessions and submitted them to the national convention of the federation held in Rome on January 11. At this convention of the federation, held jointly with the linemen's union and the union of employees of group 3, it was resolved to reject the proposals, to dissolve the central committee of the federation, and to appoint a secret strike committee. It was asserted that the wage increases demanded would not exceed 35,000,000 lire (\$6,755,000, par), that the increase demanded by the postal, telegraph, and telephone employees represented an irreducible minimum, and that the minister had not granted in full a single one of the four demands of the federation.

The Strike.

During the temporary absence from Rome of the minister of posts, the strike committee of the federation, which had assured itself of the support of the General Federation of Labor, called a strike of postal,

telegraph, and telephone employees in the entire country to go into effect at midnight of January 13. Even on its first day the strike was very effective. All of group 3 of the postal and telegraph employees, which includes those employees who perform the collecting, assorting, and delivery of the mails, responded to the call. Group 2, which includes the medium salaried employees, responded in part, the members of a rival union, the Associazione Sindacale Postelegrafica having voted not to strike. Of the employees of the central administration about 40 per cent reported for duty. The union of substitute receiving clerks of the postal and telegraph stations also decline to order a strike and instructed its members to continue at work. The telephone service was greatly impaired, large numbers of the female employees not reporting for duty. Their absence was due less to a feeling of solidarity with the strikers than to intimidation.

In the absence of the minister of posts, the undersecretary of the department issued an order limiting the mail service, while the telegraph service was closed to the public and the press, and only official messages were dispatched. Interurban telephone service was also limited to official messages.

The public, which was greatly inconvenienced through the strike, sided strongly with the Government. Although admitting that the economic conditions of the striking employees required improvement, the public took the point of view that the ministry had met in great part the demands of the employees and that the latter should have placed their cause in the hands of Parliament. The ministry of posts received numerous offers of service from private citizens, students of the high schools, and retired post office and telegraph employees who offered to act as mail collectors, letter carriers, messengers, etc. The aeronautic branch and the signal service of the army were also ordered to assist the postal authorities. The large financial and industrial establishments in a number of large cities established an emergency mail service of their own. A few striking employees returned to work because they were disgusted with the revolutionary speeches made at strikers' meetings, but on the whole the strikers' ranks maintained a solid front.

During the entire period of the strike the Government and the striking employees engaged in animated discussions in the daily press. The Government put forth the argument that before the war the postal, telegraph, and telephone services were a source of revenue to the State, while now these services were operated with a large deficit, and that in view of this fact and the serious condition of Italian State finances the demands of the employees could not be granted in full. The employees, on the other hand, contended (1) that the fact that the operation of a Government establishment results in a

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deficit does not furnish a valid reason for refusing a wage increase to underpaid employees of this establishment; (2) that the deficit of public industrial establishments is largely due to inefficient administration; and (3) that efficient administration could be brought about by the creation of equipartisan administrative boards composed of representatives of industrial and commercial organizations on the one hand and representatives of the various groups of Government officials on the other. These contentions of the striking employees found support in some of the most influential papers.

Termination of the Strike.

On January 19, while the strike of the postal, telegraph, and telephone employees was still in effect, the railroad employees called a general strike. As the Government did not care to have simultaneously on hand two strikes of Government workers and as the railroad strike deprived the central strike committee of the postal, telegraph, and telephone employees of all means of communication with the branch committees, both the Government and the postal, etc., employees were inclined to enter negotiations. The Government gave assurances that no disciplinary measures would be taken against the strikers, agreed to pay their salaries during the strike, and promised to reconsider all the demands of the strikers. Accepting these assurances, the central strike committee called off the strike on the night of January 20 and on the following day all strikers returned to their work. In calling off the strike the committee, however, pointed out that this action had merely the significance of a truce, that the workers trusted in the good faith of the Government and expected full compliance with their original four demands, and, that, if the Government should fail to live up to the assurances given, the strike would be renewed.

The Railroad Strike.

Demands of the Syndicalistic Union of Railroad Employees.

IN SPITE of the fact that, although passenger and freight rates had been doubled during the war, the operation of the Italian State railways during the year 1919 had resulted in a deficit of 400,000,000 lire (\$77,200,000, par), a syndicalistic union of railroad employees, *Il Sindacato Ferrovieri Italiani*, initiated at the end of that year a movement for wage increases and for participation in the management of the railroads. One of the main causes of the deficit was the enormous increase in the wage bill of the railways, which had risen from 300,000,000 lire to 1,000,000,000 lire (\$57,900,000 to \$193,000,000, par).

The railway men were better paid than any other class of Government employees. Locomotive engineers, for example, were in re-

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ceipt of salaries much higher than those of judges, division chiefs of Government bureaus, or staff officers in the army and navy. To be sure, the cost of living in Italy had risen over 200 per cent as compared with prewar times and the high salaries of railroad men had a greatly reduced purchasing value, but so had the much lower salaries of other classes of wage workers. Yet, during the first week of January the *Sindacato* presented to the minister of transport a memorial which had the character of an ultimatum, for it intimated that a general railroad strike would be called unless the demands of the railroad men were granted by January 15. The demands incorporated in the memorial were the following:

1. A more rational reclassification of the operating departments of the railroads (rearrangement of classes, grades, and qualifications of the personnel).
2. Abolition of probationary service.
3. Fairer and more efficient rules for the hiring, competitive examinations, and promotion of employees, increases of basic wages and allowances, and representation of the employees on all boards deciding questions relating to the personnel.
4. Transfers not to be dependent on the patronage and arbitrary will of superiors.
5. Revision of the disciplinary regulations, with substitution of several grades of reprimand for fines.
6. Abolition of promotions out of turn, which it was claimed had generally been granted as premiums for servility and abjectness.
7. Abrogation of article 56 of the law No. 429 of 1907 which provides dismissal and loss of pay of striking railroad employees.
8. Eligibility of railroad employees to political offices.
9. Strict enforcement of the 8-hour day and of the weekly rest period with respect to all classes of employees.
10. Participation of the employees in the local railroad commissions and in the division and central administrative boards through representatives elected from among the members of the *Sindacato Ferrovieri*.

The following schedule of minimum and maximum salaries demanded by the various groups and classes of employees was appended:

MINIMUM AND MAXIMUM SALARY RATES OF ITALIAN RAILROAD EMPLOYEES AS DEMANDED BY THE *SINDACATO FERROVIERI* IN JANUARY, 1920.

[One lira at par=19.3 cents.]

Group and class of employees.	Annual salary.	
	Minimum.	Maximum.
<i>Office staff.</i>		
Principal clerks, storehouse superintendents, principal auditors, principal technical clerks, chief draftsmen.....	Lire. 10,000	Lire. 12,500
Clerks, first class, auditors, technical clerks, first class, principal draftsmen, principal technical assistants.....	7,400	11,300
Clerks, technical clerks, draftsmen, technical assistants.....	6,800	7,400
Principal typist stenographers (female).....	7,000	10,000
Typist stenographers (female).....	5,600	7,000
Document file clerks.....	6,800	9,700
Copyists, first class.....	6,200	9,400
Copyists.....	5,800	6,200
Chief messengers.....	6,800	9,700
Messengers, first class.....	6,600	8,600
Messengers.....	5,800	6,000
Servants, attendants.....	5,400	8,200

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MINIMUM AND MAXIMUM SALARY RATES OF ITALIAN RAILROAD EMPLOYEES AS
DEMANDED BY THE SINDACATO FERROVIARI IN JANUARY, 1920—Concluded.

Group and class of employees.	Annual salary.	
	Mini- mum.	Maxi- mum.
<i>Station staff.</i>		
Station masters, first class.....	<i>Lire.</i> 11,700	<i>Lire.</i> 13,200
Assistant station masters, first class, and chief telegraphers.....	11,500	13,000
Station agents.....	7,800	11,700
Assistant station agents and principal telegraphers.....	7,600	11,500
Dispatchers.....	7,100	11,700
Probationary clerks.....	5,400	
Clerks, first class.....	7,000	10,900
Clerks.....	6,200	7,000
Agents at flag stations, first class.....	7,000	10,900
Agents at flag stations.....	6,600	10,500
Rolling-stock foremen and chief switchmen.....	6,800	10,500
Chief assistant freight agent, chief waiting-room guards.....	6,200	9,400
Assistant freight agent, waiting-room guards.....	6,000	9,000
Rolling-stock gang foremen, switchmen foremen.....	6,400	9,400
Rolling-stock handlers, switchmen.....	6,000	9,000
Laborers.....	5,400	7,800
<i>Trainmen.</i>		
Chief superintendent of trainmen, chief traveling auditor.....	11,500	12,700
Superintendent of trainmen, traveling auditors, first class.....	10,900	11,700
Inspector of trainmen, traveling auditor.....	7,600	10,900
Chief passenger conductor.....	6,800	10,500
Assistant passenger conductor, freight conductor.....	6,000	9,000
Brakemen.....	5,500	8,600
Traverser operator.....	5,400	7,800
<i>Engine crew.</i>		
Roundhouse superintendent, first class.....	13,000	15,000
Roundhouse superintendent.....	10,000	13,000
Locomotive engineer, motorman—electric trains.....	9,000	13,000
Switch-engine drivers.....	7,800	11,700
Firemen and assistant motormen.....	7,000	10,900
Foremen of engine heaters and tenders.....	6,400	9,400
Engine heaters and tenders.....	6,000	8,600
<i>Line crews.</i>		
Track inspector.....	7,000	11,300
Section foreman.....	5,400	8,000
Gate guard (female), per day.....	4	6
<i>Supplies.</i>		
Chief storekeeper.....	10,000	13,500
Assistant chief storekeeper.....	7,600	11,500
Storekeepers.....	7,600	11,500
Storekeeper's clerks.....	6,600	7,600
Inspectors, first class.....	7,000	10,900
Inspectors.....	6,200	7,000
Foremen of labor gangs.....	6,000	9,000
Laborers.....	5,400	7,800
<i>Watchmen.</i>		
Captain of the watch.....	6,600	9,700
Watchmen.....	5,700	8,800
<i>Unskilled labor in shops.</i>		
Foremen of laborers.....	6,200	9,000
Oilers.....	5,500	8,200
Laborers.....	5,400	7,800
<i>Mechanics.</i>		
Master mechanics, first class.....	11,700	13,600
Master mechanics.....	8,600	11,700
Chief testers, chief foremen.....	8,000	11,700
Testers, foremen.....	7,000	11,300
Skilled workers, first class.....	7,000	10,900
Skilled workers, second class.....	6,600	10,100
<i>Archives.</i>		
Chief and assistant chief keeper of records.....	10,100	12,300
Keeper and assistant keeper of records.....	7,400	11,300
Clerks, first class.....	7,400	11,000
Clerks.....	7,000	7,400

