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Preparation of Safety Codes Under the Auspices of the American Engineering Standards Committee.¹

By MORTON G. LLOYD, CHIEF OF SAFETY SECTION, U. S. BUREAU OF STANDARDS.

Need for Safety Codes.

A DISCUSSION of the importance of accident prevention appears to be superfluous before an association of this character whose members are directly concerned with compensation for industrial accidents and are familiar with the extent of casualties in American industries. Much has already been done through the safety-first movement to provide the proper physical conditions and to educate the industrial worker to use practices which will decrease the probability of accidents, but much more remains to be done in this direction.

The principal channel through which the State officials can promote accident prevention is through the inspection of factories and other work places and insistence that these shall be so constructed and operated as to provide for the safety and health of employees. In making such inspections it is necessary that the inspector should have some standard of comparison by which to judge of the conditions which he encounters. Only by having such a standard of reference is it possible for different inspectors to treat different cases upon a uniform basis or even for a single inspector to be consistent in his decisions with reference to different industrial plants. Such a standard may exist only in the mind of the inspector and be subject to development and change from day to day. Much more satisfactory results, however, can be obtained by having written standards subject to change only by definite action of the administrative authority and capable of being known to factory managers, manufacturers of machinery, and others concerned with them before installations are made. It is then possible for such persons to plan their installations so as to meet the requirements of the State officials. In that way more complete compliance on a more satisfactory basis is obtained.

It must be obvious, then, that the best work of the State factory inspector can be done upon the basis of enforcing a definite set of written rules which have been given full consideration before adoption and which are applied uniformly by all inspectors within a given jurisdiction and which are modified only by definite administrative action after due notice and full consideration. Consequently most of the States which are active in factory inspection work have definite

¹ Address to be delivered at the ninth annual meeting of the International Association of Industrial Accident Boards and Commissions, Baltimore, Oct. 9-13, 1922.

regulations and it is the duty of their inspectors to see that such regulations are complied with.

These regulations may take the form of statute laws or of rules promulgated by some administrative authority. Where the regulations are established by statute it is impossible to alter or amend them except by the same legislative process. Where the regulations are promulgated by administrative authority, changes and amendments can be made from time to time as experience or progress in the art makes advisable and a system which is more flexible and in general more satisfactory to all parties concerned is obtained.

Whatever legal form the regulations may take, it is desirable that they be as definite as possible, be easily understood, available in printed form, for the guidance of all interests concerned, and be given very thorough consideration by all parties and interests before their mandatory adoption.

Such a code of safety rules is valuable not only for mandatory enforcement by administrative authorities and for authorized inspectors, but as a guide to the industry concerned in improving its methods and modifying its previous practices. Many manufacturers are only too glad to make improvements in the physical condition of their plants when the possibility of such improvements is pointed out to them and many of them are eager to apply any information which will improve the welfare of their employees. The greatest value of the safety code is probably in providing such information as a standard for the guidance of the factory manager, and I consider its usefulness as a regulation for legal enforcement to be secondary to this.

A good illustration of this attitude of factory managers is found in the recent action of the board of directors of the National Association of Dyers and Cleaners which has expressed the need felt by them for a safety code for the industry of dry cleaning.

Advantages of National Codes.

MOST of the safety codes heretofore adopted and enforced by State boards and commissions have been developed locally and usually with the cooperation of a committee representing local interests. In the preparation of such codes, use is frequently made of standards already adopted by other States or by industrial and engineering associations. In some cases such standards already available are adopted without change, but more often changes of greater or less extent are made for the purpose of improvement or of meeting some real or fancied need caused by local conditions. This is well illustrated by the boiler code prepared by the American Society of Mechanical Engineers and the electrical safety code prepared by the Bureau of Standards. If the national codes were generally prepared by processes which would take into consideration local variations and conditions, and which guaranteed the full consideration of the viewpoint of every interest involved and freedom from domination by any one interest, particularly such as might be of a commercial character, it would seem advantageous to adopt such national codes without the introduction of local variations. This would give the advantage of uniformity in requirements in different jurisdictions. The manufacturers of equipment could

then supply a single line for use in all States and the work of the contractor and inspector would be simplified. It would also be easier for the insurance companies to harmonize their own requirements with those legally enforced by the State authorities.

To obtain national codes of this character it is necessary that their preparation be accomplished by the widest and most thorough consideration of those familiar with the particular problems of the industry concerned and that full weight be given to the viewpoints of all interests involved. Where codes are prepared by local committees the same result is usually sought by having represented upon such committees employers, employees, technical experts, casualty insurance organizations, etc., as well as the administrative department concerned. For national codes to be equally or more satisfactory than these local codes, it is necessary that they should be formulated or approved by a body having at least equally wide representation and providing equally wide opportunity for criticism and comment before final adoption.

Conferences of 1919.

REALIZING the importance of safety codes prepared upon a national basis, and as the result of the contacts made by its previous work in this field and the demands for more extensive work of the same character, the Bureau of Standards called a preliminary conference on this subject in Washington in January, 1919, and a second conference in December of the same year. At these conferences the subject was fully discussed, the need for national codes generally recognized, and the best method for preparing them given full consideration. It was finally agreed that the scheme of procedure in establishing national standards which had been inaugurated by the American Engineering Standards Committee would be the most satisfactory to utilize in the preparation of safety codes and it was finally voted by a large majority that they should be prepared under the auspices of this committee. It was realized, however, that in order for this plan to be widely acceptable it would be necessary to enlarge the scope and membership of the American Engineering Standards Committee and this was done as a direct result of these conferences.

American Engineering Standards Committee.

THE American Engineering Standards Committee, after two years of preliminary negotiations, was organized in 1918 by five national engineering societies, who invited three of the United States Government departments to accept membership. These eight bodies named three representatives each who constituted the original membership of the committee. The purpose of this organization was to serve as a national clearing house for engineering and industrial standardization, to act as the official channel of cooperation in international standardization, and to provide an information service on engineering and industrial standardization matters.

The committee does not itself formulate any standards, but its principal function is to bring about systematic cooperation of the organized bodies, technical, industrial, and governmental, which are concerned

with such standards. It has succeeded to such an extent that at the present time more than 160 organizations are actively cooperating in work under the auspices of the committee. Since 1919, when the constitution of the committee was altered, its membership has been enlarged so that it now consists of 53 members representing 5 departments and 1 independent establishment of the Federal Government, 9 national engineering societies, and 14 national industrial associations. This includes the United States Departments of Agriculture, Commerce, Interior, Navy, and War, and the Panama Canal. The application of the United States Department of Labor for membership is now pending.

The method by which the American Engineering Standards Committee functions is as follows: When it is decided that some standard, such as a safety code, should be formulated, a responsible organization, not necessarily holding membership on the committee, is recognized as a sponsor for the work or several such organizations may be designated as joint sponsors. This sponsor is supposed to organize the work and form a representative committee made up of members of all other organizations having an interest in this particular standard, which committee is technically known as a sectional committee. This sectional committee may itself carry out the work of formulating a standard or it may merely pass upon such work when it has already been done; it is free to modify any standard before its adoption. When the sectional committee agrees that a standard or code is in acceptable form for final adoption, it reports to the sponsor and if the sponsor body is satisfied with its work and approves it, it so reports to the Engineering Standards Committee. That committee then approves the standard as an American standard, as a tentative standard, or as a recommended practice.

An essential step in the process, however, is the approval by the Engineering Standards Committee of the make-up of the sectional committee in direct control of the work. To be approved, the sectional committee must be properly representative of the interests concerned and must be well balanced, so that no interest or closely connected group of interests shall be able to dominate the committee. In the case of safety codes it is required that the following groups of interests be represented upon the committee:

- (a) Manufacturers of the equipment.
- (b) Employers.
- (c) Employees.
- (d) Regulatory Government representatives.
- (e) Technical experts.
- (f) Casualty insurance interests.

Up to the beginning of the present calendar year the American Engineering Standards Committee had approved 17 standards, of which 3 may be designated as safety codes. These latter are the National Safety Code for the Protection of the Heads and Eyes of Industrial Workers, the National Electrical (Fire) Code, and the Industrial Lighting Code. During the current year it has approved the Safety Code for Abrasive Wheels, the Safety Code for Foundries, and the National Electrical Safety Code. More than 20 other codes are being actively worked upon and some of them are nearly completed. In addition, almost an equal number have been given preliminary

consideration. For several of these codes, including the Safety Code for Abrasive Wheels, the International Association of Industrial Accident Boards and Commissions is a joint sponsor.

The initiation of new projects in the American Engineering Standards Committee usually arises through a demand from some interested organization. Where such an organization has itself carried on standardization work prior to the creation of the American Engineering Standards Committee it may submit its own standards for approval after proper examination as to their general acceptance and worthiness. When a standard has yet to be formulated the American Engineering Standards Committee may designate the interested organization as a sponsor or it may call a general conference of all parties believed to be interested, to determine whether such a standard should be formulated at the present time, what its scope shall be, and how the work shall be organized. Examples of this are a conference on colors of traffic signals which was held on May 23 of this year; and a combined electrical fire and accident code, a conference upon which subject is contemplated in the early future since a difference of opinion has developed as to the advisability of formulating such a code.

Safety Code Correlating Committee.

IN MOST cases of safety codes, however, the proposals for sponsorship and initiation of the work have arisen through a supplementary committee which is advisory to the American Engineering Standards Committee and is known as the Safety Code Correlating Committee. This committee is made up of representatives of those organizations of a national character considered to be most actively interested in safety codes. The present membership includes representatives of the following:

American Gas Association.

American Society of Mechanical Engineers.

American Society of Safety Engineers.

Association of Governmental Labor Officials.

International Association of Industrial Accident Boards and Commissions.

National Association of Mutual Casualty Companies.

National Bureau of Casualty & Surety Underwriters.

National Electric Light Association.

National Fire Protection Association.

National Industrial Conference Board.

National Safety Council.

United States Bureau of Labor Statistics.

United States Bureau of Mines.

United States Bureau of Standards.

This committee was formerly known as the National Safety Code Committee and had its origin in a joint committee resulting from the conference on industrial safety codes in December, 1919. Its relation to the American Engineering Standards Committee is that of an advisor having the direct contact with bodies interested in safety codes so that it can bring to the American Engineering Standards Committee, whose membership is of a more diverse character, the desires and needs of those more intimately concerned with safety.

The first report of this committee in 1920 included a list of 37 codes which were considered of the most immediate importance and for which sponsor bodies were recommended. Since that time it has made additional recommendations from time to time and the Engineering Standards Committee has referred to it questions concerning safety codes which required investigation before decision.

The members of the Safety Code Correlating Committee are frequently designated by the chairman of the Engineering Standards Committee to serve upon special committees which investigate the make-up of sectional committees for safety codes or advise the Engineering Standards Committee as to the suitability of approval of standards in this field which have been submitted to it. The committee thus functions in general to advise the Engineering Standards Committee and keep it informed when necessary of matters relating to the field of safety codes. The present chairman is Mr. S. J. Williams, chief engineer of the National Safety Council, and its secretary is Dr. P. G. Agnew, who is also secretary of the American Engineering Standards Committee.

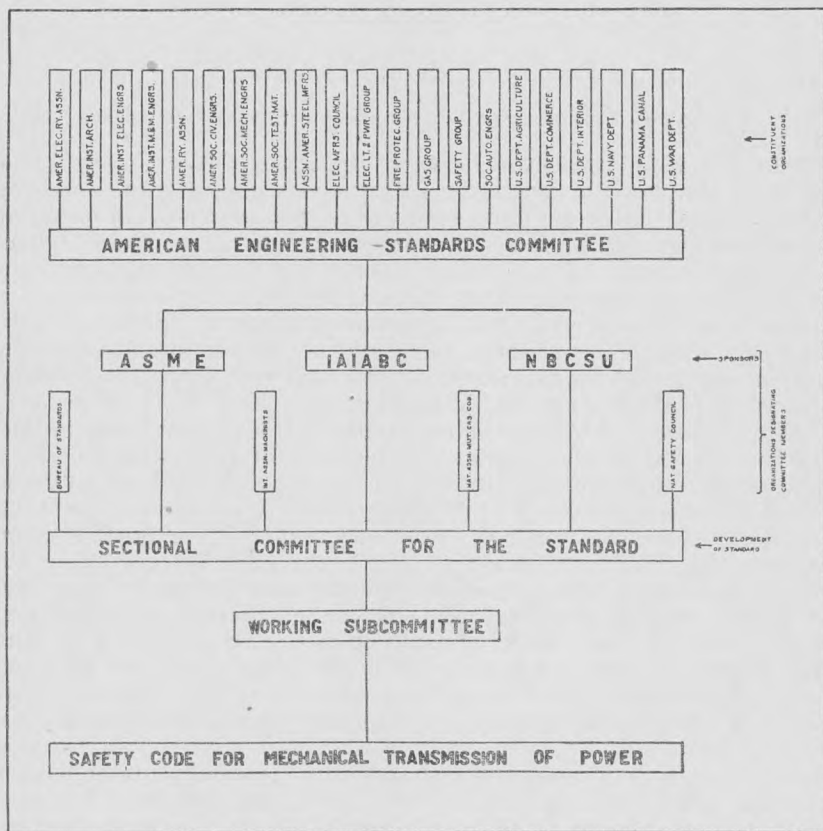
The following diagram shows the relation of the sponsors and the two committees in the case of the Safety Code for the Mechanical Transmission of Power. The group at the top of the diagram shows the various organizations naming members of the American Engineering Standards Committee. The latter appointed as sponsors for this code the American Society of Mechanical Engineers, the International Association of Industrial Accident Boards and Commissions and the National Bureau of Casualty and Surety Underwriters. The three sponsors named members of the sectional committee representing the casualty underwriters, state commissions, and manufacturers and users of the equipment concerned. They also asked the United States Bureau of Standards, International Association of Machinists, the National Association of Mutual Casualty Companies, and the National Safety Council to name representatives upon the sectional committee. A small group of these representatives formed a working subcommittee which put the preliminary draft of the code into form for presentation to the full committee. The sectional committee then discussed it and made such modifications as seemed to it proper in order that the code should be generally satisfactory. This code has reached the stage of a final revision before formal adoption.

Conclusion.

IT WILL be apparent from the foregoing that the American Engineering Standards Committee, with the cooperation of the Safety Code Correlating Committee, furnishes the machinery for the formulation of safety codes in a manner which will insure thorough consideration of the merits of proposed rules and thorough consideration of the viewpoint of the various interests which are concerned with safety codes. The actual formulation of such codes may be by a sectional committee, by a working subcommittee of such sectional committee, or by the technical staff of a sponsor body, but in every case the entire sectional committee must pass upon the work and approve the tentative draft of a code before it is submitted to the American Engineering Standards Committee. The sectional com-

mittees are made up of representatives from six groups above mentioned, and in the case of safety codes always include some representatives from State departments of labor or industrial commissions. When such codes have been approved by the American Engineering Standards Committee the assurance is given that they have had just as thorough consideration as is ever given locally to the formulation of a State code and in most cases they will have had wider consideration and criticism; in adopting such a code any State

ORGANIZATION OF AGENCIES AND COMMITTEES INVOLVED IN PREPARATION OF SAFETY CODES.



authority may feel sure that he is putting into effect as reasonable and as complete a set of rules as it is feasible to formulate at the time. Such codes may consequently be taken as models for local adoption and preferably in the form in which they have been nationally approved. It will generally be desirable to give local hearings upon such codes before adoption by the various States. In case modifications are proposed at such hearings an opportunity should be given to those engaged in the formulation of the national code to answer

objections and explain why the provisions in the national code are considered superior to local proposals which will not usually have been subjected to the same wide and careful scrutiny. There may be at times conditions peculiar to local industries which will make modifications of national codes desirable and it may be feasible in particular States to call for more complete protection than has been considered reasonable in a national code, but in the more general case it will serve all interests more fully if the national code can be adopted by the States without change so as to provide uniform regulations in a given industry throughout the country.

Factory Chiefs in New Jersey.

By JOHN ROACH, DEPUTY COMMISSIONER OF LABOR, NEW JERSEY.

IN 1912 the Department of Labor of the State of New Jersey undertook the work of preparing safety codes covering the following industrial subjects: Fire protection, fire escapes, fireproofing, fire-alarm signals, fire drills, transmission machinery, freight elevators, engine stops, steam boilers, removal of industrial dusts, noxious fumes and excessive heat, sanitation (including construction of toilet, wash room, and dressing room equipment), paint grinders, lead corrodors, lead oxidizers, nitro and amido compounds, hat felting, power laundries, abrasive wheels, and safe practices covering the use of shellacs, enamels, and japans.

While these codes were being prepared, the department became convinced that the successful enforcement of industrial rules was dependent in a large measure on the cooperation that might be secured from employers of the labor affected by them. As these standards were the result of conferences in which engineers representing the varied industries of our State participated, there was reason to assume that employers generally were as much interested in their reasonable enforcement as the authorities who prepared them. After giving careful consideration to the method of securing this greatly desired cooperation from the employers, the plan was adopted of asking each one of the manufacturing concerns in the State to delegate an employee (preferably an engineer, foreman, or superintendent in the plant, but in any case some employee occupying a position of trust and responsibility) to represent the department of labor in the plant, and to confer with the district factory inspector concerning an interpretation of these rules and their enforcement in that particular plant. This suggestion from the department met with a generous response from the employers, and in a short time about 2,600 representatives, or factory chiefs, as they were designated, had been appointed by the employees for this purpose.

Shortly after the inauguration of this movement, a meeting of nearly 2,000 factory chiefs was held in Newark. Motion pictures were shown, various types of safety apparatus were on exhibition, excellent addresses on safety were made by competent speakers, and, in general, a great deal of enthusiasm on the subject of the promotion of safety was shown by the audience.

Usually only one factory chief is appointed in each plant, although in several of the larger plants two or more factory chiefs have been appointed on request of the plant management. In plants where more than one shift is run, a factory chief may be selected for each shift.

Upon the appointment of the factory chief the following form letter and inclosure are sent to the appointing firm:

TRENTON, N. J., ———.

GENTLEMEN: I am inclosing you in this communication the usual type of letter which is directed to the representative selected by you as factory chief of your plant. We understand that the name indicated is the one desired by you, but if for any reason you care to assign these duties to any other person we would greatly appreciate it if you would kindly advise us, in order that we may keep the records of this office in conformity with your wishes.

Assuring you of our appreciation of your cooperation with us in this movement, and believing that you will be more than pleased with the results accomplished, I am

Yours very truly,

TRENTON, N. J., ———.

DEAR SIR: Understanding that your firm has designated you factory chief of their factory, I congratulate you upon the confidence reposed in you, and want to impress upon you the responsibilities attached to this position, offering as it does an opportunity to assist in the safeguarding of so many lives.

I have entered your name on our books as factory chief and instructed the inspectors to request your assistance when making their inspections. We shall appreciate it if you will make daily rounds of the building to see that it is kept free from any fire hazards, such as unnecessary sweepings, loose inflammable materials, excelsior, paper or wooden boxes, and be especially careful about the proper storage and handling of inflammable and explosive liquids. Particular attention should be paid to cellars and unfrequented places.

It is further desirable for you to acquaint yourself with the system of electric alarm, conduct the daily tests, and be sure that the fire apparatus is kept in constant readiness for actual service.

The department is mailing you pamphlets of instruction as to the desired methods of conducting fire drills and organizing factory fire brigades. Upon request, we will be glad to send an inspector to assist you with this work.

As an evidence of the confidence placed in you, and as a recognition of the position by the department of labor, an official badge, which you are to retain as long as you occupy this position, will be mailed you upon written request to the commissioner of labor, statehouse, Trenton.

We would be glad to receive suggestions from you at any time, and if we can be of assistance, please feel free to address us.

Yours respectfully,

The following form letter is sent to the factory chief who has requested the badge in accordance with the letter of instructions:

TRENTON, N. J., ———.

DEAR SIR: In accordance with our previous communication, I am inclosing you herewith the insignia of office for your position as factory chief. I believe our former communication clearly outlined your relation to our work. I would appreciate it if you would kindly acknowledge receipt of this badge.

Hoping you may enjoy the duties incident to this position, I am

Yours very truly,

During the winter months a lecture course, including exhibitions of motion pictures depicting various phases of industrial safety, is given for the benefit of factory chiefs and others interested in physical conservation. One of these lectures is usually given each month in

each industrial area, and they help to stimulate the interest of factory chiefs in their work.

We have never known an employer to express dissatisfaction with the activities of a factory chief. In well-regulated establishments, the factory chief accompanies the factory inspector on his tour of inspection and discusses with him the interpretation of the rules and their enforcement in the plant. The factory inspector outlines the orders that he thinks the department should issue to make the plant safe, and the terms of these orders are discussed with the factory chief. In case a difference of opinion respecting the necessity for the issuance of a safety order arises between the factory inspector and the factory chief, a hearing is usually held by a representative of the department of labor and the terms of the order and the conditions surrounding its issuance are gone over carefully in conference, and, if necessary, the order is modified, altered, or, in some cases, if the circumstances seem to warrant it, rescinded.

The department thinks the factory chief has an important part to play in the successful and safe administration of the personnel relations of every well-regulated industrial establishment. Many times employers of labor complain that unsafe practices in their plants are the result of inattention and disobedience on the part of some of their employees. Equipment is often allowed to fall into a dangerous condition of disrepair, guards about moving machinery are removed and not replaced, while elevator gates may be tied up in an effort to expedite the use of the elevator; greasy stairs, insecure handrails, and congested fire escape exits, add to the list, while exposure to dust, fumes, dangerous vapors and gases play their part in making plant premises positively unsafe or relatively uncomfortable.

The statement is often made by executives in positions of responsibility that most of the unsanitary and unsafe practices that abound in industry are due to carelessness, negligence, and positive disobedience on the part of their subordinates. It seems, therefore, that the factory chief has an important part to play in the establishment of safe practices in industry, for it is a part of his duty to bring to the attention of the principal authorities in a plant careless practices, as well as unsafe premises, that may cause industrial accidents.

The department of labor has become convinced that factory inspection falls down and fails completely to establish that measure of protection, contemplated by statute, in industrial activities, where cooperation and understanding between the management and the factory inspection bureau are lacking. In a large measure, the value of the work of the factory chief is enhanced by the knowledge that the physical care of the workers is to-day a matter of fundamental importance, and that it can be shown that even costly alterations to plant equipment which add to the safety of the workmen are a successful investment because of their steadying effect upon the working forces, and that these betterments increase and improve production and constitute factors which lead to eventual repayment.

Safety engineers who have given the question of accident prevention careful attention generally agree that less than 25 per cent of all industrial accidents can be prevented by means of the installation of physical safeguards. These safety engineers emphasize the value of good housekeeping in a plant and of the development of a spirit of

watchfulness and careful attention to duty on the part of workmen, and they generally agree that the measure of safety that prevails in a plant depends on the measure of cooperation the management receives from the workmen.

An intelligent, earnest factory chief is an important asset to an industrial plant, and a welcome addition to the departmental bureau charged with the responsibility of enforcing regulatory labor legislation. The position of factory chief is one that offers a wide scope for the exercise of individual initiative and personal ability, for though standards of physical conservation be prepared that cover a wide range of industrial safety and sanitation subjects, there still remains a broad field for safety development, by the factory chief, along special or unusual lines.

INDUSTRIAL RELATIONS AND LABOR CONDITIONS.

Report of Court of Industrial Relations of Kansas.

THE second annual report of the Court of Industrial Relations of the State of Kansas covers the year ended December 31, 1921. In its present form the court no longer exercises the functions of a commission of public utilities, as when first created, that office being reestablished as a separate agency of the government. There have been added to the duties of the court, however, the work of mine and factory inspection, supervision of woman and child labor including the minimum wage law, free employment service, statistical reports, advisory duties in reference to workmen's compensation, etc.

The division relating to industrial disputes is not the larger part of the work of the tribunal, but is the department which is new in its conception and operation, and therefore is the feature of the work which is attracting the attention not only of the State but of the nation as well.

A sketch is given of the legal proceedings affecting the work of the court since its organization, showing the opposition on the part of the mine union officials of the State to the work of the court as a labor tribunal, this being the source of six of the eight cases noted. In so far as final results have been attained, the law creating the court, and its activities under the law, have been fully sustained. Several of the more important decisions have already had attention in various issues of the MONTHLY LABOR REVIEW.

An account of the packing strike of December, 1921, shows the mode of operation in a case in which no appeal to another court was taken. A "plant assembly," representing both employers and employees, had arranged a new wage scale to follow the expiration, in September, 1921, of the scale fixed by Judge Alschuler, under the Bureau of Conciliation of the United States Department of Labor. This scale called for a considerable reduction from the expiring rates, and a strike vote resulted in a strike call on December 1, to be effective December 5. On the 3d the court held a sitting at Kansas City, to which representatives of the employers and employees were summoned, though but one of the latter appeared until other proceedings were had to bring them before the court. When finally brought into court they declared that they had no controversy which they desired to submit, as did also the employers. The court then announced that no matter in dispute being before it, it became its duty to see that the plants were operated with continuity and efficiency, to the end that the food supply of the State be maintained, as well as a market for the protection of the live-stock producers, which the court proposed to do.

With the cooperation of local police officers, the provisions of the law were enforced, the packing houses were able to continue oper-

ation and within a few days again reached normal production, and the live-stock market was kept open and not interfered with; all the meat products that came upon the market were sold and at prices not in any way affected by the so-called strike. Thus the interests of the public were protected and this essential industry of Kansas maintained. The court informed the employees that this court was a means provided by law for the settlement of the differences between them and their employers, which means was fully open to them, but that their disputes or demands could not and must not be enforced by means of violence, picketing, and in no other way than by the orderly processes of law. This broke the strike, and these results were accomplished without any litigation and with very few arrests for violation of law.

Labor Conditions in Venezuela.¹

THE population of Venezuela consists of three elements—Indian, Negro, and Spanish—but is largely a mixture of these elements. The Negro infusion is most pronounced along the coast, while in the interior the people are of Indian and Spanish descent. Negroes from the West Indies are found in large numbers in the coast towns. There is a numerically small middle class with a greater percentage of Spanish blood. These people are the artisans, craftsmen, etc., of the country and also hold important clerical positions. The upper class is made up of descendants of the old Spanish families, in many cases mixed with Indian blood. Property is not widely divided, large landed estates being the rule.

Because the people of Venezuela prefer to live in the larger cities, there is always a plentiful labor supply there—domestic servants, operatives in the cigarette and textile factories, and, in the seaports, workers for handling cargoes. Elsewhere, especially in the interior, there is a general scarcity of labor, the petroleum companies having great difficulty in securing sufficient unskilled labor for the work in the oil fields. The labor shortage is also felt on the ranches. Unhealthy climatic conditions in the nonmountainous regions make it difficult to secure and keep a sufficient supply of labor.

Most of the people (estimated at 70 per cent of the total) receive low wages and have low purchasing power. The average wage of common laborers in the interior is 3 to 4 bolivars (58 to 77 cents, par) per day, and about 25 per cent less in the llanos and Andean regions. At La Guaira stevedores receive an average wage of 40 cents per hour, with 60 cents for overtime, but at Puerto Cabello and Maracaibo the rates are lower, being 1 bolivar (19.3 cents, par) per hour in the latter port. In 1917 the Department of Public Works adopted the following daily wage scale and this has also been adopted for all railway and construction work by the larger companies: Overseers, 8 to 10 bolivars (\$1.54 to \$1.93, par); masons and carpenters, 6 to 8 bolivars (\$1.16 to \$1.54, par); foremen (in charge of common labor), 5 to 6 bolivars (\$0.97 to \$1.16, par); laborers, 3 to 4 bolivars (58 cents to 77

¹ United States. Department of Commerce. Bureau of Foreign and Domestic Commerce. Venezuela: A commercial and industrial handbook. Washington, 1922. pp. 23-28, 32.

cents, par); boys, 1.5 to 2 bolivars (29 cents to 39 cents, par). Because of the great increase in building and construction work there has been a scarcity of labor during the past two years, especially skilled labor, and higher wages have been paid, sometimes more than 25 per cent in advance of the wage scale just mentioned.

Nine hours constitute a working day. The "tarea," or task system, is used in almost every industry, especially in agriculture. A certain amount of work per day is assigned to each man, the allotments being fixed by custom. Upon completion of the assignment, the peon (laborer) may either quit work for the day or do extra work for which additional payment is made.

"There are no labor unions and no laws protecting workmen against accident. Industrial insurance is unknown." The only serious strike was that of harbor and railway employees in 1918, through which the employees won a 25 per cent wage increase. Although peonage is now illegal, it still exists to some extent in the outlying regions.

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 July 15, 1921, and on June 15 and July 15, 1922, as well as the percentage changes in the year and in the month. For example, the price of navy beans per pound was 7.9 cents on July 15, 1921; 10.6 cents on June 15, 1922; and 11.1 cents on July 15, 1922. These figures show an increase of 41 per cent in the year and 5 per cent in the month.

The cost of the various articles of food² combined showed a decrease of 4 per cent in July, 1922, as compared with July, 1921, and an increase of 1 per cent in July, 1922, as compared with June, 1922.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JULY 15, 1922, COMPARED WITH JUNE 15, 1922, AND JULY 15, 1921.

[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 (—) July 15, 1922, compared with—	
		July 15, 1921.	June 15, 1922.	July 15, 1922.	July 15, 1921.	June 15, 1922.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Sirloin steak.....	Pound.....	40.2	38.4	39.2	- 2	+2
Round steak.....	do.....	35.8	35.5	34.2	- 4	+2
Rib roast.....	do.....	29.3	28.2	28.6	- 2	+1
Chuck roast.....	do.....	20.7	20.1	20.3	- 2	+1
Plate beef.....	do.....	13.2	12.9	12.8	- 3	-1
Pork chops.....	do.....	34.3	33.9	34.4	+ 0.3	+1
Bacon.....	do.....	43.2	40.4	40.6	- 6	+0.4
Ham.....	do.....	51.0	51.9	52.2	+ 2	+1
Lamb, leg of.....	do.....	35.2	38.0	37.4	+ 6	-2
Hens.....	do.....	38.8	36.9	35.7	- 8	-3
Salmon, canned, red.....	do.....	36.8	32.2	32.1	-13	-0.3
Milk, fresh.....	Quart.....	14.0	12.5	12.8	- 9	+2
Milk, evaporated.....	15-16 oz. can..	13.5	10.9	10.9	-19	0
Butter.....	Pound.....	46.6	44.9	45.7	- 2	+2
Oleomargarine.....	do.....	29.1	27.5	27.5	- 6	0
Nut margarine.....	do.....	26.9	26.7	26.6	- 1	-0.4
Cheese.....	do.....	29.5	31.1	31.5	+ 7	+1
Lard.....	do.....	16.7	17.2	17.2	+ 3	0
Crisco.....	do.....	21.0	22.4	22.7	+ 8	+1
Eggs, strictly fresh.....	Dozen.....	42.3	34.1	36.0	-15	+6
Bread.....	Pound.....	9.7	8.8	8.8	- 9	0
Flour.....	do.....	5.8	5.3	5.2	-10	-2
Corn meal.....	do.....	4.4	3.9	3.9	-11	0

¹ In addition to monthly retail prices of food and coal, the bureau secures prices of gas and dry goods from each of 51 cities and of electricity from 32 cities. These prices are published at quarterly intervals in the MONTHLY LABOR REVIEW.

² The following 22 articles, weighted according to the consumption of the average family, have been used from January, 1913, to December, 1920: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea. The remainder of the 43 articles shown in Tables 1 and 2 have been included in the weighted aggregates for each month, beginning with January, 1921.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JULY 15, 1922, COMPARED WITH JUNE 15, 1922, AND JULY 15, 1921—Concluded.

Article.	Unit.	Average retail price on—			Per cent of increase (+) or decrease (–) July 15, 1922, compared with—	
		July 15, 1921.	June 15, 1922.	July 15, 1922.	July 15, 1921.	June 15, 1922.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Rolled oats,	Pound.....	9.9	8.7	8.7	-12	0
Corn flakes.....	8-oz. package..	12.2	9.9	9.9	-19	0
Cream of Wheat.....	28-oz. package.	29.7	25.8	25.8	-13	0
Macaroni.....	Pound.....	20.6	20.0	20.0	-3	0
Rice.....	do.....	8.7	9.6	9.6	+10	0
Beans, navy.....	do.....	7.9	10.6	11.1	+41	+5
Potatoes.....	do.....	3.4	3.5	3.6	+6	+3
Onions.....	do.....	5.4	8.0	7.0	+30	-13
Cabbage.....	do.....	5.5	5.1	4.6	-16	-10
Beans, baked.....	No. 2 can.....	14.2	13.2	13.3	-6	+1
Corn, canned.....	do.....	15.8	15.5	15.4	-3	-1
Peas, canned.....	do.....	17.5	17.8	17.8	+2	0
Tomatoes, canned.....	do.....	11.4	13.9	13.8	+21	-1
Sugar, granulated.....	Pound.....	7.1	7.1	7.6	+7	+7
Tea.....	do.....	69.2	68.0	68.0	-2	0
Coffee.....	do.....	35.6	36.1	36.2	+2	+0.3
Prunes.....	do.....	18.6	20.6	20.8	+12	+1
Raisins.....	do.....	30.7	24.1	24.0	-22	-0.4
Bananas.....	Dozen.....	40.8	36.3	35.8	-12	-1
Oranges.....	do.....	51.4	63.5	63.2	+23	-0.4
All articles combined ¹.....	.....	.....	.....	.....	-4	+1

¹ See note 2, p. 15.

Table 2 shows for the United States average retail prices of specified food articles on July 15, 1913 and 1914, and on July 15 of each year from 1917 to 1922, together with the percentage changes in July of each of these specified years compared with July, 1913. For example, the price of potatoes per pound was 1.9 cents in July, 1913; 2.6 cents in July, 1914; 4.2 cents in July, 1917; 3.9 cents in July, 1918; 4.8 cents in July, 1919; 8.9 cents in July, 1920; 3.4 cents in July, 1921; and 3.6 cents in July, 1922. As compared with the average price in July, 1913, these figures show the following percentage increases: 37 per cent in July, 1914; 121 per cent in July, 1917; 105 per cent in July, 1918; 153 per cent in July, 1919; 368 per cent in July, 1920; 79 per cent in July, 1921; and 89 per cent in July, 1922.

The cost of the various articles of food combined showed an increase of 43 per cent in July, 1922, as compared with July, 1913.

RETAIL PRICES OF FOOD.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JULY 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH JULY 15, 1913.

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

Article.	Unit.	Average retail price July 15—								Per cent of increase (+) or decrease (—) July 15 of each specified year compared with July 15, 1913.							
		1913	1914	1917	1918	1919	1920	1921	1922	1914	1917	1918	1919	1920	1921	1922	
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.								
Sirloin steak.....	Pound..	26.4	27.0	32.7	42.1	43.4	48.6	40.2	39.2	+ 2	+ 24	+ 59	+ 64	+ 84	+ 52	+ 48	
Round steak.....	do.....	23.2	24.4	30.6	40.3	40.7	45.0	35.8	34.2	+ 5	+ 32	+ 74	+ 75	+ 94	+ 54	+ 47	
Rib roast.....	do.....	20.2	20.9	25.8	33.3	33.5	35.9	29.3	28.6	+ 3	+ 28	+ 65	+ 66	+ 78	+ 45	+ 42	
Chuck roast.....	do.....	16.4	16.9	22.1	29.1	27.7	28.5	20.7	20.3	+ 3	+ 34	+ 77	+ 69	+ 74	+ 26	+ 24	
Plate beef.....	do.....	12.2	12.6	16.5	22.4	20.3	19.1	13.2	12.8	+ 3	+ 35	+ 84	+ 66	+ 57	+ 8	+ 5	
Pork chops.....	do.....	21.7	22.3	31.7	37.9	46.2	43.7	34.4	34.4	+ 3	+ 46	+ 75	+ 113	+ 101	+ 58	+ 59	
Bacon.....	do.....	28.0	27.4	43.0	52.3	58.1	54.7	43.2	40.6	- 2	+ 54	+ 87	+ 108	+ 95	+ 54	+ 45	
Ham.....	do.....	28.1	27.8	39.5	48.7	56.7	59.8	51.0	52.2	- 1	+ 41	+ 73	+ 102	+ 113	+ 81	+ 86	
Lamb, leg of.....	do.....	19.7	20.3	29.9	37.3	38.2	41.1	35.2	37.4	+ 3	+ 52	+ 89	+ 94	+ 109	+ 79	+ 90	
Hens.....	do.....	21.7	22.0	28.0	38.0	42.0	45.0	38.8	35.7	+ 1	+ 29	+ 75	+ 94	+ 107	+ 79	+ 65	
Salmon, canned, red.	do.....	26.6	29.6	32.2	32.2	38.7	36.8	32.1	32.1								
Milk, fresh.....	Quart..	8.8	8.9	11.1	13.2	15.0	16.7	14.0	12.8	+ 1	+ 26	+ 50	+ 70	+ 90	+ 59	+ 45	
Milk, evaporated.....	do.....	15.9	15.4	13.5	10.9	15.9	15.4	13.5	10.9								
Butter.....	Pound..	34.8	34.2	45.9	52.6	62.8	67.9	46.6	45.7	- 2	+ 32	+ 51	+ 80	+ 95	+ 34	+ 31	
Oleomargarine.....	do.....	41.9	42.7	29.1	27.5	41.9	42.7	29.1	27.5								
Nut margarine.....	do.....	35.7	36.0	26.9	26.6	35.7	36.0	26.9	26.6								
Cheese.....	do.....	21.9	22.7	33.0	33.5	43.0	41.2	29.5	31.5	+ 4	+ 51	+ 53	+ 96	+ 88	+ 35	+ 44	
Lard.....	do.....	15.9	15.4	27.4	32.5	42.0	29.0	16.7	17.2	- 3	+ 72	+ 104	+ 164	+ 82	+ 5	+ 8	
Crisco.....	do.....	38.9	36.4	21.0	22.7	38.9	36.4	21.0	22.7								
Eggs, strictly fresh.....	Dozen..	29.9	30.2	42.1	49.1	56.6	57.3	42.3	36.0	+ 1	+ 41	+ 64	+ 89	+ 92	+ 41	+ 20	
Bread.....	Pound..	5.6	6.2	9.9	10.0	10.0	11.9	9.7	8.8	+ 11	+ 77	+ 79	+ 79	+ 113	+ 73	+ 57	
Flour.....	do.....	3.3	3.2	7.3	6.7	7.5	8.7	5.8	5.2	- 3	+ 121	+ 103	+ 127	+ 164	+ 76	+ 58	
Corn meal.....	do.....	3.0	3.1	5.9	6.7	6.5	7.0	4.4	3.9	+ 3	+ 97	+ 123	+ 117	+ 133	+ 47	+ 30	
Rolled oats.....	do.....	8.7	11.0	9.9	8.7	14.1	14.8	12.2	9.9								
Corn flakes.....	do.....	25.2	30.3	29.7	25.8	19.4	21.4	20.6	20.0								
Cream of Wheat.....	do.....	19.4	21.4	20.6	20.0	19.4	21.4	20.6	20.0								
Macaroni.....	Pound..	8.7	8.8	10.7	12.9	14.6	18.6	8.7	9.6	+ 1	+ 23	+ 48	+ 68	+ 114	0	+ 10	
Rice.....	do.....	19.5	17.3	12.1	11.9	7.9	11.1	11.1	11.1								
Beans, navy.....	do.....	1.9	2.6	4.2	3.9	4.8	8.9	3.4	3.6	+ 37	+ 121	+ 105	+ 153	+ 368	+ 79	+ 89	
Potatoes.....	do.....	5.1	5.3	6.2	7.5	5.5	5.4	7.0	4.6								
Onions.....	do.....	6.2	7.5	5.5	4.6	17.3	16.9	14.2	13.3								
Cabbage.....	do.....	19.3	18.7	15.8	15.4	19.2	19.3	17.5	17.8								
Beans, baked.....	No. 2 can	16.1	15.2	11.4	13.8	16.1	15.2	11.4	13.8								
Corn, canned.....	do.....	10.9	23.5	7.1	7.6	10.9	23.5	7.1	7.6	- 5	+ 67	+ 67	+ 98	+ 382	+ 29	+ 38	
Peas, canned.....	do.....	54.4	54.7	59.9	65.3	70.5	74.4	69.2	68.0	+ 1	+ 10	+ 20	+ 30	+ 37	+ 27	+ 25	
Sugar, granulated.....	Pound..	29.8	29.6	30.6	30.1	46.2	49.3	35.6	36.2	- 1	+ 3	+ 1	+ 55	+ 65	+ 19	+ 21	
Tea.....	do.....	16.0	16.7	26.5	28.4	18.6	20.8	20.8	20.8								
Coffee.....	do.....	14.8	15.1	17.3	17.3	39.2	46.5	40.8	35.8								
Prunes.....	do.....	39.2	46.5	40.8	35.8	53.4	66.8	51.4	63.2								
Raisins.....	do.....	39.2	46.5	40.8	35.8	53.4	66.8	51.4	63.2								
Bananas.....	Dozen..	39.2	46.5	40.8	35.8	53.4	66.8	51.4	63.2								
Oranges.....	do.....	39.2	46.5	40.8	35.8	53.4	66.8	51.4	63.2								
All articles combined. ⁵										+ 3	+ 46	+ 68	+ 91	+ 120	+ 49	+ 43	

¹ All.
² 15-16-ounce can.