A study of the preceding table shows that it does not include high administrative officials, who certainly also deserved salary increases if increases were to be granted to the employees of medium and low rank. But even if the high officials are left out of consideration, the salaries proposed for employees of medium and low rank represent such a large increase over present salaries that the granting of them would involve a further burdening of the State budget to the amount of 750,000,000 to 800,000,000 lire (\$144,750,000 to \$154,400,000, par). Moreover, the salaries proposed, although including the high-cost-of-living bonus, computed at 1,200 lire (\$231.60, par), and a number of other allowances, do not include the local allowance (*soprasoldo di localita*) granted to each employee, which is based on the size of the locality in which he resides. This allowance at the time amounted to about 10 per cent of the salary and could never exceed 840 lire (\$162.12, par) per year. According to the demands of the Sindacato this allowance would vary between a minimum of 500 lire (\$96.50, par) and a maximum of 2,000 lire (\$386, par). In addition the Sindacato demanded the granting of a family allowance of 1 lira (19.3 cents, par) per day for each dependent member of the family of each employee, who is living in his household.

The Italian press condemned the economic as well as the organic and political demands of the railroad employees as preposterous. It pointed out that the present condition of the State finances precludes even the considering of the enormous salary increases demanded in the memorial, and that the granting of such large increases to the railroad employees would mean gross discrimination against other less well remunerated classes of Government employees. The demands as to abolition of fines and of promotions out of turn for merit would lower the morale and efficiency of the personnel. Concerning the demand for representation of the employees on the administrative board of the railroads, the press pointed out that even if the Government should grant this demand, the Sindacato Ferroviieri practically demands a monopoly of this representation, although over half of the railroad employees belong to no organization at all and a considerable number of the organized employees are members of other organizations. Thus, the Sindacato Ferroviieri, representing merely a majority of the organized employees, wanted the Government to ignore and suppress the unorganized employees and the minority organizations.

Reply of the Government.

Shortly after receipt of the memorial of the Sindacato Ferroviieri a cabinet council discussed the demands of the railroad employees. The cabinet, in a statement given out on January 10, showed great

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inclination to conciliate the railroad employees by far-reaching concessions. The text of this statement was as follows:

In its recent sessions the cabinet council, while examining the situation of the railroad employees, has resolved to admit three representatives of the personnel as members of the administrative board of the railroads. These three representatives shall for the first time be elected by direct vote of the employees, and, in order that the minorities be also represented, the ballot used shall contain two tickets. The administrative board thus constituted shall—

(a) On the basis of concrete proposals and at the earliest possible date draft a law recognizing the organizations of railroad employees and providing for their proportionate representation on the board itself, the representatives thus elected to supplant the above three representatives;

(b) Draft new basic schedules to be submitted for the approval of Parliament, these schedules to provide for reduction of the present personnel, the simplification of the service, and such other measures as are required to assure a normal financial return from the operation of the railroad.

(c) Put into effect the 8-hour day and the weekly rest, in the first place in the case of those groups of employees who would have been granted the 8-hour day during December of last year, and gradually within the year 1920 for all other groups of employees.

The cabinet council, in consideration of the fact that the preparation of the new basic schedules will require some time, has authorized the minister of finance to make an extraordinary disbursement of 100,000,000 lire (\$19,300,000, par) which shall be expended as follows:

(a) Five million lire (\$965,000, par) for subsidies to railroad employees' cooperative stores.

(b) Five million lire (\$965,000, par) for premiums to temporary employees who have been in continuous service over one year—gatekeepers and freight-house watchmen.

(c) Ninety million lire (\$17,370,000, par) to be distributed in two equal payments payable at the end of January and of February, to permanent and probationary employees.

On January 15 the minister of transport officially informed the Sindacato of the above concessions by the cabinet council, also informing them that all employees would receive two premiums, one payable at the end of January and one at the end of February, the subsidy in the case of permanent employees to amount to 300 lire (\$57.90, par), in the case of temporary employees to 100 lire (\$19.30, par), and in that of gatekeepers to 50 lire (\$9.65, par).

Thus the Government was willing to grant some of the most important demands of the employees, such as representation on the administrative board and the 8-hour day. The demand for salary increases is met half way by the immediate grant of a subsidy and by the proposed submission of a new salary schedule to Parliament.

Rejection of the Government's Concessions.

In view of the conciliatory attitude of the Government it should reasonably have been expected that the railroad employees would accept the immediate concessions made to them, await the action of the administrative board and of Parliament with respect to the prom-

ised new salary schedule, and desist from calling a strike. But as in other industrial disputes the agitation of a small radical minority prevailed.

Of the 167,000 railroad employees in Italy about 67,000 are organized and the remaining 100,000 are not organized. The organized employees are distributed among three organizations, besides the *Sindacato Ferrovieri*. These three other organizations, with a total membership of 27,000, were opposed to a strike and willing to accept the concessions made by the Government. As regards the 100,000 unorganized employees it may be safely assumed that they also were not in favor of a general strike. Only the *Sindacato Ferrovieri* resolved to reject the Government's proposals and to call a general strike. Thus only 40,000 out of a total of 167,000 employees, or less than one-fourth, precipitated a tie-up of the Italian railroads.

The Strike.

On the evening of January 19, at a meeting held in Rome and attended by about 3,000 railroad employees, a general strike was called by the *Sindacato Ferrovieri*, to become effective on January 20 at 6 a. m. Simultaneously with the calling of the strike by the *Sindacato* the other organizations of railroad employees issued a joint proclamation condemning the action of the *Sindacato* and appealing to their members to continue at work.

The Government had been expecting that a strike would be called and had taken extensive measures to maintain a train service between all important centers. In anticipation of the strike it had moved large supplies of food, fuel, and raw materials to all large cities. The strike was not so successful as the *Sindacato* had hoped. Barely one-third of the men went on a strike, but as the strikers included the majority of the locomotive engineers, firemen, conductors, and brakemen, traffic was badly crippled. The strike was most intensive in the northern districts; in the central districts it was only partial; and in the southern districts and Sicily traffic was nearly normal.

The Government ordered the temporary employees to return to work by a certain date, but it was not until the strike had been going on for seven days that a similar order was issued to the permanent employees. Although daily reports received by the ministry of transport indicated greatly improved traffic conditions and showed that the strike was a failure, the Government entered into negotiations with the strikers' leaders. The *Sindacato* receded from its unreasonable demand that it should be the sole representative of the employees on the administrative board, and since most of the other demands of the employees had been granted by the Government before the strike, the only question to be settled was whether the strikers should be paid wages for the time they were absent from

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work, and whether the promotions of the men who remained at work should be canceled. On January 29 the Government concluded an agreement with the strikers the principal clauses of which were as follows:

1. All employees who have taken part in the strike will be reinstated in their former positions.
2. The pay of the striking employees accrued during the period of the strike shall be deducted from their salaries and paid into the railroad employees' housing fund by the Government.
3. Reaffirming the principle of the 8-hour day for all workers in private and State industries, the 8-hour day shall be actually introduced not later than April 30 for all engine crews, not later than June 30 for all train crews, and at the earliest possible date for all other railroad employees.
4. Regulations for the introduction of the 8-hour day shall be discussed and issued by the administrative board, to which shall be admitted in an advisory capacity three members of each of the eight groups of employees, these members to be elected by the groups themselves, with proper representation of the minorities.
5. The administrative board shall draft salary schedules in which shall be included premiums and allowances, with the exception of the cost-of-living bonus. These schedules shall be submitted by the Government to Parliament, together with the memorial of the *Sindacato Ferrovieri*.
6. The railroad employees shall, with recognition of the minorities, elect five members of the administrative board. In drafting the new service regulations the administrative board shall make provision for the establishment of local commissions.

The *Sindacato*, which on January 30 itself ordered the men to resume work, completely failed to make the strike universal, and obtained no concessions that had not already been granted. In spite of a few isolated attempts at sabotage, it provoked no revolutionary demonstrations, and failed to induce any other bodies to declare a sympathetic strike. The Italian nation was the real loser by the strike, for the financial loss caused to the State ran into hundreds of million of lire. Masses of perishable goods were ruined, and the rate of exchange of the lire experienced a further sharp decline.

CONCILIATION AND ARBITRATION.

Conciliation and Arbitration in New Zealand.

A PAMPHLET bearing this title has been issued by the National Industrial Conference Board.¹ This study is put forth as a review of the experience of New Zealand, which covers the longest period of any country for this type of legislation. The act of 1894 provided for the principles of conciliation and arbitration at a time when the country was but little developed industrially, so that almost the whole history of its development has taken place under the influence of this law. While conciliation is a vital part of this system, the principle of arbitration gives it its background and effectiveness. "The former method, both in theory and in practice affords an opportunity for differences to be completely or partly settled. The latter secures the final adjustment of any unsettled elements of the dispute and the enforcement of the agreement upon all, both employers and workers, engaged in the industry."

The first consideration is of the development of the system, which involved as an essential factor the existence of labor organizations. Indeed the subtitle of the act of 1894 was "an act to encourage the formation of industrial unions and associations." Conciliation was to be effected by boards made up of representatives of industrial unions of employers and workers respectively, in equal numbers, the chairman to be elected by the membership from outside their number. In case of failure of agreement a court of arbitration was resorted to. This was to consist of three persons, one of whom was to be a judge of the supreme court. Amendments and revisions have been made from time to time, various consolidations being made, that of 1908 being the existing law, though subsequent amendments have been added. The report summarizes these various amendments. Important among them are the provisions for preferential treatment of union members and the imposition of a penalty for strikes or lockouts pending the disposition of a dispute. It is also provided that disputes may go directly to a court of arbitration without prior attempts at conciliation. In 1908 conciliation boards were abolished and councils substituted therefor. Industrial commissioners were assigned to districts, and, when a dispute is referred to one of them, he obtains the names of suitable "assessors" from both sides and from

¹ Conciliation and arbitration in New Zealand. Research report No. 23, December, 1919. National Industrial Conference Board, Boston, Mass. 46 p.

the industry in which the dispute exists. This involves the formation of a new council for each dispute. While the original principle of the system is unchanged by the amendments, there is a tendency to give more definiteness and effectiveness to the processes involved and to penalize all activities tending toward or creating either strikes or lockouts.

The number of employer unions grew from 121 with a membership of 3,630 in 1907 to 149 with a membership of 5,819 in 1914; in 1917 there were 145 with 5,390 members. Workers' unions showed a similar fluctuation, there being 310 with a membership of 45,614 in 1907 and 403 with a membership of 73,991 persons in 1914; in 1917 there were 382 unions with 72,873 members. These organizations lie at the foundation of the administrative methods. Employees are protected in their membership, and awards are binding upon every employer engaged in the industry covered by the awards, and upon every worker employed by such employer. Penalties lie against either party committing a breach of the award. Each award names a minimum wage which is generally a compromise between the demands of the union and the offers of the employers. In practical working this minimum wage does not dominate. "In our manufacturing industries at least an average of 50 per cent of the workers received more than the rate granted in the awards of the court of arbitration."

A labor disputes investigation act, modeled after the Canadian act, was provided in 1913, and this affords additional machinery for the investigation of disputes. This applies only to groups of workers not at the time bound by awards or industrial agreements, and to the employers of such workers. It provides a penalty for strikes or lockouts until after due notice or time for investigation, and also during the term of any agreement.

The proportion of disputes settled by conciliation and by arbitration has varied considerably at different times, though the average total shows a practically even distribution—49.7 per cent for conciliation and 50.3 per cent for arbitration. The ratio was practically one to two from 1894 to 1901, 1 to 17 from 1902 to 1908, and two to one from 1909 to 1918. During the first 12 years of existence of the act there were no strikes whatever, and the total reported from 1894 to 1918 inclusive was 169. Most of these took place in the years 1911 to 1914, inclusive, 46 occurring in the last year alone. The next year this number dropped to four, and in the three succeeding years there were 7, 8, and 6 strikes, respectively.

The number of these strikes, though comparatively small, is sufficient proof that the system has not given universal satisfaction. At times the employers complain and at other times it is the workmen who give expression of a sense of grievance. Prosecution has been

necessary to enforce awards, there being 69 prosecutions in 1911 and 50 in 1913. The next highest number is 17 in 1917 while in 1915, 1916, and 1918 none were found necessary. In summing up, it is said that the system, "while by no means curing industrial unrest, has shown the value of conciliation as a means of settling industrial disputes and preventing them from becoming more serious." The attitude of the courts has tended to check unreasonable demands, and "it must be borne in mind that the efficacy of conciliation may be attributable in part to the existence of the principle of compulsory arbitration, which might easily make the two parties more disposed to compromise, on grounds of expediency, if for no other reason."

PUBLICATIONS RELATING TO LABOR.

Official—United States.

CALIFORNIA.—*State Board of Education. Documents relating to vocational education. Fiscal year 1919-20. Sacramento, 1919. 80 pp. Bulletin No. 23-A.*

— *State Library. Books for the blind. Circular and finding list. Fifth edition. Sacramento, July 1, 1919. 189 pp.*

ILLINOIS (CHICAGO).—*Department of Health. Report and handbook for the years 1911 to 1918, inclusive. Chicago, 1919. 1,535 pp.*

The report of the bureau of sanitation, which is of special interest to labor, is in five parts, devoted respectively to History of the bureau, Administrative and inspection methods, Division of plumbing and new buildings, Division of housing and sanitation, and Division of ventilation. The report of the last division considers, among other matters, ventilation standards, the effect of ventilation on health, and administrative and inspection methods employed by the division, and suggests that the division should be reorganized on an engineering basis and its scope broadened to include those features in health conservation that are clearly of an engineering nature, namely: Heating, ventilation, illumination, and industrial hygiene.

MARYLAND.—*Industrial Accident Commission. Fifth annual report. November 1, 1918, to October 31, 1919. [Baltimore, 1920.] 27 pp.*

This report is reviewed on pages 166 and 167 of this issue of the MONTHLY LABOR REVIEW.

NEW YORK.—*Industrial Commission. Bureau of Industrial Code. Rules relating to work in compressed air. New York, 230 Fifth Avenue, 1920. 16 pp. Industrial Code Bulletin No. 22.*

VIRGINIA.—*Industrial Commission. First annual report for the year ending September 30, 1919. Richmond, 1920. 121 pp.*

A digest of this report is given on pages 168 and 169 of this issue of the MONTHLY LABOR REVIEW.

UNITED STATES.—*Department of Commerce. Report of the secretary and reports of bureaus, 1919. Washington, 1920. 1,071 pp.*

Subjects of interest to labor considered in the report of the secretary are the use of motion pictures in industry, superannuation and retirement, and the work of the industrial board and the industrial cooperation service of the department.

— *Bureau of the Census. Transportation by water. 1916. Washington, 1920. 230 pp.*

The number of persons employed on both land and sea in connection with water transportation as reported for 1916 was 236,882, which is 48,534, or 25.8 per cent, more than were so employed in 1906. Of these, 153,301, or 64.7 per cent, were employed on vessels, being an increase of 12,372, or 8.8 per cent, over the number reported in 1906.

The relative increase in the wages of employees on vessels was much larger than that in the salaries and wages of employees on land, 44.1 per cent for the former compared with 19.6 per cent for the latter. The wages of the men aboard ship constituted 73.3 per cent of the total salaries and wages in 1916 and 69.5 per cent in 1906.

— *Department of Labor. Bureau of Immigration. Immigration laws (act of February 5, 1917). Rules of May 1, 1917 (fourth edition—February, 1920). [Amendment to rule 22.] Washington, 1920. 108 pp. Map.*

UNITED STATES.—*Department of Labor. Children's Bureau. Every child in school. A safeguard against child labor and illiteracy. Washington, 1919. 15 pp. Children's year follow-up series No. 3. Bureau publication No. 64.*

In this account of measures adopted in 44 States during 1918 to inaugurate a back-to-school and stay-in-school movement the need for a better enforcement of the child-labor laws and higher standards for the protection of working children in every State is emphasized. The census of 1910 gives the number of employed children between the ages of 10 and 16 years as approximately 2,000,000. About three-fourths of these are in agricultural pursuits. Less than 300,000 children are affected by the provisions of the Federal child-labor law. Employment on farms and domestic service are exempt from the restrictions of State laws. It has been found that the States which have a high percentage of illiteracy also have a high percentage of rural child labor. Minimum standards for children entering employment formulated at the Children's Bureau conferences in May and June, 1919, are incorporated as a part of the bulletin.

— *Department of the Interior. Bureau of Mines. A glossary of the mining and mineral industry, by Albert H. Fay. Washington, 1920. 754 pp. Bulletin 95.*

This glossary "presents in one comprehensive volume the available standard, technical terms relating to the mining and mineral industry, as well as provincialisms that have been or are now in use in English-speaking countries."

— *Employees' Compensation Commission. Third Annual Report, July 1, 1918, to June 30, 1919. Washington, 1919. 185 pp.*

A digest of this report appears on pages 164 to 166 of this issue of the MONTHLY LABOR REVIEW.