³ 8-ounce package.
⁴ 28-ounce package.

⁵ See note 2, p. 15.

Table 3 shows the changes in the retail price of each of 22 articles of food³ as well as the changes in the amounts of these articles that could be purchased for \$1, each year, 1913 to 1921, and in July, 1922.

TABLE 3.—AVERAGE RETAIL PRICES OF SPECIFIED ARTICLES OF FOOD AND AMOUNT PURCHASABLE FOR \$1, IN EACH YEAR, 1913 TO 1921, AND IN JULY, 1922.

Year.	Sirloin steak.		Round steak.		Rib roast.		Chuck roast.		Plate beef.		Pork chops.	
	Average retail price.	Amt. for \$1.	Average retail price.	Amt. for \$1.	Average retail price.	Amt. for \$1.	Average retail price.	Amt. for \$1.	Average retail price.	Amt. for \$1.	Average retail price.	Amt. for \$1.
	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.
1913.....	\$0.254	3.9	\$0.223	4.5	\$0.198	5.1	\$0.160	6.3	\$0.121	8.3	\$0.210	4.8
1914.....	.259	3.9	.236	4.2	.204	4.9	.167	6.0	.126	7.9	.220	4.5
1915.....	.257	3.9	.230	4.3	.201	5.0	.161	6.2	.121	8.3	.203	4.9
1916.....	.273	3.7	.245	4.1	.212	4.7	.171	5.8	.128	7.8	.227	4.4
1917.....	.315	3.2	.290	3.4	.249	4.0	.209	4.8	.157	6.4	.319	3.1
1918.....	.389	2.6	.369	2.7	.307	3.3	.266	3.8	.206	4.9	.390	2.6
1919.....	.417	2.4	.389	2.6	.325	3.1	.270	3.7	.202	5.0	.423	2.4
1920.....	.437	2.3	.395	2.5	.332	3.0	.262	3.8	.183	5.5	.423	2.4
1921.....	.388	2.6	.344	2.9	.291	3.4	.212	4.7	.143	7.0	.349	2.9
1922: July.....	.392	2.6	.342	2.9	.286	3.5	.203	4.9	.128	7.8	.344	2.9
	Bacon.		Ham.		Lard.		Hens.		Eggs.		Butter.	
	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.	Per doz.	Dozs.	Per lb.	Lbs.
1913.....	\$0.270	3.7	\$0.269	3.7	\$0.158	6.3	\$0.213	4.7	\$0.345	2.9	\$0.383	2.6
1914.....	.275	3.6	.273	3.7	.156	6.4	.218	4.6	.353	2.8	.362	2.8
1915.....	.269	3.7	.261	3.8	.148	6.8	.208	4.8	.341	2.9	.358	2.8
1916.....	.287	3.5	.294	3.4	.175	5.7	.236	4.2	.375	2.7	.394	2.5
1917.....	.410	2.4	.382	2.6	.276	3.6	.286	3.5	.481	2.1	.487	2.1
1918.....	.529	1.9	.479	2.1	.333	3.0	.377	2.7	.569	1.8	.577	1.7
1919.....	.554	1.8	.534	1.9	.369	2.7	.411	2.4	.628	1.6	.678	1.5
1920.....	.523	1.9	.555	1.8	.295	3.4	.447	2.2	.681	1.5	.701	1.4
1921.....	.427	2.3	.488	2.0	.180	5.6	.397	2.5	.509	2.0	.517	1.9
1922: July.....	.406	2.5	.522	1.9	.172	5.8	.357	2.8	.360	2.8	.457	2.2
	Cheese.		Milk.		Bread.		Flour.		Corn meal.		Rice.	
	Per lb.	Lbs.	Per qt.	Qts.	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.
1913.....	\$0.221	4.5	\$0.089	11.2	\$0.056	17.9	\$0.033	30.3	\$0.030	33.3	\$0.087	11.5
1914.....	.229	4.4	.089	11.2	.063	15.9	.034	29.4	.032	31.3	.088	11.4
1915.....	.253	4.3	.088	11.4	.070	14.3	.042	23.8	.033	30.3	.091	11.0
1916.....	.258	3.9	.091	11.0	.073	13.7	.044	22.7	.034	29.4	.091	11.0
1917.....	.332	3.0	.112	9.0	.092	10.9	.070	14.3	.058	17.2	.104	9.6
1918.....	.359	2.8	.139	7.2	.098	10.2	.067	14.9	.068	14.7	.129	7.8
1919.....	.426	2.3	.155	6.5	.100	10.0	.072	13.9	.064	15.6	.151	6.6
1920.....	.416	2.4	.167	6.0	.115	8.7	.081	12.3	.065	15.4	.174	5.7
1921.....	.340	2.9	.146	6.8	.099	10.1	.058	17.2	.045	22.2	.095	10.5
1922: July.....	.315	3.2	.128	7.8	.088	11.4	.052	19.2	.039	25.6	.096	10.4
	Potatoes.		Sugar.		Coffee.		Tea.					
	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.				
1913.....	\$0.017	58.8	\$0.055	18.2	\$0.298	3.4	\$0.544	1.8				
1914.....	.018	55.6	.059	16.9	.297	3.4	.546	1.8				
1915.....	.015	66.7	.066	15.2	.300	3.3	.545	1.8				
1916.....	.027	37.0	.080	12.5	.299	3.3	.546	1.8				
1917.....	.043	23.3	.093	10.8	.302	3.3	.582	1.7				
1918.....	.032	31.3	.097	10.3	.305	3.3	.648	1.5				
1919.....	.038	26.3	.113	8.8	.433	2.3	.701	1.4				
1920.....	.063	15.9	.194	5.2	.470	2.1	.733	1.4				
1921.....	.031	32.3	.080	12.5	.363	2.8	.697	1.4				
1922: July.....	.036	27.8	.076	13.2	.362	2.8	.680	1.5				

³ Although monthly prices of 43 food articles have been secured since January, 1919, prices of only 22 of these articles have been secured each month since 1913.

Index Numbers of Retail Prices of Food in the United States.

IN TABLE 4 index numbers are given which show the changes in the retail prices of each of 22 food articles,⁴ by years from 1907 to 1921, and by months for 1921 and 1922.⁵ These index numbers, or relative prices, are based on the year 1913 as 100, and 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. These figures must be used with caution. For example, the relative price of rib roast for the year 1920 was 168, which means that the average money price for the year 1920 was 68 per cent higher than the average money price for the year 1913. The relative price of bacon for the year 1919 was 205 and for the year 1920, 194, which figures show a drop of 11 points but a decrease of only 5 per cent in the year.

In the last column of Table 4 are given index numbers showing the changes in the retail cost of all articles of food combined. From January, 1913, to December, 1920, 22 articles have been included in the index, and beginning with January, 1921, 43 articles have been used.⁴ For an explanation of the method used in making the link between the cost of the market basket of 22 articles, weighted according to the average family consumption in 1901, and the cost of the market basket based on 43 articles and weighted according to the consumption in 1918, see MONTHLY LABOR REVIEW for March, 1921 (p. 25).

The curve shown in the chart on page 21 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 retail cost of the food articles included in the index has decreased since July, 1920, until the curve is brought down in July, 1922, to approximately where it was in April, 1917. The chart has been drawn on the logarithmic scale,⁶ because the percentages of increase or decrease are more accurately shown than on the arithmetic scale.

⁴ See note 2, p. 15.

⁵ For index numbers of each month, January, 1913, to December, 1920, see MONTHLY LABOR REVIEW for February, 1921, pp. 19-21.

⁶ 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' charts," by Prof. Irving Fisher, reprinted from Quarterly Publications of the American Statistical Association June, 1917, 24 pp.

TABLE 4.—INDEX NUMBERS SHOWING CHANGES IN THE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, BY YEARS, 1907 TO 1921, AND BY MONTHS FOR 1921 AND FOR A PART OF 1922.

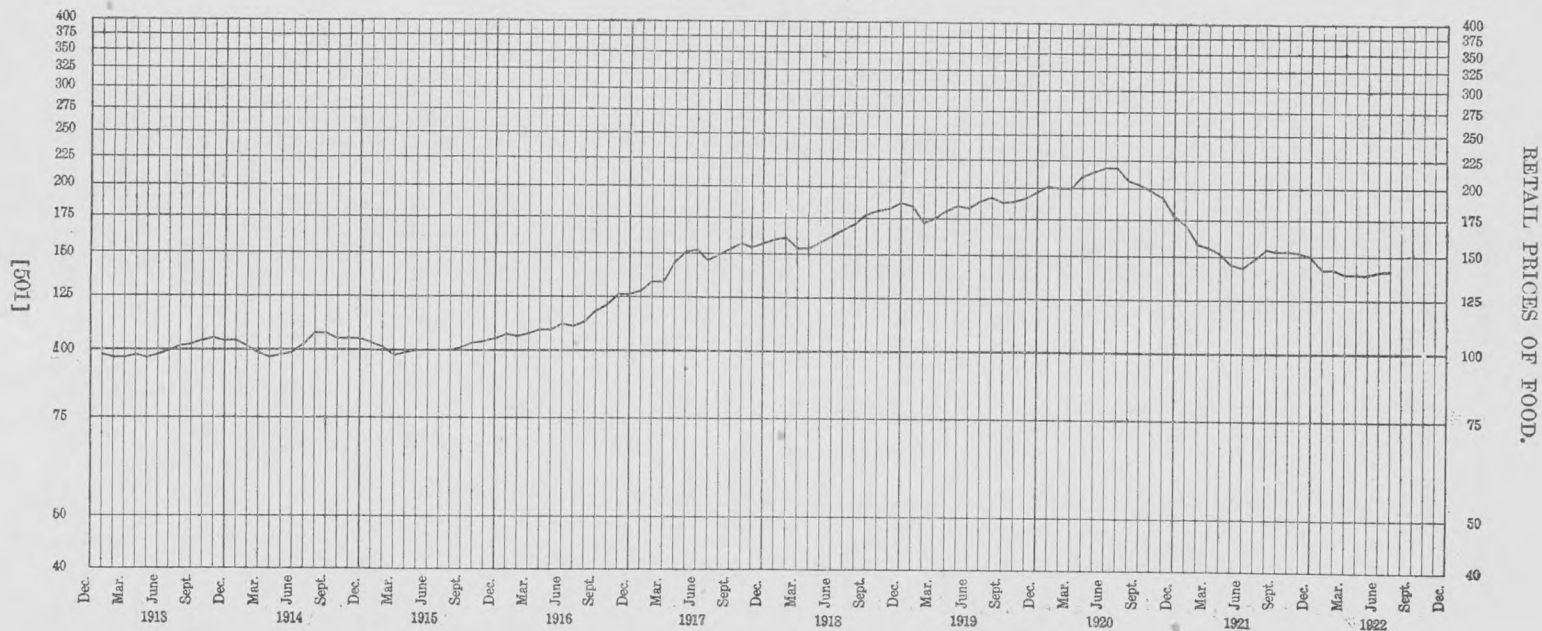
[Average for year 1913=100.]

Year and month.	Sirloin steak.	Round steak.	Rib roast.	Chuck roast.	Plate beef.	Pork chops.	Ba- con.	Ham.	Lard.	Hens.	Eggs.	But- ter.	Cheese	Milk.	Bread.	Flour.	Corn meal.	Rice.	Pota- toes.	Su- gar.	Cof- fee.	Tea.	All articles com- bined.	
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	.....	109	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	94	88	.....	96	.....	102	94	.....	130	117	.....	.....	92
1912.....	91	89	94	.....	.....	91	91	91	94	93	99	98	.....	97	.....	105	102	.....	135	115	.....	.....	98
1913.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
1914.....	102	106	103	104	104	105	102	102	99	102	102	94	104	100	113	104	105	101	108	108	100	100	102	
1915.....	101	103	101	101	100	96	100	97	93	97	99	93	105	99	125	128	108	104	89	120	101	100	101	
1916.....	108	110	107	107	106	108	106	109	111	111	109	103	117	102	130	135	113	105	159	146	100	100	114	
1917.....	124	130	126	131	130	152	152	142	175	134	139	127	150	125	164	211	192	119	253	169	101	107	146	
1918.....	153	165	155	166	170	186	196	178	211	177	165	151	162	156	175	203	227	148	188	176	102	119	168	
1919.....	164	174	164	169	167	201	205	199	234	193	182	177	193	174	179	218	213	174	224	205	145	129	186	
1920.....	172	177	168	164	151	201	194	206	187	210	197	183	188	188	205	245	217	200	371	353	158	135	203	
1921: Av. for year.....	153	154	147	133	118	166	158	181	114	186	148	135	154	164	177	176	150	109	182	145	122	128	153	
January.....	139	163	157	148	140	171	171	180	141	200	229	159	175	183	193	203	173	176	176	176	129	133	172	
February.....	151	153	148	138	129	156	166	179	131	201	139	148	174	173	189	197	167	121	153	162	126	131	158	
March.....	154	157	152	141	130	168	155	181	124	203	121	150	176	171	188	194	160	113	147	176	125	131	156	
April.....	137	160	154	140	127	177	164	183	116	202	99	145	169	167	184	179	153	106	135	176	123	129	152	
May.....	158	160	153	138	124	167	161	181	106	194	97	111	143	162	177	173	150	101	129	153	121	129	145	
June.....	157	160	151	135	117	162	159	182	103	181	101	105	133	160	175	179	150	101	159	142	120	126	144	
July.....	158	161	148	129	109	163	160	190	106	182	122	122	133	157	173	176	147	100	200	129	120	127	148	
August.....	157	160	147	130	112	181	162	197	115	183	138	134	148	161	173	173	150	101	247	136	119	127	155	
September.....	153	154	144	128	110	179	159	191	113	179	146	132	148	158	171	170	147	163	295	133	119	127	153	
October.....	147	148	139	124	109	171	153	180	103	175	171	139	149	160	170	164	143	107	206	125	119	127	153	
November.....	141	139	135	120	106	152	147	170	105	168	201	139	151	161	166	155	140	108	188	122	119	127	152	
December.....	139	138	135	120	106	145	143	165	101	168	204	136	149	158	163	152	137	107	182	118	119	124	150	
1922:																								
January.....	139	136	135	119	106	138	139	164	97	173	145	118	149	153	157	148	130	107	194	113	120	126	142	
February.....	139	135	134	118	106	140	140	173	101	173	140	120	149	148	154	155	130	107	194	116	119	125	142	
March.....	141	138	136	121	107	149	144	185	109	177	92	120	149	146	155	161	130	107	182	118	119	124	139	
April.....	143	141	138	122	107	157	147	188	107	177	92	118	145	143	155	161	130	108	171	122	120	124	139	
May.....	148	146	141	124	107	164	147	191	108	177	97	117	139	140	157	161	127	109	176	120	120	125	139	
June.....	151	150	142	126	107	161	150	193	109	173	99	117	141	140	137	161	130	110	206	129	121	125	141	
July.....	154	153	144	127	106	164	150	194	109	168	104	119	143	144	137	158	130	110	212	138	121	125	142	

[5001]

TREND IN THE RETAIL COST OF ALL ARTICLES OF FOOD, COMBINED, FOR THE UNITED STATES, BY MONTHS, JANUARY, 1913, TO JULY, 1922.

[Average cost for 1913=100.]



RETAIL PRICES OF FOOD.

Retail Prices of Food in 51 Cities on Specified Dates.

AVERAGE retail food prices are shown in Table 5 for 39 cities for July 15, 1913, and 1921, and for June 15, and July 15, 1922. For 12 other cities prices are shown for the same dates with the

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL

[The prices shown in this table are computed from reports sent monthly to the Bureau by retail dealers.]

Article.	Unit.	Atlanta, Ga.				Baltimore, Md.				Birmingham, Ala.			
		July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.
		1913	1921			1913	1921			1913	1921		
Sirloin steak.....	Pound.....	Cts. 26.0	Cts. 36.2	Cts. 35.4	Cts. 35.8	Cts. 24.3	Cts. 39.8	Cts. 36.8	Cts. 38.6	Cts. 28.1	Cts. 38.9	Cts. 34.8	Cts. 35.3
Round steak.....	do.....	21.5	33.7	32.5	32.5	23.0	36.3	32.2	34.7	22.5	35.0	30.7	30.7
Rib roast.....	do.....	19.1	28.1	27.5	27.5	20.0	29.9	28.9	29.4	20.6	28.9	25.5	25.9
Chuck roast.....	do.....	15.9	20.5	19.7	19.5	16.7	20.9	19.1	19.3	16.8	22.5	19.5	19.4
Plate beef.....	do.....	9.4	13.1	13.1	13.0	12.8	13.4	12.5	12.4	10.5	14.0	12.7	12.6
Pork chops.....	do.....	24.5	33.0	33.4	33.2	20.0	32.3	33.2	36.7	20.0	31.5	32.3	31.0
Bacon.....	do.....	32.0	42.8	39.3	39.8	26.0	36.0	34.0	35.4	35.0	48.2	42.3	41.9
Ham.....	do.....	31.0	50.3	51.1	50.6	34.5	55.0	55.6	57.1	31.3	52.5	51.7	50.9
Lamb, leg of.....	do.....	20.0	35.0	36.3	34.6	19.0	36.5	38.5	37.9	23.3	38.6	37.0	37.0
Hens.....	do.....	20.1	31.4	30.1	30.4	21.8	42.7	38.6	37.8	17.3	32.9	30.5	28.6
Salmon, canned, red.....	do.....		15.6	30.6	30.2		31.7	26.6	26.9		38.0	31.2	30.7
Milk, fresh.....	Quart.....	10.0	17.5	15.7	15.7	8.8	12.0	12.0	12.0	10.3	20.0	20.0	20.0
Milk, evaporated.....	15-16 oz. can.....		15.0	13.2	13.3		12.9	10.3	10.4		15.0	12.2	12.0
Butter.....	Pound.....	37.1	47.7	46.6	45.9	37.0	49.5	49.1	49.7	39.0	47.0	44.6	44.4
Oleomargarine.....	do.....		34.3	29.5	29.6		28.3	25.3	24.6		34.5	32.6	32.8
Nut margarine.....	do.....		27.5	26.0	26.0		25.5	25.6	25.6		30.3	28.1	28.1
Cheese.....	do.....	25.0	27.8	30.7	31.6	22.0	29.8	30.9	31.3	23.0	28.3	29.5	29.8
Lard.....	do.....	15.7	18.1	18.3	18.4	15.0	15.4	16.4	16.7	16.8	17.3	17.7	17.4
Crisco.....	do.....		19.4	22.2	22.4		18.6	20.4	21.2		24.3	21.2	21.2
Eggs, strictly fresh.....	Dozen.....	22.6	36.5	30.7	30.5	25.9	30.5	31.4	32.8	28.3	36.2	30.0	31.8
Bread.....	Pound.....	6.0	10.9	10.0	10.0	5.4	9.2	8.6	8.6	5.4	9.5	9.2	9.2
Flour.....	do.....	3.6	5.9	5.5	5.5	3.2	5.9	5.1	5.0	3.8	6.5	5.8	5.7
Corn meal.....	do.....	2.6	3.6	2.9	3.0	2.5	3.7	3.1	3.1	2.3	3.1	2.8	2.8
Rolled oats.....	do.....		11.3	9.8	9.6		9.7	8.3	8.3		11.7	9.3	9.3
Corn flakes.....	8-oz. pkg.....		13.1	9.6	10.0		11.1	9.0	9.1		13.4	10.1	9.8
Cream of Wheat.....	28-oz. pkg.....		31.4	27.0	26.8		27.6	24.9	25.2		31.4	27.1	26.7
Macaroni.....	Pound.....		22.0	21.9	22.0		21.2	17.9	18.2		21.1	19.3	19.0
Rice.....	do.....	8.6	7.5	9.3	8.7	9.0	9.1	9.4	9.3	8.2	8.3	9.2	9.1
Beans, navy.....	do.....		10.0	11.1	11.3		7.6	10.1	10.9		9.0	10.8	11.2
Potatoes.....	do.....	2.2	4.2	4.7	4.7	1.7	2.7	3.8	2.9	2.1	4.4	4.3	4.4
Onions.....	do.....		6.0	9.5	9.1		4.8	7.6	7.5		6.5	9.7	7.7
Cabbage.....	do.....		4.3	3.3	5.7		4.8	3.9	2.7		6.3	4.3	5.6
Beans, baked.....	No. 2 can.....		14.0	13.5	13.9		13.1	12.1	11.9		16.0	15.1	14.9
Corn, canned.....	do.....		15.6	16.2	15.9		15.4	14.4	14.3		17.3	16.6	16.8
Peas, canned.....	do.....		17.4	17.2	17.0		15.9	16.3	15.9		21.1	20.5	20.5
Tomatoes, canned.....	do.....		10.3	13.9	13.8		9.9	11.3	11.5		10.2	13.1	13.2
Sugar, granulated.....	Pound.....	5.8	7.3	7.4	7.9	4.9	6.3	6.3	6.9	5.5	7.3	7.2	7.8
Tea.....	do.....	60.0	89.8	88.4	88.4	56.0	65.9	66.1	66.7	61.3	84.8	79.7	79.7
Coffee.....	do.....	32.0	33.1	35.9	36.0	24.8	31.2	31.3	31.3	28.8	37.1	36.5	36.6
Prunes.....	do.....		20.7	21.6	22.6		18.1	18.3	18.8		20.4	22.7	23.8
Raisins.....	do.....		34.3	25.3	25.0		28.7	22.8	23.1		33.1	25.1	24.0
Bananas.....	Dozen.....		28.2	26.6	27.3		28.0	24.5	25.0		40.8	34.5	34.5
Oranges.....	do.....		56.0	66.4	71.5		57.1	70.9	70.8		54.4	62.7	62.6

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

exception of July, 1913, as these cities were not scheduled by the bureau until after 1913.

ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES.

As some dealers occasionally fail to report, the number of quotations varies from month to month.

Boston, Mass.			Bridgeport, Conn.				Buffalo, N. Y.				Butte, Mont.			Charleston, S. C.			
July 15—		June 15, 1922.	July 15, 1922.	July 15, 1921.	June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15, 1921.	June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.
1913	1921						1913	1921	1922.	1922.	1921.	1922.	1922.	1913	1921	1922.	1922.
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
135.8	159.8	158.8	161.1	46.3	43.1	45.9	24.0	39.3	36.8	38.2	32.5	33.0	32.9	21.8	38.7	37.9	37.9
35.8	54.4	49.2	52.3	42.2	37.1	39.4	20.8	33.6	30.9	32.7	27.8	28.5	28.3	20.0	37.3	36.3	35.4
25.6	34.2	34.8	35.3	34.7	33.4	34.7	17.0	27.9	27.6	27.9	24.8	26.3	26.0	20.5	30.7	30.8	31.1
18.7	22.4	23.0	23.3	23.6	23.3	24.5	15.8	19.9	19.5	20.0	17.8	18.3	18.3	15.0	24.5	24.2	23.3
.....	15.2	14.8	15.6	10.1	10.1	10.2	11.8	11.2	11.4	11.5	12.1	12.8	12.3	10.6	16.5	15.4	16.3
24.2	37.3	36.8	37.0	35.2	25.1	34.8	22.3	36.2	36.3	36.9	34.5	34.6	34.0	20.0	38.6	34.5	34.1
25.8	38.4	36.6	37.2	48.5	43.7	43.5	25.0	33.9	34.2	34.7	53.1	50.0	49.1	26.3	42.3	35.5	35.8
33.0	57.8	59.3	60.0	61.9	63.5	64.5	28.7	50.5	50.6	51.8	55.6	58.3	56.8	28.3	47.6	48.9	48.9
25.0	39.8	41.6	41.5	41.8	40.4	41.0	17.0	29.1	34.6	32.1	30.5	33.6	32.9	21.7	38.8	43.9	43.3
26.2	44.9	41.4	39.8	42.6	41.0	38.9	22.0	38.4	36.9	35.9	36.7	35.0	31.2	22.2	43.7	39.4	39.2
.....	34.7	31.2	31.2	42.1	33.3	33.6	.....	32.5	27.7	27.6	41.4	36.5	36.5	.....	33.9	28.0	28.1
.....	8.9	15.2	12.5	13.5	14.0	12.0	13.0	8.0	13.0	12.0	13.0	14.3	13.7	14.0	11.7	20.0	18.7
.....	14.1	11.4	11.4	13.8	10.6	10.9	.....	12.4	10.1	10.1	13.2	11.3	11.5	.....	12.8	10.5	10.5
.....	35.5	46.6	46.3	46.8	45.2	45.6	33.0	47.0	44.0	45.4	41.9	44.2	44.7	34.0	43.9	45.1	45.1
.....	31.6	29.6	29.6	28.0	25.5	25.8	.....	29.3	26.5	26.3	30.0	30.0	30.0	.....	29.3	26.7	26.7
.....	27.4	26.7	26.7	25.3	24.0	24.3	.....	26.2	26.1	25.9	29.6	29.8	29.8	.....	27.7	28.0	28.0
.....	22.3	29.7	33.1	34.0	33.0	32.6	20.5	28.4	30.3	30.4	35.3	33.8	34.2	20.0	25.7	28.2	28.3
.....	16.0	17.0	18.0	17.8	15.7	16.8	14.5	15.8	15.9	16.0	20.8	20.8	20.9	15.0	18.5	18.4	18.7
.....	21.2	22.8	23.3	19.4	21.3	22.0	.....	19.3	19.9	20.1	25.6	25.8	26.5	.....	20.4	22.3	22.4
.....	37.3	65.1	47.8	55.2	54.9	43.2	48.3	43.3	34.4	37.4	48.8	35.5	37.8	25.8	37.1	32.6	31.9
.....	5.9	9.9	8.5	8.5	10.7	8.3	8.4	5.6	8.8	8.6	8.6	9.7	9.7	6.2	11.1	9.5	9.6
.....	3.8	6.6	6.0	5.8	6.1	5.5	5.4	3.1	5.5	4.9	4.8	6.5	5.8	5.9	3.7	6.5	6.1
.....	3.5	5.6	4.8	5.0	7.6	6.8	7.0	2.6	4.2	3.7	3.7	4.8	4.1	4.0	2.4	3.0	3.0
.....	8.9	8.3	8.3	9.9	8.3	8.4	.....	8.1	7.7	7.7	8.6	6.5	6.5	.....	11.0	9.8	9.6
.....	12.1	10.2	10.1	11.5	9.5	9.5	.....	10.8	9.5	9.2	14.2	11.9	11.9	.....	12.7	10.5	10.3
.....	29.5	25.9	25.9	29.0	25.4	25.4	.....	27.8	24.9	25.1	34.2	29.2	28.8	.....	30.3	25.0	25.0
.....	24.8	23.9	24.1	25.0	24.5	23.8	.....	22.4	22.0	21.7	22.1	23.2	23.2	.....	20.1	19.8	19.8
.....	9.4	10.0	10.6	10.5	9.4	10.0	9.3	8.5	9.5	9.3	9.3	9.3	9.7	5.9	5.5	5.8	6.8
.....	7.6	10.2	11.1	8.8	10.4	11.4	.....	7.8	9.8	10.9	9.0	9.5	9.6	.....	10.1	10.3	10.7
.....	2.2	3.3	2.1	3.7	3.0	3.5	2.0	3.2	3.2	3.2	3.7	1.4	2.3	2.2	3.0	3.3	3.4
.....	7.2	8.5	8.6	5.7	7.7	7.4	.....	4.8	8.0	7.6	3.4	8.2	6.2	.....	5.0	8.5	6.7
.....	6.5	6.0	5.8	5.1	5.5	4.5	.....	4.3	5.1	3.4	6.0	6.3	6.0	.....	4.0	3.2	4.7
.....	15.9	14.4	14.3	13.0	11.7	11.9	.....	11.7	10.9	11.1	20.0	19.1	19.1	.....	11.9	11.3	11.5
.....	19.0	18.7	18.7	20.0	18.3	18.3	.....	15.9	14.4	14.4	17.2	17.3	17.3	.....	14.4	14.7	14.7
.....	20.4	21.4	21.2	20.5	19.5	20.1	.....	16.3	16.9	16.7	16.5	16.9	16.9	.....	18.8	19.3	19.3
.....	11.9	14.5	14.0	11.8	13.4	13.4	.....	11.4	13.7	13.4	13.8	16.5	16.7	.....	10.0	12.0	11.9
.....	5.4	6.7	6.8	7.5	7.0	6.7	7.4	5.3	6.6	6.7	7.7	9.1	8.9	9.3	5.0	6.4	6.6
.....	58.6	66.4	67.6	69.0	59.0	56.4	57.0	45.0	63.4	58.4	58.4	76.2	78.6	78.2	50.0	73.8	74.6
.....	33.0	41.6	42.7	42.8	33.5	34.4	35.3	29.3	33.3	34.1	33.6	46.8	45.6	45.2	26.3	32.4	32.9
.....	18.5	20.6	20.8	19.1	20.4	20.3	.....	17.7	19.6	19.4	19.2	21.0	21.3	.....	17.7	20.7	20.3
.....	30.0	21.9	21.6	30.7	23.9	24.0	.....	29.9	20.2	19.9	32.5	27.5	27.0	.....	31.3	24.8	24.6
.....	48.9	44.5	44.6	39.8	37.3	36.8	.....	49.6	42.8	41.5	41.5	45.6	45.6	.....	41.9	33.0	32.8
.....	56.5	69.6	70.2	54.7	66.5	65.6	.....	54.7	63.1	65.8	65.8	56.5	59.2	.....	51.4	64.0	63.8

² Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ART-ART-

Article.	Unit.	Chicago, Ill.				Cincinnati, Ohio.				Cleveland, Ohio.			
		July 15—		June 15,		July 15—		June 15,		July 15—		June 15,	
		1913	1921	1922.	1922.	1913	1921	1922.	1922.	1913	1921	1922.	1922.
Sirloin steak.....	Pound.....	Cts. 24.2	Cts. 38.4	Cts. 37.7	Cts. 38.3	Cts. 23.8	Cts. 35.5	Cts. 34.9	Cts. 35.2	Cts. 26.0	Cts. 38.9	Cts. 35.9	Cts. 37.5
Round steak.....	do.....	21.3	31.8	29.5	30.1	21.3	32.7	31.8	32.3	23.0	33.0	29.7	31.1
Rib roast.....	do.....	20.2	29.5	28.9	29.1	19.1	29.1	27.9	28.2	20.0	26.6	24.8	25.9
Chuck roast.....	do.....	15.9	19.1	19.3	19.6	15.2	18.9	18.5	18.3	17.5	19.9	19.2	19.9
Plate beef.....	do.....	11.3	11.8	11.7	11.9	11.6	13.4	13.3	13.2	11.5	10.5	10.5	10.9
Pork chops.....	do.....	20.4	30.2	29.8	32.4	20.6	32.1	32.4	36.7	23.2	34.0	33.8	36.2
Bacon.....	do.....	32.7	52.0	46.4	47.2	26.7	36.7	34.3	35.2	30.1	43.2	39.1	39.6
Ham.....	do.....	32.3	51.7	51.7	52.2	29.7	53.0	54.3	54.2	38.0	53.2	52.4	51.7
Lamb, leg of.....	do.....	20.2	34.3	36.8	35.9	15.7	32.7	37.0	33.9	20.7	32.9	35.0	35.6
Hens.....	do.....	20.2	36.2	33.9	33.7	23.3	38.8	37.0	36.5	22.0	38.7	35.9	36.8
Salmon, canned, red.....	do.....		35.5	32.2	32.6		35.7	28.0	27.7		34.9	30.5	30.9
Milk, fresh.....	Quart.....	8.0	14.0	12.0	12.0	8.0	13.0	12.0	12.0	8.0	13.0	11.0	11.0
Milk, evaporated.....	15-16 oz. can.....	12.6	9.9	9.9	9.9	13.2	10.2	10.0	10.0	12.8	10.2	10.2	10.2
Butter.....	Pound.....	32.3	45.6	41.3	42.1	34.4	46.0	41.1	42.4	35.2	49.9	45.8	46.3
Oleomargarine.....	do.....	24.4	23.3	23.5		23.1	28.0		28.1		29.1	27.7	27.7
Nut margarine.....	do.....		23.5	22.9	22.8		25.5	27.2	27.2		26.6	26.1	25.6
Cheese.....	do.....	25.0	34.6	33.3	34.1	21.0	32.7	31.4	32.6	23.0	26.9	29.4	30.8
Lard.....	do.....	15.1	15.6	16.2	16.5	14.2	14.0	15.0	15.0	16.5	17.4	17.5	17.7
Crisco.....	do.....		20.5	22.1	22.1		19.8	21.2	21.8		20.9	21.5	21.8
Eggs, strictly fresh.....	Dozen.....	25.3	41.8	34.5	35.4	22.4	35.9	28.6	29.8	29.8	43.3	33.4	35.6
Bread.....	Pound.....	6.1	9.8	9.7	9.7	4.8	9.4	8.4	8.4	5.5	9.1	7.9	7.9
Flour.....	do.....	2.9	5.3	4.8	4.8	3.3	5.9	5.3	5.2	3.2	6.0	5.3	5.1
Corn meal.....	do.....	2.8	5.9	5.1	5.2	2.7	3.5	2.8	2.9	2.7	4.7	3.5	3.6
Rollod oats.....	do.....		9.1	7.9	8.0		10.2	8.4	8.4		10.2	8.4	8.5
Eggs, strictly fresh.....	8-oz. pkg.....		11.1	9.5	9.4		11.2	9.6	9.4		12.5	10.4	10.0
Cream of Wheat.....	28-oz. pk.....		27.9	24.9	24.8		29.7	24.6	25.0		28.5	25.4	25.6
Macaroni.....	Pound.....		18.8	18.2	18.3		18.8	16.9	16.8		21.2	20.1	19.9
Rice.....	do.....	8.7	8.9	10.1	10.0	8.8	8.6	9.3	9.4	8.5	8.3	9.1	9.4
Beans, navy.....	do.....		7.6	10.5	11.1		6.5	11.3	11.2		6.9	11.1	11.7
Potatoes.....	do.....	2.1	3.6	3.6	3.9	2.2	4.3	4.6	4.0	2.6	3.6	4.4	3.6
Onions.....	do.....		5.0	7.3	6.6		5.5	8.0	6.2		5.4	7.2	6.5
Cabbage.....	do.....		6.3	5.0	5.0		5.8	5.0	4.7		5.7	5.3	4.8
Beans, baked.....	No. 2 can.....		14.3	12.4	12.6		13.2	11.6	12.0		13.4	12.1	12.5
Corn, canned.....	do.....		14.7	14.5	14.4		15.1	14.2	14.0		17.6	15.9	15.9
Peas, canned.....	do.....		15.1	15.7	15.7		16.5	17.1	16.9		17.5	17.8	17.9
Tomatoes, canned.....	do.....		11.9	14.1	14.2		10.8	14.1	14.0		12.3	14.0	14.1
Sugar, granulated.....	Pound.....	5.1	6.4	6.7	7.2	5.2	6.9	7.0	7.5	5.3	6.0	7.1	7.7
Tea.....	do.....	53.3	64.2	63.1	63.9	60.0	69.2	69.1	69.2	50.0	67.1	65.2	66.3
Coffee.....	do.....	30.7	33.1	34.1	34.0	25.6	30.2	31.5	31.4	26.5	35.9	36.0	36.5
Prunes.....	do.....		19.7	21.3	21.0		22.5	20.1	20.7		18.0	19.3	20.1
Raisins.....	do.....		29.9	24.5	24.3		30.3	22.1	22.4		29.4	22.7	22.5
Bananas.....	Dozen.....		38.9	35.2	36.3		42.8	37.5	36.7		49.7	45.2	43.8
Oranges.....	do.....		45.7	63.5	59.1		49.1	58.6	57.7		50.8	60.3	60.5

¹ The steak for which prices are here quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "sirloin" steak.

RETAIL PRICES OF FOOD.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued.