— *Foreman training courses. Washington, 1920. 108 pp. Bulletin No. 36. Trade and industrial series No. 7.*

— *Interstate Commerce Commission. Collisions, derailments, and other accidents resulting in injury to persons, equipment, or roadbed, arising from the operation of railways used in interstate commerce. April, May, and June, 1919. Washington, 1920. 31 pp. Accident Bulletin No. 72.*

— *Railroad Administration. Division of Labor. Women's Service Section. Number of women employed and character of their employment for dates of January 1, April 1, July 1, October 1, 1919. (Class I roads.) Eastern, Southern, and Western territories by roads. Washington, 1920. 34 pp.*

Official—Foreign Countries.

AUSTRALIA (QUEENSLAND).—*Government Statistician's Office. Statistics of the State of Queensland for the year 1917. Brisbane, 1918.*

Included in the data given in Part IV, are duties, fees, and taxes under the Workmen's Compensation Act, the Factories and Shops Act, the Contractors' and Workmen's Lien Act, and the Labor Exchanges Act, and Part VIII, in addition to other information, contains rates of wages, and wholesale and retail prices of articles of general consumption in Brisbane.

— (VICTORIA).—*Government Statist. Forty-first annual report on Friendly Societies, for the year 1918. Melbourne [1919]. xvi, 30 pp.*

Reports a total of 46 societies with 1,496 branches, having 149,558 members, and an annual income of £658,435 (\$3,204,273.93 par) in 1918.

BELGIUM.—*Ministère de l'Industrie, du Travail et du Ravitaillement. Administration des Mines et Inspection du Travail. La situation des industries Belges en décembre 1919. Brussels, 1920. 41 pp.*

Two earlier reports on the industrial situation in Belgium since the war were issued in February and June, 1919, respectively. (See MONTHLY LABOR REVIEW, Novem-

ber, 1919, p. 350.) This last investigation includes all mines under the supervision of the Administration of Mines and the industrial establishments employing 20 or more persons in 1914.

In comparing the number of persons employed in mines and metallurgical establishments in December, 1919, with the number so employed in December, 1913, the following data are given: Total number employed in December, 1913, 230,538; in December, 1919, 201,648. In industrial establishments there were 412,462 persons employed at the first date and 289,172 at the latter date.

In December, 1918, the number of unemployed persons to whom unemployment aid was being furnished exceeded 800,000. By the end of 1919 this number had been reduced to 120,000. On June 29, 1919, unemployment benefits paid for the two preceding weeks amounted to 12,353,015 francs (\$2,384,131.90, par) and for the two-week period ending November 16, 1919, the amount of such benefits was 5,298,122 francs (\$1,022,537.55, par).

CANADA (NOVA SCOTIA).—*Department of Public Works and Mines. Annual report on the mines, 1919. Halifax, 1920. 74 pp.*

States that during the year ending September 30, 1919, there were 20 fatal accidents in coal mines, which was a decrease of 102 when compared with 1918, during which year one explosion caused 88 deaths. The death rate per one thousand men employed in coal mines was 1.86 as compared with 11.77 for the preceding year. The number of men employed in the coal mines for the year ending September 30, 1919, was 12,925.

— (ONTARIO).—*Department of Labor. Mother's allowances; an investigation. Toronto, 1920. 126 pp.*

A summary of the contents of this report is published on pages 170 and 171 of this issue of the MONTHLY LABOR REVIEW.

DENMARK.—*Arbejdsanvisningsdirektøren. Indberetning for Finansåret 1918-1919. Copenhagen, 1920. 15 pp.*

The report of the director of the Danish employment exchanges for the fiscal year 1918-19 shows the existence of 62 labor exchanges. These exchanges received 92,582 applications for positions, and placed 25,855 persons. The cost of the system was 284,149.80 crowns (\$76,152.15, par), or 10.99 crowns (\$2.95, par) per person placed.

FRANCE.—*Ministère du Travail et de la Prévoyance Sociale. Direction du travail. Encouragements aux sociétés coopératives ouvrières de production et aux sociétés coopératives de consommation. Lois, décrets, statuts. Paris, 1919. 60 pp.*

Laws, decrees, and statutes regarding assistance to workmen's societies of cooperative producers and cooperative consumers.

GREAT BRITAIN.—*Board of Trade. Industrial Life Assurance Committee. Report on the business of industrial assurance companies and collecting societies. London, 1920. 25 pp. Cmd. 614. Price, 4d. net.*

— — — *Standing committee on the investigation of prices. Profiteering act, 1919. Report on metal bedsteads. London, 1920. 6 pp. Cmd. 607. Price, 1d. net.*

— — — *Report on motor fuel. London, 1920. 10 pp. Cmd. 597. Price, 2d. net.*

— — — *Report on the standard boot and shoe scheme. London, 1920. 4 pp. Cmd. 592. Price, 1d. net.*

— *Exchequer and Audit Department. National insurance (health) acts, 1911 to 1917. National health insurance fund accounts for the year ended 31st December, 1917. Accounts of the national health insurance fund (England), the Welsh national health insurance fund, the Scottish national health insurance fund, and the Irish national health insurance fund established pursuant to sections 54 (1), 82 (2), 80 (2), and 81 (2), respectively, of the National Insurance Act, 1911 (1 and 2 Geo. 5, C. 55), showing the receipts and payments during the year ended 31st December, 1917; together with the report of the comptroller and auditor general thereon. London, 1920. 37 pp. 13. Price, 4 d. net.*

GREAT BRITAIN.—Home Office. *Labor administration in America. Notes of inquiries made by Home Office representatives attending the Washington Labor Conference.* London, 1920. 16 pp. Cmd. 606. Price, 2d. net.

— Ministry of Food. *Committee on the wholesale food markets of London. First report.* 23rd February, 1920. London, 1920. 8 pp. Cmd. 634. Price, 1d. net.

— Ministry of Health. *National health insurance. The national health insurance (medical benefit) regulations, 1920, made by the Minister of Health under the national insurance (health) acts, 1911 to 1919.* London, 1920. 57 pp. 31. Price, 6d. net.

— National health insurance bill, 1920. *Report by the Government actuary upon the financial provisions of the bill.* London, 1920. 10 pp. [Cmd. 612.] Price, 2d. net.

— Ministry of Labor. *General statement of the work of the employment department.* London, February, 1920. 9 pp. Chart. 369.

This is the statement of 1918, brought up to date and reissued in February.

— Unemployment insurance bill. *Further memorandum explanatory of the financial provisions.* London, 1920. 3 pp. Cmd. 605. Price, 1d. net.

— Unemployment insurance bill, 1920. *Memorandum on financial clauses.* London, 1920. 2 pp. Cmd. 604. Price, 1d. net.

— Finance department. *National insurance (unemployment) acts, 1911 to 1918. Unemployment fund account, 1917-18. An account of the unemployment fund established pursuant to section 92 (1) of the national insurance act, 1911 (Part II), 1 and 2 Geo. 5, C. 55, showing the receipts and payments during the period 15th July 1917, to 13th July 1918; together with the report of the comptroller and auditor general thereon.* London, 1920. 6 pp. 7. Price, 1d. net.

— Ministry of Pensions. *Report of Mr. Marlay Samson, an officer of the Ministry of Pensions appointed to hold a public inquiry into the conduct of the East Ham local war pensions committee.* London, 1920. 36 pp. Cmd. 575. Price, 6d. net.

— Second annual report from 31st March, 1918, to 31st March, 1919. London, 1920. 90 pp. 39. Price, 9d. net.

— National Insurance Audit Department. *National insurance (health) acts, 1911 to 1918. Sixth report on the work of the department.* 1919. London, 1920. 18 pp. Cmd. 629. Price, 2d. net.

— Oversea Settlement Committee. *Report for the year ended 31st December, 1919.* London, February, 1920. 19 pp. Cmd. 573. Price, 3d. net.

— Parliament. House of Commons. Standing Committee A. *Report on the coal mines (emergency) bill, with the proceedings of the committee.* London, 1920. 12 pp. 36. Price, 2d. net.

— Registrar of Friendly Societies. *Reports for the year ending 31st December, 1918. Part A, General Report.* London, 1920. vi, 72 pp. Price, 9d. net.

— Treasury. *Staffs employed in Government departments. Statement showing the staffs of Government departments on 1st January, 1920, compiled from returns furnished to the Treasury.* London, 1920. 3 pp. Cmd. 546. Price, 1d. net.

— (IRELAND).—Local Government Board. *Annual report for the year ended 31st March, 1919.* Dublin, 1920. lxx pp. Cmd. 578. Price, 4 d. net.

ITALY.—*Laws, statutes, etc. Compulsory insurance against unemployment in Italy. Royal decree, 19th October, 1919. Translation of text, with explanatory notes. Issued by the Ministry of Labor (Intelligence and statistics department) of Great Britain.* London, 1920. 16 pp. Cmd. 613. Price, 2d. net.

A digest of this decree was issued in the MONTHLY LABOR REVIEW for April, 1919, pages 191-198.

LEAGUE OF NATIONS.—*International Labor Conference. Draft conventions and recommendations adopted by the conference at its first annual meeting, 29 October-29 November, 1919. (Authentic texts.)* London, 1920. 38 pp. Cmd. 627. Price, 6d. net.

French and English text in one pamphlet.

NETHERLANDS.—*Central Bureau voor de Statistiek. Verslag, 1917, 1918. The Hague, 1918, 1919. 2 vols. 38, 44 pp.*

NETHERLANDS.—*Centrale Commissie voor de Statistiek. Jaarverslag, 1917, 1918. The Hague, 1918, 1919. 2 vols. 79, 160 pp.*

The four volumes listed in this and the preceding entry comprise the administrative reports of the Central Statistical Organization of the Netherlands, and its advisory commission for the years 1917 and 1918. All official statistics are centralized in this bureau and its advisory commission.

— (AMSTERDAM).—*Arbeidsbureau. Elfde Jaarverslag, 1918. [Amsterdam, 1919.] 8 pp. (Reprint from Verslag van den Toestand der Gemeente Amsterdam over 1918.)*

At the beginning of 1919 there were 9,426 employees on the pay roll of the department of public works and the various municipal establishments of the city of Amsterdam. Of that number 8,409 had been full-time workers, i. e. had worked 300 days per year during the year 1918. The average weekly wages in all departments and establishments increased from 15.54 florins (\$6.25, par) in 1913 to 28.27 florins (\$11.36, par) during the first half of 1919. The average weekly wage is nearly the same in all departments, judging from the figures shown for 1919.

— *Gemeente arbeidsbeurs. De Amsterdamsche arbeidsbeurs; Haar geschiedenis, haar huidige werkwijze en haar toekomst. Amsterdam [1919], 66 pp., illustrated.*

An account of the history and present work of the municipal labor exchange of Amsterdam issued on the occasion of the opening of the new quarters in 1918.

— *Verslag betreffende de Gemeente-arbeidsbeurs te Amsterdam over het jaar 1918. [Amsterdam, 1920.] 68 pp. plates. Verslagen van bedrijven, diensten en commissiën der Gemeente Amsterdam, 1918, No. 2.*

Report of municipal labor exchange of Amsterdam for the year 1918.

NEW ZEALAND.—*Registrar-general's office. Statistics for the year 1918. Volume I. Blue book. Population and vital statistics. Law and crime. Wellington, 1919. 295 pp.*

NORWAY.—*Stats Småbruk-og boligbank. Beretning om den Norske arbeiderbruk-og boligbanks virksomhet, 1ste juli 1913 til 30te juni 1918. [Christiania, 1914-1919.] 5 vols. Stortings meddelelser, No. 1, 1914-1919; 1916 published as Stortings proposition no. 155.*

The above reports comprise the operations of the Norwegian housing and small-holdings loan bank, the function and work of which are described in Bulletin 153 of this Bureau.

The operations of the bank since its creation in 1903 are summarized in the table below:

OPERATIONS OF THE NORWEGIAN SMALL-HOLDINGS AND HOUSING LOAN BANK OF NORWAY, JULY 1, 1903 TO JUNE 30, 1918.

[One crown at par=26.8 cents.]

Fiscal year ending June 30—	Loans for—					
	Small-holdings.		Housing.		Total.	
	Num-ber.	Amount.	Num-ber.	Amount.	Num-ber.	Amount.
		<i>Crowns.</i>		<i>Crowns.</i>		<i>Crowns.</i>
1905 ¹ (1½ years).....	1,074	1,431,750.00	1,038	1,333,850.00	2,112	2,765,600.00
1906 ¹	1,526	1,900,250.00	953	1,146,250.00	2,479	3,046,500.00
1907 ¹	1,419	1,835,480.00	786	996,620.00	2,205	2,832,100.00
1908 ¹	1,359	1,849,500.00	786	1,021,187.00	2,145	2,870,687.00
1909 (1½ years).....	1,469	2,079,100.00	985	1,365,000.00	2,454	3,444,100.00
1910.....	1,345	1,906,050.00	961	1,363,600.00	2,306	3,269,650.00
1911.....	1,701	2,482,550.00	1,266	1,899,800.00	2,967	4,382,350.00
1912.....	1,686	2,613,750.00	1,367	2,034,750.00	3,053	4,648,500.00
1913.....	1,561	2,548,300.00	1,318	2,045,250.00	2,879	4,593,550.00
1914.....	1,712	2,812,400.00	1,578	2,557,250.00	3,290	5,369,650.00
1915.....	1,043	1,751,150.00	757	1,201,700.00	1,800	2,952,850.00
1916.....	1,495	2,632,100.00	1,228	2,043,650.00	2,723	4,675,750.00
1917.....	1,356	2,378,050.00	1,149	1,852,450.00	2,505	4,230,500.00
1918.....	476	800,050.00	273	432,500.00	749	1,232,550.00
Total.....	19,222	29,020,480.00	14,445	21,293,857.00	33,667	50,314,337.00

¹ Fiscal year ending Mar. 31.

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OPERATIONS OF THE NORWEGIAN SMALL-HOLDINGS AND HOUSING LOAN BANK
OF NORWAY, JULY 1, 1902 TO JUNE 30, 1918—Concluded.

Fiscal year ending June 30—	Repayments on—			Balance outstanding.
	Small-holdings.	Housing.	Total.	
	<i>Crowns.</i>	<i>Crowns.</i>	<i>Crowns.</i>	<i>Crowns.</i>
1905 ¹ (1½ years).....	1,077.00	1,175.00	2,252.00	2,763,348.00
1906 ¹	3,227.50	22,658.00	25,885.50	5,789,962.50
1907 ¹	11,230.29	48,791.02	60,021.31	8,556,041.19
1908 ¹	27,320.54	76,586.19	103,906.73	11,322,821.46
1909 (1½ years).....	55,891.28	128,937.61	184,828.89	14,582,092.57
1910.....	53,237.05	147,027.01	200,264.06	17,651,478.51
1911.....	124,249.38	215,497.40	339,746.78	21,694,081.73
1912.....	170,586.78	304,805.57	475,452.35	25,867,129.38
1913.....	179,314.18	325,382.51	505,696.69	29,954,982.69
1914.....	201,232.35	331,827.44	533,119.79	34,731,512.90
1915.....	215,297.12	385,012.88	601,210.00	37,083,152.90
1916.....	303,066.11	536,202.54	839,268.65	40,919,634.25
1917.....	468,294.76	730,610.17	1,258,904.93	43,891,229.32
1918.....	637,678.13	920,192.27	1,557,870.40	43,565,908.92
Total.....	2,451,762.47	4,296,665.61	6,748,428.08	.....

¹ Fiscal year ending Mar. 31.

SWEDEN.—*Pensionsstyrelsen. Allmänna pensionsförsäkringen år 1918. Stockholm, 1920. 43 pp.*

The Swedish pension law (June 30, 1913), the operations of which for the year 1918 are reported in the document listed above, provides an old-age pension for every citizen upon attainment of the age of 67 years or upon becoming incapacitated for work, and after paying premiums for a specified number of years. The base premium is 3 crowns per year; it is increased by graded amounts in proportion to annual income. All persons 15 to 66 years of age are required to insure and to pay premiums.

The number of individuals applying, in 1918, for pensions for the first time, was 27,924. The total number of requests was 38,942. Of these requests 27,220 were granted and payments made in the sum of 2,075,753 crowns (\$556,301.80, par). Certain supplementary pensions under special clauses of the law were also made to the amount of 30,813 crowns (\$8,257.88, par).

SWITZERLAND.—*Assemblée Fédérale. Message du Conseil fédéral à l'Assemblée fédérale concernant l'attribution à la confédération du droit de légiférer en matière d'assurance-invalidité, vieillesse et survivants, et la création des ressources nécessaires pour les assurances sociales. [Berne.] June 21, 1919. 238 pp.*

Message of the Federal Council to the Federal Assembly concerning the right of the Confederation to legislate in matters concerning invalidity, old-age, and survivors' insurance, and the creation of the necessary resources for social insurance.

Unofficial.

AMERICAN FEDERATION OF LABOR. *New Hampshire State Branch. Proceedings of the eighteenth annual convention, held at Rochester, July 15, 16, and 17, 1919. Rochester, Charles H. Bean, jr., secretary-treasurer, 1919. 54 pp.*

AMERICAN SOCIOLOGICAL SOCIETY. *The problem of democracy. Papers and proceedings, fourteenth annual meeting, held at Chicago, Ill., December 29-31, 1919. Chicago, University of Chicago Press, 1920. 295 pp. Publications. Volume XIV.* Papers of special interest are on Organized labor and Democracy, by Matthew Woll, and Americanization, by Jane Addams.

AMERICAN WOOD WORKING MACHINERY COMPANY. *American woodworking machinery for vocational training. Rochester, N. Y., 1920. 162 pp. Illustrated.*

ARNOT, R. PAGE. *Trade unionism: A new model.* London, Independent Labor Party, 1919. 16 pp.

Characterizing branch unions and craft unions as especial weaknesses in the system of modern British trade unionism, the author advocates industrial unionism as a means of correcting these weaknesses and making the trade-union an effective force. According to this plan the workshop is made the unit of organization. It includes also the creation of a district committee in each industry based upon the shop as its unit and forming a part of a district labor council representing all industries, and lastly a national industrial union made up of representatives of shop and district unions.

ASSOCIATION VALENTIN HAÛY POUR LE BIEN DES AVEUGLES. *Le retour à la terre du soldat aveugle. Avec une préface de Henri de Régner. Lettres des soldats aveugles offrant des exemples pratiques de réadaptation aux travaux agricoles, dédiés par l'Association Valentin Haüy aux agriculteurs blessés aux yeux qui veulent reprendre leur vie d'autrefois.* Paris, 1919. 55 pp. Illustrated.

A collection of letters written to the Association Valentin Haüy for the Benefit of the Blind, by blind soldiers, giving practical examples of their readaptation to agricultural labor.

BAYLE, F. *Les salaires ouvriers et la richesse nationale.* Paris, Dunod, 1919. 213 pp.