Columbus, Ohio.			Dallas, Tex.				Denver, Colo.				Detroit, Mich.				Fall River, Mass.				
July 15, 1921.	June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	
			1913	1921			1913	1921			1913	1921			1913	1921			
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
36.8	34.1	35.4	22.8	36.1	37.2	37.2	25.3	34.0	32.1	32.4	25.0	39.8	36.9	38.3	135.5	156.2	155.6	156.1	56.2
31.8	29.7	30.9	20.8	34.6	35.0	35.0	23.2	30.1	27.7	29.0	20.2	32.4	29.4	30.5	28.0	44.1	41.8	42.2	41.8
28.5	26.9	27.4	19.7	29.6	29.3	28.2	17.8	24.3	24.2	26.0	19.8	28.7	27.4	26.8	24.0	29.2	26.8	28.0	26.8
22.8	20.6	21.3	16.3	23.7	22.7	22.9	16.2	18.0	17.8	17.8	15.0	19.9	19.2	19.0	18.5	21.8	20.2	21.1	21.1
13.8	13.6	13.0	13.2	19.2	17.9	18.2	9.6	10.5	9.8	9.8	11.5	11.1	11.5	11.0	.....	14.0	12.4	12.3	12.3
29.5	31.8	32.0	22.0	35.0	35.2	35.2	20.6	30.8	32.5	32.3	20.6	35.4	33.9	35.1	22.5	33.1	33.5	32.9	32.9
39.5	37.2	37.5	38.0	50.5	47.0	47.8	31.0	47.7	44.8	44.1	24.5	41.3	40.9	40.6	26.2	40.1	39.4	39.4	39.4
52.7	51.7	54.4	31.1	53.8	55.4	56.3	33.3	56.9	56.1	56.1	28.0	56.6	56.1	59.4	32.7	52.4	54.4	54.3	54.3
35.5	38.8	35.5	22.0	39.0	42.0	40.8	17.8	32.3	35.9	36.9	17.6	36.0	40.6	38.0	21.0	36.6	40.9	40.3	40.3
35.2	34.8	34.2	17.8	30.7	31.5	31.3	21.4	35.6	32.9	31.1	21.6	38.7	37.9	35.7	25.0	47.8	44.8	44.0	44.0
35.5	32.1	31.9	.....	36.6	32.0	32.4	.....	38.9	35.6	35.4	.....	36.2	29.8	30.3	.....	35.7	31.5	31.1	31.1
12.0	11.0	11.0	10.0	15.0	12.0	15.0	8.4	10.8	9.8	9.8	7.9	13.0	12.0	12.0	9.0	13.0	13.0	13.0	13.0
14.5	10.0	10.3	.....	14.7	12.7	12.2	.....	13.9	10.4	10.4	.....	13.4	10.5	10.4	.....	14.9	12.1	12.1	12.1
47.7	42.5	43.7	36.0	44.3	43.2	44.8	36.4	43.6	40.0	41.0	33.7	46.8	44.2	44.5	35.1	43.9	45.1	45.4	45.4
26.5	24.7	26.2	.....	27.5	27.0	27.0	.....	31.3	28.8	28.8	.....	28.4	25.9	25.8	.....	31.0	28.5	28.5	28.5
24.9	24.4	24.7	.....	29.8	29.4	29.2	.....	27.6	28.2	28.1	.....	26.4	25.1	24.3	.....	31.7	30.7	30.7	30.7
25.9	28.7	29.3	20.0	30.7	31.1	31.7	26.1	30.8	33.3	33.5	20.7	29.1	29.5	30.6	23.4	31.2	33.1	33.2	33.2
13.1	14.8	15.0	16.8	20.8	20.7	31.0	16.3	17.7	18.8	18.9	16.3	16.5	16.9	16.7	15.2	15.1	16.5	16.6	16.6
20.8	22.2	22.2	.....	19.5	21.4	21.5	.....	22.0	24.5	24.9	.....	20.1	21.7	22.0	.....	21.5	22.0	22.0	22.0
35.0	26.7	27.5	24.0	34.6	30.5	33.4	27.1	39.6	32.1	33.8	27.0	48.5	37.1	33.5	38.0	55.7	45.8	50.2	50.2
10.3	8.1	8.1	5.4	10.1	9.1	8.8	5.4	10.3	8.2	8.4	5.6	9.4	8.6	8.6	6.2	10.7	9.3	9.3	9.3
5.5	4.9	4.8	3.3	5.2	4.9	4.8	2.6	4.0	4.0	4.1	3.2	5.8	5.0	5.0	3.4	6.2	5.6	5.5	5.5
3.7	3.1	2.9	2.6	3.8	3.4	3.5	2.4	3.3	3.2	3.1	2.8	4.8	4.2	4.3	3.4	6.6	6.1	6.0	6.0
10.4	8.9	9.1	.....	11.8	10.6	10.5	.....	9.4	9.2	9.1	.....	10.5	9.5	9.5	10.0	11.1	9.6	9.4	9.4
11.5	9.6	9.4	.....	12.9	11.4	11.8	.....	12.6	10.2	10.3	.....	11.1	9.1	8.9	.....	13.6	10.5	10.2	10.2
30.4	25.6	26.0	.....	31.8	25.7	25.7	.....	29.5	25.5	25.4	.....	29.8	25.1	25.1	.....	29.7	27.7	27.7	27.7
20.8	19.9	19.8	.....	21.6	21.2	21.3	.....	19.7	21.3	21.1	.....	19.1	18.9	19.0	.....	25.0	24.0	24.0	24.0
9.4	10.8	10.8	9.3	8.9	10.9	11.4	8.6	9.0	9.9	9.9	8.4	7.5	9.7	9.6	.....	9.6	10.1	10.0	10.0
6.7	11.9	12.8	.....	9.3	10.7	10.7	.....	8.9	10.0	10.3	.....	6.4	10.9	11.9	.....	7.7	10.1	10.9	10.9
3.5	3.9	3.9	2.2	4.5	4.5	4.2	2.1	4.0	3.6	4.2	1.9	3.3	3.7	3.2	2.2	3.1	2.8	3.0	3.0
6.4	9.6	7.6	.....	5.9	7.9	7.6	.....	5.6	8.3	7.7	.....	6.3	7.5	5.9	.....	6.2	9.0	9.0	9.0
6.0	5.9	4.9	.....	5.5	6.4	6.5	.....	4.9	6.5	4.6	.....	7.9	5.1	3.8	.....	4.3	5.9	4.5	4.5
14.2	13.3	13.4	.....	16.4	15.5	15.3	.....	16.3	14.4	14.5	.....	12.2	11.8	12.2	.....	14.2	13.3	13.0	13.0
13.7	13.2	13.2	.....	17.7	17.7	17.7	.....	15.1	14.9	14.9	.....	15.7	14.8	14.7	.....	16.2	15.7	15.8	15.8
14.9	14.9	14.9	.....	22.2	21.8	21.5	.....	17.3	17.3	17.5	.....	17.0	16.5	16.4	.....	18.5	17.8	17.9	17.9
10.6	14.4	14.5	.....	12.9	14.5	14.5	.....	12.2	13.3	13.4	.....	11.3	13.4	13.4	.....	11.4	13.4	13.6	13.6
6.8	7.1	7.7	5.7	7.5	7.4	8.1	5.6	7.9	7.9	8.2	5.3	6.5	6.8	7.7	5.4	7.1	6.9	7.6	7.6
82.5	78.4	78.4	66.7	87.5	90.6	90.6	52.8	71.4	69.6	69.8	43.3	63.3	61.3	61.3	44.2	56.0	54.7	54.3	54.3
34.6	34.7	35.2	36.7	37.7	41.3	41.4	29.4	36.1	35.7	36.0	29.3	35.1	35.7	35.7	33.0	40.6	37.9	38.0	38.0
18.2	21.1	22.1	.....	21.9	23.5	23.2	.....	18.9	21.6	21.0	.....	18.3	20.8	21.3	.....	18.0	18.5	18.8	18.8
30.3	23.0	22.3	.....	33.9	26.2	25.5	.....	32.5	25.3	25.4	.....	29.3	23.4	23.2	.....	29.2	24.0	23.9	23.9
40.5	38.5	37.5	.....	33.6	35.6	35.0	.....	213.8	212.6	212.6	.....	35.5	33.9	33.8	.....	211.4	210.4	210.3	210.3
53.0	63.5	61.0	.....	49.5	69.3	72.5	.....	48.6	59.8	60.7	.....	48.1	60.6	60.1	.....	50.2	59.3	59.3	59.3

² Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article.	Unit.	Houston, Tex.			Indianapolis, Ind.			Jacksonville, Fla.				
		July 15, 1921.	June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.
					1913	1921				1913	1921	
Sirloin steak.....	Pound.....	Cts. 32.9	Cts. 32.9	Cts. 31.3	Cts. 25.5	Cts. 36.9	Cts. 36.6	Cts. 36.6	Cts. 26.0	Cts. 36.9	Cts. 35.0	Cts. 35.0
Round steak.....	do.....	31.4	32.0	31.0	24.7	35.8	34.3	34.6	22.0	32.5	30.5	30.0
Rib roast.....	do.....	26.5	25.2	25.6	18.2	26.3	26.6	26.5	23.0	27.5	26.2	25.3
Chuck roast.....	do.....	22.4	20.8	21.2	16.4	21.6	21.6	22.0	14.0	19.3	17.9	17.8
Plate beef.....	do.....	17.9	16.2	15.5	12.1	13.8	14.1	13.4	10.3	11.3	10.3	10.5
Pork chops.....	do.....	34.1	30.9	29.9	22.0	32.9	32.5	32.1	22.3	34.2	34.1	32.3
Bacon.....	do.....	53.2	49.4	49.0	30.7	42.2	39.1	40.2	27.8	41.4	36.7	38.1
Ham.....	do.....	51.9	52.0	52.1	32.8	55.4	56.4	55.3	28.7	50.0	50.0	50.0
Lamb, leg of.....	do.....	34.0	38.8	37.5	21.7	32.1	40.0	39.3	19.3	37.6	37.5	37.0
Hens.....	do.....	30.6	30.0	30.2	21.0	35.0	34.6	34.0	22.8	35.2	34.0	33.0
Salmon, canned, red.....	do.....	37.0	31.5	31.5	.....	18.6	38.5	38.4	.....	37.4	30.8	30.7
Milk, fresh.....	Quart.....	16.0	15.3	15.3	8.0	12.0	10.0	10.0	12.4	20.0	14.7	16.0
Milk, evaporated.....	15-16 oz. can.....	13.9	11.4	11.5	.....	13.3	10.0	9.9	.....	13.6	11.2	11.0
Butter.....	Pound.....	44.9	43.8	44.0	33.2	44.9	40.9	41.4	38.6	46.1	45.7	45.3
Oleomargarine.....	do.....	32.8	31.3	31.3	.....	27.8	26.8	26.8	.....	28.6	27.7	27.5
Nut margarine.....	do.....	28.6	28.6	28.8	.....	25.8	26.6	26.5	.....	29.3	26.7	25.8
Cheese.....	do.....	26.3	28.6	29.2	21.3	29.6	30.8	31.4	22.5	26.0	23.8	29.8
Lard.....	do.....	18.6	17.9	17.9	15.2	13.3	14.5	14.6	15.5	19.5	18.0	18.0
Crisco.....	do.....	19.7	24.0	23.9	.....	21.0	21.9	22.0	.....	20.5	22.4	22.5
Eggs, strictly fresh.....	Dozen.....	34.1	29.2	30.3	22.2	34.5	27.3	27.8	30.6	41.3	34.6	36.6
Bread.....	Pound.....	8.7	6.8	6.8	5.1	8.6	8.1	8.0	6.4	10.3	10.7	10.7
Flour.....	do.....	6.0	5.3	5.2	3.2	5.6	4.8	4.7	3.8	6.6	6.1	6.0
Corn meal.....	do.....	4.1	3.5	3.6	2.6	3.3	2.9	2.9	3.0	3.6	3.0	3.0
Rollod oats.....	do.....	10.3	8.7	8.4	.....	9.3	7.8	7.5	.....	10.9	9.3	9.3
Corn flakes.....	8-oz. pkg.....	12.4	9.8	9.7	.....	24.0	9.2	9.0	.....	12.5	9.8	9.8
Cream of Wheat.....	28-oz. pkg.....	29.5	24.8	24.9	.....	18.0	25.9	25.9	.....	30.1	27.4	26.9
Macaroni.....	Pound.....	20.8	20.1	20.1	.....	19.8	19.1	19.1	.....	21.7	18.6	18.8
Rice.....	do.....	6.9	8.1	8.0	9.2	9.2	9.9	9.8	6.6	7.5	9.2	9.0
Beans, navy.....	do.....	8.6	9.9	9.9	.....	7.2	11.9	12.8	.....	8.9	11.2	11.8
Potatoes.....	do.....	4.1	3.9	4.0	2.2	3.7	4.0	3.9	2.6	4.6	4.4	4.4
Onions.....	do.....	4.6	7.1	7.0	.....	6.0	9.1	7.4	.....	5.1	8.8	8.3
Cabbage.....	do.....	5.4	4.9	5.5	.....	6.4	5.1	4.7	.....	5.6	4.3	5.6
Beans, baked.....	No. 2 can.....	12.8	14.0	14.2	.....	13.7	13.0	13.1	.....	13.1	11.8	12.0
Corn, canned.....	do.....	12.6	14.3	14.2	.....	14.3	14.3	14.3	.....	16.9	15.8	15.9
Peas, canned.....	do.....	17.9	18.8	18.8	.....	14.7	15.4	15.6	.....	19.3	17.7	17.5
Tomatoes, canned.....	do.....	10.8	13.9	13.6	.....	11.7	14.9	15.2	.....	10.0	13.3	12.8
Sugar, granulated.....	Pound.....	6.8	6.9	7.9	5.8	7.4	7.5	8.3	5.9	7.1	7.3	7.7
Tea.....	do.....	71.6	73.9	72.2	60.0	80.8	74.2	74.2	60.0	86.2	86.5	86.5
Coffee.....	do.....	29.7	31.3	32.3	30.0	38.8	36.6	37.1	34.5	36.7	38.2	37.7
Prunes.....	do.....	18.1	23.4	22.9	.....	20.5	20.8	21.2	.....	17.3	21.5	20.9
Raisins.....	do.....	32.2	24.4	26.2	.....	33.1	25.9	24.9	.....	33.8	25.6	26.0
Bananas.....	Dozen.....	34.7	30.0	29.2	.....	31.3	31.0	30.3	.....	28.1	29.4	24.4
Oranges.....	do.....	47.3	52.7	56.5	.....	50.6	61.9	63.1	.....	67.5	60.3	65.0

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

RETAIL PRICES OF FOOD.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued.

Kansas City, Mo.				Little Rock, Ark.				Los Angeles, Calif.				Louisville, Ky.				Manchester, N. H.				
July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	
1913	1921		1913	1921		1913	1921	1913	1921		1913	1921	1913	1921		1913	1921		1922.	
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
24.7	37.1	37.4	37.4	26.7	35.0	34.1	34.3	24.0	35.9	34.4	34.3	23.6	33.4	32.3	31.7	36.2	157.1	152.5	154.2	54.2
21.8	33.5	32.5	31.9	20.0	31.9	31.8	32.2	21.0	30.0	28.5	28.4	20.4	31.7	29.4	28.9	29.7	49.2	44.1	45.1	45.1
17.8	27.2	25.2	25.2	20.0	28.7	27.0	27.5	19.6	29.3	28.2	28.0	18.3	25.5	23.8	23.3	20.7	26.8	26.9	27.2	27.2
14.9	17.5	17.9	18.2	16.7	20.6	20.1	20.5	15.8	17.0	17.9	17.4	15.6	20.1	18.2	17.6	17.2	22.2	21.9	22.4	22.4
11.7	10.8	11.1	10.8	13.8	14.3	15.0	15.7	12.3	12.7	12.6	12.2	13.1	15.6	13.0	12.5	.....	17.2	15.5	15.6	15.6
20.4	30.2	30.6	31.0	23.3	33.8	33.3	32.6	25.4	39.0	38.3	38.0	20.1	34.6	30.8	29.9	20.7	34.6	33.6	33.5	33.5
30.6	50.0	46.1	45.3	37.5	48.9	42.2	41.9	34.0	54.4	52.0	51.6	29.4	39.8	35.5	37.4	24.0	36.8	33.9	33.6	33.6
28.8	53.1	55.0	55.3	30.0	54.2	54.4	54.7	36.7	61.7	62.7	62.7	30.0	50.2	47.5	47.5	29.2	49.0	49.5	49.6	49.6
18.5	32.1	34.3	32.0	20.8	36.4	39.3	35.6	18.8	31.4	32.6	33.4	18.3	30.0	36.0	33.3	21.8	38.3	37.3	38.0	38.0
17.8	32.3	31.8	30.8	20.0	30.3	29.8	28.2	26.4	39.8	41.3	39.2	23.3	31.1	32.4	30.3	24.3	49.4	45.0	43.2	43.2
.....	33.7	31.6	31.8	.....	39.9	31.5	31.5	.....	45.1	40.9	40.4	.....	31.8	30.0	29.4	.....	35.0	31.7	31.4	31.4
8.7	14.7	12.0	12.0	10.0	15.0	13.0	13.0	10.0	14.3	14.0	14.0	8.8	11.0	9.0	9.3	8.0	15.0	12.0	12.0	12.0
.....	14.3	10.8	10.9	.....	14.7	11.7	11.7	.....	11.6	9.9	9.9	.....	13.9	10.9	10.3	.....	15.0	12.9	12.7	12.7
35.4	47.5	44.0	44.6	39.4	45.9	46.0	46.9	37.0	50.6	51.2	51.7	35.3	49.9	44.8	44.7	38.1	52.6	49.6	49.9	49.9
.....	28.3	28.1	27.0	.....	31.3	33.3	31.3	.....	32.0	29.7	29.9	.....	28.5	26.9	26.7	.....	29.4	28.3	28.0	28.0
.....	26.6	27.5	27.7	.....	28.0	27.8	28.3	.....	27.3	27.5	26.8	.....	27.0	26.5	25.5	.....	26.0	23.6	22.7	22.7
21.8	30.5	33.2	32.9	23.3	29.2	31.6	32.0	19.5	33.3	34.8	35.6	21.7	26.7	27.7	28.9	21.0	30.1	32.1	32.4	32.4
16.2	17.7	17.7	17.5	16.3	18.5	20.0	20.1	18.3	16.7	18.4	18.8	15.4	15.4	14.9	14.9	16.0	16.8	17.3	17.4	17.4
.....	22.5	24.3	24.3	.....	20.5	23.1	23.0	.....	21.0	23.4	23.9	.....	21.5	22.1	22.4	.....	23.1	22.6	22.9	22.9
23.1	35.5	29.4	29.7	26.7	35.7	31.9	31.6	33.0	41.2	35.8	37.4	22.1	31.3	25.7	28.3	32.3	55.5	41.1	44.7	44.7
6.1	9.9	7.8	7.8	6.0	9.5	8.4	8.4	6.0	9.2	9.1	9.0	5.7	8.9	8.8	8.8	6.1	8.6	8.0	8.0	8.0
3.0	5.4	4.9	4.8	3.5	5.9	5.5	5.3	3.6	5.5	5.1	4.9	3.5	5.6	5.4	5.4	3.4	6.4	5.7	5.6	5.6
2.6	4.9	4.3	4.5	2.4	3.1	2.8	2.8	3.2	5.1	4.3	4.2	2.3	2.6	2.5	2.5	3.4	6.0	4.6	4.8	4.8
.....	10.4	8.1	8.1	.....	11.7	10.1	10.2	.....	10.6	10.1	10.2	.....	10.6	10.1	10.2	.....	9.9	9.0	9.0	9.0
.....	13.0	9.9	9.9	.....	13.1	9.8	10.2	.....	12.6	9.9	10.0	.....	11.9	9.6	9.4	.....	12.9	10.0	9.9	9.9
.....	30.2	26.4	26.7	.....	31.4	26.5	26.5	.....	28.9	24.8	24.6	.....	29.7	25.1	24.7	.....	29.7	26.4	26.4	26.4
.....	22.6	22.1	21.8	.....	21.8	22.3	22.3	.....	17.6	16.6	16.6	.....	20.5	17.9	17.9	.....	25.6	25.0	24.8	24.8
8.7	8.6	9.3	9.6	8.3	7.4	8.6	8.4	7.7	9.5	9.6	9.8	8.1	8.4	9.0	9.1	8.8	8.6	9.2	9.3	9.3
.....	8.3	11.7	12.8	.....	8.0	11.4	11.8	.....	8.0	9.5	9.8	.....	6.3	10.5	11.9	.....	7.7	11.1	11.7	11.7
1.8	3.3	3.6	3.3	1.8	4.3	3.5	3.4	1.7	2.5	3.2	2.9	2.0	2.6	3.8	3.0	2.0	3.3	2.0	3.7	3.7
.....	5.7	8.3	8.0	.....	5.7	9.7	7.2	.....	3.7	6.0	5.1	.....	3.7	6.1	4.5	.....	6.9	7.5	8.0	8.0
.....	4.3	4.6	3.7	.....	5.6	5.0	5.9	.....	3.9	4.1	4.0	.....	6.8	4.4	3.6	.....	8.1	5.9	5.8	5.8
.....	14.8	14.2	14.3	.....	13.7	13.5	13.4	.....	16.0	13.8	14.2	.....	12.5	11.9	12.5	.....	16.2	14.9	14.9	14.9
.....	13.0	13.3	13.4	.....	14.8	15.3	15.3	.....	16.8	17.1	16.8	.....	15.8	15.2	15.0	.....	19.0	18.4	18.3	18.3
.....	14.9	15.3	15.5	.....	18.2	19.5	19.5	.....	18.1	19.6	19.3	.....	17.1	16.4	16.4	.....	21.6	22.1	22.1	22.1
.....	10.9	14.3	14.3	.....	11.7	14.7	14.7	.....	213.4	216.1	215.6	.....	11.5	13.6	13.4	.....	19.4	20.1	20.1	20.1
5.7	7.3	7.4	7.8	5.8	8.1	7.8	8.1	5.5	7.1	7.3	7.8	5.2	7.0	7.1	7.6	5.3	7.5	7.4	7.9	7.9
54.0	78.5	78.1	78.6	50.0	91.2	92.5	92.3	54.5	68.9	72.3	71.6	62.5	77.3	76.2	76.2	47.0	58.4	57.1	57.4	57.4
27.8	36.7	37.1	37.3	30.8	37.6	39.8	40.2	36.3	36.2	38.2	38.5	27.5	34.1	34.9	35.1	32.0	38.8	38.6	38.9	38.9
.....	17.4	21.6	22.1	.....	21.3	21.5	22.7	.....	17.4	20.0	20.6	.....	22.2	19.5	19.2	.....	19.3	19.9	20.0	20.0
.....	33.5	27.2	26.9	.....	34.0	24.6	25.4	.....	29.5	24.2	24.3	.....	29.1	24.3	24.1	.....	31.6	22.2	22.3	22.3
.....	13.5	11.8	11.8	.....	10.7	9.7	9.6	.....	12.8	10.8	10.8	.....	38.0	36.5	34.5	.....	11.5	10.1	10.1	10.1
.....	53.7	59.9	62.8	.....	55.0	67.8	66.7	.....	28.3	40.0	49.1	.....	44.5	46.3	48.9	.....	53.9	67.4	59.9	59.9

² No. 2½ can.

³ No. 3 can.

⁴ Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article.	Unit.	Memphis, Tenn.				Milwaukee, Wis.				Minneapolis, Minn.			
		July 15—		June	July	July 15—		June	July	July 15—		June	July
		1913	1921	15, 1922.	15, 1922.	1913	1921	15, 1922.	15, 1922.	1913	1921	15, 1922.	15, 1922.
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak	Pound	22.9	32.4	31.7	32.3	23.0	39.5	37.5	38.2	24.2	34.7	33.1	33.8
Round steak	do.	19.7	30.0	28.0	28.4	21.2	35.0	33.2	33.7	22.2	30.8	30.2	30.4
Rib roast	do.	20.4	25.8	24.1	24.5	18.8	28.9	27.0	27.1	20.5	25.4	25.0	25.9
Chuck roast	do.	15.9	18.7	16.8	17.3	16.6	21.9	21.3	21.8	17.3	19.0	19.2	19.8
Plate beef	do.	12.2	13.8	12.2	12.5	11.6	11.7	12.4	12.3	10.3	8.6	9.1	9.1
Pork chops	do.	20.0	29.9	28.9	28.8	20.0	33.5	32.4	34.8	19.3	31.8	33.2	33.3
Bacon	do.	31.4	42.8	38.1	38.2	28.6	45.4	42.8	42.7	27.7	45.7	43.9	44.3
Ham	do.	30.7	51.2	51.7	51.9	29.0	49.3	49.1	50.1	30.0	51.8	52.8	52.5
Lamb, leg of	do.	21.2	34.3	36.8	36.6	20.5	38.0	39.3	38.0	16.5	32.1	33.8	33.2
Hens	do.	20.0	31.5	31.5	27.0	20.6	35.1	33.5	32.1	19.2	31.7	30.6	29.1
Salmon, canned, red	do.		39.3	36.3	36.6		42.1	32.1	32.0		43.8	38.6	39.3
Milk, fresh	Quart	10.0	17.3	15.0	15.0	7.0	9.0	9.0	9.0	7.0	10.0	10.0	10.0
Milk, evaporated	15-16 oz. can		14.8	11.8	11.2		13.8	10.4	10.5		14.4	11.4	11.6
Butter	Pound	36.9	45.4	41.9	42.5	31.3	45.5	40.9	41.8	31.0	42.5	40.7	42.0
Oleomargarine	do.		30.4	30.6	30.6		25.3	24.4	24.4		29.1	26.3	26.1
Nut margarine	do.		26.7	28.8	27.0		24.5	23.7	23.7		25.2	24.6	24.8
Cheese	do.	20.0	25.5	23.6	29.4	21.0	25.0	28.0	28.5	20.8	27.6	29.4	29.7
Lard	do.	15.9	15.8	16.1	15.9	15.6	17.1	17.4	17.5	15.4	16.0	16.7	16.8
Crisco	do.		19.3	22.3	21.7		21.0	21.8	22.0		21.7	23.3	23.5
Eggs, strictly fresh	Dozen	24.0	35.5	28.9	30.1	23.8	35.1	30.0	29.3	22.7	36.6	29.8	29.6
Bread	Pound	6.0	10.3	9.2	9.6	5.6	9.4	9.3	9.3	5.6	9.6	9.0	9.0
Flour	do.	3.5	5.9	5.5	5.3	3.1	5.6	5.0	4.8	3.0	5.9	5.1	5.3
Corn meal	do.	2.0	2.9	2.7	2.7	3.0	4.6	3.7	3.8	2.4	4.7	3.8	4.0
Rolled oats	do.		10.7	9.4	9.1		6.9	7.2	6.7		8.5	8.3	7.8
Corn flakes	8-oz. pkg		12.5	9.8	9.8		11.7	9.3	9.2		12.5	10.2	10.4
Cream of Wheat	28-oz. pkg		29.2	26.4	26.5		29.1	25.3	25.0		30.0	25.4	25.2
Macaroni	Pound		17.1	17.3	17.2		18.8	17.4	17.8		17.6	18.0	17.8
Rice	do.	8.0	6.5	8.6	8.3	9.0	9.5	10.0	10.0	9.1	8.6	9.3	9.3
Beans, navy	do.		7.4	11.0	11.2		7.1	10.6	11.5		8.3	9.9	10.9
Potatoes	do.	1.9	4.3	4.0	4.1	2.0	3.9	2.9	3.8	1.7	3.6	3.3	2.4
Onions	do.		4.3	6.8	4.9		6.6	7.8	6.6		6.0	8.6	6.8
Cabbage	do.		5.4	4.0	4.4		7.2	5.4	4.3		4.1	5.7	2.9
Beans, baked	No. 2 can		14.8	13.6	13.2		12.5	11.3	11.4		15.9	14.7	15.3
Corn, canned	do.		14.1	14.7	14.4		15.3	14.7	14.8		13.7	13.3	13.4
Peas, canned	do.		15.9	18.9	19.1		15.0	15.6	15.5		15.4	15.6	15.9
Tomatoes, canned	do.		10.7	13.7	13.6		12.2	14.7	14.6		14.3	15.2	15.1
Sugar, granulated	Pound	5.7	7.3	7.0	7.7	5.5	6.7	6.8	7.4	5.6	7.3	7.3	7.8
Tea	do.	63.8	88.4	86.2	89.8	50.0	68.1	69.0	69.4	45.0	64.3	62.7	64.2
Coffee	do.	27.5	34.8	37.6	37.5	27.5	32.1	32.8	32.2	30.8	40.3	40.5	40.5
Prunes	do.		20.6	21.2	20.8		19.0	21.4	21.2		19.3	21.4	22.1
Raisins	do.		34.8	26.3	26.3		30.1	24.5	24.4		31.0	25.0	25.1
Bananas	Dozen		38.2	33.6	34.5		¹ 11.2	³ 9.8	³ 9.7		³ 12.6	³ 10.7	³ 10.8
Oranges	do.		51.9	70.6	70.5		50.8	57.9	61.9		51.1	67.3	67.4

1 Whole.

RETAIL PRICES OF FOOD.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued.

Mobile, Ala.			Newark, N. J.				New Haven, Conn.				New Orleans, La.				New York, N. Y.			
July 15, 1921.	June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.
			1913	1921			1913	1921			1913	1921	1922.	1922.	1913	1921	1922.	1922.
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
32.7	31.2	30.8	28.4	43.8	41.2	43.3	33.2	48.7	46.8	49.1	22.5	31.5	32.6	33.4	27.0	43.4	42.0	43.1
33.0	30.4	30.0	28.0	42.5	39.6	41.6	30.0	41.4	38.5	40.4	19.5	29.1	30.3	30.0	26.1	42.5	40.2	41.9
28.0	26.1	25.0	21.2	34.1	32.8	33.9	24.8	34.8	34.1	36.0	19.4	28.3	27.7	28.7	22.6	36.0	35.8	35.8
21.7	21.2	20.6	18.0	22.1	19.7	21.7	20.0	25.1	23.8	24.8	14.5	19.5	19.7	20.6	16.4	21.9	21.3	21.7
17.0	16.6	16.4	13.5	12.1	11.4	11.8	.....	16.9	14.0	14.4	11.3	15.5	15.4	15.7	14.9	17.8	17.8	17.5
35.9	33.8	33.1	22.8	37.4	34.9	36.0	22.8	33.1	34.4	34.6	23.1	35.3	36.0	37.2	22.6	37.9	36.6	36.6
46.8	40.3	41.6	25.8	37.9	37.1	37.5	29.3	45.4	41.1	41.0	31.3	46.3	42.2	43.2	26.4	40.8	37.8	38.5
48.3	49.2	49.2	22.0	34.2	35.0	34.8	34.0	56.5	59.1	59.6	30.0	49.7	51.5	50.8	30.0	54.4	57.7	57.0
32.9	34.3	32.1	21.2	38.0	38.1	39.9	21.4	40.0	41.4	42.3	21.3	37.5	39.9	41.2	18.1	35.4	35.0	36.2
37.5	34.7	35.6	24.0	41.4	40.1	37.9	24.0	45.1	42.5	41.5	19.3	36.7	37.8	37.0	22.6	41.8	39.1	37.5
37.0	31.1	31.8	.....	34.6	28.4	28.6	.....	37.7	35.1	34.3	.....	39.4	35.3	35.4	.....	38.0	29.5	30.1
16.5	15.0	15.0	9.0	15.0	14.3	15.3	9.0	14.0	14.0	14.0	9.3	16.5	14.0	14.0	9.0	14.0	13.0	14.0
13.7	11.4	11.3	.....	12.3	10.2	10.2	.....	13.2	11.0	10.9	.....	13.1	10.5	10.4	.....	12.3	10.0	10.1
46.2	47.9	47.7	35.6	48.8	44.3	46.1	33.8	45.0	44.4	44.6	34.1	45.3	45.4	46.2	34.4	47.6	44.4	45.0
30.7	29.7	29.2	.....	29.2	28.4	28.4	.....	29.5	28.3	28.4	.....	27.8	27.4	27.6	.....	29.5	27.6	27.2
27.9	26.9	26.5	.....	26.4	25.4	25.0	.....	27.0	26.2	26.3	.....	26.7	26.4	26.5	.....	25.7	25.5	25.1
26.2	30.5	28.1	24.2	32.2	33.3	34.1	22.0	31.1	32.1	31.9	22.0	28.9	30.9	31.6	19.4	32.4	32.9	32.7
16.8	17.3	16.0	.....	12.3	16.6	17.2	15.7	16.2	16.4	16.6	15.1	16.5	16.5	16.6	16.2	17.3	17.6	17.6
19.2	22.6	23.1	.....	19.0	21.2	21.7	.....	19.4	20.6	21.2	.....	20.6	23.7	23.4	.....	19.7	21.2	21.9
40.5	31.6	32.2	38.2	51.8	43.8	47.6	39.0	54.3	43.6	49.3	27.6	39.5	31.2	33.0	.....	53.4	42.6	45.0
9.5	8.2	8.2	5.6	9.4	8.6	8.6	5.3	9.5	8.1	8.1	5.1	8.2	8.0	7.8	6.4	10.1	9.7	9.7
5.6	5.4	5.4	3.7	5.9	5.4	5.4	3.3	6.0	5.3	5.1	3.9	6.5	5.8	5.8	3.3	6.1	5.5	5.4
3.2	3.2	3.1	3.6	6.5	6.0	6.1	3.2	6.4	5.9	6.0	2.7	3.1	2.9	3.0	3.4	6.4	5.4	5.3
10.3	9.2	9.3	.....	8.9	7.4	7.5	.....	9.9	9.1	8.8	.....	9.4	8.9	8.8	.....	8.3	8.0	7.8
12.6	9.6	9.7	.....	10.4	8.9	8.7	.....	11.0	9.6	9.5	.....	11.1	9.7	9.6	.....	10.4	8.9	8.7
29.2	24.9	24.8	.....	28.4	25.3	25.3	.....	28.6	24.8	24.8	.....	29.5	24.7	24.7	.....	28.6	25.0	25.0
19.2	20.2	20.3	.....	21.9	21.4	21.4	.....	22.0	22.0	22.0	.....	9.9	9.8	9.9	.....	21.9	21.0	20.6
7.6	8.5	8.5	9.0	8.2	8.9	9.1	9.3	8.7	9.8	9.8	7.4	7.5	8.8	9.1	8.0	8.5	9.1	9.0
8.1	10.9	12.3	.....	7.6	10.3	11.2	.....	7.7	10.7	11.1	.....	7.0	10.5	11.0	.....	9.1	10.7	11.2
3.8	3.6	4.3	2.6	3.4	4.4	3.4	2.1	3.1	2.5	3.6	2.0	3.2	3.7	3.8	2.5	3.5	4.8	3.8
5.2	7.4	6.9	.....	6.7	8.1	6.8	.....	6.0	8.4	7.9	.....	3.7	4.7	4.7	.....	5.6	7.4	6.4
6.7	3.9	5.5	.....	5.2	5.3	4.4	.....	5.5	5.2	4.3	.....	6.4	3.2	3.3	.....	4.2	5.1	3.5
13.6	13.5	13.4	.....	12.1	11.1	11.2	.....	14.2	12.3	12.3	.....	13.8	12.7	12.7	.....	12.9	11.7	11.9
15.1	15.8	15.5	.....	15.7	15.4	15.1	.....	19.2	18.2	18.3	.....	13.5	13.4	13.0	.....	14.9	13.6	13.7
17.5	16.8	17.6	.....	17.4	17.8	17.5	.....	21.9	21.3	21.1	.....	18.2	16.9	16.7	.....	16.2	16.2	16.3
10.2	13.7	13.3	.....	9.9	13.1	12.6	.....	22.1	21.8	21.6	.....	11.2	13.6	13.4	.....	11.1	12.4	12.4
7.5	7.5	7.9	5.3	6.5	6.3	7.1	5.3	6.8	6.7	7.6	5.2	6.6	6.7	7.1	4.9	6.3	6.3	7.0
73.3	73.4	75.1	53.8	48.8	48.6	48.5	55.0	54.5	56.3	56.4	62.1	72.4	72.0	71.2	43.3	53.0	49.5	48.4
32.1	34.1	35.5	29.3	31.8	32.8	33.0	33.8	37.6	37.9	37.9	26.7	29.8	30.7	30.9	27.5	32.5	32.6	32.3
16.2	22.7	24.4	.....	17.4	18.6	18.3	.....	18.4	19.0	19.4	.....	17.8	21.8	22.0	.....	18.8	19.7	19.5
30.4	25.5	26.0	.....	29.8	21.3	20.9	.....	29.2	22.7	22.3	.....	30.7	25.3	25.7	.....	30.1	21.8	21.9
25.5	26.3	25.7	.....	43.3	40.6	37.5	.....	38.1	35.4	35.0	.....	23.0	22.0	21.0	.....	41.4	41.8	40.7
51.2	69.0	67.8	.....	57.4	72.5	76.4	.....	53.4	68.9	64.1	.....	44.4	62.9	63.3	.....	57.9	74.6	77.2

² No. 3 can.

³ Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article.	Unit.	Norfolk, Va.			Omaha, Nebr.				Peoria, Ill.		
		July 15, 1921.	June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15, 1921.	June 15, 1922.	July 15, 1922.
					1913	1921					
					Cts.	Cts.					
Sirloin steak.....	Pound.....	42.9	38.1	38.3	25.2	36.8	35.8	36.0	33.1	34.3	33.8
Round steak.....	do.....	37.1	32.0	31.8	22.0	33.3	33.1	33.6	32.7	32.8	32.5
Rib roast.....	do.....	55.2	30.1	30.3	18.0	26.4	24.9	25.3	25.0	24.2	24.1
Chuck roast.....	do.....	21.8	18.5	19.3	16.2	19.6	19.1	19.6	21.5	20.1	20.1
Plate beef.....	do.....	14.4	12.9	12.5	11.1	10.8	10.5	10.6	14.3	12.1	12.3
Pork chops.....	do.....	32.4	32.3	31.2	19.9	31.8	31.0	32.3	30.0	30.1	31.1
Bacon.....	do.....	41.7	36.3	38.1	28.0	51.8	46.3	46.7	44.5	42.7	42.7
Ham.....	do.....	43.0	45.0	44.6	29.0	55.9	55.4	55.8	52.9	52.0	53.0
Lamb, leg of.....	do.....	39.4	40.9	37.2	17.8	32.4	40.8	40.2	35.0	35.0	35.0
Hens.....	do.....	41.4	38.0	36.4	17.5	32.4	31.3	30.3	33.5	33.1	32.3
Salmon, canned, red.....	do.....	33.2	29.4	30.2	.....	36.3	33.8	33.8	35.6	33.5	33.2
Milk, fresh.....	Quart.....	19.0	17.0	17.0	7.9	12.0	11.0	11.0	12.5	10.2	10.2
Milk, evaporated.....	15-16 oz. can.....	13.4	10.3	10.2	.....	14.3	10.7	10.4	14.5	10.9	10.9
Butter.....	Pound.....	49.5	46.4	46.9	32.8	42.5	42.2	42.1	42.9	41.2	41.3
Oleomargarine.....	do.....	30.0	27.0	27.4	.....	31.0	28.8	29.2	28.5	27.6	27.4
Nut margarine.....	do.....	27.3	27.8	26.0	.....	27.8	28.2	28.0	27.7	26.5	27.0
Cheese.....	do.....	27.7	28.2	28.8	22.5	29.6	30.0	30.8	29.5	30.6	30.9
Lard.....	do.....	17.2	17.0	17.0	17.6	18.4	19.4	19.3	16.7	17.3	17.3
Crisco.....	do.....	19.8	21.0	21.3	.....	21.6	24.6	24.3	22.3	23.4	23.4
Eggs, strictly fresh.....	Dozen.....	38.2	34.1	33.9	23.3	33.9	29.2	29.8	33.4	28.3	27.8
Bread.....	Pound.....	9.7	7.9	8.0	5.2	9.8	9.8	9.8	10.2	8.6	9.0
Flour.....	do.....	6.1	5.1	5.0	2.8	5.0	4.7	4.6	5.8	5.2	5.2
Corn meal.....	do.....	3.8	3.2	3.3	2.3	4.4	3.5	3.5	3.9	3.7	3.7
Rollod oats.....	do.....	10.0	8.0	7.9	.....	10.6	10.4	10.5	11.4	8.8	8.8
Corn flakes.....	8-oz. pkg.....	12.0	9.5	9.3	.....	14.0	10.8	10.4	13.0	10.0	10.0
Cream of Wheat.....	28-oz. pkg.....	29.4	25.7	25.5	.....	31.3	26.3	25.8	30.1	27.3	27.3
Macaroni.....	Pound.....	19.4	20.0	19.8	.....	20.8	20.5	20.5	20.2	20.0	20.2
Rice.....	do.....	10.1	9.8	9.7	8.5	8.0	9.0	9.4	8.5	10.3	10.6
Beans, navy.....	do.....	8.1	10.1	10.5	.....	7.6	11.2	12.3	7.1	13.0	13.2
Potatoes.....	do.....	2.8	3.4	3.0	1.8	2.7	3.4	2.9	3.9	3.7	3.7
Onions.....	do.....	4.7	8.6	7.1	.....	5.5	8.4	7.5	6.1	8.6	8.7
Cabbage.....	do.....	4.2	2.9	3.4	.....	4.4	5.3	3.5	5.7	6.5	5.1
Beans, baked.....	No. 2 can.....	11.2	10.5	10.5	.....	16.8	15.9	16.1	13.9	13.1	13.3
Corn, canned.....	do.....	16.2	14.7	14.7	.....	14.0	16.4	16.4	14.3	14.8	14.5
Peas, canned.....	do.....	20.9	18.5	18.5	.....	14.5	16.8	16.8	16.3	16.8	16.8
Tomatoes, canned.....	do.....	11.0	12.9	12.6	.....	11.4	14.8	14.5	11.6	15.5	15.4
Sugar, granulated.....	Pound.....	6.9	6.5	7.1	5.7	7.3	7.3	7.9	7.4	7.6	8.0
Tea.....	do.....	83.2	73.3	73.4	56.0	74.1	72.1	72.5	64.6	61.7	61.3
Coffee.....	do.....	40.4	35.9	35.9	30.0	37.5	40.0	40.0	33.3	34.4	34.8
Prunes.....	do.....	17.8	19.6	20.0	.....	20.4	20.8	23.1	23.8	22.9	23.1
Raisins.....	do.....	31.5	23.3	24.3	.....	33.3	27.5	26.7	32.0	26.3	26.3
Bananas.....	Dozen.....	39.0	33.6	33.2	.....	4 12.4	4 10.1	4 10.1	4 12.0	4 10.2	4 10.2
Oranges.....	do.....	52.9	60.9	66.5	.....	48.8	60.8	55.8	49.5	55.0	57.5

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

RETAIL PRICES OF FOOD.

PRICES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued.

Philadelphia, Pa.				Pittsburgh, Pa.				Portland, Me.				Portland, Oreg.				Providence, R. I.			
July 15—		June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.	July 15, 1921.	June 15, 1922.	July 15, 1922.	July 15—	June 15, 1922.	July 15, 1922.	July 15—	June 15, 1922.	July 15, 1922.	July 15, 1922.		
1913	1921		1913	1921							1913	1921		1913	1921				
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	
132.0	149.4	147.5	149.6	27.5	44.9	40.8	42.7	157.7	155.2	156.2	23.5	30.0	30.1	30.2	139.6	165.8	163.0	164.5	
27.5	41.7	39.0	41.3	24.8	38.6	34.0	35.6	46.8	44.6	45.3	21.4	27.0	27.2	26.9	31.0	49.9	45.3	46.1	
22.7	34.9	31.9	33.3	21.8	32.3	30.0	30.9	28.9	28.0	29.3	19.5	25.2	25.6	24.2	36.4	34.2	34.7	34.7	
18.2	19.3	19.9	20.3	16.8	21.5	20.7	20.9	18.4	18.6	19.3	16.4	17.2	18.5	17.9	18.8	28.8	24.7	24.9	
12.7	10.2	10.3	9.9	12.4	10.5	10.2	10.1	15.0	14.6	13.7	13.6	12.1	13.5	13.1	.....	19.5	16.3	17.5
22.2	36.8	37.1	37.4	23.0	35.5	33.8	34.2	34.7	35.0	35.6	22.1	35.2	31.8	32.5	21.6	37.2	36.4	37.4	
27.9	37.9	37.8	38.2	29.5	46.8	40.9	41.9	40.2	36.8	36.7	31.9	47.3	45.9	45.6	23.4	37.4	35.5	35.7	
32.7	57.4	58.1	59.3	31.5	57.3	56.7	57.6	52.9	57.6	58.5	30.8	50.2	51.1	52.2	32.3	58.3	57.6	57.9	
21.0	40.8	42.1	39.3	20.8	37.9	39.8	38.6	38.1	40.1	40.7	18.1	27.9	33.8	33.0	21.7	41.7	43.2	43.4	
23.3	44.3	42.0	41.2	26.5	49.5	42.2	41.6	46.9	43.8	43.5	20.3	34.6	34.5	32.7	24.8	47.1	42.4	40.8	
.....	30.7	28.6	28.6	.....	35.5	29.2	29.4	33.9	28.8	28.7	.....	42.3	41.8	41.8	.....	39.6	31.7	31.5
8.0	11.0	11.0	8.6	14.0	12.0	12.0	15.5	13.0	13.5	.....	9.3	12.9	11.8	12.6	9.0	15.0	13.0	14.0
.....	13.6	11.0	10.9	.....	12.9	10.1	10.1	14.1	11.9	.....	.....	12.4	11.5	11.3	.....	14.1	11.6	11.5
39.2	51.3	50.2	50.5	35.7	49.0	45.5	46.0	51.7	49.5	49.9	37.5	44.6	45.5	49.6	36.0	48.7	45.5	45.8	
.....	29.0	28.0	27.3	.....	27.4	25.0	25.4	34.2	30.5	30.4	.....	26.2	29.0	29.2	.....	32.1	29.8	29.8
.....	27.3	26.0	26.0	.....	23.3	25.3	25.7	27.1	27.9	27.8	.....	28.4	27.7	28.0	.....	27.3	27.5	27.1
25.0	32.8	34.8	34.7	24.5	31.0	31.1	30.9	32.2	31.7	32.3	20.8	29.6	33.1	34.1	21.7	29.7	30.7	30.6	
15.3	15.3	15.9	16.1	15.5	14.1	15.2	15.8	16.2	17.4	17.4	.....	20.9	20.0	20.0	.....	16.2	16.6	16.6
.....	19.7	20.6	21.9	.....	19.6	20.8	21.6	23.8	22.6	22.8	.....	24.1	24.8	25.3	.....	21.5	22.6	22.8
30.4	43.4	35.6	36.5	27.1	41.7	34.8	36.8	54.8	39.8	45.7	34.0	36.9	27.6	30.6	35.7	56.7	42.7	50.1	
4.8	8.7	8.7	8.7	5.4	9.4	8.2	8.2	10.1	9.4	9.4	5.6	9.5	9.4	9.4	5.9	10.6	8.9	8.9	
3.2	6.0	5.4	5.4	3.3	5.9	5.2	5.2	6.1	5.5	5.4	2.9	5.0	4.8	4.6	3.5	6.5	5.8	5.6	
2.7	4.4	3.6	3.5	2.7	4.3	4.2	4.1	4.5	3.9	4.0	3.3	4.8	3.4	3.5	2.8	4.5	3.8	3.7	
.....	9.1	8.0	8.0	.....	10.4	8.9	9.1	7.7	6.8	6.7	.....	9.5	10.0	9.4	.....	10.7	9.4	9.4
.....	11.0	9.5	9.3	.....	11.6	9.5	9.5	12.3	9.8	9.8	.....	13.3	11.6	11.3	.....	11.7	9.8	9.7
.....	28.2	24.9	25.1	.....	29.1	25.5	25.4	29.6	25.9	26.1	.....	31.7	28.6	28.9	.....	29.9	26.3	26.2
.....	21.8	21.0	21.0	.....	21.3	20.9	20.7	23.5	23.9	23.3	.....	16.9	17.4	17.4	.....	22.7	22.5	22.5
9.8	9.5	10.0	10.0	9.2	9.6	9.6	10.0	10.0	10.6	10.4	8.6	8.8	10.2	9.9	9.3	9.7	9.5	9.6	
.....	8.0	9.8	10.0	.....	7.1	10.9	11.8	7.4	10.5	10.9	.....	6.7	9.2	9.8	.....	8.0	10.4	10.8
2.1	3.0	4.6	3.4	1.8	3.2	3.8	3.4	2.9	1.9	3.1	1.2	3.1	1.9	3.6	2.0	3.3	2.7	3.5	
.....	4.5	6.5	5.2	.....	6.0	8.0	7.6	6.4	8.0	8.3	.....	4.0	6.9	5.0	.....	6.2	8.8	7.3
.....	4.4	4.5	3.3	.....	5.2	4.9	4.4	6.1	5.1	5.3	.....	4.1	6.0	4.2	.....	4.3	4.8	3.4
.....	12.7	11.8	11.9	.....	14.2	12.8	13.4	17.1	15.4	15.3	.....	15.4	17.3	17.2	.....	14.9	12.8	12.7
.....	15.3	15.0	14.9	.....	15.2	14.2	14.4	16.9	15.8	15.4	.....	18.4	17.7	17.7	.....	18.2	17.3	17.2
.....	15.6	16.7	16.7	.....	16.7	15.5	15.5	19.0	20.8	20.8	.....	17.5	18.4	18.4	.....	19.5	20.4	20.2
.....	10.9	13.0	13.2	.....	10.9	13.4	13.2	21.9	22.4	22.7	.....	13.8	15.5	15.1	.....	13.6	14.4	14.8
5.0	6.6	6.4	6.9	5.5	7.0	6.9	7.7	7.0	7.1	7.7	6.3	7.7	7.5	7.7	5.1	6.8	6.8	7.5	
54.0	61.8	60.3	59.5	58.0	74.4	76.3	75.8	57.6	56.8	56.8	55.0	64.1	61.9	62.8	48.3	59.4	60.1	60.0	
25.0	30.0	31.0	31.3	30.0	36.5	36.2	36.2	38.4	39.8	40.0	35.0	37.7	37.2	36.9	30.0	39.5	40.1	40.0	
.....	16.8	17.9	17.6	.....	19.8	20.7	21.1	17.7	19.3	19.8	.....	9.1	19.0	19.4	.....	19.8	19.9	20.3
.....	28.4	22.4	22.7	.....	27.8	24.3	24.0	28.7	21.9	21.8	.....	29.4	24.6	24.6	.....	29.5	22.9	23.0
.....	37.1	32.9	31.7	.....	44.1	42.5	41.3	42.0	40.5	40.4	.....	43.5	43.7	43.5	.....	42.2	36.3	35.4
.....	49.5	69.8	66.4	.....	51.9	62.7	55.3	57.5	75.6	66.8	.....	53.7	56.7	59.7	.....	58.1	76.3	80.1

² No. 3 can.

³ No. 2½ can.

⁴ Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article.	Unit.	Richmond, Va.			Rochester, N. Y.			St. Louis, Mo.				
		July 15—		June 15, 1922.	July 15, 1922.	July 15, 1921.	June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.
		1913	1921						1913	1921		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Pound.....	22.2	41.3	39.2	39.3	41.4	37.6	38.6	24.8	33.7	33.5	34.2
Round steak.....	do.....	19.6	37.1	34.4	34.6	35.3	33.0	33.6	22.9	35.1	30.6	30.9
Rib roast.....	do.....	19.3	31.2	30.0	30.5	29.7	27.8	28.1	18.3	29.6	26.1	26.6
Chuck roast.....	do.....	15.9	24.6	23.0	21.9	23.1	22.1	22.6	14.6	18.7	18.5	19.3
Plate beef.....	do.....	12.9	18.3	17.2	17.2	11.3	11.4	11.9	11.0	11.8	12.8	12.4
Pork chops.....	do.....	21.2	34.5	34.5	33.9	37.2	36.6	36.8	19.8	30.8	29.0	30.7
Bacon.....	do.....	23.6	38.1	35.7	37.1	35.0	33.9	34.1	27.8	40.5	39.8	39.5
Ham.....	do.....	26.0	46.0	47.2	46.8	51.5	51.4	51.2	27.3	50.2	50.8	50.8
Lamb, leg of.....	do.....	19.3	41.5	44.3	42.9	37.4	38.4	38.7	19.0	30.9	35.0	33.9
Hens.....	do.....	20.0	40.0	37.1	35.5	42.8	40.8	39.8	18.0	33.6	32.6	31.8
Salmon, canned, red.....	do.....	33.3	33.5	33.8	36.0	28.9	28.9	.....	35.6	32.8	32.3	32.3
Milk, fresh.....	Quart.....	10.0	14.0	13.0	13.0	12.0	11.0	12.0	8.0	13.0	10.0	12.0
Milk, evaporated.....	15-16 oz. can.....	14.6	12.3	12.4	13.7	11.1	10.9	.....	12.5	9.8	9.8	9.8
Butter.....	Pound.....	38.1	50.7	52.4	52.3	45.8	44.4	45.6	33.3	46.3	45.3	46.4
Oleomargarine.....	do.....	31.4	30.2	30.8	29.0	28.1	27.8	.....	28.3	26.1	25.6	25.6
Nut margarine.....	do.....	29.1	28.0	28.2	25.8	26.2	25.8	.....	25.6	24.9	24.8	24.8
Cheese.....	do.....	22.3	29.7	30.8	31.9	29.6	31.3	31.8	19.5	26.6	27.7	28.5
Lard.....	do.....	15.0	17.3	17.8	17.8	16.5	16.9	16.9	14.1	13.1	13.5	13.6
Crisco.....	do.....	20.9	21.7	22.4	18.4	20.8	21.6	.....	20.8	21.0	21.4	21.4
Eggs, strictly fresh.....	Dozen.....	24.6	37.6	33.9	33.6	42.1	34.4	36.9	21.4	34.3	29.5	29.8
Bread.....	Pound.....	5.3	10.7	9.1	9.2	8.5	8.1	8.1	5.5	10.6	9.3	9.3
Flour.....	do.....	3.3	6.1	5.6	5.4	5.9	5.3	5.2	3.0	5.2	4.8	4.7
Corn meal.....	do.....	2.0	4.3	4.2	4.3	5.3	4.7	4.9	2.2	3.4	3.0	3.0
Rolled oats.....	do.....	11.0	10.1	10.1	10.1	8.5	7.0	6.8	.....	9.7	8.2	8.1
Corn flakes.....	8-oz. pkg.....	12.6	10.0	10.0	11.8	9.6	9.8	.....	10.8	9.2	9.2	9.2
Cream of Wheat.....	28-oz. pkg.....	31.2	27.1	26.7	29.1	25.0	25.0	.....	30.1	24.6	24.6	24.6
Macaroni.....	Pound.....	22.8	21.3	21.3	20.5	18.5	18.3	.....	21.0	20.5	20.4	20.4
Rice.....	do.....	10.0	10.3	11.9	12.0	8.9	9.6	9.6	8.4	8.0	9.1	9.3
Beans, navy.....	do.....	8.7	10.3	10.3	8.0	10.8	11.7	.....	6.7	11.1	11.7	11.7
Potatoes.....	do.....	1.7	3.0	4.9	3.8	3.0	3.2	3.5	1.9	3.4	4.4	3.9
Onions.....	do.....	4.8	9.2	6.2	5.4	8.6	7.0	.....	4.5	7.0	6.1	6.1
Cabbage.....	do.....	4.4	2.2	2.5	5.2	5.1	4.4	.....	4.5	4.7	4.4	4.4
Beans, baked.....	No. 2 can.....	11.8	12.2	12.3	12.1	11.3	11.5	.....	11.8	11.4	11.3	11.3
Corn, canned.....	do.....	16.1	15.5	15.5	15.8	15.5	15.8	.....	15.1	14.7	14.6	14.6
Peas, canned.....	do.....	20.0	19.6	19.6	18.9	18.6	18.8	.....	15.8	16.3	16.4	16.4
Tomatoes, canned.....	do.....	11.9	12.8	12.9	11.7	13.5	13.6	.....	10.4	14.1	13.7	13.7
Sugar, granulated.....	Pound.....	5.0	7.0	7.1	7.7	6.7	6.7	7.6	5.2	6.8	6.9	7.3
Tea.....	do.....	56.0	83.4	81.5	79.8	58.1	60.6	60.6	55.0	68.3	67.5	67.5
Coffee.....	do.....	26.8	35.5	35.9	36.6	33.9	33.3	33.7	24.3	32.8	34.8	34.7
Prunes.....	do.....	21.6	22.2	22.5	20.5	20.1	20.4	.....	20.0	21.2	22.1	22.1
Raisins.....	do.....	31.4	22.9	23.6	29.8	23.6	23.3	.....	30.6	26.0	26.7	26.7
Bananas.....	Dozen.....	45.0	37.1	37.1	44.7	41.0	41.3	.....	36.3	32.0	30.7	30.7
Oranges.....	do.....	50.7	66.3	68.6	51.9	57.9	64.5	.....	46.8	56.5	54.3	54.3

¹ No. 2½ can.² Per pound.

RETAIL PRICES OF FOOD.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued.

St. Paul, Minn.				Salt Lake City, Utah.				San Francisco, Calif.				Savannah, Ga.			Scranton, Pa.			
July 15—		June 15,	July 15,	July 15—		June 15,	July 15,	July 15—		June 15,	July 15,	July 15,	June 15,	July 15,	July 15—		June 15,	July 15,
1913	1921	1922.	1922.	1913	1921	1922.	1922.	1913	1921	1922.	1922.	1921.	1922.	1922.	1913	1921	1922.	1922.
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
27.0	38.1	35.5	36.1	22.9	30.8	29.4	29.7	20.7	29.4	30.7	30.7	34.6	30.7	31.3	26.8	49.3	47.4	48.1
23.3	33.2	30.5	30.8	20.0	28.5	26.3	26.3	19.0	27.0	27.7	27.6	29.6	27.9	22.8	39.9	36.8	38.3	38.3
21.9	28.4	28.6	29.4	19.9	24.3	22.6	22.7	21.0	27.2	28.2	28.5	26.8	25.3	24.8	23.8	35.4	35.1	35.8
17.0	20.6	20.9	22.1	15.7	18.9	17.9	18.0	14.6	17.2	18.6	18.2	18.4	17.7	17.3	17.5	26.3	25.2	25.3
11.2	9.6	10.1	10.4	12.0	12.6	11.8	11.6	13.0	13.3	13.5	13.2	15.6	15.8	15.5	12.1	11.8	10.8	10.9
19.7	31.6	33.4	33.4	22.9	34.0	33.8	33.9	23.2	38.8	38.8	38.9	34.1	31.7	30.0	21.3	38.4	38.2	38.5
26.8	44.5	42.2	42.2	31.7	45.0	40.0	39.3	33.3	54.4	54.3	53.9	38.9	35.6	35.6	27.5	42.3	43.5	43.7
28.0	51.3	51.7	51.4	30.7	48.1	49.7	49.7	30.0	53.7	57.9	58.6	42.3	43.5	44.0	31.7	57.9	57.7	57.5
18.9	31.9	36.6	35.1	18.8	30.8	33.6	33.3	16.7	30.8	35.4	34.8	37.0	39.0	38.0	21.7	42.9	45.7	46.5
19.7	31.7	30.3	28.8	24.8	35.0	34.1	33.1	23.8	41.7	39.5	38.7	33.7	33.5	31.6	23.7	48.1	45.1	45.1
.....	40.0	36.2	35.2	.....	38.5	33.9	33.6	.....	31.7	27.8	27.8	42.0	36.3	36.6	.....	41.8	36.9	36.6
6.8	10.0	10.0	10.0	8.7	12.5	9.0	9.0	10.0	14.0	13.0	13.0	20.0	18.0	18.0	.....	12.3	12.0	12.0
.....	13.8	11.9	11.5	.....	12.7	10.5	10.5	.....	11.8	10.1	10.1	13.3	10.2	10.0	.....	13.6	11.3	11.3
32.6	42.8	40.6	40.5	35.0	44.0	43.7	44.3	36.4	49.1	48.8	51.4	48.7	45.7	45.5	35.3	44.5	44.2	44.6
.....	28.9	28.7	27.6	.....	30.0	.....	.....	.....	26.6	26.3	26.6	33.9	30.2	30.6	.....	28.4	26.0	26.8
.....	26.3	27.3	26.9	.....	27.7	28.8	28.4	.....	26.0	27.4	26.4	28.2	27.4	27.0	.....	27.6	21.0	21.0
21.0	28.9	29.6	30.6	23.3	25.7	27.3	28.0	19.0	29.8	33.7	34.0	27.2	28.0	28.7	18.0	28.7	30.0	30.4
15.0	16.3	17.4	17.5	19.3	18.2	18.8	19.0	18.8	18.9	19.2	19.1	18.0	17.7	17.7	15.6	17.5	17.8	17.7
.....	23.9	24.3	24.5	.....	26.3	25.3	25.3	.....	21.5	24.1	24.8	19.0	20.3	20.7	.....	21.8	22.3	22.7
22.9	38.5	30.2	30.6	29.4	40.8	28.1	29.6	31.4	46.7	32.6	33.8	40.4	33.0	35.4	28.0	43.8	35.1	36.4
5.9	9.5	9.3	9.3	5.9	9.8	9.5	9.4	5.9	9.6	8.5	8.5	10.6	8.7	8.7	5.6	10.4	9.2	9.2
3.0	5.8	5.4	5.4	2.6	3.5	3.5	3.3	3.4	5.9	5.4	5.4	6.1	5.6	5.6	3.6	6.8	5.8	5.7
2.5	4.3	3.7	3.4	3.4	4.2	3.5	3.6	3.4	5.0	4.5	4.5	2.8	2.7	2.6	.....	7.8	6.2	6.1
.....	9.2	8.6	9.5	.....	11.0	9.7	9.5	.....	10.7	9.5	9.2	8.8	8.1	8.3	.....	11.1	9.8	9.8
.....	13.6	10.0	10.2	.....	14.6	12.5	12.3	.....	12.6	10.7	10.7	11.6	8.9	8.8	.....	12.7	10.2	10.1
.....	29.9	26.2	26.2	.....	32.7	26.6	26.4	.....	28.7	24.9	25.2	29.7	25.1	24.7	.....	29.6	27.1	27.1
.....	18.8	18.6	18.5	.....	22.8	21.2	20.9	.....	14.5	12.9	12.7	20.2	18.7	17.7	.....	23.9	23.2	22.9
10.0	8.6	9.6	9.5	8.2	8.4	8.8	9.0	8.5	9.0	8.8	8.7	7.9	8.6	8.5	8.5	9.4	9.8	9.8
.....	8.6	10.3	10.7	.....	8.8	9.2	9.8	.....	6.8	8.8	9.1	9.1	10.8	10.9	.....	9.7	10.8	11.1
1.4	4.0	2.7	2.3	1.6	2.5	2.3	2.8	1.9	2.7	4.0	3.4	3.6	3.6	3.8	2.0	3.2	3.8	3.5
.....	6.0	10.2	6.7	.....	6.4	8.2	6.9	.....	1.6	4.8	3.4	6.1	9.0	8.7	.....	5.2	8.5	8.0
.....	4.1	5.2	3.2	.....	6.3	5.7	7.2	.....	13.6	.....	.....	4.9	4.8	6.0	.....	5.7	5.1	4.2
.....	17.5	14.0	14.6	.....	17.4	17.0	17.1	.....	17.0	14.8	14.7	13.3	12.3	12.4	.....	13.6	12.4	12.4
.....	16.2	14.9	15.0	.....	16.3	15.1	15.2	.....	18.2	16.7	16.5	14.9	14.5	14.5	.....	16.7	16.8	16.8
.....	15.9	16.3	16.3	.....	16.0	15.9	16.1	.....	18.7	17.8	17.9	18.0	16.9	16.9	.....	17.5	17.2	17.3
.....	13.5	14.8	15.3	.....	11.5	14.1	14.4	.....	11.5	13.5	13.5	10.3	12.6	12.6	.....	12.9	13.8	14.2
5.6	7.5	7.5	7.9	5.9	8.2	8.1	8.5	5.4	7.1	6.9	7.6	6.9	6.8	7.3	5.6	7.2	6.9	7.5
45.0	69.6	65.0	65.8	65.7	82.5	78.1	78.8	50.0	58.6	56.7	57.2	70.8	67.6	68.1	52.5	63.1	59.7	59.5
30.0	39.5	39.6	40.0	35.8	46.5	44.1	44.1	32.0	34.3	35.2	34.9	31.7	31.9	31.9	31.3	38.9	37.7	37.5
.....	19.9	22.3	22.7	.....	15.8	20.4	20.1	.....	15.5	19.1	19.1	17.3	19.1	19.3	.....	17.6	18.6	18.9
.....	32.5	26.7	26.8	.....	30.1	25.3	25.3	.....	29.1	22.4	22.2	31.3	22.9	22.5	.....	30.4	24.7	23.7
.....	12.4	11.4	10.0	.....	17.6	17.5	16.4	.....	40.7	37.9	35.7	40.6	31.4	30.0	.....	37.4	35.6	34.4
53.3	67.7	66.2	.....	46.5	54.8	56.3	.....	.....	47.1	60.4	58.8	60.0	81.0	83.0	.....	50.5	66.1	65.8

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Concluded.

Article.	Unit.	Seattle, Wash.				Springfield, Ill.			Washington, D. C.			
		July 15—		June 15, 1922.	July 15, 1922.	July 15, 1921.	June 15, 1922.	July 15, 1922.	July 15—		June 15, 1922.	July 15, 1922.
		1913	1921						1913	1921		
Sirloin steak.....	Pound.....	Cts. 24.4	Cts. 32.2	Cts. 31.5	Cts. 31.0	Cts. 36.5	Cts. 33.9	Cts. 34.3	Cts. 28.1	Cts. 47.7	Cts. 42.2	Cts. 43.2
Round steak.....	do.....	21.5	28.9	27.6	28.1	35.2	33.5	34.1	24.6	41.4	36.9	38.1
Rib roast.....	do.....	20.0	26.1	25.4	24.6	24.6	23.2	23.1	22.0	35.3	33.5	33.0
Chuck roast.....	do.....	15.2	17.2	17.2	16.8	19.9	20.6	20.3	17.9	23.6	23.1	22.9
Plate beef.....	do.....	13.0	13.2	13.4	12.7	12.8	13.4	13.3	12.4	13.3	13.3	12.7
Pork chops.....	do.....	23.6	35.9	34.4	34.4	31.8	31.2	31.2	21.9	38.3	37.9	39.3
Bacon.....	do.....	31.7	52.2	51.3	49.7	39.7	39.0	40.0	28.1	41.7	37.2	37.6
Ham.....	do.....	31.7	53.9	53.9	54.6	50.3	52.1	51.1	30.0	57.2	58.3	59.0
Lamb, leg of.....	do.....	19.6	29.0	34.3	32.4	32.1	40.6	40.6	21.4	41.9	43.9	41.7
Hens.....	do.....	23.8	33.7	34.9	33.4	33.8	34.3	33.4	22.6	44.8	41.6	41.5
Salmon, canned, red.....	do.....	33.4	31.0	31.0	31.1	40.3	33.9	33.9	21.9	36.3	30.3	29.6
Milk, fresh.....	Quart.....	8.5	12.0	12.0	12.0	12.5	11.1	11.1	8.0	14.0	13.0	13.0
Milk, evaporated.....	15-16 oz. can.....	12.2	10.3	10.3	10.3	14.5	11.4	11.5	11.5	14.2	11.1	10.7
Butter.....	Pound.....	35.5	43.8	44.9	49.7	47.6	44.3	44.9	36.6	49.2	48.5	48.6
Oleomargarine.....	do.....	25.7	27.5	27.5	27.5	29.1	27.8	28.3	28.4	26.4	26.3	26.3
Nut margarine.....	do.....	28.4	28.1	28.2	26.8	27.1	27.0	27.0	23.8	26.2	26.2	26.7
Cheese.....	do.....	21.7	29.1	31.3	32.2	30.4	32.5	32.5	23.8	31.2	33.2	33.3
Lard.....	do.....	17.8	19.1	18.6	18.9	16.1	17.0	17.0	15.0	16.3	16.9	17.0
Crisco.....	do.....	22.8	25.3	25.3	21.4	22.8	23.0	23.0	21.0	21.8	21.8	21.9
Eggs, strictly fresh.....	Dozen.....	34.5	41.4	31.2	32.2	35.2	29.3	28.0	26.0	41.0	35.7	36.7
Bread.....	Pound.....	5.5	9.9	9.9	9.9	10.4	9.6	9.7	5.7	10.2	8.7	8.7
Flour.....	do.....	2.9	4.8	5.0	4.9	6.1	5.5	5.4	3.8	6.4	5.5	5.6
Corn meal.....	do.....	3.1	4.5	3.7	3.7	4.4	4.0	4.2	2.5	3.8	3.5	3.6
Rolled oats.....	do.....	9.2	8.6	8.5	11.2	10.4	10.2	10.2	11.3	9.3	9.3	9.3
Corn flakes.....	8-oz. pkg.....	13.7	11.5	11.5	14.0	10.1	9.8	9.8	11.8	9.6	9.6	9.8
Cream of Wheat.....	28-oz. pkg.....	30.6	27.0	27.0	30.4	27.6	27.6	27.6	29.0	25.7	25.5	25.5
Macaroni.....	Pound.....	18.3	18.9	18.9	22.0	20.3	20.3	20.3	22.2	21.8	21.5	21.5
Rice.....	do.....	7.7	9.6	11.0	11.2	9.6	10.3	10.5	9.8	10.1	10.1	10.0
Beans, navy.....	do.....	7.2	9.6	10.0	7.6	12.8	13.5	13.5	7.9	10.8	11.1	11.1
Potatoes.....	do.....	1.5	3.3	2.8	3.3	4.1	3.9	4.3	1.8	3.4	4.4	3.8
Onions.....	do.....	3.4	8.0	5.5	6.7	10.8	9.6	9.6	6.6	8.8	9.0	9.0
Cabbage.....	do.....	6.0	6.5	5.7	7.7	6.4	5.8	5.8	6.8	4.2	3.3	3.3
Beans, baked.....	No. 2 can.....	17.6	16.0	15.9	14.3	13.4	13.5	13.5	12.3	11.7	11.6	11.6
Corn, canned.....	do.....	16.9	17.4	17.4	14.6	14.6	14.4	14.4	14.0	14.2	14.3	14.3
Peas, canned.....	do.....	17.5	18.7	19.0	16.3	17.3	17.5	17.5	15.6	16.9	17.0	17.0
Tomatoes, canned.....	do.....	12.9	15.4	15.4	11.6	15.4	15.3	15.3	11.8	13.1	12.6	12.6
Sugar, granulated.....	Pound.....	6.1	8.0	7.5	7.9	7.8	8.1	8.1	5.0	6.9	6.8	7.3
Tea.....	do.....	50.0	64.2	64.2	65.0	76.6	72.5	71.8	57.5	74.2	72.2	73.0
Coffee.....	do.....	28.0	37.7	39.0	39.2	36.3	35.5	35.6	28.8	33.7	33.3	33.2
Prunes.....	do.....	15.8	21.4	21.2	20.4	20.9	20.9	20.9	19.7	21.2	21.4	21.4
Raisins.....	do.....	29.7	24.5	24.8	33.9	25.6	25.9	25.9	30.7	24.3	24.2	24.2
Bananas.....	Dozen.....	16.4	15.0	14.9	11.0	9.8	9.6	9.6	44.2	36.5	36.5	36.5
Oranges.....	do.....	44.3	60.6	57.6	53.7	64.2	63.9	63.9	55.0	65.6	65.6	70.6

¹No. 2½ can.²Per pound.

Comparison of Retail Food Costs in 51 Cities.

TABLE 6 shows for 39 cities the percentage of increase or decrease in the retail cost of food⁷ in July, 1922, compared with the average cost in the year 1913, in July, 1921, and in June, 1922. For 12 other cities comparisons are given for the one-year and the one-month periods; these cities have been scheduled by the bureau at different dates since 1913. 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.⁸

Effort has been made by the bureau each month to have perfect reporting cities. For the month of July, 99.3 per cent of all the firms reporting in the 51 cities sent in a report promptly. The following were perfect reporting cities; that is, every merchant in the following-named 39 cities who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Baltimore, Bridgeport, Buffalo, Charleston, S. C., Cincinnati, Cleveland, Columbus, Dallas, Denver, Fall River, Houston, Indianapolis, Jacksonville, Kansas City, Little Rock, Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Minneapolis, Newark, New Haven, New York, Norfolk, Omaha, Pittsburg, Portland, Me., Portland, Oreg., Providence, Richmond, Rochester, St. Paul, Salt Lake City, San Francisco, Savannah, Scranton, and Washington, D. C.

The following summary shows the promptness with which the merchants responded in July:

RETAIL PRICE REPORTS RECEIVED DURING JULY.

Item.	United States.	Geographical division.				
		North Atlantic.	South Atlantic.	North Central.	South Central.	Western.
Percentage of reports received.....	99.3	99.5	100	99	99	99
Number of cities in each section from which every report was received.....	39	12	8	9	5	5

⁷ For list of articles, see note 2, p. 15.

⁸ The consumption figure used from January, 1913, to December, 1920, for each article in each city is given in the MONTHLY LABOR REVIEW for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month beginning with January, 1921, are given in the MONTHLY LABOR REVIEW for March, 1921, p. 26.

TABLE 6.—PERCENTAGE CHANGES IN THE RETAIL COST OF FOOD IN JULY, 1922, COMPARED WITH THE COST IN JUNE, 1922, JULY, 1921, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES.

City.	Percentage increase, July, 1922, compared with year 1913.	Percentage decrease, July, 1922, compared with July, 1921.	Percentage increase, July, 1922, compared with June, 1922.	City.	Percentage increase, July, 1922, compared with year 1913.	Percentage decrease, July, 1922, compared with July, 1921.	Percentage increase, July, 1922, compared with June, 1922.
Atlanta.....	42	2	1	Minneapolis.....	41	6	1.2
Baltimore.....	45	3	1	Mobile.....		3	1
Birmingham.....	43	5	1 0.1	Newark.....	38	3	1
Boston.....	47	5	6	New Haven.....	41	3	3
Bridgeport.....		6	3	New Orleans.....	42	2	1
Buffalo.....	46	2	2	New York.....	45	3	1 0.4
Butte.....		5	2	Norfolk.....		8	1 0.4
Charleston.....	47	4	0.3	Omaha.....	41	2	1.1
Chicago.....	48	3	2	Peoria.....		6	1
Cincinnati.....	43	5	1.1	Philadelphia.....	41	2	1.2
Cleveland.....	37	7	1 0.4	Pittsburgh.....	39	6	0.2
Columbus.....		6	1	Portland, Me.....		5	4
Dallas.....	43	1	2	Portland, Oreg.....	34	2.1	5
Denver.....	33	5	2	Providence.....	46	7	4
Detroit.....	46	6	1.1	Richmond.....	53	3	1.2
Fall River.....	43	3	2	Rochester.....		2	3
Houston.....		5	1	St. Louis.....	44	4	1
Indianapolis.....	38	5	1 0.3	St. Paul.....		6	1.2
Jacksonville.....	37	4	1	Salt Lake City.....	24	7	1
Kansas City.....	37	7	1.1	San Francisco.....	36	3	1 0.4
Little Rock.....	35	5	1 0.4	Savannah.....		6	1
Los Angeles.....	33	1	1 0.3	Scranton.....	47	4	1 0.1
Louisville.....	29	5	1.1	Seattle.....	37		2
Manchester.....	43	7	4	Springfield, Ill.....		4	1
Memphis.....	36	5	0.3	Washington, D. C.....	49	5	1 0.1
Milwaukee.....	47	4	2				

¹ Decrease.² Increase.Retail Prices of Coal in the United States.¹

THE following table shows the average retail prices of coal on January 15 and July 15 of each year, 1913 to 1922, by cities. Prices for coal are secured from the cities from which monthly retail prices of food are received.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds used. The coal dealers in each city are asked to quote prices on the kinds of bituminous coal usually sold for household use.

The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

¹ Prices of coal were formerly secured semiannually and published in the March and September issues of the MONTHLY LABOR REVIEW. Since June, 1920, these prices have been secured and published monthly.

TABLE 1.—RETAIL PRICES OF COAL, PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15 OF EACH YEAR, 1913 TO 1922, BY CITIES.

City, and kind of coal.	1913		1914		1915		1916		1917		1918		1919		1920		1921		1922	
	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.
Atlanta, Ga.:																				
Bituminous.....	\$5.875	\$4.833	\$5.295	\$5.083	\$5.250	\$4.575	\$5.050	\$4.500	\$7.000	\$7.050	\$7.444	\$7.778	\$8.029	\$8.250	\$9.050	\$13.250	\$11.854	\$8.841	\$7.519	\$8.115
Baltimore, Md.:																				
Pa. anthracite—																				
Stove.....	17.700	17.240	17.700	17.280	17.620	17.138	17.650	17.800	18.160	18.542	19.600	110.450	111.983	111.750	112.500	113.750	115.500	114.750	115.000	115.000
Chestnut.....	17.930	17.490	17.950	17.520	17.870	17.363	17.880	17.950	18.310	18.700	19.750	110.550	112.042	111.850	112.600	113.850	115.500	114.750	114.750	114.750
Bituminous.....													17.540	16.893	17.500	18.938	110.250	18.063	7.850	8.250
Birmingham, Ala.:																				
Bituminous.....	4.217	4.011	4.228	3.833	4.090	3.646	3.913	3.644	5.080	5.607	5.616	6.461	6.741	7.286	7.496	9.431	10.648	8.674	7.192	6.215
Boston, Mass.:																				
Pa. anthracite—																				
Stove.....	8.250	7.500	8.000	7.500	7.750	7.500	8.000	8.000	9.500	9.500	9.850	10.250	12.000	12.000	12.750	14.500	16.000	15.000	15.000	15.000
Chestnut.....	8.250	7.750	8.250	7.750	8.000	7.750	8.250	8.000	9.500	9.500	9.850	10.250	12.000	12.000	12.750	14.500	16.000	15.000	15.000	15.000
Bituminous.....													10.250	9.000	9.500	13.250				
Bridgeport, Conn.:																				
Pa. anthracite—																				
Stove.....									10.000	8.667	10.500	10.400	12.370	11.750	12.500	15.000	17.500	14.500	13.850	14.000
Chestnut.....									10.000	8.667	10.500	10.400	12.370	11.750	12.500	15.000	17.500	14.400	13.850	14.000
Bituminous.....													9.125	8.000	8.500					
Buffalo, N. Y.:																				
Pa. anthracite—																				
Stove.....	6.750	6.542	6.817	6.650	6.850	6.650	6.850	7.010	7.600	8.138	8.830	9.180	10.400	10.700	10.890	12.080	13.250	12.910	12.960	12.813
Chestnut.....	6.992	6.800	7.067	6.900	7.100	6.900	7.100	7.260	7.850	8.163	8.830	9.240	10.500	10.800	10.990	12.080	13.250	12.910	12.960	12.813
Bituminous.....													6.000	8.000	12.000					
Butte, Mont.:																				
Bituminous.....				7.417	6.750	7.125	7.125	8.222	8.598	9.188	9.083	9.377	9.836	10.381	10.908	12.715	11.982	11.673	11.528	
Charleston, S. C.:																				
Pa. anthracite—																				
Stove.....	18.375	17.750	17.750	17.750	17.750	17.750	17.750	17.875	18.750	111.500	112.275		(2)	13.400	13.400	16.325	17.875	17.000	17.000	17.000
Chestnut.....	18.500	18.000	18.250	18.250	18.250	18.250	18.250	18.375	19.250	111.750	112.475		(2)	13.500	13.500	16.400	17.725	17.100	17.100	17.100
Bituminous.....	16.750	16.750	16.750	16.750	16.750	16.750	16.750	7.000	8.000	8.000	8.375	8.500	8.500	8.500	8.500	12.000	13.250	12.000	12.000	12.000
Chicago, Ill.:																				
Pa. anthracite—																				
Stove.....	8.000	7.800	8.080	7.900	8.100	7.900	8.100	8.240	9.570	9.583	10.350	10.900	11.808	12.200	12.590	14.675	15.913	15.120	15.410	15.763
Chestnut.....	8.250	8.050	8.330	8.130	8.350	8.150	8.350	8.490	9.670	9.667	10.388	10.975	12.016	12.300	12.690	14.788	16.025	15.230	15.340	15.630
Bituminous.....	4.969	4.650	5.000	4.850	5.068	4.708	4.938	4.800	7.083	6.813	6.671	6.475	6.700	7.017	8.020	8.946	9.481	8.503	8.906	8.917
Cincinnati, Ohio:																				
Pa. anthracite—																				
Stove.....	8.250	7.500	8.000	7.917	7.917	7.667	8.000	7.875	10.000		9.500	11.660	(2)	12.000	12.500	14.000	15.970	15.333	15.333	16.000
Chestnut.....	8.750	7.750	8.250	8.167	8.167	7.833	8.083	8.125	10.125		9.500		(2)	12.000	12.667	14.000	16.375	15.750	15.500	16.000
Bituminous.....	3.500	3.375	3.750	3.500	3.500	3.500	3.688	3.500	5.500	5.938	6.098	6.725	6.478	6.139	6.739	8.000	8.679	6.786	7.000	7.154

¹ Per ton of 2,240 pounds.

² Zoned out by Fuel Administration.

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RETAIL PRICES OF COAL.

TABLE 1.—RETAIL PRICES OF COAL, PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15 OF EACH YEAR, 1913 TO 1922, BY CITIES—Continued.