A discussion on modern systems of wage payments, including the Willans, Rowan, Taylor, and the Gantt systems. A chapter (V) is devoted to wages and war-time bonuses.

CANISY, CTE. DE. *La question ouvrière dans le Bassin de Briey.* Paris, Payot et Cie., 1919. 223 pp. Bibliothèque Politique et Economique.

Discusses the labor problem in the Bassin de Briey, which region, in 1913, supplied 70 per cent of the total iron output of France. The author believes the development of this region depends in great part upon the manner in which the labor question is settled.

CLEVELAND CHAMBER OF COMMERCE. *Committee on labor relations. Labor relations in Cleveland. A declaration of principles establishing a proper basis therefor.* [Cleveland] 1920. 5 pp.

States that public opinion is the most powerful force to bring about desired industrial conditions. The committee declares that employees should not intentionally restrict individual output in order to create an artificial scarcity of labor as a means of increasing wages or continuity of employment, and that employers should not restrict production to create an artificial scarcity of product in order to increase prices. The report considers production, wages, hours of work, working conditions, collective bargaining, open or closed shop, information and frankness, coercive measures, and settlement of labor disputes. The committee states that "the employees' right to strike and the employer's right to lock out his employees are both secondary to the public's right to service."

CONFERENCE OF STATE AND PROVINCIAL HEALTH AUTHORITIES OF NORTH AMERICA. *Proceedings of the thirty-fourth annual meeting, held at Atlantic City, N. J., June 6-7, 1919.* Concord, N. H., The Rumford Press, 1919. 142 pp.

Among the articles of interest to labor are recent developments in the United States in favor of health insurance, by John B. Andrews; Recent developments in the United States in opposition to health insurance as a national policy, by Dr. George E. Tucker, and Health insurance as a means of organized practice of medicine, by John A. Lapp.

DAVIS, PHILIP, ED. *Immigration and Americanization. Selected readings.* Boston, Ginn & Co., [1920.] 770 pp.

A handbook of addresses and articles on all possible phases of the subjects of immigration and Americanization, designed to meet the general public need of a summarization of the best literature upon these topics. The selections are arranged in two parts: Book I, Immigration; Book II, Americanization, and present both a

chronological and a logical development of the subject matter. As the value of this collection has been tested in courses for teachers of immigrants at Boston University, it is believed that it will prove useful in similar courses elsewhere.

DODD, EDWARD L. *Some dangers in establishing a pension system and the proper precautions.* Austin, Texas, January 20, 1919. 26 pp. *University of Texas Bulletin* No. 1905.

This paper undertakes to point out a few of the large features of pensions, in accordance with the author's belief that "it is possible to establish a pension system which will be equitable to all employees, present and future, and will be a great blessing to them," and in conclusion states certain propositions which he considers essential to a clear understanding of such a system.

DOUGLAS, PAUL H. *Absenteeism in labor.* New York, Academy of Political Science, 1919. Pp. 591-608. Reprinted from *Political Science Quarterly*, Vol. XXXIV, No. 4, December, 1919.

Considers the amount, losses, and causes of absenteeism, and suggests methods of reducing it. The losses are classified as (a) machinery or equipment rendered less efficient by the absence of the worker, (b) extra administrative and clerical force required, (c) lessened productivity of the absentee's associates, and (d) loss of profit upon the labor of the workman himself. The most important causes are given as sickness and ill health, accidents, long hours, women in industry, nature of the employment, prevalence of other work, payment of overtime bonus, lack of materials, climatic conditions, housing conditions, inadequate transportation facilities, liquor, wage income higher than standard of living, and separation of interests between workman and employer. In order to reduce the amount of absenteeism, the author suggests the establishment of efficient employment departments, the investigation of absences, the imposition of fines for tardiness and absence, and payment of bonuses for attendance, the improvement of working and social conditions, the cultivation of the cooperative spirit between employer and workmen, prohibition, competitive devices to stimulate interest, and a shorter working-day with the omission of the overtime bonus.

GARTON FOUNDATION. *The industrial council for the building industry. The story of a revolution in industrial development, together with the full text of the Foster report on organized public service in the building industry.* London, Harrison and Sons. 153 pp.

HILDEBRAND, KARL, COMP. *De Svenska Statsmakterna och Krigstidens Folkhushållning August, 1914-1918. Stockholm, 1916-1919.* 4 vols.

This is a compilation, under official authority, of Swedish experience during the war in the general field of industrial control, but emphasizing particularly the work of the Government regulating the food supply. The headings of the principal chapters indicate the scope of the work: (1) State loans and financing; (2) Money and banking; (3) Production and distribution of necessities; (4) Railroads and communication; (5) Tariffs, etc. There is an abundance of material on prices and unemployment.

HOBSON, S. G. *National guilds and the State.* London, G. Bell & Sons, Ltd., 1920. xix, 406 pp.

HODGEN, MARGARET. *Factory work for girls.* New York, The Woman's Press, 1920. 84 pp.

INDUSTRIAL COUNCIL FOR THE BUILDING INDUSTRY. *Building Trades Parliament. Annual meeting, in London, August, 1919. Minutes of proceedings [and Appendixes B1 and B2].* [London, 1919.] 31, 8 pp.

This report of proceedings includes as appendixes (a) The interim report of the building resettlement committee on the supply of building labor for the Government housing schemes; (b) Organized public service in the building industry; (c) First report of the safety and welfare committee. The supplementary pamphlet includes appendixes omitted from the original report.

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INDUSTRIAL COUNCIL FOR THE BUILDING INDUSTRY—*Quarterly meeting, November, 1919. [London, 1919.] 12 pp.*

A brief summary of the report on apprenticeship will be found on pages 119 to 122 of this issue of the REVIEW.

INTERNATIONALES SEKRETARIAT DES PERSONALS IN ÖFFENTLICHEN DIENSTEN UND BETRIEBEN. *Protokoll des Internationalen Kongresses des Personals in öffentlichen Diensten und Betrieben abgehalten in Amsterdam am 20., 21., und 22. Oktober, 1919. Berlin, 1920. 32 pp.*

A digest of the proceedings of the international congress of workers and employees in public services held at Amsterdam Oct. 20 to 22, 1919. The congress was attended by delegates of organizations from Belgium, Denmark, Germany, England, France, the Netherlands, Norway, and Sweden, representing 456,000 members. A large part of the discussions was taken up by controversies between the French and Belgian delegates on the one side and the German delegates on the other over the attitude of the international secretariat, which during the war was located in Berlin, toward the deportation of French and Belgian workers. These controversies were finally settled by a declaration of the German delegation satisfactory to the French and Belgian delegates. The former international secretary was given a vote of confidence, but still the congress resolved to move the secretariat to Amsterdam and elected N. Van Hinte (Holland) secretary. The congress elected a commission charged with the drafting of new by-laws and of a program of activities. The annual contributions per member and per year were fixed at 5 pfennings (1.2 cents, par) for Germany, 3 cents (1.2 cents, par) for Holland, 6 centimes (1.2 cents, par) for France and Belgium, and at equivalent amounts for all other countries. A resolution was adopted advocating the creation of a central organization for municipal workers in those countries in which such a central organization does not yet exist. It was also resolved to draft the new by-laws in such a manner that class conscious organizations of salaried public employees would be permitted and encouraged to affiliate with the international union.

KANEGAFUCHI SPINNING COMPANY (LTD.) (JAPAN). *Its constitution; how it cares for its employees and workers. Tokio, October, 1919. 108 pp. Tables.*

LABRY, RAOUL. *Une Législation Communiste. Recueil des lois, décrets, arrêtés principaux du gouvernement bolchéviste. Paris, Payot et Cie., 1920. XVIII, 590 pp.*

This is a collection of legislative measures enacted by the soviet government of Russia, including a few decrees issued by the Union of the Communes of the Northern district and of Moscow. There is a section devoted to Labor laws, Labor inspection service, Wages, and Social insurance.

LEGAL AID SOCIETY (NEW YORK CITY). *Forty-fourth annual report for the year 1919. New York, 1920. 78 pp.*

LEMAIRE, FERN. *Questions de régimes de salaires et d'organisation industrielle. Modes de rémunération. Salaires à primes. Taylorisme. Second édition. Liège, Imprimerie Henri Mambourg, [1920?] 124 pp.*

This volume discusses the various methods of wage payment and their effect on output and cost of production, the four chapters being devoted respectively to (1) maximum production; (2) traditional methods of wage payments; (3) premiums; and (4) the Taylor system.

MAXEINER, STANLEY R. *War contributions to industrial surgery. In Modern Medicine, Vol. II, No. 3. Chicago, Modern Hospital Publishing Company, March, 1920. Pp. 231-235.*

Advocates among other measures in industrial surgery more attention and better care of the slightly injured, the use of antitetanic serum in all industrial accident cases with abrasions of the skin, and the establishment of schools for the reeducation of the industrial cripple. This paper was read before the Hennepin County Medical Society, Minneapolis, January 14, 1920.

MERRICK, DWIGHT V. *Time studies as a basis for rate setting.* New York, The Engineering Magazine Co., 1919. 366 pp.