City, and kind of coal.	1913		1914		1915		1916		1917		1918		1919		1920		1921		1922	
	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.
Cleveland, Ohio:																				
Pa. anthracite—																				
Stove.....	\$7.500	\$7.250	\$7.500	\$7.500	\$7.650	\$7.400	\$7.650	\$7.850	\$9.688	\$9.667	\$9.825	.....	\$11.050	\$11.538	\$12.300	\$14.050	\$14.750	\$14.188	\$14.313	\$14.375
Chestnut.....	7.750	7.500	7.750	7.750	7.900	7.650	7.900	8.100	10.000	9.667	9.575	.....	11.175	11.650	12.233	14.025	14.750	14.200	14.438	14.438
Bituminous.....	4.143	4.143	4.400	4.571	4.643	4.607	4.643	4.946	8.227	7.000	6.901	\$6.443	6.821	7.710	7.911	11.357	9.558	8.708	8.139	8.625
Columbus, Ohio:																				
Pa. anthracite—																				
Chestnut.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.000	12.000	14.650	16.500	14.833	15.083	.....
Bituminous.....	.....	.....	.....	.....	.....	.....	.....	3.640	6.400	6.031	5.943	6.179	6.088	6.056	6.513	9.458	9.457	7.420	7.196	7.191
Dallas, Tex.:																				
Pa. anthracite—																				
Chestnut.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18.000	20.000	22.000	.....	.....	.....	.....
Ark. anthracite—																				
Egg.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bituminous.....	8.250	7.214	7.929	7.150	7.545	6.950	7.458	7.208	10.167	8.583	10.139	10.386	10.980	11.083	14.583	14.083	16.250	14.614	15.423	14.423
Denver, Colo.:																				
Colo. anthracite—																				
Stove, 3 and 5																				
mixed.....	8.500	8.500	10.500	8.929	9.214	9.071	9.333	8.786	9.600	10.750	11.750	12.325	12.650	13.150	14.000	14.875	17.533	16.000	15.917	15.500
Furnace, 1 and																				
2 mixed.....	8.875	9.000	11.000	9.071	9.286	9.071	9.333	9.071	9.900	11.000	11.750	12.325	12.650	13.500	14.875	17.533	16.000	15.917	15.500	
Bituminous.....	5.250	4.875	6.474	5.300	5.641	5.192	5.250	5.019	6.000	6.500	7.598	7.995	8.148	8.348	8.908	9.469	11.691	10.979	10.836	10.038
Detroit, Mich.:																				
Pa. anthracite—																				
Stove.....	8.000	7.450	8.000	7.500	7.938	7.500	7.950	8.000	9.750	9.125	9.880	10.150	11.600	11.890	12.650	14.625	15.950	14.563	14.563	14.563
Chestnut.....	8.250	7.650	8.250	7.750	8.188	7.750	8.200	8.250	9.800	9.313	10.080	10.520	11.710	11.980	12.750	14.625	15.950	14.563	14.563	14.563
Bituminous.....	5.200	5.200	5.200	5.188	5.179	5.237	5.237	5.611	7.583	7.500	8.267	8.180	7.732	7.988	8.781	12.417	12.194	10.000	8.750	8.969
Fall River, Mass.:																				
Pa. anthracite—																				
Stove.....	8.250	7.425	7.750	7.688	8.000	7.750	8.750	8.438	11.000	10.688	10.750	11.000	12.700	12.590	13.000	14.500	16.500	15.250	15.250	15.250
Chestnut.....	8.250	7.613	8.000	7.688	8.000	7.750	8.750	8.438	11.000	10.438	10.750	11.000	12.383	12.250	12.750	14.250	16.250	15.083	15.000	15.000
Bituminous.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Houston, Tex.:																				
Bituminous.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Indianapolis, Ind.:																				
Pa. anthracite—																				
Stove.....	8.950	8.000	8.300	7.750	8.250	7.650	8.250	8.500	10.167	.....	9.825	10.250	12.250	12.250	13.000	14.375	16.000	15.375	15.750	15.625
Chestnut.....	9.150	8.250	8.500	7.950	8.450	7.900	8.450	8.688	10.333	.....	9.925	10.500	12.333	12.250	13.167	14.875	16.000	15.500	15.667	15.667
Bituminous.....	3.813	3.700	4.611	4.000	4.073	4.208	4.411	4.568	6.800	7.107	6.163	6.875	7.375	8.188	9.625	9.838	8.631	7.550	7.432

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Jacksonville, Fla.:																				
Pa. anthracite—																				
Stove.....	10.000	9.000	9.000	9.125	9.000	9.000	9.000	9.000	11.000	12.000	12.000	(²)	15.000	17.000	18.000	24.000	16.250	17.500	17.500
Chestnut.....	10.600	9.000	9.000	9.125	9.000	9.000	9.000	9.000	11.000	12.000	12.000	.....	(²)	15.000	17.000	18.000	23.000	16.250	17.500	17.500
Bituminous.....	7.500	7.000	7.125	6.875	7.500	7.000	7.500	7.375	8.000	8.500	9.333	9.825	10.000	10.000	11.000	15.000	15.667	12.250	13.000	13.000
Kansas City, Mo.:																				
Ark. anthracite—																				
Furnace.....			8.286	7.917	8.333	7.833	8.333	8.125	9.292	.....	12.562	13.700	15.107	13.593	15.950	15.750	17.917	16.857	17.214	15.286
Stove, or No. 4.....			8.929	8.500	8.833	8.375	8.833	8.667	9.858	.....	13.150	14.200	15.550	14.450	16.583	16.500	18.500	17.563	18.125	16.125
Bituminous.....	4.391	3.935	4.276	4.033	4.200	4.056	4.515	4.353	6.438	5.700	6.703	6.700	7.354	7.469	8.625	9.600	10.115	9.550	8.669	8.984
Little Rock, Ark.:																				
Ark. anthracite—																				
Egg.....							7.625	7.625	9.000	.....	11.500	12.750	12.975	12.500	.....	14.500	17.000	16.000	15.000	15.000
Stove.....													13.333	13.250	.....		17.000	16.000	15.000	15.000
Bituminous.....	6.000	5.333	6.250	5.833	5.972	5.361	6.000	5.750	8.000	7.857	8.250	9.155	9.414	9.250	10.375	12.591	14.176	12.423	12.800	11.688
Los Angeles, Calif.:																				
N. Mex. anthra- cite—																				
Cerillos egg.....			17.000	.....	15.000	15.000	18.000	16.000	.....	.....	22.000	20.000	21.150	.....	21.000	.....	.....	.....	.....	.....
Bituminous.....	13.520	12.500	13.500	12.000	13.600	11.375	13.700	12.900	15.000	14.375	14.881	14.700	14.688	14.583	16.000	17.000	19.222	18.000	19.000	14.000
Louisville, Ky.:																				
Bituminous.....	4.200	4.000	4.377	3.953	3.997	3.478	3.816	3.737	5.734	6.583	6.038	6.783	6.743	6.816	6.836	9.531	9.750	8.042	7.096	7.389
Manchester, N. H.:																				
Pa. anthracite—																				
Stove.....	10.000	8.500	8.750	8.500	8.750	8.500	9.000	8.750	11.000	11.000	11.000	10.500	12.500	12.750	13.417	15.000	18.000	16.500	16.500	16.000
Chestnut.....	10.000	8.500	8.750	8.500	8.750	8.500	9.000	8.750	11.000	11.000	11.000	10.500	12.500	12.750	13.417	15.000	18.000	16.500	16.500	16.000
Bituminous.....												10.000	10.000	10.000	10.000	13.000	14.000	11.333	11.000	10.500
Memphis, Tenn.:																				
Pa. anthracite—																				
Stove.....													15.000	16.000	16.000	18.000	18.000	18.000	18.000	18.000
Chestnut.....													15.000	16.000	16.000	18.000	18.000	18.000	18.000	18.000
Bituminous.....	4.344	4.219	4.219	4.219	3.883	3.833	3.904	4.083	6.222	7.018	6.539	7.171	7.221	7.528	8.000	9.563	10.036	8.393	7.786	7.786
Milwaukee, Wis.:																				
Pa. anthracite—																				
Stove.....	8.000	7.850	8.080	7.930	8.100	7.900	8.100	8.300	9.020	9.167	9.500	10.968	12.286	12.400	12.600	14.800	16.200	15.940	15.980	16.010
Chestnut.....	8.250	8.100	8.330	8.180	8.350	8.150	8.350	8.550	9.270	9.367	9.650	10.904	12.378	12.500	12.700	14.900	16.280	15.940	15.950	15.950
Bituminous.....	6.250	5.714	6.143	5.714	6.143	5.625	6.000	5.875	7.743	8.000	7.385	7.385	7.814	8.144	8.960	12.167	12.948	10.663	10.407	9.750
Minneapolis, Minn.:																				
Pa. anthracite—																				
Stove.....	9.250	9.050	9.350	9.133	9.307	9.150	9.350	9.900	10.350	10.650	10.826	12.238	13.708	13.800	14.000	16.520	18.330	17.730	17.750	17.510
Chestnut.....	9.500	9.300	9.600	9.383	9.557	9.400	9.600	10.150	10.600	10.900	10.926	12.328	13.786	13.900	14.100	16.560	18.390	17.730	17.750	17.500
Bituminous.....	5.889	5.792	5.875	5.846	5.990	5.960	5.977	6.375	8.077	8.600	8.888	8.474	9.000	9.189	10.425	12.044	13.824	12.485	11.703	11.938
Mobile, Ala.:																				
Bituminous.....											8.000	9.000	9.429	9.722	10.333	11.900	13.214	10.438	11.214	8.875
Newark, N. J.:																				
Pa. anthracite—																				
Stove.....	6.500	6.250	6.500	6.250	6.500	6.250	6.500	6.750	7.208	7.250	8.100	8.500	9.750	10.050	10.483	11.767	13.000	12.700	12.750	12.750
Chestnut.....	6.750	6.500	6.750	6.500	6.750	6.500	6.750	7.000	7.292	7.250	8.100	8.500	9.750	10.050	10.483	11.767	13.000	12.700	12.750	12.750

² Zoned out by Fuel Administration.³ Per 10-barrel lots (1,800 pounds).

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TABLE 1.—RETAIL PRICES OF COAL, PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15 OF EACH YEAR, 1913 TO 1922, BY CITIES—Continued.

City, and kind of coal.	1913		1914		1915		1916		1917		1918		1919		1920		1921		1922	
	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.
New Haven, Conn.:																				
Pa. anthracite—																				
Stove.....	\$7.500	\$6.250	\$6.571	\$6.579	\$7.000	\$6.750	\$7.500	\$7.742	\$9.500	\$9.000	\$9.750	\$10.100	\$12.050	\$11.333	\$12.250	\$14.583	\$17.083	\$13.833	\$14.000	\$14.000
Chestnut.....	7.500	6.250	6.571	6.579	7.000	6.750	7.500	7.742	9.500	9.000	9.750	10.100	12.050	11.333	12.250	14.583	17.083	13.833	14.000	14.000
New Orleans, La.:																				
Pa. anthracite—																				
Stove.....	10.000	10.000	10.000	10.000	10.000	10.125	10.500	11.700	13.100	.....	13.067	.....	(2)	16.000	17.500	19.000	22.500	17.000	18.000	18.000
Chestnut.....	10.500	10.500	10.500	10.500	10.500	10.625	11.000	12.200	13.500	.....	13.300	14.550	(2)	16.000	17.500	18.833	22.500	17.000	18.000	18.333
Bituminous.....	3 6.056	3 6.063	3 5.944	3 6.071	3 5.950	3 6.083	3 6.091	3 6.063	3 6.944	.....	8.040	7.789	8.900	8.292	9.269	10.857	12.873	10.528	10.781	8.393
New York, N. Y.:																				
Pa. anthracite—																				
Stove.....	7.071	6.657	6.857	8.850	7.143	6.907	7.107	7.393	8.500	8.440	9.058	9.300	10.757	10.800	11.536	13.067	14.542	13.300	13.208	13.135
Chestnut.....	7.143	6.800	7.000	6.993	7.286	7.057	7.250	7.421	8.500	8.420	9.083	9.293	10.764	10.857	11.600	13.067	14.542	13.300	13.208	13.135
Norfolk, Va.:																				
Pa. anthracite—																				
Stove.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.000	9.500	11.700	12.500	13.000	14.500	16.000	14.500	14.000	14.000
Chestnut.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.000	9.500	11.700	12.500	13.000	14.500	16.000	14.500	14.000	14.000
Bituminous.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7.750	7.750	8.250	9.375	9.750	12.125	13.357	11.971	9.429	9.952
Omaha, Nebr.:																				
Pa. anthracite—																				
Stove.....	12.000	10.750	10.700	10.700	10.750	10.700	10.750	11.750	13.200	13.250	13.188	.....	.....	16.450	17.275	21.300	23.250	22.000	22.000	22.000
Chestnut.....	12.000	11.000	10.950	10.950	11.000	10.950	11.000	12.000	13.400	13.500	13.338	.....	.....	16.550	17.450	21.400	23.375	22.000	22.000	22.000
Bituminous.....	6.625	6.125	6.125	6.125	6.083	6.167	6.042	6.000	7.857	7.750	7.950	7.388	8.471	8.930	10.108	11.465	13.697	12.344	11.857	11.905
Peoria, Ill.:																				
Pa. anthracite—																				
Stove.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.250	11.000	.....	11.667	13.000	14.000	16.500	15.375	15.500	16.500
Chestnut.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.500	11.025	.....	11.750	13.000	14.000	16.500	15.500	15.500	16.500
Bituminous.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.500	.....	5.850	5.550	6.000	7.429	7.750	6.406	6.321	6.696
Philadelphia, Pa.:																				
Pa. anthracite—																				
Stove.....	1 7.156	1 6.894	1 7.281	1 7.050	1 7.250	1 7.013	1 7.250	1 7.494	1 7.969	1 8.319	1 9.594	1 9.806	1 11.244	1 10.850	1 11.881	1 13.469	1 14.975	1 14.156	1 14.125	1 14.094
Chestnut.....	1 7.375	1 7.144	1 7.531	1 7.300	1 7.500	1 7.263	1 7.500	1 7.744	1 8.188	1 8.519	1 9.681	1 9.888	1 11.319	1 10.950	1 11.906	1 13.438	1 14.975	1 14.125	1 14.125	1 14.094
Pittsburgh, Pa.:																				
Pa. anthracite—																				
Stove.....	1 7.938	1 7.375	1 7.713	1 7.550	1 7.875	1 7.567	1 7.967	1 8.000	1 10.500	1 10.625	.....	1 11.000	1 12.750	1 12.750	1 13.750	1 15.250	1 18.500	1 15.750	1 15.500	1 15.750
Chestnut.....	1 8.000	1 7.438	1 7.775	1 7.550	1 7.933	1 7.567	1 8.017	1 8.100	1 10.850	1 10.650	1 10.150	1 11.050	1 12.700	1 12.663	1 14.000	1 15.175	1 18.500	1 15.867	1 15.667	1 15.583
Bituminous.....	4 3.158	4 3.176	4 3.188	4 3.158	4 3.225	4 3.225	4 3.326	4 3.450	4 4.857	4 5.750	4 5.278	5 6.696	6 6.000	5 8.833	6 6.179	7 7.375	8 8.188	6 8.857	6 7.781	6 6.656
Portland, Me.:																				
Pa. anthracite—																				
Stove.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.890	11.040	13.000	12.200	13.440	15.360	16.320	15.120	15.843	15.843
Chestnut.....	10.890	11.040	13.000	12.200	13.440	15.360	16.320	15.120	15.843	15.843
Bituminous.....	10.453	10.890	10.853	8.573	9.370	14.810	12.740	9.310

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Portland, Oreg.:																						
Bituminous.....	9.786	9.656	9.625	9.279	9.382	9.224	9.438	9.263	10.276	9.659	10.181	10.442	10.566	11.493	11.618	11.955	13.792	13.469	12.964	12.717		
Providence, R. I.:																						
Pa. anthracite—																						
Stove.....	5 8.250	5 7.500	5 7.750	5 7.450	5 7.750	5 7.500	5 8.750	5 8.500	10.000	5 9.500	5 10.500	5 11.375	5 12.400	5 12.000	5 12.950	5 14.500	5 17.000	5 15.000	5 15.000	5 15.000	5 15.000	5 15.000
Chestnut.....	5 8.250	5 7.750	5 8.000	5 7.700	5 8.000	5 7.750	5 9.000	5 8.500	10.000	5 9.500	5 10.500	5 11.375	5 12.400	5 12.000	5 13.000	5 14.500	5 17.000	5 15.000	5 15.000	5 15.000	5 15.000	5 15.000
Bituminous.....													5 10.500	5 9.000	5 10.000	5 13.625	5 13.583	5 9.500				
Richmond, Va.:																						
Pa. anthracite—																						
Stove.....	8.000	7.250	7.750	7.542	8.000	7.500	7.900	8.000	9.450	9.500	9.500	9.900	11.500	12.000	12.125	13.500	15.500	14.250	14.250	14.250	14.250	14.250
Chestnut.....	8.000	7.250	7.750	7.542	8.000	7.500	7.900	8.000	9.450	9.500	9.500	9.900	11.500	12.000	12.125	13.500	15.500	14.250	14.250	14.250	14.250	14.250
Bituminous.....	5.500	4.944	5.423	5.042	5.444	5.023	5.364	5.063	7.268	7.250	7.686	7.811	8.222	8.464	8.931	10.882	12.289	10.738	9.846	8.692		
Rochester, N. Y.:																						
Pa. anthracite—																						
Stove.....									7.200	7.750	8.150	8.550	9.050	10.300	10.600	10.800	12.200	13.550	13.350	13.450	13.450	
Chestnut.....									7.450	7.900	8.250	8.650	9.150	10.400	10.700	10.900	12.300	13.550	13.350	13.450	13.450	
St. Louis, Mo.:																						
Pa. anthracite—																						
Stove.....	8.438	7.740	8.150	8.175	8.333	8.033	8.583	8.500	9.813	10.250	10.433	11.000	.....	12.900	13.100	14.350	17.288	16.063	16.188	16.125		
Chestnut.....	8.680	7.990	8.350	8.363	8.500	8.200	8.750	8.750	10.050	10.563	10.533	11.250	.....	12.900	13.225	14.350	17.288	16.250	16.375	16.250		
Bituminous.....	3.360	3.037	3.288	3.056	3.214	3.050	3.179	3.073	4.615	4.788	5.444	5.893	5.463	5.425	5.970	6.632	8.066	6.895	7.158	6.934		
St. Paul, Minn.:																						
Pa. anthracite—																						
Stove.....	9.198	9.050	9.333	9.183	9.350	9.150	9.350	9.883	10.350	10.675	10.727	12.248	13.453	13.800	14.000	16.483	18.283	17.750	17.750	17.508	17.508	
Chestnut.....	9.448	9.300	9.583	9.433	9.600	9.400	9.600	10.133	10.600	10.883	10.827	12.417	13.543	13.900	14.100	16.517	18.317	17.750	17.750	17.508	17.508	
Bituminous.....	6.073	6.041	6.121	6.089	6.167	6.153	6.203	6.610	8.213	8.568	9.162	9.148	9.582	9.875	11.531	13.258	15.131	12.831	12.050	12.416		
Salt Lake City, Utah:																						
Colo. anthracite—																						
Furnace, 1 and																						
2 mixed.....	11.000	11.500	11.500	.....	11.500	11.563	11.714	11.429	12.000	12.875	14.000	15.000	15.333	16.000	16.313	18.375	17.700	19.300	19.125	19.125		
Stove, 3 and 5																						
mixed.....	11.000	11.500	11.472	.....	11.500	11.571	11.786	11.429	12.000	12.875	14.000	15.000	15.333	16.000	16.583	18.375	18.500	20.000	20.000	20.000	20.000	
Bituminous.....	5.639	5.458	5.580	5.552	5.462	5.462	5.464	5.464	5.658	6.368	7.250	7.303	7.875	7.250	8.236	9.250	10.012	9.750	9.000	8.706		
San Francisco, Calif.:																						
N. Mex. anthracite—																						
Cerrillos egg.....	17.000	17.000	17.000	17.000	16.833	16.833	17.000	17.000	19.000	19.000	20.750	18.600	21.550	20.500	23.000	24.000	28.650	26.500	27.250	24.250		
Colo. anthracite—																						
Egg.....	17.000	17.000	17.000	17.000	16.833	16.833	17.000	17.000	19.000	.....	18.600	18.600	19.400	19.400	21.750	23.000	26.750	26.000	26.250	23.750		
Bituminous.....	12.000	12.000	12.091	12.400	12.273	12.333	12.250	12.250	13.429	14.500	13.867	14.083	14.200	13.591	15.100	16.643	19.400	18.455	19.250	16.500		
Savannah, Ga.:																						
Pa. anthracite—																						
Stove.....																	5 15.100	5 17.600	5 19.100	5 17.100	5 17.100	5 16.100
Chestnut.....																	5 15.100	5 17.600	5 19.100	5 17.100	5 17.100	5 16.100
Bituminous.....																	5 11.100	5 14.500	5 15.100	5 12.767	5 12.267	5 10.100

¹ Per ton of 2,240 pounds.

² Zoned out by Fuel Administration.

³ Per 10-barrel lots (1,800 pounds).

⁴ Per 25-bushel lots (1,900 pounds).

⁵ 50 cents per ton additional is charged for "binning." Most customers bring or basketing the coal into the cellar.

⁶ All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge is included in the price.

RETAIL PRICES OF COAL.

TABLE 1.—RETAIL PRICES OF COAL, PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15 OF EACH YEAR, 1913 TO 1922, BY CITIES—Continued.

City, and kind of coal.	1913		1914		1915		1916		1917		1918		1919		1920		1921		1922	
	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.
Scranton, Pa.:																				
Pa. anthracite—																				
Stove.....	\$4.250	\$4.313	\$4.500	\$4.313	\$4.438	\$4.125	\$4.375	\$4.800	\$5.250	\$5.250	\$6.113	\$6.050	\$7.475	\$7.683	\$8.233	\$9.275	\$9.833	\$9.550	\$9.700	\$9.700
Chestnut.....	4.500	4.563	4.750	4.563	4.688	4.313	4.625	4.800	5.250	5.250	6.150	6.150	7.563	7.783	8.300	9.275	9.833	9.550	9.700	10.183
Seattle, Wash.:																				
Bituminous.....	7 7.125	7 7.200	7 6.167	7 5.800	7 5.906	7 5.313	7 5.528	7 5.750	7 5.850	7 6.133	8 7.867	8 9.133	8 9.163	8 9.103	8 9.588	8 9.843	8 11.611	8 11.337	8 10.130	8 9.943
Springfield, Ill.:																				
Bituminous.....				2.646	2.078	2.034	2.563	2.750	2.706	3.455	3.711	3.661	3.832	3.976	3.950	4.450	4.950	4.425	4.575	4.625
Washington, D. C.:																				
Pa. anthracite—																				
Stove.....	1 7.500	1 7.381	1 7.588	1 7.410	1 7.731	1 7.400	1 7.625	1 7.725	1 8.206	1 8.567	1 10.100	1 9.980	1 11.890	1 11.911	1 12.447	1 13.793	1 15.593	1 14.514	1 14.943	1 14.721
Chestnut.....	1 7.650	1 7.531	1 7.738	1 7.569	1 7.881	1 7.550	1 7.775	1 7.856	1 8.200	1 8.625	1 10.190	1 10.064	1 12.019	1 12.011	1 12.538	1 13.857	1 15.557	1 14.400	1 14.621	1 14.636
Bituminous.....												1 7.700	1 7.974	1 8.050	1 8.287	1 9.694	1 11.577	1 10.055	1 9.096	1 9.063

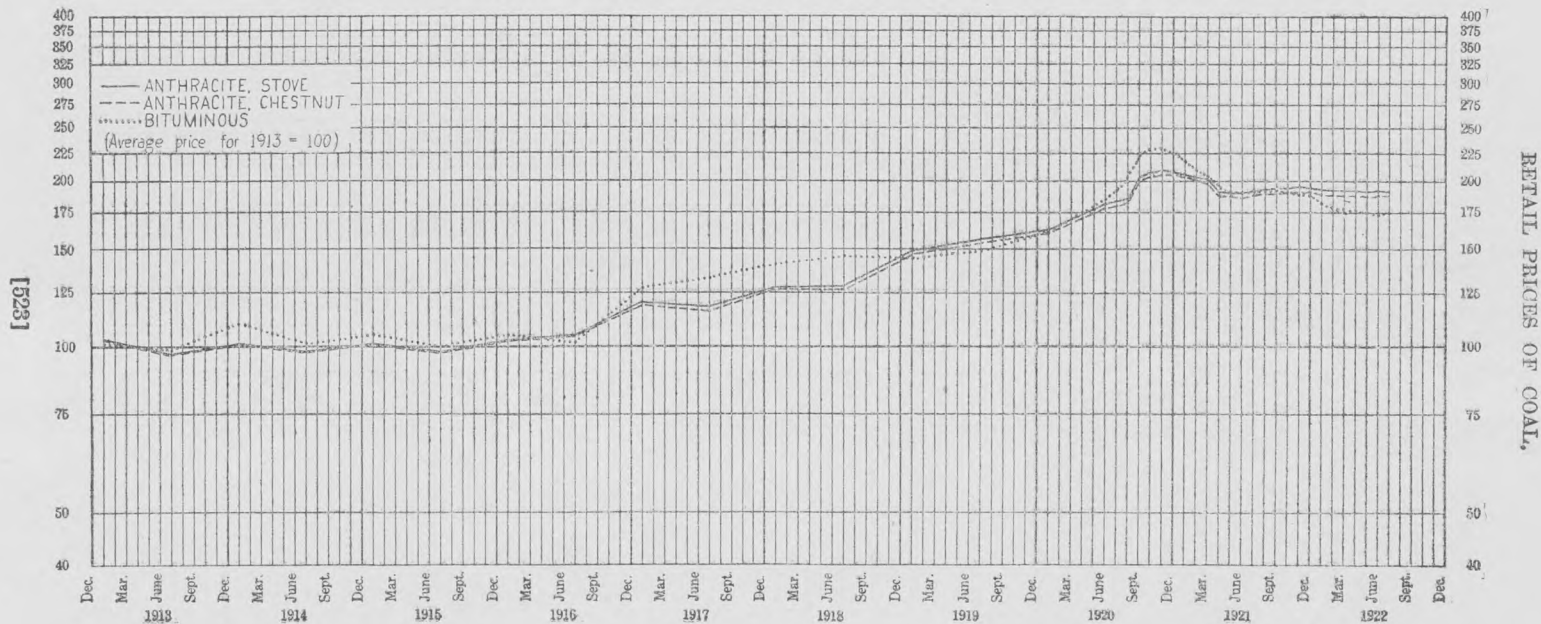
¹ Per ton of 2,240 pounds.

⁷ At yard, delivery \$0.50 to \$2, according to distance.

⁸ Prices in Zone A. The cartage charge in Zone A was \$1.85 until in July, 1921, when it was \$1.55. Beginning with January, 1922, the cartage charge in Zone A has been \$1.75. These charges have been included in the averages.

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TREND IN THE RETAIL PRICE OF COAL FOR THE UNITED STATES, JANUARY, 1913, to JULY, 1922.



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RETAIL PRICES OF COAL,

Table 2 shows for the United States both average and relative retail prices of Pennsylvania white ash coal, stove and chestnut sizes, and of bituminous coal on specified dates from January, 1913, to July, 1922. An average price for the year 1913 has been made from the averages for January and July of that year. The average prices for each month have been divided by this average price for the year 1913 to obtain the relative prices.

July, 1922, compared with July, 1913, shows an increase of 99 per cent in the price of Pennsylvania white ash stove coal, 94 per cent in the price of chestnut, and 76 per cent in the price of bituminous.

July, 1922, compared with July, 1921, shows a decrease of 0.2 per cent in the price of Pennsylvania white ash stove and in the price of chestnut, and a decrease of 9 per cent in the price of bituminous coal.

The figures for the chart, showing the trend in the retail prices of coal, have been taken from Table 2.

TABLE 2.—AVERAGE AND RELATIVE PRICES OF COAL IN TON LOTS FOR THE UNITED STATES ON SPECIFIED DATES FROM JANUARY 15, 1913, TO JANUARY 15, 1922.

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
January.....	7.99	103	8.15	103	5.48	101
July.....	7.46	97	7.68	97	5.39	99
1914:						
January.....	7.80	101	8.00	101	5.97	110
July.....	7.60	98	7.78	98	5.46	101
1915:						
January.....	7.83	101	7.99	101	5.71	105
July.....	7.54	98	7.73	98	5.44	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
July.....	9.08	118	9.16	116	7.21	133
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.....	12.14	157	12.17	154	8.10	149
1920:						
January.....	12.59	163	12.77	161	8.81	162
June.....	14.07	182	14.14	179	10.19	187
July.....	14.28	185	14.33	181	10.55	194
August.....	14.40	186	14.50	183	11.04	203
September.....	15.77	204	15.85	200	12.12	223
October.....	16.08	208	16.15	204	12.50	230
November.....	16.22	210	16.29	206	12.53	230
December.....	16.16	209	16.29	206	12.30	226
1921:						
January.....	15.99	207	16.13	204	11.82	218
February.....	15.80	204	15.88	201	11.41	210
March.....	15.63	202	15.66	198	11.15	205
April.....	14.87	192	14.86	188	10.58	195
May.....	14.80	192	14.88	188	10.40	191
June.....	14.77	191	14.84	187	10.39	191
July.....	14.90	193	14.95	189	10.47	193
August.....	14.97	194	15.02	190	10.47	193
September.....	15.03	195	15.07	190	10.47	193
October.....	15.08	195	15.11	191	10.41	191
November.....	15.11	196	15.14	191	10.34	190
December.....	15.09	195	15.13	191	10.28	189
1922:						
January.....	17.98	194	15.02	190	9.89	182
February.....	14.92	193	14.99	189	9.71	179
March.....	14.89	193	14.94	189	9.72	179
April.....	14.89	193	14.94	189	9.62	177
May.....	14.85	192	14.91	188	9.50	175
June.....	14.88	193	14.93	189	9.48	174
July.....	14.87	192	14.92	189	9.49	175

Index Numbers of Wholesale Prices in July, 1922.

THE trend of wholesale prices of commodities continued upward through July, according to information gathered in representative markets of the country by the United States Department of Labor through the Bureau of Labor Statistics. Based on 404 commodities, or series of quotations, the bureau's weighted index number rose from 150 in June to 155 in July, a gain of $3\frac{1}{2}$ per cent. The increase from May to June was $1\frac{1}{2}$ per cent.

The largest price increase was reported for the group of fuel and lighting materials, in which the index number, computed in part from estimated prices, rose nearly 13 per cent. Farm products advanced 3 per cent and foodstuffs $1\frac{1}{2}$ per cent in average price from June to July. In the group of building materials prices advanced $1\frac{3}{4}$ per cent. Increases of less than 1 per cent took place among cloths and clothing and metals and metal products. House furnishing goods, on the contrary, decreased $1\frac{3}{4}$ per cent and chemicals and drugs three-fourths of 1 per cent in average price in the period stated. No change was reported for the group of miscellaneous commodities, including cattle feed, leather, paper and pulp, and other articles.

Of the 404 commodities, or price series, for which comparable data for June and July were obtained, increases were found to have occurred for 146 commodities and decreases for 100 commodities. In the case of 158 commodities no change in average prices was reported.

INDEX NUMBERS OF WHOLESALE PRICES, BY GROUPS OF COMMODITIES.

[1913=100.]

	1921, July.	1922	
		June.	July.
Farm products.....	119	131	135
Foods.....	141	140	142
Cloths and clothing.....	172	179	180
Fuel and lighting.....	136	235	254
Metals and metal products.....	124	120	121
Building materials.....	160	167	170
Chemicals and drugs.....	129	122	121
Housefurnishing goods.....	180	176	173
Miscellaneous.....	123	114	114
All commodities.....	141	150	155

Comparing prices in July with those of a year ago, as measured by changes in the index numbers, it is seen that the general level has risen 10 per cent. Fuel and lighting materials show by far the largest increase, $36\frac{1}{2}$ per cent. Farm products have increased $13\frac{1}{2}$ per cent, building materials $6\frac{1}{4}$ per cent, and clothing $4\frac{3}{4}$ per cent in price in the year. Food items show only a small increase. Metals, chemicals and drugs, house furnishing goods, and miscellaneous commodities all show decreases compared with prices of a year ago.

Revised Index Numbers of Wholesale Prices, by Years, 1890 to 1921.

TO MEET the demand for index numbers of wholesale prices for years prior to 1913, comparable with the revised figures for years and months since 1913 recently computed by the United States Department of Labor through the Bureau of Labor Statistics, the following table is presented. While the results here shown for earlier years are necessarily based on a smaller number of commodities than the data for recent years, the figures are believed to furnish a reliable barometer of wholesale price changes in general over the period stated.

REVISED INDEX NUMBERS OF WHOLESALE PRICES, BY YEARS, 1890 TO 1921.

[1913=100.]

Year.	Farm products.	Foods.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Building materials.	Chemicals and drugs.	House-furnishing goods.	Miscellaneous.	All commodities.
1890.....	70	86	95	62	116	82	91	88	99	81
1891.....	75	85	91	60	102	78	92	89	97	80
1892.....	68	79	91	57	92	74	93	85	91	75
1893.....	71	85	90	58	85	73	91	85	92	77
1894.....	61	75	79	56	72	70	82	80	88	69
1895.....	61	74	77	66	77	68	81	77	93	70
1896.....	55	69	76	65	78	68	81	77	92	67
1897.....	59	71	75	55	72	66	88	75	93	67
1898.....	63	74	77	56	72	70	97	78	96	70
1899.....	64	74	80	67	110	77	101	80	100	75
1900.....	70	79	88	76	108	81	102	87	104	81
1901.....	74	79	81	73	103	78	105	87	96	79
1902.....	81	83	82	84	100	80	108	87	93	84
1903.....	77	81	87	98	99	82	105	90	102	86
1904.....	81	84	88	87	88	79	105	89	110	86
1905.....	79	86	90	81	98	85	103	88	117	86
1906.....	80	83	98	85	113	95	96	91	116	89
1907.....	87	89	105	89	121	100	98	98	111	94
1908.....	86	91	94	83	95	92	99	92	101	90
1909.....	97	97	98	84	93	95	100	92	130	97
1910.....	103	101	100	78	94	98	102	96	151	101
1911.....	93	97	96	76	89	98	102	93	111	93
1912.....	101	104	97	84	99	99	101	94	110	99
1913.....	100	100	100	100	100	100	100	100	100	100
1914.....	103	102	98	93	85	92	101	100	95	98
1915.....	104	105	98	88	99	94	134	100	95	101
1916.....	123	121	127	126	162	120	181	106	121	127
1917.....	190	167	175	169	231	157	202	125	148	177
1918.....	218	188	228	170	187	172	215	153	156	194
1919.....	231	207	253	181	162	201	169	184	175	206
1920.....	218	220	*295	241	192	264	200	254	196	226
1921.....	124	144	180	199	129	165	136	195	128	147

Wholesale Prices in the United States and Foreign Countries, 1913 to June, 1922.

IN THE following table the more important index numbers of wholesale prices in the United States and several foreign countries, as compiled by recognized authorities, have been reduced to a common base, in order that the trend of prices in the several countries may be directly compared. The results here shown have been obtained by merely shifting the base for each series of index numbers to the year 1913; i. e., by dividing the index for 1913 on the original base into the index for each year or month on that base. These results are therefore to be regarded only as approximations of the

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correct index numbers in the case of series constructed by averaging the relative prices of individual commodities.¹ This applies to the index numbers of the Department of Labor of Canada, the Statistique Générale of France, the series for Italy constructed by Prof. Riccardo Bachi, and the series here shown for Japan. The index numbers of the United States Bureau of Labor Statistics and the Census and Statistics Office of New Zealand are built on aggregates of actual money prices, or relatives made from such aggregates of actual prices, and therefore can readily be shifted to any desired base. The series here shown for Sweden, Germany, the United Kingdom, and Australia are reproduced as published, the last two series being rounded off to three figures. It should be understood also that the validity of the comparisons here made is affected by the wide difference in the number of commodities included in the different series of index numbers.

WHOLESALE PRICES IN THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES

[Index numbers expressed as percentages of the index number for 1913. See text explanation.]

Year and month.	United States: Bureau of Labor Statistics (Revised a); 404 commodities (variable).	Canada: Department of Labor; 272 commodities (variable).	United Kingdom: Board of Trade; 150 commodities.	France: Statistique Générale; 45 commodities.	Germany: Statistisches Reichsamt; 38 commodities.	Italy: Riccardo Bachi; 38 commodities until end of 1919; thereafter 76 commodities.	Japan: Bank of Japan, Tokyo; 56 commodities.	Sweden: Svensk Handels-tidning; 47 commodities.	Australia: Bureau of Census and Statistics; 92 commodities.	New Zealand: Census and Statistics Office; 140 commodities.
1913.....	100	100	100	100	100	100	100	^b 100	.....	100
1914.....	98	100	.....	102	.....	95	96	116	.....	102
1915.....	101	110	.....	140	.....	133	97	145	.....	121
1916.....	127	134	.....	188	.....	201	117	185	.....	131
1917.....	177	174	.....	262	.....	299	147	244	.....	148
1918.....	194	205	.....	339	.....	409	192	339	.....	172
1919.....	206	216	.....	356	.....	364	236	331	.....	175
1920.....	226	246	314	510	1486	624	259	347	.....	208
1921.....	147	182	201	345	1911	578	200	211	.....	197
1914.										
January...	98	101	.....	100	.....	102	.....	.....	.....	.....
April.....	98	101	.....	100	.....	92	.....	.....	.....	.....
July.....	97	99	.....	101	.....	92	.....	.....	.....	.....
October...	97	102	.....	107	.....	98	.....	.....	.....	.....
1915.										
January...	98	103	.....	124	.....	105	.....	.....	.....	.....
April.....	99	108	.....	135	.....	121	.....	.....	.....	.....
July.....	100	111	.....	142	.....	130	.....	.....	.....	.....
October...	102	112	.....	158	.....	148	.....	.....	.....	.....
1916.										
January...	113	127	.....	179	.....	184	.....	.....	.....	.....
April.....	121	132	.....	190	.....	201	.....	.....	.....	.....
July.....	123	132	.....	186	.....	193	.....	.....	.....	.....
October...	136	138	.....	198	.....	207	.....	.....	133	.....
1917.										
January...	153	154	.....	215	.....	229	.....	.....	133	.....
April.....	173	169	.....	248	.....	265	.....	.....	136	.....
July.....	188	179	.....	268	.....	304	.....	.....	148	.....
October...	183	179	.....	284	.....	350	.....	.....	155	.....

^a For particulars concerning revised index numbers, see MONTHLY LABOR REVIEW for July, 1922, pp. 59 and 60.

^b July, 1913, to June, 1914.

^c July, 1914.

¹ For a discussion of index numbers constructed according to this method, see Bulletin No. 181 of the U. S. Bureau of Labor Statistics, pp. 245-252.

WHOLESALE PRICES IN THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES—
Concluded.

Year and month.	United States: Bureau of Labor Statistics (Revised ¹); 404 commodities (variable).	Canada: Department of Labor; 272 commodities (variable).	United Kingdom: Board of Trade; 150 commodities.	France: Statistique Générale; 45 commodities.	Germany: Statistisches Reichsamt; 38 commodities.	Italy: Riccardo Bachi; 38 commodities until end of 1919; thereafter 76 commodities.	Japan: Bank of Japan, Tokyo; 56 commodities.	Sweden: Svensk Handelstidning; 47 commodities.	Australia: Bureau of Census and Statistics; 92 commodities.	New Zealand: Census and Statistics Office; 140 commodities.
1918.										
January...	184	190	.....	313	.....	363	.....	.....	164	160
February...	186	194	.....	319	.....	380	.....	.....	164	159
March.....	187	199	.....	327	.....	394	.....	.....	167	161
April.....	190	199	.....	333	.....	401	.....	.....	168	166
May.....	190	204	.....	335	.....	409	.....	.....	171	167
June.....	191	207	.....	329	.....	415	.....	.....	171	169
July.....	196	210	.....	337	.....	429	.....	.....	170	172
August....	200	210	.....	350	.....	432	.....	.....	172	177
September	204	211	.....	355	.....	433	.....	.....	172	179
October...	202	214	.....	360	.....	442	.....	370	173	182
November...	203	215	.....	358	.....	437	.....	367	172	186
December.	202	213	.....	353	.....	371	.....	372	172	187
1919.										
January...	199	211	.....	348	.....	325	.....	369	171	180
February...	193	206	.....	340	.....	321	.....	358	167	176
March.....	196	205	.....	337	.....	325	.....	354	168	170
April.....	199	206	.....	332	.....	332	.....	339	171	168
May.....	202	210	.....	325	.....	338	.....	330	172	167
June.....	203	210	.....	330	.....	358	.....	324	173	168
July.....	212	217	.....	349	.....	362	.....	320	176	170
August....	216	222	.....	347	.....	369	.....	321	182	174
September	210	223	.....	360	.....	372	.....	319	185	178
October....	211	221	.....	382	.....	390	.....	307	200	179
November...	217	227	.....	405	.....	439	.....	308	199	181
December.	223	238	.....	423	.....	457	.....	317	197	183
1920.										
January...	233	250	303	487	1256	508	301	319	203	190
February...	232	254	317	522	1685	557	314	342	206	194
March.....	234	258	326	554	1709	602	322	354	209	202
April.....	245	261	332	588	1567	664	300	354	217	205
May.....	247	263	333	550	1508	660	272	361	225	206
June.....	243	258	330	493	1382	632	248	366	233	205
July.....	241	256	324	496	1367	604	239	364	234	215
August....	231	244	320	501	1450	625	235	365	236	215
September	226	241	318	526	1498	655	231	362	230	216
October....	211	234	309	502	1466	659	226	346	215	218
November...	196	225	293	461	1509	670	221	331	208	214
December.	179	214	269	435	1440	655	206	299	197	214
1921.										
January...	170	208	251	407	1439	642	201	267	196	212
February...	160	199	230	377	1376	613	195	250	192	206
March.....	155	194	215	360	1338	604	191	237	181	204
April.....	148	187	209	347	1326	584	190	229	171	201
May.....	145	183	206	329	1308	547	191	218	166	198
June.....	142	179	202	325	1366	509	192	218	162	196
July.....	141	176	198	330	1428	520	196	211	159	196
August....	142	174	194	331	1917	542	199	198	160	193
September	141	172	191	344	2067	580	207	182	160	193
October....	142	169	184	331	2460	599	219	175	156	191
November...	141	168	176	332	3416	595	214	174	151	187
December.	140	170	171	326	3487	595	209	172	148	185
1922.										
January...	138	168	168	314	3665	577	206	170	147	182
February...	141	169	165	306	4103	562	204	166	147	178
March.....	142	166	163	307	5433	533	201	164	146	176
April.....	143	166	163	314	6355	527	197	165	148	176
May.....	148	167	164	317	6458	524	194	164	155	174
June.....	150	165	163	325	7030	537	197	164	156	.....

Quantity and Cost of Clothing Purchased by Average Workingman's Family in One Year.

THE following table shows the number and the cost of a large number of articles of clothing purchased in one year by the average workingman's family in the United States.

In the fall of 1918 and the winter of 1919, the Bureau of Labor Statistics made a survey of the cost of living in 92 localities in the United States. Detailed information relative to incomes and expenditures was secured from 12,096 families. The table presented here shows figures for 12,094 families. The data relating to clothing consist of the number of each of the articles named that were purchased by the families in one year together with its cost.

The data are shown separately for male and female members of the family, and under each sex are shown by subdivisions as follows:

For husband or wife; for children under 4 years of age; children 4 and under 8 years; children 8 and under 12 years; children 12 and under 15 years; children 15 and over; and dependents—that is, persons (other than the children of the family) living with the family and dependent upon the family purse for their support.

The table shows figures for "All families" and for "Families purchasing." By "All families" is meant the number of families having persons in the group under consideration. Of course, in the case of husband and wife, this means the total number of 12,094 families, as data were secured only from families having both husband and wife living. In the group of male children under 4 years of age "All families" means 3,848—that is, there were 3,848 families having male children under four years of age. In the group of male children 4 and under 8 years, "All families" means 3,674, etc. This number appears for each group at the head of the table for that group. By "Families purchasing" is meant in each case the number of families reporting the purchase during the year of the article under consideration. To illustrate: While there were 12,094 families for which data were reported for the husband, there were only 7,502 of these families that reported the purchase of felt hats, 3,396 the purchase of straw hats, etc. This number, varying in each case, is shown in the column, "Number of families purchasing." For each article, figures are given showing the average number of articles per family, the average cost per family, the average number of articles per person (that is, per person of the group being considered), the average cost per person, and the average cost per article. Under "Families purchasing" are shown the number of families purchasing, the per cent that these families are of all families in the group, the average number of articles per family purchasing, and the average cost per family purchasing.

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR.

Husbands (12,094 families).

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Hats, felt.....	0.7	\$2.26	0.7	\$2.26	\$3.23	7,502	62.0	1.1	\$3.65
Hats, straw.....	.3	.74	.3	.74	2.52	3,396	28.1	1.0	2.64
Caps.....	.5	.56	.5	.56	1.11	4,290	35.5	1.4	1.59
Suits, wool.....	.6	15.35	.6	15.35	26.54	6,232	51.5	1.1	29.78
Suits, cotton.....	.1	.92	.1	.92	12.99	753	6.2	1.1	14.76
Coats (separate).....	.04	.22	.04	.22	4.86	403	3.3	1.3	6.50
Pants (separate), wool.....	.4	1.97	.4	1.97	5.08	3,370	27.9	1.4	7.05
Pants (separate), cotton.....	.4	1.12	.4	1.12	3.06	2,604	21.5	1.7	5.22
Overcoats.....	.2	3.96	.2	3.96	22.38	2,118	17.5	1.0	22.59
Mackinaws.....	.03	.26	.03	.26	9.61	325	2.7	1.0	9.61
Raincoats.....	.1	.47	.1	.47	8.57	661	5.5	1.0	8.68
Sweaters and jerseys.....	.2	.96	.2	.96	4.39	2,442	20.2	1.1	4.75
Cleaning, pressing, and repairing.....	1.00	1.00	1.00	1.00	.....	3,461	28.6	.....	3.50
Overalls.....	1.1	2.46	1.1	2.46	2.14	5,618	46.5	2.5	5.29
Jumpers.....	.4	.88	.4	.88	1.99	2,431	20.1	2.2	4.38
Shirts, cotton.....	3.6	4.65	3.6	4.65	1.31	10,801	89.3	4.0	5.20
Shirts, wool.....	.2	.61	.2	.61	2.85	1,388	11.5	1.9	5.34
Shirts, silk.....	.05	.21	.05	.21	4.28	432	3.6	1.4	5.97
Undershirts, cotton.....	.8	.82	.8	.82	1.01	3,829	31.7	2.6	2.60
Undershirts, wool.....	.2	.43	.2	.43	2.25	1,135	9.4	2.0	4.58
Drawers, cotton.....	.8	.77	.8	.77	1.01	3,669	30.3	2.5	2.55
Drawers, wool.....	.2	.39	.2	.39	2.22	1,048	8.7	2.0	4.49
Union suits, cotton.....	1.2	1.91	1.2	1.91	1.58	5,439	45.0	2.7	4.24
Union suits, wool.....	.2	.82	.2	.82	3.68	1,308	10.8	2.1	7.55
Pajamas.....	.1	.23	.1	.23	1.65	949	7.8	1.8	2.98
Nightshirts.....	.3	.41	.3	.41	1.27	2,051	17.0	1.9	2.43
Socks, cotton.....	10.6	2.95	10.6	2.95	.28	11,480	94.9	11.1	3.11
Socks, wool.....	.6	.45	.6	.45	.76	2,025	16.7	3.5	2.68
Socks, silk.....	.3	.20	.3	.20	.71	1,076	8.9	3.1	2.23
Shoes, high.....	2.1	10.70	2.1	10.70	5.17	11,471	94.8	2.2	11.29
Shoes, low.....	.2	.96	.2	.96	4.41	2,235	18.5	1.2	5.19
Shoe repairing.....	.....	2.64	.....	2.64	.....	10,597	87.6	.....	3.01
Shoe shines.....	2.8	.26	2.8	.26	.09	1,210	10.0	27.9	2.59
Rubber boots.....	.1	.34	.1	.34	5.18	702	5.8	1.1	5.77
House slippers.....	.2	.30	.2	.30	1.78	1,946	16.1	1.0	1.84
Spats and leggings.....	.01	.02	.01	.02	2.03	108	.9	1.0	2.09
Rubbers.....	.4	.53	.4	.53	1.28	3,984	32.9	1.2	1.59
Arctics.....	.1	.22	.1	.22	2.70	875	7.2	1.1	3.10
Gloves and mittens, leather, dress.....	.2	.42	.2	.42	2.04	2,226	18.4	1.1	2.31
Gloves and mittens, leather, work.....	.3	.35	.3	.35	1.07	1,228	10.2	3.2	3.43
Gloves and mittens, cotton.....	3.9	.86	3.9	.86	.22	3,936	32.5	11.9	2.65
Gloves and mittens, wool.....	.1	.13	.1	.13	.98	1,263	10.4	1.2	1.20
Collars.....	4.4	.79	4.4	.79	.18	7,831	64.8	6.8	1.23
Ties.....	2.2	1.34	2.2	1.34	.61	8,663	71.6	3.1	1.87
Handkerchiefs.....	5.5	.79	5.5	.79	.14	7,896	65.3	8.5	1.20
Mufflers and scarfs.....	.1	.09	.1	.09	1.56	653	5.4	1.1	1.67
Garters.....	1.1	.31	1.1	.31	.28	7,166	59.3	1.9	.52
Belts.....	.3	.24	.3	.24	.78	3,173	26.2	1.2	.92
Suspenders.....	.8	.43	.8	.43	.57	5,894	48.7	1.6	.89
Umbrellas.....	.1	.22	.1	.22	1.79	1,412	11.7	1.1	1.91
Pocketbooks.....	.1	.06	.1	.06	.82	754	6.2	1.1	.90
Watches and jewelry.....	.....	1.18	.....	1.18	.....	2,068	17.1	.....	6.91
Other clothing.....	.....	.22	.....	.22	.....	1,499	12.4	.....	1.81
Total.....	.....	71.38	.....	71.38	.....	.....	.....	.....	.....

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Male children under 4 years of age (3,848 families).

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Hats, felt.....	0.2	\$0.24	0.2	\$0.21	\$1.08	661	17.2	1.3	\$1.40
Hats, straw.....	.1	.13	.1	.12	.93	474	12.3	1.2	1.10
Caps.....	1.2	.89	1.0	.79	.77	2,547	66.2	1.7	1.35
Suits, wool.....	.1	.48	.1	.42	3.63	380	9.9	1.3	4.83
Suits, cotton.....	1.2	1.28	1.0	1.13	1.11	986	25.6	4.5	4.98
Coats (separate).....	.03	.10	.03	.09	3.14	99	2.6	1.2	3.78
Pants (separate), wool.....	.03	.03	.03	.02	.99	57	1.5	1.9	1.89
Pants (separate), cotton.....	.1	.05	.1	.05	.68	94	2.4	3.3	2.22
Overcoats.....	.4	1.79	.4	1.59	4.53	1,362	35.4	1.1	5.06
Mackinaws.....	.003	.01	.003	.01	4.33	12	.3	1.0	4.33
Raincoats.....	.003	.01	.003	.01	3.94	12	.3	1.0	3.94
Sweaters and jerseys.....	.5	1.04	.4	.92	2.15	1,486	38.6	1.2	2.68
Cleaning, pressing, and repairing.....		.04		.03		104	2.7		1.33
Overalls.....	.4	.37	.3	.32	.96	575	14.9	2.5	2.45
Jumpers.....	.01	.01	.01	.01	.57	14	.4	3.5	1.99
Shirts, cotton.....	.3	.13	.2	.11	.46	254	6.6	4.2	1.92
Shirts, wool.....	.01	.01	.01	.01	.92	13	.3	2.5	2.32
Undershirts, cotton.....	1.4	.62	1.3	.55	.43	1,656	43.0	3.3	1.43
Undershirts, wool.....	.7	.62	.7	.55	.84	983	25.5	2.9	2.44
Drawers, cotton.....	.6	.22	.5	.20	.39	633	16.5	3.5	1.36
Drawers, wool.....	.1	.07	.1	.06	.78	130	3.4	2.5	1.95
Union suits, cotton.....	.5	.40	.4	.35	.83	648	16.8	2.9	2.36
Union suits, wool.....	.1	.12	.1	.11	1.44	141	3.7	2.4	3.40
Pajamas.....	.2	.17	.2	.15	.81	353	9.2	2.3	1.90
Nightshirts.....	1.0	.58	.9	.51	.60	1,234	32.1	3.0	1.80
Stocks, cotton.....	6.9	1.94	6.1	1.71	.28	3,246	84.4	8.2	2.30
Stocks, wool.....	.9	.44	.8	.39	.52	815	21.2	4.0	2.09
Stocks, silk.....	.04	.03	.04	.02	.61	70	1.8	2.4	1.48
Shoes, high.....	2.6	4.48	2.3	3.96	1.73	3,392	88.1	2.9	5.68
Shoes, low.....	.4	.17	.4	.44	1.25	971	25.2	1.6	1.99
Shoe repairing.....		.15		.15		557	14.5		1.21
Shoe shines.....	.01	.0003	.01	.0003	.05	1	.03	26.0	1.30
Rubber boots.....	.01	.01	.01	.01	1.91	29	.8	1.0	1.98
House slippers.....	.04	.03	.03	.03	.90	128	3.3	1.1	.99
Spats and leggings.....	.1	.13	.1	.11	1.52	294	7.6	1.1	1.64
Rubbers.....	.2	.11	.1	.10	.65	570	14.8	1.1	.73
Aretics.....	.01	.02	.01	.02	1.56	48	1.2	1.0	1.62
Gloves and mittens, leather, dress.....	.05	.04	.04	.04	.88	160	4.2	1.2	1.02
Gloves and mittens, cotton.....	.1	.03	.1	.03	.27	384	10.0	1.2	.33
Gloves and mittens, wool.....	.2	.10	.2	.09	.46	669	17.4	1.2	.58
Collars.....	.003	.001	.003	.001	.23	6	.2	2.2	.50
Ties.....	.1	.02	.04	.01	.32	114	3.0	1.7	.55
Handkerchiefs.....	.2	.02	.2	.02	.09	176	4.6	4.9	.44
Mufflers and scarfs.....	.01	.01	.01	.01	.77	30	.8	1.0	.79
Garters.....	.7	.14	.7	.12	.18	1,360	35.3	2.1	.38
Belts.....	.02	.01	.02	.01	.32	49	1.3	1.5	.47
Umbrellas.....	.002	.002	.001	.002	1.17	6	.2	1.0	1.17
Pocketbooks.....	.001	.0002	.001	.0002	.15	4	.1	1.3	.19
Watches and jewelry.....		.08		.07		97	2.5		3.12
Dresses.....	3.4	2.51	3.0	2.22	.74	1,966	51.1	6.7	4.91
Rompers.....	2.2	1.60	1.9	1.41	.74	1,539	40.0	5.4	4.00
Underwaists.....	.9	.27	.8	.24	.29	1,169	30.4	3.0	.87
Petticoats.....	1.5	.86	1.3	.77	.57	1,306	33.9	4.4	2.55
Other clothing.....		2.01		1.78		1,979	51.4		3.91
Total.....		24.95		22.09					

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Male children 4 and under 8 years of age (3,674 families).

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Hats, felt.....	0.5	\$0.56	0.4	\$0.49	\$1.11	1,326	36.1	1.4	\$1.54
Hats, straw.....	.3	.28	.3	.24	.97	881	24.0	1.2	1.16
Caps.....	1.0	.70	.9	.61	.71	2,321	63.2	1.6	1.11
Suits, wool.....	.6	3.04	.5	2.67	5.40	1,562	42.5	1.3	7.16
Suits, cotton.....	2.2	3.14	2.0	2.75	1.41	2,030	55.3	4.0	5.68
Coats (separate).....	.02	.05	.02	.04	2.32	47	1.3	1.7	3.90
Pants (separate), wool.....	.3	.45	.3	.39	1.37	548	14.9	2.2	3.01
Pants (separate), cotton.....	.6	.54	.5	.47	.92	828	22.5	2.6	2.39
Overcoats.....	.4	2.28	.3	2.00	6.09	1,227	33.4	1.1	6.84
Mackinaws.....	.03	.18	.03	.16	5.37	109	3.0	1.1	6.01
Raincoats.....	.03	.11	.03	.09	3.61	107	2.9	1.0	3.71
Sweaters and jerseys.....	.4	.91	.3	.80	2.31	1,248	34.0	1.2	2.69
Cleaning, pressing, and repairing.....		.06		.05		155	4.2		1.36
Overalls.....	1.0	.96	.8	.84	.99	1,300	35.4	2.7	2.70
Jumpers.....	.02	.02	.02	.02	.80	31	.8	2.6	2.08
Shirts, cotton.....	3.0	1.74	2.7	1.53	.58	2,017	54.9	5.5	3.17
Shirts, wool.....	.03	.04	.03	.03	1.09	58	1.6	2.2	2.37
Shirts, silk.....	.003	.003	.003	.003	1.05	6	.2	1.8	1.93
Undershirts, cotton.....	.8	.37	.7	.32	.47	968	26.3	3.0	1.40
Undershirts, wool.....	.1	.11	.1	.09	.89	187	5.1	2.4	2.12
Drawers, cotton.....	.7	.33	.6	.29	.45	860	23.4	3.2	1.41
Drawers, wool.....	.1	.08	.1	.07	.84	151	4.1	2.4	2.02
Union suits, cotton.....	1.6	1.43	1.4	1.26	.89	2,038	55.5	2.9	2.58
Union suits, wool.....	.2	.27	.2	.24	1.57	282	7.7	2.3	3.54
Pajamas.....	.3	.28	.3	.24	.84	540	14.7	2.2	1.88
Nightshirts.....	.5	.38	.5	.33	.70	875	23.8	2.3	1.58
Socks, cotton.....	10.9	3.32	9.5	2.91	.31	3,597	97.9	11.1	3.39
Socks, wool.....	.2	.15	.2	.13	.67	248	6.8	3.2	2.17
Socks, silk.....	.01	.01	.01	.004	.70	8	.2	3.4	2.36
Shoes, high.....	3.3	8.67	2.9	7.60	2.59	3,639	99.0	3.4	8.75
Shoes, low.....	.6	1.00	.6	.88	1.55	1,458	39.7	1.6	2.52
Shoe repairing.....		1.37		1.20		2,440	66.4		2.06
Shoe shimes.....	.01	.001	.01	.001	.09	3	.1	11.3	1.07
Rubber boots.....	.1	.13	.1	.11	2.19	190	5.2	1.2	2.53
House slippers.....	.1	.08	.1	.07	.96	278	7.6	1.1	1.10
Spats and leggings.....	.04	.04	.03	.04	1.12	130	3.5	1.1	1.25
Rubbers.....	.7	.47	.6	.41	.72	1,676	45.6	1.4	1.04
Arctics.....	.1	.09	.05	.08	1.60	174	4.7	1.2	1.85
Gloves and mittens, leather, dress.....	.1	.12	.1	.10	.89	396	10.8	1.2	1.07
Gloves and mittens, leather, work.....	.004	.003	.003	.003	.82	13	.4	1.1	.89
Gloves and mittens, cotton.....	.3	.10	.3	.09	.33	744	20.3	1.5	.50
Gloves and mittens, wool.....	.4	.22	.4	.19	.52	1,055	28.7	1.5	.76
Collars.....	.1	.01	.1	.01	.21	92	2.5	2.7	.57
Ties.....	.6	.18	.5	.16	.30	932	25.4	2.4	.71
Handkerchiefs.....	1.8	.15	1.6	.13	.09	950	25.9	6.9	.59
Mufflers and scarfs.....	.03	.02	.02	.02	.77	85	2.3	1.2	.93
Garters.....	1.8	.32	1.6	.28	.18	2,779	75.6	2.4	.43
Belts.....	.04	.01	.04	.01	.33	118	3.2	1.3	.43
Suspenders.....	.1	.03	.1	.03	262	7.1	1.7	1.7	.47
Umbrellas.....	.01	.01	.01	.01	.99	46	1.3	1.1	1.07
Pocket books.....	.01	.001	.005	.001	.24	18	.5	1.1	.26
Watches and jewelry.....		.03		.03		52	1.4		2.28
Dresses.....	.03	.03	.03	.02	.79	25	.7	5.0	3.94
Rompers.....	.4	.33	.4	.29	.75	340	9.3	4.8	3.58
Underswaits.....	1.1	.30	1.0	.27	.27	1,301	35.4	3.2	.86
Petticoats.....	.01	.005	.01	.004	.46	10	.3	3.9	1.79
Other clothing.....		.20		.18		558	15.2		1.33
Total.....		35.71		31.31					

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Male children 8 and under 12 years of age (2,872 families).

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Hats, felt.....	0.3	\$0.36	0.3	\$0.31	\$1.21	664	23.1	1.3	\$1.56
Hats, straw.....	.1	.13	.1	.11	.91	337	11.7	1.2	1.08
Caps.....	1.6	1.11	1.4	.97	.71	2,386	83.1	1.9	1.34
Suits, wool.....	.8	6.78	.7	5.91	8.12	1,845	64.2	1.3	10.56
Suits, cotton.....	.4	1.47	.3	1.28	3.92	596	20.8	1.8	7.10
Coats (separate).....	.02	.04	.02	.03	2.11	32	1.1	1.7	3.50
Pants (separate), wool.....	.6	1.03	.5	.90	1.82	743	25.9	2.2	3.99
Pants (separate), cotton.....	1.1	1.41	.9	1.23	1.30	1,245	43.3	2.5	3.26
Overcoats.....	.2	1.59	.2	1.39	7.43	569	19.8	1.1	8.04
Mackinaws.....	.1	.74	.1	.64	6.74	233	9.9	1.1	7.50
Raincoats.....	.05	.19	.04	.17	3.89	132	4.6	1.1	4.21
Sweaters and jerseys.....	.4	1.10	.4	.95	2.54	1,030	35.9	1.2	3.05
Cleaning, pressing, and repairing.....	.7	.05	.6	.04	.04	117	4.1	.....	1.24
Overalls.....	.7	.78	.6	.68	1.15	867	30.2	2.2	2.58
Jumpers.....	.01	.01	.01	.01	.92	18	.6	1.9	1.74
Shirts, cotton.....	5.1	3.46	4.4	3.01	.68	2,528	88.0	5.8	3.93
Shirts, wool.....	.1	.09	.1	.08	1.32	98	3.4	2.0	2.63
Shirts, silk.....	.004	.01	.003	.01	1.72	6	.2	1.8	3.15
Undershirts, cotton.....	.5	.28	.5	.25	.53	554	19.3	2.8	1.47
Undershirts, wool.....	.1	.06	.05	.05	1.03	72	2.5	2.3	2.32
Drawers, cotton.....	.5	.27	.4	.24	.54	514	17.9	2.8	1.51
Drawers, wool.....	.1	.05	.1	.05	.91	66	2.3	2.5	2.33
Union suits, cotton.....	1.8	1.75	1.6	1.52	.97	1,808	63.0	2.9	2.78
Union suits, wool.....	.2	.30	.1	.26	1.85	210	7.3	2.2	4.09
Pajamas.....	.2	.20	.2	.17	.94	299	10.4	2.0	1.90
Nightshirts.....	.4	.30	.3	.26	.77	515	17.9	2.1	1.65
Socks, cotton.....	11.2	3.72	9.7	3.24	.33	2,817	98.1	11.4	3.79
Socks, wool.....	.1	.10	.1	.09	.79	134	4.7	2.8	2.20
Shoes, high.....	3.6	11.13	3.2	9.69	3.05	2,843	99.0	3.7	11.25
Shoes, low.....	.5	.83	.5	.73	1.53	899	31.3	1.7	2.67
Shoe, repairing.....	.....	2.55	.....	2.22	.....	2,466	85.9	.....	2.98
Shoe shines.....	.01	.001	.01	.001	.10	7	.2	5.4	.55
Rubber boots.....	.1	.16	.05	.14	2.89	145	5.0	1.1	3.24
House slippers.....	.1	.07	.1	.07	.99	192	6.7	1.1	1.12
Spats and leggings.....	.01	.01	.01	.01	1.04	29	1.0	1.0	1.08
Rubbers.....	.8	.67	.7	.58	.82	1,425	49.6	1.6	1.34
Arctics.....	.04	.08	.04	.07	1.84	107	3.7	1.2	2.21
Gloves and mittens, leather, dress.....	.1	.14	.1	.12	.95	357	12.4	1.2	1.14
Gloves and mittens, leather, work.....	.01	.01	.01	.01	.83	22	.8	1.3	1.06
Gloves and mittens, cotton.....	.4	.15	.4	.13	.35	676	23.5	1.8	.62
Gloves and mittens, wool.....	.5	.26	.4	.23	.58	848	29.5	1.5	.83
Collars.....	.3	.06	.3	.05	.18	263	9.2	3.6	.67
Ties.....	1.3	.41	1.1	.35	.31	1,353	47.1	2.8	.86
Handkerchiefs.....	2.9	.27	2.5	.24	.09	1,143	39.8	7.2	.69
Mufflers and scarfs.....	.03	.02	.03	.02	.71	73	2.5	1.2	.88
Garters.....	1.8	.31	1.6	.27	.17	2,221	77.3	2.4	.40
Belts.....	.2	.09	.2	.08	.40	517	18.0	1.3	.52
Suspenders.....	.5	.15	.4	.13	.30	796	27.7	1.7	.53
Umbrellas.....	.02	.03	.02	.03	1.26	64	2.2	1.1	1.36
Pocketbooks.....	.01	.005	.01	.004	.30	36	1.3	1.2	.36
Watches and jewelry.....	.....	.14	.....	.12	.....	141	4.9	.....	2.82
Underwaists.....	.4	.13	.4	.11	.29	420	14.6	3.0	.87
Other clothing.....	.....	.17	.....	.15	.....	3.6	13.4	.....	1.26
Total.....	.....	45.25	.....	39.39	.....	.....	.....	.....	.....

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Male children 12 and under 15 years of age (1,665 families).

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Hats, felt.....	0.2	\$0.28	0.2	\$0.25	\$1.57	257	15.4	1.1	\$1.79
Hats, straw.....	.1	.08	.1	.07	1.15	102	6.1	1.1	1.23
Caps.....	1.7	1.41	1.6	1.29	.81	1,514	90.9	1.9	1.55
Suits, wool.....	.9	9.56	.9	8.78	10.12	1,184	71.1	1.3	13.44
Suits, cotton.....	.3	1.74	.2	1.60	6.78	317	19.0	1.3	9.13
Coats (separate).....	.02	.04	.02	.04	2.27	23	1.4	1.3	2.86
Pants (separate), wool.....	.5	1.12	.5	1.03	2.19	452	27.1	1.9	4.12
Pants (separate), cotton.....	.9	1.34	.8	1.23	1.57	676	40.6	2.1	3.30
Overcoats.....	.1	1.33	.1	1.22	10.08	213	12.8	1.0	10.41
MacInawes.....	.2	1.21	.2	1.11	7.35	264	15.9	1.0	7.65
Raincoats.....	.1	.26	.1	.24	4.13	97	5.8	1.1	4.43
Sweaters and jerseys.....	.5	1.42	.4	1.30	3.09	655	39.3	1.2	3.61
Cleaning, pressing, and repairing.....		.06		.05		72	4.3		1.38
Overalls.....	.5	.67	.5	.62	1.36	411	24.7	2.0	2.71
Jumpers.....	.02	.03	.02	.03	1.21	22	1.3	1.7	2.08
Shirts, cotton.....	4.5	3.55	4.1	3.26	.79	1,522	91.4	4.9	3.88
Shirts, wool.....	.1	.08	.05	.07	1.51	51	3.1	1.7	2.60
Shirts, silk.....	.01	.01	.005	.01	2.28	7	.4	1.3	2.93
Undershirts, cotton.....	.4	.28	.4	.26	.65	281	16.9	2.5	1.65
Undershirts, wool.....	.04	.05	.03	.04	1.34	29	1.7	2.0	2.73
Drawers, cotton.....	.3	.23	.3	.21	.68	225	13.5	2.5	1.68
Drawers, wool.....	.03	.04	.03	.03	1.22	25	1.5	2.0	2.38
Union suits, cotton.....	1.8	1.93	1.6	1.78	1.08	1,089	65.4	2.7	2.95
Union suits, wool.....	.2	.43	.2	.39	2.15	154	9.2	2.1	4.60
Pajamas.....	.2	.21	.2	.20	1.11	173	10.4	1.8	2.05
Nightshirts.....	.3	.23	.2	.21	.89	229	13.8	1.9	1.66
Socks, cotton.....	10.7	3.80	9.8	3.50	.36	1,637	98.3	10.9	3.87
Socks, wool.....	.2	.12	.1	.11	.82	87	5.2	2.9	2.36
Socks, silk.....	.01	.01	.01	.01	.66	9	.5	2.4	1.62
Shoes, high.....	3.3	11.79	3.0	10.84	3.57	1,646	98.9	3.3	11.93
Shoes, low.....	.5	.78	.4	.72	1.70	447	26.8	1.7	2.90
Shoe repairing.....		2.84		2.61		1,484	89.1		3.19
Shoe shines.....	.2	.02	.1	.01	.10	18	1.1	14.3	1.41
Rubber boots.....	.1	.18	.05	.16	3.51	79	4.7	1.1	3.78
House slippers.....	.1	.06	.05	.05	1.12	79	4.7	1.1	1.23
Spats and leggings.....	.02	.03	.02	.02	1.25	33	2.0	1.1	1.36
Rubbers.....	.7	.64	.6	.59	.94	751	45.1	1.5	1.42
Arctics.....	.04	.09	.04	.08	2.22	57	3.4	1.1	2.53
Gloves and mittens, leather, dress.....	.2	.20	.2	.19	1.08	247	14.8	1.3	1.36
Gloves and mittens, leather, work.....	.03	.02	.02	.02	.82	31	1.9	1.4	1.17
Gloves and mittens, cotton.....	.4	.15	.4	.14	.37	374	22.5	1.8	.67
Gloves and mittens, wool.....	.4	.26	.4	.24	.68	462	27.7	1.4	.95
Collars.....	1.0	.20	.9	.18	.19	401	24.1	4.3	.83
Ties.....	1.8	.70	1.7	.64	.39	1,016	61.0	3.0	1.14
Handkerchiefs.....	3.5	.40	3.2	.36	.11	830	49.8	7.0	.79
Mufflers and scarfs.....	.04	.03	.03	.02	.76	45	2.7	1.3	1.00
Garters.....	1.6	.26	1.4	.24	.17	1,193	71.7	2.2	.37
Belts.....	.5	.26	.5	.24	.50	645	38.7	1.3	.66
Suspenders.....	.4	.14	.4	.13	.36	403	24.2	1.6	.57
Umbrellas.....	.03	.05	.03	.04	1.44	53	3.2	1.0	1.46
Pocketbooks.....	.03	.01	.03	.01	.43	44	2.6	1.2	.53
Watches and jewelry.....		.47		.44		163	9.8		4.84
Underwaists.....	.1	.02	.1	.02	.29	52	3.1	2.2	.62
Other clothing.....		.14		.13		192	11.5		1.22
Total.....		51.23		47.08					

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Male children 15 years of age and over (1,352 families).

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Hats, felt.....	0.6	\$1.90	0.5	\$1.59	\$3.00	646	47.8	1.3	\$3.98
Hats, straw.....	.3	.60	.2	.50	2.19	303	22.4	1.2	2.69
Caps.....	1.7	1.91	1.4	1.60	1.14	1,081	80.0	2.1	2.39
Suits, wool.....	1.3	26.50	1.1	22.11	20.22	1,146	84.8	1.5	31.26
Suits, cotton.....	.2	1.96	.1	1.64	11.39	178	13.2	1.3	14.90
Coats (separate).....	.02	.09	.01	.08	5.25	20	1.5	1.2	6.31
Pants (separate), wool.....	.4	1.73	.4	1.44	4.07	363	26.8	1.6	6.43
Pants (separate), cotton.....	.5	1.32	.4	1.10	2.57	339	25.1	2.0	5.25
Overcoats.....	.4	7.11	.3	5.93	20.03	438	32.4	1.1	21.95
Mackinaws.....	.1	.91	.1	.76	8.35	142	10.5	1.0	8.64
Raincoats.....	.1	.52	.1	.43	7.42	91	6.7	1.0	7.67
Sweaters and jerseys.....	.5	2.01	.4	1.68	4.36	511	37.8	1.2	5.32
Cleaning, pressing, and repairing.....		.84		.70		297	22.0		3.82
Overalls.....	.8	1.55	.6	1.29	2.03	445	32.9	2.3	4.70
Jumpers.....	.2	.43	.2	.36	2.03	137	10.1	2.1	4.27
Shirts, cotton.....	4.6	5.60	3.8	4.67	1.22	1,270	93.9	4.9	5.96
Shirts, wool.....	.2	.39	.1	.32	2.59	112	8.3	1.8	4.70
Shirts, silk.....	.1	.55	.1	.46	4.75	101	7.5	1.6	7.43
Undershirts, cotton.....	.7	.57	.6	.48	.85	318	23.5	2.9	2.44
Undershirts, wool.....	.1	.19	.1	.16	1.81	52	3.8	2.7	4.83
Drawers, cotton.....	.6	.54	.5	.45	.86	304	22.5	2.8	2.42
Drawers, wool.....	.1	.16	.1	.13	1.67	48	3.6	2.7	4.46
Union suits, cotton.....	2.0	2.75	1.6	2.30	1.41	855	63.2	3.1	4.35
Union suits, wool.....	.2	.62	.2	.52	2.84	128	9.5	2.3	6.54
Pajamas.....	.3	.39	.2	.33	1.50	170	12.6	2.1	3.12
Nightshirts.....	.3	.29	.2	.24	1.12	174	2.9	2.0	2.27
Socks, cotton.....	12.2	3.83	10.2	3.19	.31	1,311	97.0	12.6	3.95
Socks, wool.....	.3	.20	.2	.17	.74	106	7.8	3.5	2.61
Socks, silk.....	.9	.65	.8	.54	.70	275	20.3	4.6	3.19
Shoes, high.....	3.2	15.78	2.6	13.17	4.98	1,328	98.2	3.2	16.07
Shoes, low.....	.3	1.24	.3	1.03	3.65	325	24.0	1.4	5.14
Shoe repairing.....		3.09		2.58		1,185	87.6		3.52
Shoe shines.....	5.1	.46	4.3	.39	.09	176	13.0	39.2	3.56
Rubber boots.....	.1	.22	.04	.18	4.33	56	4.1	1.2	5.33
Hubber slippers.....	.1	.10	.1	.08	1.50	80	5.9	1.1	1.67
Spats and leggings.....	.03	.06	.03	.05	2.04	32	2.4	1.3	2.62
Rubbers.....	.6	.72	.5	.60	1.16	561	41.5	1.5	1.74
Aretics.....	.05	.13	.04	.11	2.79	56	4.1	1.1	3.04
Gloves and mittens, leather, dress.....	.4	.76	.3	.64	1.90	437	32.3	1.2	2.37
Gloves and mittens, leather, work.....	.2	.16	.1	.14	1.01	105	7.8	2.1	2.10
Gloves and mittens, cotton.....	1.3	.37	1.1	.31	.27	287	21.2	6.3	1.73
Gloves and mittens, wool.....	.3	.23	.2	.19	.86	249	18.4	1.4	1.24
Collars.....	5.8	1.22	4.9	1.02	.21	1,003	74.2	7.8	1.64
Ties.....	3.7	2.39	3.1	2.00	.64	1,144	84.6	4.4	2.83
Handkerchiefs.....	6.4	.87	5.4	.73	.14	909	67.2	9.6	1.30
Mufflers and scarfs.....	.1	.21	.1	.18	1.68	147	10.9	1.2	1.96
Garters.....	1.7	.44	1.4	.37	.26	1,008	74.6	2.3	.59
Belts.....	.9	.65	.7	.54	.74	821	60.7	1.5	1.07
Suspenders.....	.2	.13	.2	.11	.54	209	15.5	1.6	.84
Umbrellas.....	.1	.20	.1	.17	1.71	132	9.8	1.2	2.05
Pocketbooks.....	.1	.07	.1	.06	.88	88	6.5	1.2	1.04
Watches and jewelry.....		2.12		1.77		287	21.2		9.97
Other clothing.....		.23		.19		167	12.4		1.85
Total.....		97.98		81.77					

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Male dependents (128 families).

Article	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Hats, felt.....	0.3	\$80.76	0.3	\$80.74	\$2.87	32	25.0	1.1	\$3.05
Hats, straw.....	.1	.11	.1	.11	2.04	7	5.5	1.0	2.04
Caps.....	.2	.26	.2	.25	1.10	22	17.2	1.4	1.50
Suits, wool.....	.3	5.87	.3	5.74	20.88	30	23.4	1.2	25.05
Suits, cotton.....	.03	.36	.03	.35	11.50	4	3.1	1.0	11.50
Pants (separate), wool.....	.1	.50	.1	.49	3.78	13	10.2	1.3	4.94
Pants (separate), cotton.....	.2	.49	.2	.48	2.96	14	10.9	1.5	4.45
Overcoats.....	.1	2.02	.1	1.97	17.20	15	11.7	1.0	17.20
Sweaters and jerseys.....	.1	.47	.1	.46	3.75	16	12.5	1.0	3.75
Cleaning, pressing, and repairing.....		.14		.13		8	6.3		2.16
Overalls.....	.1	.22	.1	.22	1.78	7	5.5	2.3	4.07
Jumpers.....	.02	.03	.02	.03	2.00	1	.8	2.0	4.00
Shirts, cotton.....	1.6	1.79	1.6	1.75	1.11	67	52.3	3.1	3.43
Shirts, wool.....	.1	.24	.1	.23	3.05	6	4.7	1.7	5.08
Undershirts, cotton.....	.6	.57	.6	.56	1.00	37	28.9	2.0	1.97
Undershirts, wool.....	.2	.41	.2	.40	2.63	9	7.0	2.2	5.83
Drawers, cotton.....	.5	.51	.5	.50	1.01	34	23.6	1.9	1.93
Drawers, wool.....	.1	.33	.1	.32	2.36	8	6.3	2.3	5.31
Union suits, cotton.....	.4	.56	.4	.54	1.37	22	17.2	2.4	3.24
Union suits, wool.....	.1	.29	.1	.28	3.70	5	3.9	2.0	7.40
Pajamas.....	.02	.02	.02	.02	1.50	1	.8	2.0	3.00
Night shirts.....	.1	.13	.1	.13	1.05	6	4.7	2.7	2.81
Socks, cotton.....	4.6	1.25	4.5	1.22	.27	79	61.7	7.4	2.02
Socks, wool.....	.3	.20	.3	.20	.78	11	8.6	3.0	2.34
Socks, silk.....	.1	.03	.1	.03	.51	3	2.3	2.3	1.20
Shoes, high.....	.9	4.02	.9	3.93	4.51	65	50.8	1.8	7.91
Shoes, low.....	.1	.23	.1	.23	3.74	5	3.9	1.6	5.98
Shoe repairing.....		.74		.72		43	33.6		2.20
Shoe shines.....	1.6	.18	1.6	.17	.11	3	2.3	69.3	7.60
House slippers.....	.1	.22	.1	.21	1.75	16	12.5	1.0	1.75
Rubbers.....	.1	.14	.1	.13	1.16	14	10.9	1.1	1.24
Arctics.....	.01	.04	.01	.03	4.50	1	.8	1.0	4.50
Gloves and mittens, leather dress.....	.04	.10	.04	.09	2.45	5	3.9	1.0	2.45
Gloves and mittens, leather, work.....	.02	.02	.02	.02	.83	2	1.6	1.5	1.25
Gloves and mittens, cotton.....	.1	.02	.1	.02	.45	6	4.7	1.2	.52
Gloves and mittens, wool.....	.05	.05	.05	.05	1.17	6	4.7	1.0	1.17
Collars.....	1.2	.20	1.2	.20	.17	24	18.8	6.4	1.09
Ties.....	.6	.33	.6	.33	.54	32	25.0	2.5	1.33
Handkerchiefs.....	2.3	.29	2.3	.29	.13	43	33.6	7.0	.87
Mufflers and scarfs.....	.04	.04	.04	.04	.99	4	3.1	1.3	1.24
Garters.....	.3	.07	.3	.07	.23	22	17.2	1.7	.39
Belts.....	.1	.05	.1	.05	.68	10	7.8	1.0	.68
Suspenders.....	.3	.16	.3	.16	.60	29	22.7	1.2	.72
Umbrellas.....	.02	.03	.02	.03	1.42	3	2.3	1.0	1.42
Pocketbooks.....	.01	.004	.01	.004	.50	1	.8	1.0	.50
Watches and jewelry.....		.05		.05		5	3.9		1.30
Other clothing.....		.15		.14		10	7.8		1.89
Total.....		24.70		24.13					

Wives (12,094 families).

Hats.....	1.2	\$5.14	1.2	\$5.14	\$4.42	9,261	76.6	1.5	\$6.71
Veils.....	.1	.08	.1	.08	.57	1,086	9.0	1.6	.95
Caps.....	.04	.03	.04	.03	.78	345	2.9	1.3	1.04
Suits, cotton.....	.04	.66	.04	.66	15.65	505	4.2	1.0	15.87
Suits, wool.....	.2	5.00	.2	5.00	24.97	2,378	19.7	1.0	25.42
Suits, silk.....	.01	.20	.01	.20	16.81	143	1.2	1.0	16.93
Skirts, cotton.....	.3	.78	.3	.78	2.73	2,567	21.2	1.4	3.69
Skirts, wool.....	.2	1.11	.2	1.11	6.29	1,963	16.2	1.1	6.83
Skirts, silk.....	.1	.79	.1	.79	6.29	1,430	11.8	1.1	6.66
Waists and blouses, cotton.....	1.2	1.92	1.2	1.92	1.58	6,805	56.3	2.2	3.42
Waists and blouses, wool.....	.01	.02	.01	.02	3.36	62	.5	1.2	3.95
Waists and blouses, silk.....	.5	2.02	.5	2.02	4.29	4,202	34.7	1.4	5.83
Dresses, cotton.....	.5	1.59	.5	1.59	3.51	3,296	27.3	1.7	5.85
Dresses, wool.....	.1	1.81	.1	1.81	13.57	1,554	12.8	1.0	14.06
Dresses, silk.....	.2	2.71	.2	2.71	14.29	2,142	17.7	1.1	15.27

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Wives (12,094 families)—Concluded.