MUKHERJI, P. *The Cooperative Movement in India.* Second edition. Thacker, Spink & Co., Calcutta and Simla, 1917. 453 pp. *Indian Citizen series.*

Since March 25, 1904, the date on which the Cooperative Credit Societies Bill was passed, the growth of the cooperative movement in India has been rapid. In 1915 there were 17,327 cooperative societies, having 824,469 members, and capital to the amount of Rs. 8,96,61,722 (\$29,088,952, par). Since India is primarily agricultural, it is not surprising that of the above number 15,861, or about 92 per cent, are agricultural credit associations. The author points out that even this number is inadequate since there are in India 220,000,000 agriculturists to be financed. It is stated that by the aid of these associations "laborers have become owners; hopeless debt has been banished, and the money lender driven out; agriculture and industry have been developed, and the villagers in the poorest tracts have become prosperous; the illiterate man has turned toward education and the drunkard has been reclaimed; the middleman has been eliminated, the raiyat is getting full value for his produce and paying his rent with ease; village life has been stimulated by associated action and by the business education of the bank; punctuality, thrift, and mutual confidence are being taught; litigation has decreased, and morality has improved; activity has taken the place of stagnation and routine; associated action has replaced mutual distrust."

The book contains a discussion of the various types of societies, such as the cooperative stores, farmers' marketing and supply societies, housing associations, etc.

The greatest obstacle to the growth of cooperation, the author states, is the illiteracy of the people.

NATIONAL INDUSTRIAL CONFERENCE BOARD. *Changes in the cost of living, July, 1914-November, 1919.* Boston, December, 1919. 24 pp. *Research report No. 25.*

This report is reviewed on pages 88 and 89 of this issue of the MONTHLY LABOR REVIEW.

— *Conciliation and arbitration in New Zealand.* Boston, December, 1919. 46 pp. *Research report No. 23.*

A brief review of this report appears on pages 216 to 218 of this issue of the MONTHLY LABOR REVIEW.

— *A works council manual.* Boston, February, 1920. 32 pp. *Research report No. 26. Supplemental to Research report No. 21.*

This manual supplementing Research report No. 21, which was reviewed in the MONTHLY LABOR REVIEW for January, 1920, pp. 191, 192, is designed for the use of employers who wish to introduce works councils in their establishments. It outlines the procedure to be followed in instituting the different types of shop committee plans, and the appendixes give model drafts of constitutions for large and small establishments and several charts showing methods of procedure of the committees.

NATIONAL TUBERCULOSIS ASSOCIATION. *Transactions of the fifteenth annual meeting, Atlantic City, N. J., June 14, 16, and 17, 1919.* New York, 381 Fourth Avenue. [1920.] 606 pp.

NICHOLSON, J. SHIELD. *Inflation.* London, P. S. King & Son (Ltd.), 1919. 143 pp.

This book treats of the inflation of the currency as a result of the excess of public expenditure over the revenue of the country and the abandonment of the gold standard. The effect of this inflation upon wages and upon industrial unrest is discussed, and the author argues that the working classes will gain far more by a general fall in prices than by a continued rise in wages.

PARKER, CARLETON H. *The casual laborer and other essays.* N. Y., Harcourt, 1920. 199 pp.

Of this series of four articles, three, entitled "The casual laborer," "The I. W. W.," and "Motives in economic life," have previously appeared as magazine articles. The first essay, "Toward understanding labor unrest," written by Mr. Parker shortly

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before his death, is published for the first time. The purpose of this essay is to show that the causes of labor unrest are largely psychological, that labor unrest is the result of the repression of normal instincts and is fundamentally the same as discontent appearing in other fields of activity. The social environment of the casual worker, it is claimed, is such that he seeks compensation for social inferiority in strikes and sabotage, the reaction being defined as an ordinary mental disease of a functional kind. The remedy suggested is to adopt a new standard of normality, the first step in this direction being to break down inhibitions to free experimental thinking.

Mr. Parker's report of the wheat and hop fields riot of 1913, made to Hiram W. Johnson, then Governor of California, is published as an appendix to the volume.

ROBERTS, RICHARD. *The unfinished program of democracy.* London, *The Swarthmore Press (Ltd.)*. [1919.] 326 pp.

ROBERTSON, JAMES. *Labor unionism based upon the American shop-steward system.* Portland, Oreg. [1920.] 16 pp. Chart.

An explanation of the shop-steward movement in terms of industrial unionism.

SAFETY INSTITUTE OF AMERICA. *Safety fundamentals. Lectures given on alternate Saturday mornings from Feb. 1 to June 7, 1919, for the benefit of factory inspectors employed by the city of New York, the States of New York and New Jersey, and insurance companies operating in and near New York City.* New York, 1920. 228 pp.

The subjects of these lectures are The body which gets hurt, The injured body and its treatment, Protective clothing for men, Suitable work garments for women in industry, Safe heads and good eyes, Guarding machinery, Arrangement of machinery and working places, Heating and ventilation, Illumination, Nature's forces for and against workmen, and Safety education and shop organization.

SAMVIRKENDE FAGFORBUND. *Beretning om de Virksomhed, 1. April 1918—31. Marts 1919.* Copenhagen, 1919. 195 pp.

Annual report of the Danish Federation of Labor for the fiscal year ending March 31, 1919. The statement of the report concerning hours of labor is given on pages 108 and 109 of this issue of the MONTHLY LABOR REVIEW.

SCHIFF, MORTIMER L. *Profit-sharing.* New York, 1919. 24 pp. Reprinted from the *New York Times*, October 5, 1919.

SECRIST, HORACE. *Statistics in business, their analysis, charting, and use.* New York, McGraw-Hill Book Company, Inc., 1920. 137 pp.

The essential kinds of information for business executives and the best methods of securing, classifying, tabulating, and summarizing facts are treated in this book. A classification of the outstanding and basic facts of business includes information of various kinds about labor, capital, production, population, markets, land and building, transportation, and laws and policies. A section of bibliographical comments includes a number of Government publications such as the MONTHLY LABOR REVIEW, Monthly Summary of Commerce and Finance, and reports of several of the departments as among the most valuable sources of information on the particular subjects with which each deals.

STASSEN, DR. M. *La fatigue de l'appareil visuel chez les ouvriers mineurs.* Liège, 1914-1919. 233 pp.

This is a scientific study of the effect of underground work upon the organs of vision, with especial reference to coal mines.

STONE, GILBERT. *The British coal industry.* London and Toronto, J. M. Dent & Sons, (Ltd.), 1919. 188 pp.

The author's aim is to stimulate production as the chief remedy for the present deplorable condition of the coal industry in Great Britain. He gives an historical sketch, to date, of working conditions and legislation relating to the industry, together with "well-ascertained facts" as to the advantages or disadvantages of various theories

of management including statements of results obtained by other countries from trials of State control, etc.

Other chapters relate to output, export trade, the home consumer, and the final one to wages and disputes, quoting the laconic phrase of the Prime Minister, "With production we get prosperity; without it we starve."

STUDENSKY, PAUL. *Teachers' pension systems in the United States. A critical and descriptive study.* New York, D. Appleton & Co., 1920. 460 pp. *The Institute for Government Research. Studies in administration.*

This comprehensive study of the subject of teachers' pensions is divided generally into two parts: A discussion of the problem of teachers' pensions and an account of typical teachers' pension systems of to-day. Five appendixes deal with (1) comparative analysis of teachers' pension systems; (2) reference to laws, statistical reports, etc., relative to all teachers' pension systems in the United States, by States; (3) laws providing for sound teachers' pension systems; (4) actuarial tables; (5) bibliography.

UNION SUISSE DU COMMERCE ET DE L'INDUSTRIE. *Rapport sur le Commerce et l'Industrie de la Suisse, 1918.* Zurich [1919]. 524 pp.

The annual report for the year 1918 of the Secretariat of the Swiss Industrial and Commercial Union on business conditions in the various branches of industry and commerce. In addition the volume contains general statistical data on the economic situation in Switzerland. A digest of economic measures taken by the Swiss Federal authorities and of similar measures taken by foreign governments during the period October 1, 1918, to June 30, 1919, is given in an appendix.

UNITED MINE WORKERS OF AMERICA. *The case of the bituminous coal mine workers as presented by the United Mine Workers of America to the President's coal commission appointed December, 1919.* Washington, 1920. 78 pp. Chart.

The report of the President's coal commission was summarized in the April issue of the REVIEW (pp. 40-50).

— *Proceedings of the twenty-seventh consecutive and fourth biennial convention.* Cleveland, Ohio, September 9, 1919. In three volumes. Indianapolis, Bookwalter-Ball Printing Co., 1919. 480, 996, 544 pp.

UNITED STATES STEEL AND CARNEGIE PENSION FUND. *Treasurer's and manager's ninth annual report for year ending December 31, 1919.* [Pittsburgh, 1920.] 8 pp.

VALDOUR, JACQUES. *La vie ouvrière. Observations vécues.* Paris, Arthur Rousseau, 1919. 390 pp.

A study of working conditions among miners in the northern and central portions of France.

VERBAND DER GEMEINDE- UND STAATSARBEITER. *Protokoll über die Verhandlungen des achten Verbandstages abgehalten vom 1. bis 6. September 1919 in Nürnberg.* Berlin, 1919. 188 pp.

The minutes of the eighth general meeting of the German Federation of Workers in State and municipal services held at Nuremberg September 1 to 6, 1919. The meeting adopted several important resolutions. It went on record as advocating the universal conclusion of collective agreements as a suitable means of doing away with the one-sided dictatorial fixing of wage and working conditions by the employer and his organs. It demanded decisive participation of the workers' representatives in legislation, State and municipal administration, and in the management of industrial establishments, the immediate socialization of all capitalistic enterprises, but particularly of mines, enterprises for the generation of power, iron and steel works, banks, and insurance companies. It condemned the works council bill as a piece of patchwork which does not give the works councils sufficient influence in the administration of State and municipal establishment nor remove the existing bureaucracy. The meeting adopted new by-laws for the federation and regulated anew the contributions of members as well as the strike, unemployment, and death benefits.