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
House dresses, bungalow aprons, and wrappers.....	2.0	\$3.12	2.0	\$3.12	\$1.55	8,535	70.6	2.9	\$4.43
Aprons.....	1.0	.54	1.0	.54	.52	3,837	31.7	3.2	1.69
Coats and cloaks, cotton.....	.05	.77	.05	.77	16.36	558	4.6	1.0	16.60
Coats and cloaks, wool.....	.3	6.15	.3	6.15	23.61	3,060	25.3	1.0	24.32
Raincoats.....	.01	.04	.01	.04	7.75	64	.5	1.0	7.75
Sweaters and jerseys, cotton.....	.04	.15	.04	.15	3.69	467	3.9	1.0	3.80
Sweaters and jerseys, wool.....	.1	.36	.1	.36	5.97	724	6.0	1.0	6.04
Sweaters and jerseys, silk.....	.01	.07	.01	.07	9.14	92	.8	1.0	9.14
Furs and boas.....	.03	.57	.03	.57	18.24	350	2.9	1.1	19.64
Cleaning, pressing, and repairing.....		.42		.42		1,893	15.7		2.71
Petticoats, cotton.....	.8	1.02	.8	1.02	1.20	5,465	45.2	1.9	2.25
Petticoats, wool.....	.01	.02	.01	.02	1.66	108	.9	1.4	2.24
Petticoats, silk.....	.1	.29	.1	.29	4.18	801	6.6	1.0	4.33
Corsets.....	.9	2.13	.9	2.13	2.35	8,384	69.3	1.3	3.07
Brassieres.....	.3	.21	.3	.21	.62	1,561	12.9	2.6	1.61
Corset covers and camisoles.....	1.0	.65	1.0	.65	.66	4,860	40.2	2.5	1.63
Combinations, cotton.....	.4	.49	.4	.49	1.10	2,045	16.9	2.6	2.87
Combinations, silk.....	.01	.03	.01	.03	2.62	77	.6	1.6	4.06
Union suits, cotton.....	1.1	1.25	1.1	1.25	1.13	5,032	41.6	2.7	3.01
Union suits, wool.....	.1	.21	.1	.21	2.58	489	4.0	2.0	5.11
Union suits, silk.....	.001	.003	.001	.003	3.27	7	.1	1.6	5.13
Shirts, cotton.....	1.8	.64	1.8	.64	.36	5,928	49.0	3.6	1.31
Shirts, wool.....	.04	.06	.04	.06	1.49	263	2.2	2.0	2.96
Shirts, silk.....	.004	.01	.004	.01	1.95	25	.2	1.8	3.58
Chemises, cotton.....	.1	.13	.1	.13	.93	618	5.1	2.7	2.50
Chemises, silk.....	.003	.01	.003	.01	2.82	17	.1	1.9	5.31
Drawers, cotton.....	.9	.57	.9	.57	.60	3,902	32.3	2.9	1.76
Drawers, wool.....	.03	.04	.03	.04	1.32	188	1.6	2.0	2.67
Drawers, silk.....	.002	.005	.002	.005	1.99	17	.1	1.7	3.40
Nightdresses, cotton.....	1.2	1.46	1.2	1.46	1.25	6,195	51.2	2.3	2.85
Nightdresses, silk.....	.001	.01	.001	.01	5.48	14	.1	1.3	7.05
Pajamas, cotton.....	.01	.01	.01	.01	1.72	67	.6	1.5	2.62
Kimonos, cotton.....	.1	.31	.1	.31	2.23	1,440	11.9	1.2	2.61
Kimonos, wool.....	.01	.06	.01	.06	5.13	132	1.1	1.0	5.36
Kimonos, silk.....	.004	.03	.004	.03	7.39	53	.4	1.0	7.53
Stockings, cotton.....	5.5	2.00	5.5	2.00	.37	11,362	93.9	5.8	2.13
Stockings, wool.....	.05	.04	.05	.04	.83	242	2.0	2.3	1.90
Stockings, silk.....	.8	.94	.8	.94	1.22	3,523	29.1	2.6	3.22
Shoes, high.....	1.3	7.18	1.3	7.18	5.34	10,593	87.6	1.5	8.20
Shoes, low.....	.5	1.81	.5	1.81	3.65	4,974	41.1	1.2	4.39
Shoe repairing.....		.91		.91		6,850	56.6		1.60
Shoe shines.....	.1	.01	.1	.01	.10	195	1.6	6.5	.65
House slippers.....	.3	.50	.3	.50	1.60	3,214	26.6	1.2	1.90
Spats and gaiters.....	.02	.03	.02	.03	1.71	205	1.7	1.0	1.76
Rubbers.....	.3	.30	.3	.30	.91	3,613	29.9	1.1	.99
Arctics.....	.003	.01	.003	.01	2.24	38	.3	1.0	2.24
Gloves and mittens, kid.....	.3	.59	.3	.59	1.88	3,275	27.1	1.2	2.16
Gloves and mittens, cotton.....	.2	.15	.2	.15	.75	1,942	16.1	1.2	.90
Gloves and mittens, wool.....	.03	.03	.03	.03	.88	368	3.0	1.1	.93
Gloves and mittens, silk.....	.2	.25	.2	.25	1.00	2,395	19.8	1.3	1.23
Collars.....	.1	.07	.1	.07	.66	753	6.2	1.6	1.05
Collar and cuff sets.....	.1	.05	.1	.05	.99	513	4.2	1.2	1.22
Ties.....	.01	.004	.01	.004	.47	80	.7	1.4	.65
Ribbons.....		.03		.03		429	3.5		.78
Handkerchiefs.....	4.1	.61	4.1	.61	.15	6,328	52.3	7.9	1.16
Scarfs.....	.02	.03	.02	.03	1.61	223	1.8	1.1	1.74
Garters.....	.1	.03	.1	.03	.21	997	8.2	1.5	.33
Belts.....	.02	.01	.02	.01	.57	248	2.1	1.1	.64
Hairpins, fancy combs, ornaments, nets, etc.....		.30		.30		9,263	76.6		.40
Sanitary supplies.....		.23		.23		1,522	12.6		1.81
Umbrellas.....	.7	.22	.1	.22	2.01	1,319	10.9	1.0	2.05
Parasols.....	.01	.03	.01	.03	2.45	127	1.1	1.0	2.46
Handbags, purses, etc.....	.3	.44	.3	.44	1.66	2,929	24.2	1.1	1.81
Watches and jewelry.....		.70		.70		833	6.9		10.17
Other clothing.....		.39		.39		2,535	21.0		1.84
Total.....		63.55		63.55					

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Female children under 4 years of age (3,683 families).

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Hats.....	0.3	\$0.48	0.3	\$0.43	\$1.60	817	22.2	1.4	\$2.17
Veils.....	.01	.003	.01	.003	.48	24	.7	1.1	.52
Caps.....	1.2	1.14	1.0	1.01	.96	2,391	64.9	1.8	1.75
Skirts, cotton.....	.003	.001	.003	.001	.46	3	.1	4.0	1.83
Skirts, wool.....	.0003	.001	.0002	.001	3.00	1	.03	1.0	3.00
Waists and blouses, cotton.....	.003	.002	.003	.002	.54	4	.1	3.0	1.61
Dresses, cotton.....	6.3	5.26	5.6	4.66	.83	3,304	89.7	7.1	5.86
Dresses, wool.....	.1	.16	.1	.14	2.07	192	5.2	1.5	3.05
Dresses, silk.....	.02	.06	.02	.05	2.48	67	1.8	1.3	3.34
House dresses, bungalow aprons, and wrappers.....	.1	.03	.1	.03	.50	56	1.5	4.2	2.11
Aprons.....	.4	.18	.4	.16	.44	278	7.5	5.3	2.35
Coats and cloaks, cotton.....	.2	.79	.2	.70	3.21	794	21.6	1.1	3.67
Coats and cloaks, wool.....	.3	1.62	.3	1.43	4.98	1,073	29.1	1.1	5.55
Raincoats.....	.003	.01	.003	.01	3.46	10	.3	1.1	3.81
Sweaters and jersey, cotton.....	.2	.30	.2	.27	1.70	545	14.8	1.2	2.05
Sweaters and jerseys, wool.....	.3	.71	.3	.63	2.46	854	23.2	1.2	3.05
Sweaters and jerseys, silk.....	.004	.01	.004	.01	3.06	15	.4	1.1	3.27
Furs and boas.....	.03	.12	.03	.11	3.62	99	2.7	1.3	4.64
Cleaning, pressing, and repairing.....	.04	.04	.04	.04		115	3.1		1.29
Petticoats, cotton.....	2.6	1.27	2.3	1.12	.49	2,225	60.4	4.3	2.10
Petticoats, wool.....	.4	.42	.4	.31	1.01	556	15.1	2.8	2.80
Petticoats, silk.....	.002	.003	.002	.003	1.32	5	.1	1.8	2.38
Combinations, cotton.....	.03	.01	.02	.01	.54	20	.5	4.8	2.57
Union suits, cotton.....	.3	.27	.3	.24	.81	454	12.3	2.7	2.16
Union suits, wool.....	.1	.11	.1	.09	1.38	117	3.2	2.4	3.33
Union suits, silk.....	.001	.001	.0005	.001	2.25	1	.03	2.0	4.50
Shirts, cotton.....	1.6	.60	.14	.53	.38	1,723	46.8	3.4	1.29
Shirts, wool.....	.8	.67	.7	.59	.82	1,047	28.4	2.9	2.35
Shirts, silk.....	.01	.01	.01	.01	.82	11	.3	3.2	2.60
Chemises, cotton.....	.01	.003	.01	.002	.30	8	.2	4.3	1.26
Drawers, cotton.....	1.7	.53	1.5	.47	.31	1,249	33.9	5.0	1.56
Drawers, wool.....	.1	.06	.1	.06	.75	123	3.3	2.6	1.92
Nightdresses, cotton.....	1.5	.85	1.3	.75	.58	1,852	50.3	2.9	1.69
Nightdresses, silk.....	.002	.003	.002	.002	1.16	3	.1	2.7	3.10
Fajamas, cotton.....	.1	.08	.1	.07	.90	145	3.9	2.2	1.98
Kimonos, cotton.....	.1	.11	.1	.09	.85	230	6.2	2.0	1.70
Kimonos, wool.....	.02	.03	.02	.03	1.74	51	1.4	1.3	2.29
Kimonos, silk.....	.001	.001	.0005	.001	2.50	2	.1	1.0	2.50
Stockings, cotton.....	6.5	1.83	5.8	1.62	.28	3,073	83.4	7.8	2.19
Stockings, wool.....	.8	.42	.7	.37	.53	797	21.6	3.6	1.93
Stockings, silk.....	.1	.04	.1	.04	.60	98	2.7	2.5	1.49
Shoes, high.....	2.4	4.03	2.1	3.57	1.66	3,177	86.3	2.8	4.67
Shoes, low.....	.4	.56	.4	.50	1.29	1,049	28.5	1.5	1.98
Shoe repairing.....	.11	.11	.11	.10		383	10.4		1.06
House slippers.....	.05	.05	.04	.04	.97	159	4.3	1.1	1.08
Spats and gaiters.....	.03	.04	.03	.03	1.31	98	2.7	1.1	1.41
Rubbers.....	.1	.09	.1	.08	1.62	478	13.0	1.1	1.70
Arctics.....	.01	.01	.01	.01	1.48	30	.8	1.0	1.48
Gloves and mittens, kid.....	.03	.03	.03	.03	.92	112	3.0	1.1	.99
Gloves and mittens, cotton.....	.1	.03	.1	.03	.27	366	9.9	1.2	.31
Gloves and mittens, wool.....	.2	.10	.2	.09	.46	648	17.6	1.2	.58
Gloves and mittens, silk.....	.004	.002	.003	.002	.53	14	.4	1.0	.53
Collars.....	.003	.002	.003	.001	.50	8	.2	1.5	.75
Collar and cuff sets.....	.01	.005	.005	.004	.90	17	.5	1.2	1.06
Ties.....	.003	.001	.003	.001	.42	5	.1	2.2	.92
Ribbons.....	.23	.23	.23	.20		672	18.2		1.24
Handkerchiefs.....	.3	.03	.3	.02	.09	214	5.8		.47
Scarfs.....	.02	.01	.01	.01	.72	50	1.4	1.2	.89
Garters.....	.8	.14	.7	.12	.18	1,295	35.2	2.1	.39
Belts.....	.01	.002	.01	.002	.24	28	.8	1.3	.30
Hairpins, fancy combs, ornaments, nets, etc.....	.001	.001	.001	.005		11	.3		.19
Sanitary supplies.....	.02	.02	.02	.02		30	.8		2.31
Umbrellas.....	.003	.003	.002	.003	1.07	10	.3	1.0	1.07
Parasols.....	.01	.01	.01	.01	.75	38	1.0	1.1	8.1
Handbags, purses, etc.....	.01	.004	.01	.003	.40	30	.8	1.2	.47

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Female children under 4 years of age (3,683 families)—Concluded.

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Watches and jewelry.....		\$0.28		\$0.25		279	7.6		\$3.66
Rompers.....	.6	.39	.5	.35	\$0.69	554	15.0	3.8	2.60
Underwaists.....	.9	.26	.8	.23	.28	1,164	31.6	3.0	.82
Other clothing.....		2.08		1.84		2,048	55.6		3.74
Total.....		26.75		23.68					

Female children 4 and under 8 years of age (3,588 families).

Hats.....	0.9	\$1.82	0.8	\$1.59	\$1.91	2,323	64.7	1.5	\$2.79
Veils.....	.003	.003	.003	.002	.83	8	.2	1.4	1.15
Caps.....	.5	.50	.5	.44	.95	1,450	40.4	1.3	1.23
Suits, cotton.....	.0003	.001	.0002	.001	2.50	1	.03	1.0	2.50
Suits, silk.....	.0003	.001	.0002	.001	5.00	1	.03	1.0	5.00
Skirts, cotton.....	.02	.02	.02	.01	.84	42	1.2	1.7	1.42
Skirts, wool.....	.01	.02	.01	.02	2.05	32	.9	1.3	2.68
Skirts, silk.....	.001	.001	.0005	.001	2.13	2	.1	1.0	2.13
Waists and blouses, cotton.....	.1	.11	.1	.09	.95	165	4.6	2.4	2.28
Waists and blouses, wool.....	.004	.01	.004	.01	2.19	10	.3	1.6	3.50
Waists and blouses, silk.....	.001	.001	.0005	.001	2.50	2	.1	1.0	2.50
Dresses, cotton.....	5.6	6.51	4.9	5.71	1.16	3,305	92.1	6.1	7.06
Dresses, wool.....	.3	.79	.2	.70	2.95	622	17.3	1.6	4.58
Dresses, silk.....	.05	.16	.04	.14	3.32	140	3.9	1.2	4.06
House dresses, bungalow aprons, and wrappers.....	.1	.07	.1	.06	.56	127	3.5	3.7	2.09
Aprons.....	.3	.15	.3	.14	.51	305	8.5	3.6	1.81
Coats and cloaks, cotton.....	.2	.94	.2	.82	4.63	655	18.3	1.1	5.12
Coats and cloaks, wool.....	.4	2.41	.3	2.11	6.64	1,162	32.4	1.1	7.42
Raincoats.....	.05	.14	.04	.12	3.08	150	4.2	1.1	3.33
Sweaters and jerseys, cotton.....	.1	.33	.1	.29	2.25	472	13.2	1.1	3.79
Sweaters and jerseys, wool.....	.2	.64	.2	.56	3.37	621	17.3	1.1	4.72
Sweaters and jerseys, silk.....	.002	.01	.001	.01	4.07	6	.2	1.0	4.07
Furs and boas.....	.1	.21	.05	.19	4.08	155	4.3	1.2	4.90
Cleaning, pressing, and repairing.....		.10		.08		224	6.2		1.92
Petticoats, cotton.....	2.1	1.16	1.9	1.02	.55	2,177	60.7	3.5	1.64
Petticoats, wool.....	.1	.11	.1	.10	.94	193	5.4	2.2	2.04
Petticoats, silk.....	.001	.001	.0005	.001	2.50	2	.1	1.0	2.50
Combinations, cotton.....	.1	.04	.1	.03	.53	67	1.9	4.0	2.13
Union suits, cotton.....	1.0	.90	.9	.79	.91	1,350	37.6	2.6	2.39
Union suits, wool.....	.1	.25	.1	.22	1.65	234	6.5	2.3	3.76
Shirts, cotton.....	1.4	.48	1.2	.42	.35	1,531	42.7	3.2	1.14
Shirts, wool.....	.2	.13	.1	.11	.85	221	6.2	2.5	2.00
Shirts, silk.....	.001	.001	.0005	.001	2.50	1	.03	2.0	5.00
Chemises, cotton.....	.03	.01	.03	.01	.47	30	.8	3.7	1.74
Drawers, cotton.....	3.3	1.16	2.9	1.02	.35	2,378	66.3	5.0	1.75
Drawers, wool.....	.1	.10	.1	.08	.79	164	4.6	2.7	2.12
Drawers, silk.....	.001	.002	.001	.001	1.10	2	.1	2.5	2.74
Nightdresses, cotton.....	1.1	.77	1.0	.68	.68	1,702	47.4	2.4	1.63
Nightdresses, silk.....	.001	.001	.001	.001	1.33	2	.1	1.5	2.00
Pajamas, cotton.....	.1	.08	.1	.07	.88	159	4.4	2.1	1.87
Kimonos, cotton.....	.03	.05	.03	.04	1.46	106	3.0	1.1	1.58
Kimonos, wool.....	.01	.02	.01	.01	2.61	22	.6	1.0	2.73
Kimonos, silk.....	.0003	.001	.0002	.0005	2.00	1	.03	1.0	2.00
Stockings, cotton.....	9.3	2.85	8.2	2.50	.30	3,514	97.9	9.5	2.91
Stockings, wool.....	.1	.09	.1	.08	.67	180	5.0	2.8	1.88
Stockings, silk.....	.02	.02	.02	.02	.99	33	.9	2.2	2.22
Shoes, high.....	3.1	7.82	2.7	6.85	2.54	3,537	98.6	3.1	7.93
Shoes, low.....	.8	1.39	.7	1.22	1.71	1,801	50.2	1.6	2.77
Shoe repairing.....		.98		.86		1,977	55.1		1.77
Shoe shiners.....	.01	.001	.004	.004	.10	3	.1	6.0	.60
House slippers.....	.1	.09	.1	.08	.97	303	8.4	1.1	1.06
Spats and gaiters.....	.02	.02	.01	.01	.95	56	1.6	1.1	1.02
Rubbers.....	.6	.44	.6	.38	.69	1,681	46.9	1.3	.93
Arctics.....	.03	.05	.03	.04	1.61	103	2.9	1.1	1.73

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Female children 4 and under 8 years of age (3,588 families)—Concluded.

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Gloves and mittens, kid.....	.1	\$0.11	.1	\$0.09	\$1.06	323	9.0	1.1	\$1.18
Gloves and mittens, cotton.....	.3	.09	.2	.08	.34	679	18.9	1.4	.48
Gloves and mittens, wool.....	.3	.18	.3	.16	.52	931	25.9	1.3	.68
Gloves and mittens, silk.....	.01	.01	.01	.01	.64	44	1.2	1.1	.73
Collars.....	.01	.005	.01	.004	.42	28	.8	1.4	.60
Collar and cuff sets.....	.01	.01	.01	.01	.81	35	1.0	1.2	.99
Ties.....	.02	.01	.02	.01	.33	47	1.3	1.6	.52
Ribbons.....		1.13		.99		2,359	65.7		1.71
Handkerchiefs.....	2.2	.21	2.0	.18	.09	1,132	31.5	7.1	.65
Scarfs.....	1	.05	.04	.04	.90	156	4.3	1.2	1.05
Garters.....	1.8	.34	1.6	.30	.19	2,622	73.1	2.5	.46
Belts.....	.05	.02	.04	.01	.33	134	3.7	1.3	.44
Hairpins, fancy combs, ornaments, nets, etc.....		.01		.01		84	2.3		.26
Sanitary supplies.....		.0001		.0001		1	.03		.25
Umbrellas.....	.03	.04	.03	.03	1.14	118	3.3	1.1	1.20
Parasols.....	.03	.03	.03	.03	.94	115	3.2	1.1	1.00
Hand bags, purses, etc.....	.1	.03	.05	.02	.48	150	4.2	1.3	.60
Watches and jewelry.....		.16		.14		208	5.8		2.82
Rompers.....	.1	.06	.1	.05	.70	99	2.8	2.9	2.02
Underwaists.....	1.4	.40	1.3	.35	.28	1,636	45.6	3.2	.88
Other clothing.....	1.4	.31		.27		731	20.4		1.50
Total.....		37.09		32.53					

Female children 8 and under 12 years of age (2,912 families).

Hats.....	1.0	\$2.23	0.9	\$1.95	\$2.13	2,068	71.0	1.5	\$3.15
Veils.....	.01	.01	.004	.01	1.86	12	.4	1.3	2.33
Caps.....	.5	.51	.4	.44	1.04	1,153	39.6	1.2	1.29
Suits, cotton.....	.002	.005	.001	.004	2.73	5	.2	1.0	2.73
Suits, wool.....	.002	.01	.001	.01	4.40	3	.1	1.7	7.33
Suits, silk.....	.001	.003	.001	.003	4.25	1	.03	2.0	8.50
Skirts, cotton.....	.1	.10	.1	.09	1.13	164	5.6	1.6	1.82
Skirts, wool.....	.05	.12	.04	.10	2.44	106	3.6	1.4	3.31
Skirts, silk.....	.001	.001	.001	.001	1.33	3	.1	1.0	1.33
Waists and blouses, cotton.....	.4	.45	.4	.39	1.01	531	18.2	2.4	2.46
Waists and blouses, wool.....	.01	.04	.01	.03	2.92	28	1.0	1.3	3.86
Waists and blouses, silk.....	.003	.004	.002	.003	1.38	5	.2	1.6	2.21
Dresses, cotton.....	4.5	6.85	3.9	5.96	1.54	2,685	92.2	4.8	7.43
Dresses, wool.....	.4	1.58	.3	1.38	4.07	794	27.3	1.4	5.81
Dresses, silk.....	.1	.33	.1	.29	5.00	178	6.1	1.1	5.45
House dresses, bungalow aprons, and wrappers.....	.1	.08	.1	.07	.67	135	4.6	2.7	1.82
Aprons.....	.2	.11	.2	.10	.54	231	7.9	2.7	1.44
Coats and cloaks, cotton.....	.2	.95	.1	.83	6.26	394	13.5	1.1	7.01
Coats and cloaks, wool.....	.4	3.44	.3	2.99	8.67	1,018	35.0	1.1	9.84
Raincoats.....	.1	.19	.05	.16	3.55	147	5.0	1.0	3.72
Sweaters and jerseys, cotton.....	.1	.40	.1	.34	2.65	381	13.1	1.1	3.02
Sweaters and jerseys, wool.....	.2	.73	.2	.63	3.69	527	18.1	1.1	4.02
Sweaters and jerseys, silk.....	.002	.01	.002	.01	4.35	7	.2	1.0	4.35
Furs and boas.....	.04	.25	.04	.22	5.56	105	3.6	1.2	6.89
Cleaning, pressing, and repairing.....		.13		.11		207	7.1		1.79
Petticoats, cotton.....	1.8	1.21	1.6	1.05	.66	1,768	60.7	3.0	2.00
Petticoats, wool.....	.1	.08	.1	.07	1.06	108	3.7	2.0	2.14
Petticoats, silk.....	.001	.002	.001	.002	2.89	2	.1	1.0	2.89
Corsets.....	.02	.01	.01	.01	.87	25	.9	1.8	1.56
Brassiers.....	.003	.002	.003	.002	.59	5	.2	2.0	1.18
Corset covers and camisoles.....	.01	.01	.01	.01	.47	13	.4	3.2	1.48
Combinations, cotton.....	.1	.08	.1	.07	.69	104	3.6	3.1	2.16
Union suits, cotton.....	1.0	1.05	.9	.92	1.03	1,188	40.8	2.5	2.58
Union suits, wool.....	.1	.22	.1	.19	1.74	169	5.8	2.2	3.81
Shirts, cotton.....	1.4	.48	1.2	.42	.35	1,226	42.1	3.3	1.14
Shirts, wool.....	.1	.08	.1	.07	.85	100	3.4	2.6	2.19

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Female children 8 and under 12 years of age (2,912 families)—Concluded.

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Shirts, silk.....	.002	\$0.001	.001	\$0.001	\$0.50	2	.1	2.5	\$1.24
Chemises, cotton.....	.04	.02	.03	.01	.43	34	1.2	3.2	1.37
Drawers, cotton.....	2.9	1.20	2.5	1.05	.42	1,915	65.8	4.4	1.83
Drawers, wool.....	.1	.06	.1	.05	.83	86	3.0	2.4	2.01
Drawers, silk.....	.0003	.0003	.0003	.0003	1.00	1	.03	1.0	1.00
Nightdresses, cotton.....	1.0	.81	.9	.70	.78	1,357	46.6	2.2	1.74
Nightdresses, silk.....	.001	.002	.001	.001	1.25	1	.03	4.0	5.00
Pajamas, cotton.....	.1	.05	.04	.04	.94	80	2.7	1.8	1.73
Kimonos, cotton.....	.04	.06	.03	.05	1.69	94	3.2	1.1	1.87
Kimonos, wool.....	.004	.01	.004	.01	2.94	12	.4	1.1	3.13
Stockings, cotton.....	9.1	2.99	7.9	2.61	.33	2,881	98.9	9.2	3.03
Stockings, wool.....	.1	.09	.1	.08	.72	131	4.5	2.7	1.98
Stockings, silk.....	.02	.02	.02	.02	1.05	47	1.6	1.5	1.54
Shoes, high.....	3.0	9.38	2.6	8.17	3.16	2,883	99.0	3.0	9.47
Shoes, low.....	.9	1.73	.8	1.50	2.00	1,584	54.4	1.6	3.17
Shoe repairing.....		1.63		1.42		2,177	74.8		2.18
Shoe shines.....	.02	.001	.01	.001	.69	9	.3	5.2	.46
House slippers.....	.1	.12	.1	.11	1.18	266	9.1	1.1	1.33
Spats and gaiters.....	.01	.01	.01	.01	.93	29	1.0	1.0	.96
Rubbers.....	.9	.69	.8	.60	.76	1,702	58.4	1.6	1.19
Arctics.....	.03	.05	.03	.04	1.67	77	2.6	1.2	1.95
Gloves and mittens, kid.....	.1	.17	.1	.14	1.17	350	12.0	1.2	1.38
Gloves and mittens, cotton.....	.3	.13	.3	.11	.38	668	22.9	1.5	.57
Gloves and mittens, wool.....	.4	.24	.4	.21	.58	856	29.4	1.4	.80
Gloves and mittens, silk.....	.04	.03	.03	.03	.77	94	3.2	1.2	.91
Collars.....	.03	.01	.02	.01	.41	54	1.9	1.4	.59
Collar and cuff sets.....	.02	.01	.02	.01	.77	41	1.4	1.3	.98
Ties.....	.1	.04	.1	.03	.48	140	4.8	1.7	.79
Ribbons.....		1.78		1.55		2,504	86.0		2.07
Handkerchiefs.....	3.8	.38	3.3	.33	.10	1,351	46.4	8.2	.82
Scarfs.....	.1	.09	.1	.08	1.02	206	7.1	1.2	1.25
Garters.....	1.8	.37	1.6	.32	.20	2,219	76.2	2.4	.48
Belts.....	.1	.04	.1	.03	.39	202	6.9	1.3	.52
Hairpins, fancy combs, ornaments, nets, etc.....		.02		.02		177	6.1		.35
Sanitary supplies.....		.001		.0004		2	.1		.75
Umbrellas.....	.1	.07	.1	.06	1.23	157	5.4	1.1	1.38
Parasols.....	.02	.03	.02	.03	1.29	66	2.3	1.0	1.33
Handbags, purses, etc.....	.1	.06	.1	.05	.60	242	8.3	1.2	.74
Watches and jewelry.....		.33		.28		230	7.9		4.12
Underwaists.....	1.2	.38	1.1	.33	.31	1,180	40.5	3.0	.95
Other clothing.....		.29		.25		612	21.0		1.37
Total.....		45.14		39.30					

Female children 12 and under 15 years of age (1,682 families).

Hats.....	1.2	\$3.14	1.1	\$2.90	\$2.64	1,304	77.5	1.5	\$4.05
Veils.....	.01	.01	.01	.01	1.52	9	.5	1.1	1.69
Caps.....	.4	.50	.4	.47	1.23	578	34.4	1.2	1.47
Suits, cotton.....	.01	.03	.01	.03	5.47	10	.6	1.0	5.47
Suits, wool.....	.03	.34	.02	.31	12.57	44	2.6	1.0	12.85
Suits, silk.....	.001	.01	.001	.01	7.50	2	.1	1.0	7.50
Skirts, cotton.....	.2	.30	.2	.28	1.38	222	13.2	1.7	2.29
Skirts, wool.....	.1	.40	.1	.37	3.09	177	10.5	1.2	3.78
Skirts, silk.....	.01	.05	.01	.04	4.69	16	1.0	1.1	4.98
Waists and blouses, cotton.....	1.0	1.20	.9	1.11	1.21	683	40.6	2.5	2.97
Waists and blouses, wool.....	.02	.05	.02	.05	2.46	25	1.5	1.4	3.54
Waists and blouses, silk.....	.04	.11	.04	.10	2.75	44	2.6	1.5	4.13
Dresses, cotton.....	3.1	6.34	2.9	5.86	2.02	1,475	87.7	3.6	7.23
Dresses, wool.....	.4	2.26	.4	2.08	5.60	558	33.2	1.2	6.80
Dresses, silk.....	.1	1.00	.1	.93	7.21	204	12.1	1.1	8.27
House dresses, bungalow aprons, and wrappers.....	.2	.13	.1	.12	.86	123	7.3	2.1	1.77

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Female children 12 and under 15 years of age (1,682 families)—Concluded.

Article.	All families.				Families purchasing.				
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Aprons.....	.2	\$0.11	.2	\$0.10	\$0.55	138	8.2	2.4	\$1.33
Coats and cloaks, cotton.....	.1	1.01	.1	.94	8.00	194	11.5	1.1	8.79
Coats and cloaks, wool.....	.4	5.20	.4	4.80	12.21	673	40.0	1.1	12.99
Raincoats.....	.05	.21	.04	.19	4.26	77	4.6	1.1	4.48
Sweaters and jerseys, cotton.....	.1	.41	.1	.38	3.17	196	11.7	1.1	3.56
Sweaters and jerseys, wool.....	.2	1.08	.2	.99	4.58	379	22.5	1.0	4.78
Sweaters and jerseys, silk.....	.01	.03	.01	.03	5.41	9	.5	1.1	6.01
Furs and boas.....	.04	.33	.03	.30	8.95	54	3.2	1.1	10.27
Cleaning, pressing and repairing.....	.18	.....	.....	.17	.....	157	9.3	.....	1.96
Petticoats, cotton.....	1.6	1.26	1.5	1.16	.79	1,042	62.0	2.6	2.03
Petticoats, wool.....	.03	.04	.03	.04	1.29	38	2.3	1.4	1.86
Petticoats, silk.....	.003	.01	.003	.01	1.97	5	.3	1.0	1.97
Corsets.....	.3	.40	.3	.37	1.23	349	20.7	1.6	1.94
Brassieres.....	.01	.01	.01	.01	.49	12	.7	2.1	1.01
Corset covers and camisoles.....	.2	.12	.2	.11	.54	155	9.2	2.4	1.29
Combinations, cotton.....	.3	.25	.3	.23	.89	180	10.7	2.7	2.36
Combinations, silk.....	.001	.005	.001	.004	4.00	2	.1	1.0	4.00
Union suits, cotton.....	1.1	1.14	1.0	1.06	1.08	741	44.1	2.4	2.59
Union suits, wool.....	.1	.19	.1	.18	2.07	80	4.8	2.0	4.04
Shirts, cotton.....	1.6	.52	1.5	.48	.32	833	49.5	3.3	1.05
Shirts, wool.....	.04	.04	.04	.04	1.08	35	2.1	2.0	2.16
Shirts, silk.....	.003	.002	.003	.002	.79	2	.1	2.5	1.98
Chemises, cotton.....	.1	.06	.1	.05	.77	48	2.9	2.7	2.07
Chemises, silk.....	.002	.003	.002	.003	1.45	3	.2	1.3	1.93
Drawers, cotton.....	2.2	1.10	2.1	1.02	.49	1,032	61.4	3.6	1.80
Drawers, wool.....	.05	.05	.04	.04	.99	39	2.3	2.1	2.06
Drawers, silk.....	.001	.002	.001	.002	3.50	1	.1	1.0	3.50
Nightdresses, cotton.....	1.0	.59	.9	.53	.92	803	47.7	2.0	1.87
Pajamas, cotton.....	.03	.04	.03	.04	1.28	28	1.7	1.8	2.28
Kimonos, cotton.....	.05	.10	.04	.09	2.11	75	4.5	1.0	2.19
Kimonos, wool.....	.01	.02	.005	.02	3.88	9	.5	1.0	3.88
Kimonos, silk.....	.001	.002	.001	.002	3.00	1	.1	1.0	3.00
Stockings, cotton.....	8.4	2.96	7.8	2.73	.35	1,657	98.5	8.5	3.00
Stockings, wool.....	.1	.06	.1	.05	.78	3	.2	2.5	1.93
Stockings, silk.....	.2	.26	.2	.24	1.06	172	10.2	2.4	2.56
Shoes, high.....	2.5	10.04	2.3	9.28	3.95	1,658	98.6	2.6	10.10
Shoes, low.....	.8	2.10	.8	1.94	2.49	948	56.4	1.5	3.73
Shoe repairing.....	.....	1.69	.....	1.56	.....	1,317	78.3	.....	2.15
Shoe shiners.....	.04	.004	.03	.004	.....	10	.6	6.2	.66
House slippers.....	.1	.12	.1	.11	1.22	150	8.9	1.1	1.33
Spats and gaiters.....	.01	.02	.01	.02	1.22	22	1.3	1.0	1.28
Rubbers.....	.8	.68	.8	.63	.83	943	56.1	1.5	1.22
Arctics.....	.01	.02	.01	.01	1.51	16	1.0	1.1	1.70
Gloves and mittens, kid.....	.2	.30	.2	.28	1.45	303	18.0	1.1	1.66
Gloves and mittens, cotton.....	.3	.15	.3	.14	.50	375	22.3	1.3	.66
Gloves and mittens, wool.....	.3	.20	.3	.18	.69	401	23.8	1.2	.83
Gloves and mittens, silk.....	.1	.07	.1	.07	.89	121	7.2	1.1	1.02
Collars.....	.1	.04	.1	.03	.43	72	4.3	2.0	.84
Collar and cuff sets.....	.05	.03	.04	.03	.70	58	3.4	1.3	.91
Ties.....	.2	.11	.2	.10	.55	209	12.4	1.6	.86
Ribbons.....	.....	1.65	.....	1.53	.....	1,364	81.1	.....	2.04
Handkerchiefs.....	4.9	.59	4.5	.54	.....	968	57.6	8.5	1.02
Scarfs.....	.1	.08	.1	.07	1.20	103	6.1	1.0	.26
Garters.....	1.3	.27	1.2	.25	.20	1,021	60.7	2.2	1.44
Belts.....	.1	.06	.1	.06	.44	202	12.0	1.2	.52
Hairpins, fancy combs, ornaments, nets, etc.....	.....	.07	.....	.07	.....	357	21.2	.....	.34
Sanitary supplies.....	.....	.02	.....	.02	.....	31	1.8	.....	1.01
Umbrellas.....	.1	.12	.1	.11	1.49	129	7.7	1.1	1.59
Parasols.....	.02	.03	.02	.03	1.57	29	1.7	1.0	1.62
Handbags, purses, etc.....	.1	.10	.1	.09	.86	164	9.8	1.2	1.03
Watches and jewelry.....	.....	.97	.....	.90	.....	234	13.9	.....	7.01
Underwaists.....	.6	.22	.5	.21	.39	372	22.1	2.6	1.01
Other clothing.....	.....	.33	.....	.30	.....	363	21.6	.....	1.53
Total.....	.....	54.05	.....	49.92	.....	.....	.....	.....	.....

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Female children 15 years of age and over (1,581 families).

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Percent of all families.	Average number of articles per family.	Average cost per family.
Hats.....	2.3	\$9.69	1.8	\$7.55	\$4.14	1,477	93.4	2.5	\$10.38
Veils.....	.2	.10	.1	.08	.54	146	9.2	2.0	1.11
Caps.....	.2	.25	.1	.19	1.36	247	15.6	1.2	1.59
Suits, cotton.....	.1	1.00	.1	.78	14.13	98	6.2	1.1	16.15
Suits, wool.....	.3	7.66	.3	5.97	23.29	439	27.8	1.2	27.59
Suits, silk.....	.02	.24	.01	.18	14.99	20	1.3	2.3	18.74
Skirts, cotton.....	.5	1.26	.4	.98	2.38	494	31.2	1.7	4.04
Skirts, wool.....	.4	1.86	.3	1.45	5.17	427	27.0	1.3	6.90
Skirts, silk.....	.2	.94	.1	.73	5.70	212	13.4	1.2	7.02
Waists and blouses, cotton.....	2.3	3.65	1.8	2.85	1.59	1,044	66.0	3.5	5.53
Waists and blouses, wool.....	.04	.13	.03	.10	3.54	43	2.7	1.3	4.70
Waists and blouses, silk.....	.8	3.56	.7	2.77	4.26	663	41.9	2.0	8.49
Dresses, cotton.....	1.9	6.07	1.4	4.73	3.27	1,092	69.1	2.7	8.79
Dresses, wool.....	.5	6.23	.4	4.86	11.72	657	41.6	1.3	15.00
Dresses, silk.....	.5	6.17	.4	4.81	12.53	587	37.1	1.3	16.63
House dresses, bungalow aprons, and wrappers.....	.5	.65	.4	.51	1.32	294	18.6	2.7	3.51
Aprons.....	.3	.21	.2	.17	.75	158	10.0	2.8	2.14
Coats and cloaks, cotton.....	.1	1.64	.1	1.28	13.13	176	11.1	1.1	14.77
Coats and cloaks, wool.....	.6	11.96	.5	9.32	19.83	776	49.1	1.2	24.38
Raincoats.....	.04	.21	.03	.17	5.89	56	3.5	1.0	6.00
Sweaters and jerseys, cotton.....	.1	.55	.1	.43	3.97	186	11.8	1.2	4.65
Sweaters and jerseys, wool.....	.3	1.56	.2	1.22	5.48	382	24.2	1.2	6.45
Sweaters and jerseys, silk.....	.03	.20	.02	.15	7.48	40	2.5	1.1	7.85
Furs and boas.....	.1	2.55	.1	1.99	18.74	178	11.3	1.2	22.64
Cleaning, pressing, and repairing.....	.54			.42		267	16.9		3.19
Petticoats, cotton.....	1.7	2.01	1.3	1.57	1.16	1,023	64.7	2.7	3.11
Petticoats, wool.....	.02	.03	.01	.02	1.53	18	1.1	1.7	2.54
Petticoats, silk.....	.1	.48	.1	.38	3.97	165	10.4	1.2	4.63
Corsets.....	1.6	2.75	1.3	2.15	1.69	1,288	81.5	2.0	3.38
Brassieres.....	.4	.23	.3	.18	.55	204	12.9	3.3	1.80
Corset covers and camisoles.....	2.0	1.42	1.5	1.10	.71	870	55.0	3.6	2.57
Combinations, cotton.....	1.2	1.31	1.0	1.02	1.07	539	34.1	3.6	3.84
Combinations, silk.....	.04	.07	.03	.06	1.74	28	1.8	2.4	4.16
Union suits, cotton.....	1.2	1.32	.9	1.03	1.12	600	38.0	3.1	3.47
Union suits, wool.....	.1	.15	.1	.12	2.27	45	2.8	2.3	5.19
Union suits, silk.....	.002	.01	.001	.01	4.42	2	.1	1.5	6.63
Shirts, cotton.....	3.2	1.00	2.5	.78	.31	989	62.6	5.1	1.59
Shirts, wool.....	.04	.06	.03	.05	1.33	28	1.8	2.5	3.38
Shirts, silk.....	.02	.04	.02	.03	1.53	15	.9	2.5	3.78
Chemises, cotton.....	.3	.30	.2	.23	1.01	136	8.6	3.4	3.47
Chemises, silk.....	.01	.02	.01	.02	2.42	9	.6	1.4	3.49
Drawers, cotton.....	2.0	1.18	1.6	.92	.58	793	50.2	4.1	2.36
Drawers, wool.....	.02	.03	.02	.02	1.28	20	1.3	2.0	2.49
Drawers, silk.....	.01	.02	.01	.01	1.41	10	.6	2.1	2.97
Nightdresses, cotton.....	1.5	1.83	1.2	1.43	1.21	933	59.2	2.6	3.10
Nightdresses, silk.....	.004	.02	.003	.02	4.88	7	.4	1.0	4.88
Pajamas, cotton.....	.1	.09	.04	.07	1.70	50	3.2	1.6	2.80
Pajamas, silk.....	.001	.001	.0005	.001	2.25	1	.1	1.0	2.25
Kimonos, cotton.....	.2	.38	.1	.30	2.28	217	13.7	1.2	2.76
Kimonos, wool.....	.01	.08	.01	.06	5.28	18	1.1	1.3	6.75
Kimonos, silk.....	.01	.04	.01	.03	5.38	10	.6	1.4	5.92
Stockings, cotton.....	8.0	3.38	6.3	2.63	.42	1,411	89.2	9.0	3.79
Stockings, wool.....	.04	.03	.03	.02	.73	26	1.6	2.3	1.67
Stockings, silk.....	2.8	3.34	2.2	2.60	1.20	891	56.4	4.9	5.93
Shoes, high.....	2.7	14.98	2.1	11.67	5.54	1,548	97.9	2.8	15.30
Shoes, low.....	1.2	4.88	.9	3.80	4.04	1,079	68.2	1.8	7.15
Shoe repairing.....		2.11		1.64		1,221	77.2		2.73
Shoe shines.....	1.1	.10	.9	.08	.09	83	5.2	21.6	1.89
House slippers.....	.1	.20	.1	.16	1.42	182	11.5	1.2	1.77
Spats and gaiters.....	.1	.24	.1	.19	1.84	160	10.1	1.3	2.36
Rubbers.....	.9	.81	.7	.63	.90	843	53.3	1.7	1.51
Arctics.....	.004	.01	.003	.01	1.84	6	.4	1.0	1.84
Gloves and mittens, kid.....	.9	1.57	.7	1.22	1.82	855	54.1	1.6	2.90
Gloves and mittens, cotton.....	.3	.18	.2	.14	.71	279	17.6	1.4	1.61
Gloves and mittens, wool.....	.1	.10	.1	.08	.80	159	10.1	1.3	1.02
Gloves and mittens, silk.....	.4	.34	.3	.27	.98	329	20.8	1.7	1.65

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Continued.