VERBAND DER GEMEINDE- UND STAATSARBEITER. *Reichssekktion Gesundheitswesen. Neuzeitliche Dienst- und Ausbildungsgestaltung des Pflegepersonals, by Dr. Jakobit, and Die Berufsausbildung des Krankenpflegepersonals, by Emil Dittmer. Berlin, 1920. 32 pp.*

Two papers read at the third conference of the section on hygiene of the German Federation of Workers in State and municipal services. Both papers deal with the working conditions and the occupational training of nurses.

— *Die Sozialisierungsbestrebungen im Staat und Gemeinde, by Emil Dittmer, and Das Betriebsrütigesetz, by Josef Weigl. Berlin, 1919. 31 pp.*

Two papers read at the eighth general meeting of the German Federation of Workers in State and municipal services. The first of these papers deals with proposals of socialization in the State and municipalities and the second with the works council law.

— *Die Tarifverträge in gemeinnötigen Betrieben. Berlin, 1919. 508 pp.*

A compilation of collective agreements concluded during the first half of 1919 by organizations of workers in German State and municipal services with communes, unions of communes, district, provincial and State authorities, monopolies, and employers' associations. The agreements included in the compilation cover 1,300 establishments employing about 110,000 workers.

VEREIN DER WOLLINDUSTRIELLEN MÄHRENS. *Bericht des Vereins erstattet in der 37 ordentlichen Hauptversammlung vom 12, Februar 1920. Brinn, 1920. 79 pp.*

The annual report for the year 1919 of the Association of Woolen Goods Manufacturers of Moravia. The association received reports from 49 establishments which before the outbreak of the war employed 17,189 workers, of which 7,841 were males and 9,348 females. On December 15, 1919, 48 of these establishments were operating while one had closed down temporarily. The total number of workers employed in the 48 establishments had decreased to 10,626. Of these 30 were working 3 days per week, 759 worked 4 days per week, 1,473 worked 5 days, and 8,364 worked 6 days per week. On December 22, 1919, the association concluded a collective agreement with the workers' organizations which is to remain in force up to June 30, 1920. The agreement provides for basic wages for all occupations and for premiums for pieceworkers. In addition the workers receive (1) a fixed cost of living bonus of 25 hellers (5.1 cents, par) per hour, (2) a bonus based on their weekly net earnings and amounting to between 100 and 140 per cent of these earnings, and (3) a family subsidy of 4 crowns (81.2 cents, par) per child and week, but not to exceed 20 crowns (\$4.06, par) per family. Time and a half is to be paid for overtime and holiday work and double time for Sunday work. The industry suffered greatly from lack of raw material and coal.

WORKERS' EDUCATION. *A symposium. Reprinted from the Shipbuilders' News and Navy Yard Employee, Brooklyn, N. Y., for September, 1919, by the Industrial committee of the department of research of the Young Women's Christian Association. New York, 1919. 13 pp.*

CONTENTS.—The Boston Trade Union College, by W. H. L. Dana; The new school for social research, by Charles A. Beard; The united labor education committee, by J. M. Budish; The workers' university, by Juliet Stuart Poyntz; Labor and education, by Frank Tannenbaum; Workers' education and the Young Women's Christian Association, by Mary L. Cady.

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. The bulletins marked thus * are out of print.]*

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 1919. [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 1919. [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 and standardization of piece rates in the dress and waist industry of New York City.

Wages and Hours of Labor—Concluded.

- 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.
- 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, 1907 to 1918.
- 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. 221. Hours, fatigue, and health in British munition factories.
- 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.]
- Bul. 274. Union scale of wages and hours of labor, May 15, 1919. [In press.]

Employment and Unemployment.

- * Bul. 109. Statistics of unemployment and the work of employment offices.
- Bul. 116. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia.
- 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 the 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 determination 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. 217. Effect of workmen's compensation laws in diminishing the necessity of industrial employment of women and children.
- 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.
- Bul. 272. Workmen's compensation legislation of the United States and Canada, 1919. [In press.]
- Bul. 273. Proceedings of the Sixth Annual Meeting of the International Association of Industrial Accident Boards and Commissions. [In press.]
- Bul. 275. Comparison of workmen's compensation laws of the United States and Canada. [In press.]
- Bul. 276. Standardization of industrial accident statistics. [In press.]

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 the 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.

Industrial Accidents and Hygiene—Concluded.

- 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.
- Bul. 251. Preventable death in the cotton manufacturing industry.
- Bul. 253. Women in the lead industry.
- Bul. 256. Accidents and accident prevention in machine building. Revision of Bul. 216.
- Bul. 267. Anthrax as an occupational disease. (Revised.) [In press.]

Conciliation and Arbitration (including strikes and lockouts).

- * Bul. 124. Conciliation and arbitration in the building trades of Greater New York.
- Bul. 133. Report of the industrial council of the British Board of Trade on its inquiry into industrial agreements.
- Bul. 139. Michigan copper district strike.
- Bul. 144. Industrial court of the cloak, suit, and skirt industry of New York City.
- Bul. 145. Conciliation, arbitration, and sanitation in the dress and waist industry of New York City.
- * Bul. 191. Collective bargaining in the anthracite coal industry.
- Bul. 198. Collective agreements in the men's clothing industry.
- Bul. 233. Operation of the Industrial Disputes Investigation Act of Canada.

Labor Laws of the United States (including decisions of courts relating to labor).

- * Bul. 111. Labor legislation of 1912.
- * Bul. 112. Decisions of courts and opinions affecting labor, 1912.
- * Bul. 148. Labor laws of the United States, with decisions of courts relating thereto.
- Bul. 152. Decisions of courts and opinions affecting labor, 1913.
- * Bul. 166. Labor legislation of 1914.
- * Bul. 169. Decisions of courts affecting labor, 1914.
- * Bul. 186. Labor legislation of 1915.
- * Bul. 189. Decisions of courts affecting labor, 1915.
- Bul. 211. Labor laws and their administration in the Pacific States.
- * Bul. 213. Labor legislation of 1916.
- Bul. 224. Decisions of courts affecting labor, 1916.
- Bul. 229. Wage-payment legislation in the United States.
- Bul. 244. Labor legislation of 1917.
- Bul. 246. Decisions of courts affecting labor, 1917.
- Bul. 257. Labor legislation of 1918.
- Bul. 258. Decisions of courts and opinions affecting labor, 1918. [In press.]

Foreign Labor Laws.

- Bul. 142. Administration of labor laws and factory inspection in certain European countries.

Vocational Education.

- Bul. 145. Conciliation, arbitration, and sanitation 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. 159. Short-unit courses for wage earners, and a factory school experiment.
- Bul. 162. Vocational education survey of Richmond, Va.
- Bul. 199. Vocational education survey of Minneapolis.
- Bul. 271. Adult working-class education in Great Britain and the United States. [In press.]

Labor as Affected by the War.

- Bul. 170. Foreign food prices as affected by the war.
- Bul. 219. Industrial poisons used or produced in the manufacture of explosives.
- Bul. 221. Hours, fatigue, and health in British munition factories.
- Bul. 222. Welfare work in British munition factories.
- Bul. 223. Employment of women and juveniles in Great Britain during the war.
- Bul. 230. Industrial efficiency and fatigue in British munition factories.
- Bul. 237. Industrial unrest in Great Britain.
- Bul. 249. Industrial health and efficiency. Final report of British Health of Munition Workers Committee.
- Bul. 255. Joint industrial councils in Great Britain.

Miscellaneous Series.

- * Bul. 117. Prohibition of night work of young persons.
- Bul. 118. Ten-hour maximum working day for women and young persons.
- * Bul. 123. Employers' welfare work.
- Bul. 158. Government aid to home owning and housing of working people in foreign countries.
- * Bul. 159. Short-unit courses for wage earners, and a factory school experiment.
- * Bul. 167. Minimum-wage legislation in the United States and foreign countries.
- Bul. 170. Foreign food prices as affected by the war.
- Bul. 174. Subject index of the publications of the United States Bureau of Labor Statistics up to May 1, 1915.
- Bul. 208. Profit sharing in the United States.
- Bul. 222. Welfare work in British munition factories.
- Bul. 242. Food situation in Central Europe, 1917.
- Bul. 250. Welfare work for employees in industrial establishments in the United States.
- Bul. 254. International labor legislation and the society of nations.
- Bul. 263. Housing by employers in the United States. [In press.]
- Bul. 268. Historical survey of international action affecting labor. [In press.]

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SPECIAL PUBLICATIONS ISSUED BY THE BUREAU OF LABOR STATISTICS.

Descriptions of occupations, prepared for the United States Employment Service, 1918-19.

Boots and shoes, harness and saddlery, and tanning.
Cane-sugar refining and flour milling.
Coal and water gas, paint and varnish, paper, printing trades, and rubber goods.
Electrical manufacturing, distribution, and maintenance.
Logging camps and sawmills.
Medicinal manufacturing.
Metal working, building and general construction, railroad transportation, and ship-
building.
Mines and mining.
Office employees.
Slaughtering and meat packing.
Street railways.
Textiles and clothing.
Water transportation.