Female children 15 years of age and over (1,581 families)—Concluded.

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Collars.....	.4	\$0.22	.3	\$0.17	\$0.58	243	15.4	2.5	\$1.44
Collar and cuff sets.....	.3	.26	.2	.20	.91	257	16.3	1.8	1.60
Ties.....	.3	.17	.2	.13	.62	259	16.4	1.7	1.05
Ribbons.....	.....	.42	.....	.33	.....	426	26.9	.....	1.58
Handkerchiefs.....	8.5	1.25	6.6	.97	.15	1,164	73.6	11.5	1.69
Scarfs.....	.05	.13	.04	.10	2.72	72	4.6	1.1	2.87
Garters.....	.4	.08	.3	.07	.21	307	19.4	2.1	.43
Belts.....	.2	.10	.1	.08	.54	214	13.5	1.4	.74
Hairpins, fancy combs, ornaments, nets, etc.....	.....	.53	.....	.41	.....	1,175	74.3	.....	.72
Sanitary supplies.....	.....	.24	.....	.19	.....	257	16.3	.....	1.48
Umbrellas.....	.2	.52	.2	.40	2.09	324	20.5	1.2	2.51
Parasols.....	.03	.08	.02	.06	2.82	42	2.7	1.1	3.02
Handbags, purses, etc.....	.5	.75	.4	.58	1.57	571	36.1	1.3	2.08
Watches and jewelry.....	.....	2.81	.....	2.19	.....	359	22.7	.....	12.38
Underwaists.....	.1	.03	.04	.02	.55	39	2.5	2.1	1.16
Other clothing.....	.....	.34	.....	.26	.....	260	16.4	.....	2.05
Total.....	.....	123.97	.....	96.59	.....	.....	.....	.....	.....

Female dependents (509 families).

Hats.....	0.4	\$1.64	0.3	\$1.61	\$3.78	165	32.4	1.3	\$5.06
Veils.....	.1	.06	.1	.06	.83	24	4.7	1.5	1.25
Caps.....	.01	.01	.01	.01	1.61	4	.8	1.0	1.61
Suits, cotton.....	.01	.15	.01	.14	12.33	6	1.2	1.0	12.33
Suits, wool.....	.1	1.37	.1	1.35	21.18	32	6.3	1.0	21.84
Skirts, cotton.....	.1	.25	.1	.24	2.18	44	8.6	1.3	2.87
Skirts, wool.....	.1	.79	.1	.77	6.25	60	11.8	1.1	6.67
Skirts, silk.....	.02	.16	.02	.16	6.97	12	2.4	1.0	6.97
Waists and blouses, cotton.....	.6	.74	.6	.73	1.26	140	27.5	2.1	2.71
Waists and blouses, wool.....	.004	.02	.004	.02	4.50	2	.4	1.0	4.50
Waists and blouses, silk.....	.2	.64	.2	.63	3.97	56	11.0	1.5	5.81
Dresses, cotton.....	.3	1.01	.3	.99	2.92	93	18.3	1.9	5.50
Dresses, wool.....	.1	.97	.1	.95	10.75	41	8.1	1.1	12.06
Dresses, silk.....	.1	.65	.1	.64	11.84	25	4.9	1.1	13.26
House dresses, bungalow aprons, and wrappers.....	.7	1.18	.7	1.16	1.64	156	30.6	2.3	3.86
Aprons.....	.8	.40	.8	.39	.51	130	25.5	3.0	1.55
Coats and cloaks, cotton.....	.03	.43	.03	.42	14.66	15	2.9	1.0	14.66
Coats and cloaks, wool.....	.1	2.40	.1	2.35	21.79	55	10.8	1.0	22.18
Raincoats.....	.004	.05	.004	.04	11.50	2	.4	1.0	11.50
Sweaters and jerseys, cotton.....	.03	.11	.03	.11	3.59	16	3.1	1.0	3.59
Sweaters and jerseys, wool.....	.04	.21	.04	.21	5.37	19	3.7	1.1	5.65
Furs and boas.....	.01	.57	.01	.56	58.00	5	1.0	1.0	58.00
Cleaning, pressing, and repairing.....	.....	.14	.....	.14	.....	32	6.3	.....	2.30
Petticoats, cotton.....	.4	.43	.4	.42	1.18	115	22.6	1.6	1.91
Petticoats, wool.....	.1	.10	.1	.10	2.03	19	3.7	1.4	2.78
Petticoats, silk.....	.01	.05	.01	.05	3.35	6	1.2	1.2	3.91
Corsets.....	.3	.55	.2	.54	2.17	110	21.6	1.2	2.53
Brassieres.....	.1	.03	.1	.03	.56	12	2.4	2.5	1.41
Corset covers and camisoles.....	.3	.17	.3	.17	.64	61	12.0	2.3	1.45
Combinations, cotton.....	.1	.10	.1	.10	1.02	19	3.7	2.7	2.73
Combinations, silk.....	.004	.01	.004	.01	2.65	1	.2	2.0	5.30
Union suits, cotton.....	.4	.48	.4	.47	1.33	84	16.5	2.2	2.90
Union suits, wool.....	.1	.25	.1	.25	2.92	21	4.1	2.1	6.11
Shirts, cotton.....	.7	.41	.7	.41	.55	139	27.3	2.7	1.51
Shirts, wool.....	.1	.11	.1	.11	1.72	16	3.1	2.1	3.65
Shirts, silk.....	.004	.004	.004	.004	1.00	1	.2	2.0	2.00
Chemises, cotton.....	.1	.10	.1	.10	.76	25	4.9	2.7	2.08
Drawers, cotton.....	.5	.36	.5	.36	.66	110	21.6	2.5	1.69
Drawers, wool.....	.04	.06	.04	.06	1.48	10	2.0	2.0	2.97
Nightdresses, cotton.....	.5	.64	.5	.63	1.25	128	25.1	2.0	2.55
Pajamas, cotton.....	.002	.002	.002	.002	.98	1	.2	1.0	.98

QUANTITY AND COST OF CLOTHING PURCHASED BY THE AVERAGE WORKING-MAN'S FAMILY IN ONE YEAR—Concluded.

Female dependents (509 families)—Concluded.

Article.	All families.					Families purchasing.			
	Average number of articles per family.	Average cost per family.	Average number of articles per person.	Average cost per person.	Average cost per article.	Number of families purchasing.	Per cent of all families.	Average number of articles per family.	Average cost per family.
Kimonos, cotton.....	.05	\$0.12	.05	\$0.12	\$2.44	20	3.9	1.3	\$3.05
Kimonos, wool.....	.01	.06	.01	.06	4.14	7	1.4	1.0	4.14
Stockings, cotton.....	2.9	1.05	2.8	1.03	.36	336	66.0	4.4	1.59
Stockings, wool.....	.1	.11	.1	.10	1.06	22	4.3	2.3	2.45
Stockings, silk.....	.2	.22	.2	.22	1.26	24	4.7	3.8	4.73
Shoes, high.....	.8	3.38	.8	3.31	4.32	273	53.6	1.5	6.30
Shoes, low.....	.2	.67	.2	.66	3.42	84	16.5	1.2	4.07
Shoe repairing.....		.31		.30		117	23.0		1.34
Shoe shines.....	.04	.004	.04	.004	.10	1	.2	20.0	2.00
House slippers.....	.2	.39	.2	.38	1.71	103	20.2	1.1	1.92
Spats and gaiters.....	.01	.02	.01	.01	1.94	4	.8	1.0	1.94
Rubbers.....	.1	.11	.1	.11	.92	58	11.4	1.1	1.00
Aretics.....	.01	.02	.01	.02	1.95	5	1.0	1.0	1.95
Gloves and mittens, kid.....	.1	.18	.1	.18	1.84	46	9.0	1.1	2.04
Gloves and mittens, cotton.....	.1	.10	.1	.10	.76	59	11.6	1.1	.84
Gloves and mittens, wool.....	.05	.04	.04	.04	.99	23	4.5	1.0	.99
Gloves and mittens, silk.....	.1	.09	.1	.09	1.01	38	7.5	1.2	1.20
Collars.....	.1	.03	.1	.03	.66	17	3.3	1.6	1.04
Collar and cuff sets.....	.02	.01	.02	.01	.60	9	1.8	1.2	.73
Ties.....	.004	.002	.004	.002	.50	1	.2	2.0	1.00
Ribbons.....	.02	.02	.02	.02		6	1.2		1.62
Handkerchiefs.....	1.8	.28	1.8	.28	.15	138	27.1	6.8	1.03
Scarfs.....	.02	.03	.02	.03	1.26	9	1.8	1.2	1.54
Garters.....	.1	.01	.1	.01	.18	24	4.7	1.4	.26
Belts.....	.004	.002	.004	.002	.50	2	.4	1.0	.50
Hairpins, fancy combs, ornaments, nets, etc.....		.07		.07		119	23.4		.31
Sanitary supplies.....		.02		.02		7	1.4		1.46
Umbrellas.....	.02	.04	.02	.04	1.56	12	2.4	1.0	1.56
Parasols.....	.01	.02	.01	.02	2.00	3	.6	1.3	2.67
Handbags, purses, etc.....	.1	.16	.1	.16	1.94	39	7.7	1.1	2.14
Watches and jewelry.....		.18		.17		14	2.8		6.48
Other clothing.....		.25		.24		69	13.6		1.81
Total.....		25.82		25.33					

Wholesale Prices of Certain Food Commodities at Anchorage, Alaska.

IN VIEW of the exaggerated reports as to the prices of supplies in Alaska, the mine inspector of the Territory publishes in his report for 1921 the wholesale cost in warehouse at Anchorage of some principal commodities. This list, which is given below, was furnished by the Alaskan Engineering Commission on November 21, 1921.

Wholesale prices of principal commodities in warehouse at Anchorage, Alaska, Nov. 21, 1921.

Apples evaporated, 25-pound box.....	\$3. 15
Apples, canned, case of 6 No. 10 cans.....	3. 40
Apricots, evaporated, 25-pound box.....	7. 90
Apricots, canned, case of 6 No. 10 cans.....	4. 35
Baking powder, pound.....	. 38
Beans, lima, two 50-pound sacks.....	8. 10
Beans, navy (small white), two 50-pound sacks.....	9. 00
Beef, corned, case of 12 No. 2 cans.....	7. 00
Beets, fresh, pound.....	. 05
Beets, canned, case of 6 No. 10 cans.....	3. 40
Berries:	
Blackberries, case of 24 No. 2 cans.....	4. 90
Cranberries, case of 6 No. 10 cans.....	7. 05
Loganberries, case of 24 No. 2 cans.....	7. 20
Raspberries, case of 24 No. 2 cans.....	7. 40
Strawberries, case of 24 No. 2 cans.....	6. 50
Butter (in brine), 50-pound keg.....	24. 75
Cabbage, canned, case of 6 No. 10 cans.....	2. 75
Cheese, pound.....	. 30
Coffee, ground, pound.....	. 40
Crackers, case of 24 No. 2 cans.....	9. 00
Figs, evaporated, 25-pound box.....	2. 75
Flour, hard wheat, bale of two 49-pound sacks.....	5. 00
Flour, soft wheat, bale of two 49-pound sacks.....	4. 50
Ham, cured, all brands, pound.....	. 40
Meats:	
Beef, fresh frozen, full quarters only, pound.....	. 17
Mutton, fresh frozen, halves only, pound.....	. 18
Pork, fresh frozen, halves only, pound.....	. 20
Oil, Wesson, case of 12 medium-size cans.....	6. 30
Peaches, evaporated, 25-pound box.....	4. 50
Peaches, canned, case of 24 No. 2½ cans.....	6. 50
Pears, evaporated, 25-pound box.....	4. 50
Pears, canned, case of 24 No. 2½ cans.....	6. 50
Potatoes, Irish, sacks, per pound.....	. 03
Rice, per hundredweight.....	7. 40
Soap, Ivory, case of 100 10-ounce cakes.....	13. 50
Soap, Lennox, case of 100 cakes.....	5. 50
Soups, Campbell's, case of 48 No. 1 cans.....	5. 50
Sugar, brown, per hundredweight.....	8. 55
Sugar, granulated (white cane), per hundredweight.....	9. 00

Prices of Principal Commodities in Japan, 1912 to 1920.

A REPORT issued by the Japanese Department of Finance¹ gives (pp. 174, 175) the average prices of the principal commodities in use in Japan for the years 1912 to 1920. The prices prevailing in the last half of 1920 show a sharp decline in most cases from the prices in effect the first half of 1920 when the cost of living reached its highest point.

¹ Japan. Department of Finance. The twenty-first financial and economic annual of Japan, 1921. Tokyo [1922].

The following tables show the average prices and the index numbers of principal commodities in the chief markets of the country, 1912 to 1920:

AVERAGE PRICES OF PRINCIPAL COMMODITIES IN JAPAN, 1912 TO 1920.

[Yen at par=43.9 cents; koku=4.96005 bu.; kwan=8.26733 lbs. (avoir.); kin=1.32277 lbs. (avoir.); shō=1.58722 qts.; tan=about 35 ft. in length; kama= 40 yds.; one jō Mino contains 48 sheets, Hanshi, 20 sheets; shime=100 jō.; soku=10 jō; bu=1.431665 lines (line is usually $\frac{1}{16}$ in.).]

Commodity.	Unit.	1912	1913	1914	1915	1916
		Yen.	Yen.	Yen.	Yen.	Yen.
Rice.....	Koku.....	20.23	20.97	15.35	12.28	13.10
Barley.....	do.....	8.38	7.92	6.25	4.65	4.96
Rye.....	do.....	12.59	11.93	8.34	7.55	7.59
Wheat.....	do.....	11.31	11.76	10.84	11.44	11.18
Beans, soja.....	do.....	10.93	12.11	11.23	8.98	10.32
Beans, red.....	do.....	14.68	15.91	16.10	12.13	12.41
Salt.....	do.....	4.54	4.84	4.86	4.66	5.76
Soy.....	do.....	25.48	25.93	25.57	25.13	24.36
Sugar, white.....	100 kin.....	20.97	20.33	20.69	21.45	22.54
Saké.....	Koku.....	48.12	51.92	46.18	43.17	47.41
Tea.....	100 kin.....	47.94	46.08	46.69	48.88	49.30
Beef.....	do.....	30.08	29.03	29.55	28.52	30.31
Eggs.....	100.....	2.57	2.78	2.76	2.50	2.58
Milk.....	Shō.....	.35	.33	.32	.31	.32
Cotton, ginned.....	100 kin.....	34.17	34.93	30.65	27.61	41.58
Yarn, cotton.....	do.....	47.96	47.67	37.32	35.82	48.43
Silk, raw.....	do.....	799.86	819.25	825.85	792.57	1,092.29
Hemp.....	do.....	54.05	50.64	47.00	47.75	54.10
Cloth, white cotton.....	Tan.....	.44	.47	.38	.35	.45
Shirting, white.....	Kama.....	6.30	6.35	6.36	6.26	7.35
Kaiki, (silk tissues).....	do.....	5.13	5.25	4.85	5.19	5.62
Cedar square timber.....	4 yds.....	6.19	6.30	6.38	6.36	6.98
Pig iron.....	Kwan.....	.31	.30	.30	.46	.76
Petroleum.....	Box of 2 cans.....	3.92	4.29	4.16	4.31	5.80
Coal.....	Ton.....	7.32	7.88	8.22	7.39	8.95
Firewood.....	10 kwan.....	.28	.30	.28	.27	.27
Charcoal.....	do.....	1.15	1.21	1.15	1.13	1.22
Seed oil.....	Koku.....	45.02	41.44	41.41	42.88	51.50
Paper (Hanshi).....	Soku.....	.29	.29	.29	.31	.34
Dried sardines.....	10 kwan.....	4.06	4.05	3.56	3.21	3.57
Oil cake.....	do.....	2.44	2.55	2.43	2.24	2.52

Commodity.	Unit.	1917	1918	1919	1920	
					First half.	Last half.
Rice.....	Koku.....	Yen. 19.25	Yen. 31.73	Yen. 45.54	Yen. 50.07	Yen. 37.41
Barley.....	do.....	8.15	14.73	16.22	18.48	11.86
Rye.....	do.....	11.97	21.40	27.17	33.23	19.07
Wheat.....	do.....	13.52	22.38	23.16	26.90	18.00
Beans, soja.....	do.....	13.61	18.35	22.07	27.74	21.21
Beans, red.....	do.....	16.35	21.37	31.93	38.36	28.76
Salt.....	do.....	5.21	6.22	7.09	8.08	¹ 4.43
Soy.....	do.....	27.27	33.72	44.10	54.78	² 5.10
Sugar, white.....	100 kin.....	24.10	26.93	37.75	50.58	42.11
Saké.....	Koku.....	54.09	65.36	86.27	113.82	93.96
Tea.....	100 kin.....	54.91	69.68	94.27	126.67	131.74
Beef.....	do.....	37.34	53.10	70.45	87.40	³ 57.16
Eggs.....	100.....	3.07	4.14	5.97	6.03	³ 59.95
Milk.....	Shō.....	.36	.45	.56	.77	.68
Cotton, ginned.....	100 kin.....	58.25	84.81	83.21	92.14	59.55
Yarn, cotton.....	do.....	86.38	121.56	176.02	183.79	108.08
Silk, raw.....	do.....	1,218.37	1,437.59	2,041.71	2,611.80	1,355.20
Hemp.....	do.....	67.06	81.33	110.23	207.94	10.07
Cloth, white cotton.....	Tan.....	.65	.90	1.35	1.49	.99
Shirting, white.....	Kama.....	10.94	15.77	24.70	21.68	(⁴)
Kaiki (silk tissues).....	do.....	7.07	8.62	11.07	13.08	(⁴)
Cedar square timber.....	4 yds.....	9.01	12.49	17.33	24.08	⁵ 3.16
Pig iron.....	Kwan.....	1.31	1.63	.80	.94	⁶ 119.52
Petroleum.....	Box of 2 cans.....	5.67	8.80	11.40	10.02	4.45
Coal.....	Ton.....	16.48	24.12	26.44	28.21	28.69
Firewood.....	10 Kwan.....	.38	.59	.70	.99	1.04
Charcoal.....	do.....	1.80	2.73	3.09	3.84	3.48
Seed oil.....	Koku.....	72.02	93.22	97.77	98.87	67.59
Paper (Hanshi).....	Soku.....	.38	.60	.72	1.30	⁷ 7.71
Dried sardines.....	10 Kwan.....	4.61	6.74	8.91	12.08	6.58
Oil cake.....	do.....	3.26	4.36	5.69	8.72	4.61

¹ Per 100 kin. ² Per 9 shō. ³ Per 10 kwan. ⁴ Not reported. ⁵ Per 2 yds. long. ⁶ Per ton. ⁷ Per 1 shime.

INDEX NUMBERS OF PRICES OF COMMODITIES IN JAPAN, 1912 TO 1920.

[1912=100.]

Commodity.	1912	1913	1914	1915	1916	1917	1918	1919	1920	
									First half.	Second half.
Rice.....	100	104	76	61	64	95	157	225	247	183
Barley.....	100	95	65	56	60	98	177	195	222	141
Rye.....	100	96	66	61	59	96	171	219	264	158
Wheat.....	100	104	96	101	99	120	198	205	238	157
Beans, soja.....	100	104	103	82	95	125	168	202	254	183
Beans, red.....	100	109	110	83	85	112	145	218	255	185
Salt.....	100	96	99	94	96	109	128	143	166	164
Soy.....	100	101	101	97	96	109	133	175	238	225
Sugar, white.....	100	97	98	102	107	115	129	178	242	203
Saké.....	100	105	96	88	97	111	136	194	236	177
Tea.....	100	95	97	102	102	113	148	201	270	254
Beef.....	100	104	107	103	110	136	195	260	320	331
Eggs.....	100	108	107	97	100	119	164	233	233	284
Milk.....	100	103	100	98	101	112	142	178	244	218
Cotton, ginned.....	100	103	90	79	105	170	248	243	266	185
Yarn, cotton.....	100	99	78	75	101	180	254	368	384	309
Silk, raw.....	100	103	102	98	134	151	178	251	323	295
Hemp.....	100	94	87	88	99	123	153	205	290	244
Cloth, white cotton.....	100	97	86	81	104	152	210	317	396	217
Shirting, white.....	100	101	103	99	116	173	249	321	352	(1)
Kaiki (silk tissues).....	100	102	94	92	107	137	169	218	253	(1)
Cedar square timber.....	100	102	103	104	113	145	201	282	424	418
Pig iron.....	100	97	96	141	238	428	566	273	301	266
Petroleum.....	100	109	106	100	148	145	226	291	256	238
Coal.....	100	109	114	100	123	229	337	369	392	400
Firewood.....	100	107	104	101	101	143	220	259	354	375
Charcoal.....	100	105	101	101	109	167	251	283	347	334
Seed oil.....	100	92	92	95	114	160	209	217	222	161
Paper (Hanshi).....	100	105	104	104	121	139	218	262	407	285
Dried sardines.....	100	100	88	79	88	113	169	221	266	162
Oil cake.....	100	105	99	92	103	139	179	233	356	192
Average.....	100	101	96	94	109	145	200	238	292	245

1 Not reported.

WAGES AND HOURS OF LABOR.

Changes in Union Scale of Wages and Hours of Labor, 1913 to 1922.¹

THE Bureau of Labor Statistics during the past summer has collected information concerning the union scale of wages and hours of labor in the principal time-work trades in the leading industrial centers of the United States, and a full compilation of the material is now in progress.

An abridged compilation has been made for certain trades and cities, and the rates and hours of labor as of May 15, 1922, are brought into comparison in the following table with like figures for preceding years back to 1913.

The union-wage-scale figures here published represent the minimum wage of union members employed in the trades stated, but these figures do not always represent the maximum wage that was paid, as in some instances part or even all of the organized workers in the trades received more than the scale.

In cases where scales have been revised since May 15, 1922, and made retroactive to that date or earlier the changes have been included in the tabulation, in so far as information has been received.

Two or more quotations of rates and hours are shown for some occupations in some cities. Such quotations indicate that there were two or more agreements with different employers and possibly made also by different unions. The figures are the highest and lowest contractual terms in the city.

¹ A brief summary of the changes from 1907 to 1921 is given in the MONTHLY LABOR REVIEW for December, 1921. The average money rate per hour for each trade, all cities combined, as of May, 1921, and May, 1920, is published in the May, 1922, MONTHLY LABOR REVIEW.

UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922.

Blacksmiths, manufacturing shops.

City.	Rates per hour (cents).										Hours per week.											
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922		
Boston.....									90.0	81.0										44	44	
Buffalo.....	40.0	50.0	50.0	55.0	55.0	65.0	72.5	100.0	94.0	87.5	54	54	54	50	50	44	44	48	48	48	48	
Charleston, S. C.....	36.0	36.0	36.0	41.7	41.7	72.5	80.0	90.0	90.0	65.0	54	54	54	54	54	48	1 48	1 48	44	44	44	44
Chicago.....	43.2	43.2	43.2	46.2	56.0	75.0	90.0	110.0	110.0	110.0	49½	49½	49½	49½	48	48	44	44	44	44	44	44
Manchester.....								70.0	61.0	61.0										48	48	48
New Orleans.....	36.1	36.1	36.1	36.1	36.1	68.8	80.0	80.0	80.0	83.0	54	54	54	54	54	48	48	48	44	44	44	44
New York.....	44.4	44.4	44.4	53.1	53.1	72.5	80.0	80.0	72.0	72.0	2 53	2 53	2 53	48	48	48	48	48	48	48	48	48
Philadelphia.....					{ 44.4 50.0 }	72.5	80.0	110.0	110.0	100.0					{ 54 48 }	44	44	44	44	44	44	44
Pittsburgh.....	37.5	37.5	37.5	37.5	46.9	57.5	70.0	80.0	90.0	90.0	48	48	48	48	48	48	48	48	48	48	48	48
Portland, Oreg.....	45.0	45.0	45.0	45.0	50.0	72.2	80.0	88.0	88.0	80.0	54	54	54	54	48	48	44	44	44	44	44	44
St. Louis.....	33.3	33.3	33.3	33.3	40.0	50.0	80.0	90.0	100.0	90.0	54	54	54	54	54	54	48	48	44	44	44	44
Salt Lake City.....	44.7	44.7	44.7	45.7	56.3	62.5	75.0	87.5	87.5	3 65.0	48	48	48	48	48	48	48	48	48	48	48	1 48
San Francisco.....	50.0	50.0	50.0		50.0	72.5	80.0	90.0	90.0	80.0	48	48	48	48	48	48	44	44	44	44	44	44
Seattle.....						75.0	80.0	88.0	80.0	75.0						48	44	44	44	44	44	44

Boiler makers, manufacturing and jobbing shops.

Baltimore.....	30.6	30.6	30.6	30.6	48.0	50.0	80.0	80.0	80.0	80.0	54	54	54	54	49½	44	44	44	44	44	44	
Birmingham.....	40.0	40.0	40.0	42.5	47.5	67.5	80.0	90.0	75.0	75.0	60	60	60	60	60	48	48	48	48	48	48	48
Buffalo.....	36.0	36.0	36.0	40.0	46.0	70.0	80.0	80.0	80.0	77.0	54	54	54	54	54	54	1 48	1 48	1 48	1 48	1 48	1 48
Charleston, S. C.....	36.1	36.1	36.1		42.8	72.5	80.0	90.0	90.0	72.0	54	54	54		54	48	1 48	1 48	44	44	44	44
Chicago.....	40.0	40.0	40.0	40.0	42.0	52.0	60.0	74.0	74.0	70.0	54	54	54	54	54	54	54	54	54	54	54	54
Cincinnati.....	40.0	35.0	35.0	35.0	38.0	40.0	55.0	100.0	80.0	70.0	54	49½	49½	49½	49½	49½	49½	49½	50	50	49½	49½
Cleveland.....	35.0	35.0	35.0	40.0	50.0	60.0	70.0	85.0	80.0	80.0	54	4 49½	4 49½	4 49½	4 49½	49½	49½	49½	49½	49½	49½	49½
Indianapolis.....	35.0	35.0	35.0	37.5	42.0	50.0	55.0	75.0	75.0	75.0	50	50	50	50	48	48	48	48	48	48	48	48
Kansas City, Mo.....	38.0	40.0	40.0	40.0	45.0	45.0	68.8	100.0	100.0	90.0	54	54	54	54	54	54	44	44	44	44	44	44
Los Angeles.....								71.9	71.9	75.0									48	48	48	48
Louisville.....	32.0	32.0	32.0	32.0	35.0	45.0	65.0	76.0	76.0	76.0	54	54	54	54	50	50	50	48	48	48	48	48
Memphis.....	41.0	41.0	41.0	41.0	45.0	55.0	70.0	75.0	90.0	90.0	54	54	54	54	54	54	54½	54½	48	48	48	48
Milwaukee.....								85.0	85.0	80.0									44	44	44	44
New Orleans.....	38.9	38.9	38.9	38.9	43.8	62.5	80.0	80.0	80.0	75.0	54	54	54	54	48	48	48	48	48	48	48	48
New York.....	41.7	41.7	41.7	46.9	49.4	70.0	80.0	80.0	72.0	64.0	54	54	54	48	48	48	48	48	48	48	48	48

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UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922—Continued.

Bricklayers—Concluded.

City.	Rates per hour (cents).										Hours per week.									
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
New Orleans.....	62.5	62.5	62.5	62.5	62.5	62.5	75.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
New York.....	70.0	75.0	75.0	75.0	75.0	81.3	87.5	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44
Omaha.....	70.0	70.0	70.0	75.0	75.0	75.0	87.5	125.0	112.5	100.0	44	44	44	44	44	44	44	44	44	44
Philadelphia.....	62.5	65.0	65.0	65.0	70.0	80.0	80.0	130.0	130.0	125.0	44	44	44	44	44	44	44	44	44	44
Pittsburgh.....	70.0	70.0	70.0	70.0	75.0	75.0	90.0	112.5	150.0	130.0	44	44	44	44	44	44	44	44	44	44
Portland, Oreg.....	75.0	75.0	75.0	75.0	75.0	87.5	100.0	125.0	125.0	112.5	44	44	44	44	44	44	44	44	44	44
Providence.....	65.0	65.0	65.0	65.0	70.0	70.0	80.0	115.0	115.0	115.0	44	44	44	44	44	44	44	44	44	44
Richmond, Va.....	65.0	65.0	65.0	65.0	75.0	75.0	87.5	100.0	100.0	100.0	45	45	15 45	15 45	15 45	15 45	15 45	15 45	15 45	15 45
St. Louis.....	70.0	75.0	75.0	75.0	75.0	85.0	100.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44
St. Paul.....	65.0	70.0	70.0	70.0	75.0	75.0	87.5	125.0	112.5	100.0	48	48	48	44	44	18 44	44	44	44	44
Salt Lake City.....	75.0	80.0	80.0	80.0	87.5	87.5	100.0	125.0	112.5	112.5	44	44	44	44	44	44	44	44	44	44
San Francisco.....	87.5	87.5	87.5	87.5	87.5	100.0	112.5	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44
Scranton.....	60.0	60.0	60.0	65.0	70.0	75.0	75.0	112.5	125.0	125.0	9 44	9 44	13 44	13 44	44	44	44	44	44	44
Seattle.....	75.0	75.0	75.0	75.0	81.3	100.0	112.5	125.0	112.5	112.5	44	44	44	44	44	44	44	44	44	44
Washington.....	62.5	66.7	66.7	70.0	70.0	75.0	87.5	100.0	125.0	137.5	16 45	16 45	16 45	16 45	16 45	16 45	44	44	44	44

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Building laborers.

Boston.....	35.0	35.0	35.0	35.0	37.5	40.0	40.0	67.5 70.0	67.5 70.0	67.5 70.0	48	48	48	48	48	48	44	44	44	44
Chicago.....	40.0	40.0	40.0	42.5	45.0	50.0	57.5	100.0	100.0	72.5	44	44	44	44	44	44	44	44	44	44
Cincinnati.....		25.0	25.0	25.0	30.0	35.0	40.0	45.0	50.0	40.0		50	50	50	50	50	50	50	50	50
Cleveland.....			31.3	31.3	40.0	55.0	57.5	87.5	87.5	57.5			48	48	44	44	44	44	44	44
Detroit.....			30.0	30.0			65.0	75.0	60.0	50.0			54	54			44	44	44	44
Fall River.....									50.0	50.0									44	48
Kansas City, Mo.....	27.5	30.0	35.0	35.0	37.5	37.5	57.5	75.0	75.0	70.0	48	48	48	48	48	48	48	44	44	44
Los Angeles.....	34.4	34.4	34.4	34.4	34.4	43.8	50.0	62.5	62.5	62.5	44	44	44	44	44	44	44	44	44	44
Louisville.....	27.9	27.9	22.2	22.2	22.2	30.0	35.0	50.0	40.0	40.0	48	48	54	54	54	50	50	44	44	44
Manchester.....									55.0	55.0									44	44
Milwaukee.....								65.0	65.0	55.0									44	44
Minneapolis.....								55.0	55.0	55.0									44	44

New Orleans.....										50.0	50.0									45	45
New York.....	22.5	22.5	25.0	25.0	30.0	40.5	40.5	75.0		60.0	60.0									44	44
Omaha.....				30.0	30.0	45.0	50.0	60.0		81.3	81.3	48	48	44	44	44	48	48		48	48
Pittsburgh.....	25.0	25.0	25.0	30.0	30.0	45.0	45.0	70.0		100.0	80.0									48	48
Portland, Oreg.....	37.5	37.5	37.5	37.5	37.5	50.0	62.5	75.0		80.0	50.0	54	54	54	48	48	48	44	44	44	44
Providence.....	25.0	25.0	25.0	25.0	30.0	35.0	47.5	50.0		67.5	67.5	48	48	48	48	48	48	44	44	44	44
St. Louis.....	25.0	25.0	25.0	25.0	30.0	33.3	40.0	54.0		50.0	40.0	50	50	50	50	50	50	50	50	44	44
St. Paul.....						40.0	45.0	67.5		67.5	67.5	44	44	44	44	44	44	44	44	44	44
Salt Lake City.....								50.0	68.8	56.3	343.8									49½	49½
San Francisco.....	27.8	31.3	31.3	31.3	37.5	43.8	62.5	75.0		81.3	62.5	54	48	48	48	48	48	48	48	44	48
Scranton.....	25.0	25.0	22.5	30.0	30.0	30.0	50.0	58.5		70.0	60.0	54	54	54	48	48	48	48	48	48	44
Seattle.....	37.5	37.5	37.5	37.5	43.8	56.3	68.8	75.0		75.0	62.5	44	44	44	44	44	44	40	44	44	44
Washington.....	25.0	25.0	25.0	25.0	31.3	40.0	50.0	50.0		50.0	62.5	48	48	48	48	44	44	44	44	44	44

Carpenters.

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Atlanta.....	40.0	40.0	40.0	40.0	50.0	50.0	60.0	80.0	70.0	70.0	50	50	50	50	50	44	44	44	44	44	44
Baltimore.....	43.8	43.8	43.8	43.8	50.0	62.5	80.0	90.0	90.0	80.0	48	17 44	17 44	17 44	17 44	44	44	44	44	44	44
Birmingham.....	52.5	45.0	45.0	45.0	45.0	55.0	65.0	75.0	75.0	75.0	48	48	48	48	48	44	44	44	44	44	44
Boston.....	50.0	55.0	55.0	57.0	60.0	65.0	75.0	100.0	100.0	100.0	44	44	44	18 44	18 44	40	40	40	40	40	40
Buffalo.....	50.0	50.0	50.0	50.0	62.5	70.0	70.0	100.0	87.5	87.5	48	48	1 48	1 48	44	44	44	44	44	44	44
Charleston, S. C.....	33.3	33.3	33.3	33.3	33.3	37.5	70.0	80.0	80.0	65.0	2 53	2 53	2 53	2 53	2 53	48	48	48	48	48	48
Chicago.....	65.0	65.0	65.0	70.0	70.0	70.0	80.0	125.0	125.0	110.0	44	44	44	44	44	44	44	44	44	44	44
Cincinnati.....	50.0	50.0	55.0	60.0	62.5	65.0	70.0	100.0	100.0	95.0	44½	44½	44½	44½	44½	44½	44½	44½	44½	44½	44½
Cleveland.....	50.0	55.0	55.0	60.0	70.0	80.0	85.0	125.0	125.0	104.0	48	44	44	44	44	44	44	44	44	44	44
Dallas.....	55.0	55.0	60.0	60.0	62.5	62.5	87.5	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Denver.....	60.0	60.0	60.0	60.0	70.0	75.0	87.5	112.5	112.5	100.0	44	44	44	44	44	44	44	44	44	44	44
Detroit.....	50.0	50.0	50.0	50.0	60.0	60.0	80.0	100.0	85.0	85.0	48	48	48	48	48	44	44	44	44	44	44
Fall River.....	42.0	44.0	44.0	48.0	50.0	62.5	75.0	100.0	100.0	85.0	48	48	44	44	44	44	44	44	44	44	44
Indianapolis.....	50.0	50.0	55.0	55.0	57.5	60.0	75.0	100.0	92.5	92.5	44½	44½	44	44	44½	44½	44½	44½	44½	44½	44½
Jacksonville.....	31.3	37.5	37.5	37.5	37.5	40.0	45.0	65.0	80.0	80.0	48	48	48	48	48	48	48	48	44	44	44

¹ 44 hours per week, June to August, inclusive.
² Work 53 hours, paid for 54.
³ Prevailing rate; no effective union scale.
⁹ 48 hours per week, September to April, inclusive.

¹³ 48 hours per week, October to April, inclusive.
¹⁴ 40 hours per week, July 1 to September 7, inclusive.
¹⁵ 44½ hours per week, December to February, inclusive.

¹⁶ 44½ hours per week, October to April, inclusive.
¹⁷ 48 hours per week, November to March, inclusive.
¹⁸ 40 hours per week, June to September, inclusive.

UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922—Continued.

Carpenters—Concluded.

City.	Rates per hour (cents).											Hours per week.									
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	
Kansas City, Mo.....	55.0	60.0	65.0	65.0	65.0	65.0	85.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Little Rock.....	50.0	50.0	50.0	50.0	60.0	60.0	80.0	92.5	80.0	80.0	48	48	48	44	44	44	44	44	44	44	44
Los Angeles.....	50.0	50.0	50.0	50.0	50.0	62.5	75.0	87.5	100.0	100.0	48	48	48	44	48	48	44	44	44	44	44
Louisville.....	45.0	45.0	45.0	45.0	50.0	60.0	60.0	80.0	80.0	80.0	44	44	44	44	44	44	44	44	44	44	44
Manchester.....	40.0	40.0	40.0	40.0	50.0	60.0	60.0	100.0	90.0	90.0	48	48	48	48	44	44	44	44	44	44	44
Memphis.....	50.0	50.0	50.0	50.0	55.0	65.0	75.0	100.0	75.0	75.0	44	44	44	44	44	44	44	44	44	44	44
Milwaukee.....	50.0	50.0	50.0	50.0	56.3	56.3	70.0	100.0	85.0	85.0	44	44	44	44	44	44	44	44	44	44	44
Minneapolis.....	50.0	50.0	50.0	50.0	55.0	60.0	75.0	100.0	100.0	80.0	48	48	48	48	48	44	44	44	44	44	44
Newark, N. J.....	50.0	50.0	50.0	56.3	65.0	70.0	80.0	100.0	100.0	112.5	44	44	44	44	44	44	44	44	44	44	44
New Haven.....	47.5	50.0	50.0	50.0	55.0	55.0	65.0	100.0	100.0	90.0	44	44	44	44	44	44	44	44	44	44	44
New Orleans.....	40.0	40.0	40.0	40.0	40.0	50.0	60.0	75.0	100.0	100.0	48	48	48	48	48	48	48	48	44	44	44
New York.....	62.5	62.5	62.5	62.5	68.8	68.8	75.0	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44
Omaha.....	50.0	50.0	50.0	50.0	57.5	60.0	75.0	112.5	101.3	90.0	44	44	44	44	44	44	44	44	44	44	44
Philadelphia.....	50.0	55.0	55.0	55.0	60.0	70.0	80.0	112.5	112.5	90.0	44	44	44	44	44	44	44	44	44	44	44
Pittsburgh.....	55.0	56.3	62.5	62.5	71.0	71.0	80.0	90.0	125.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Portland, Ore.....	50.0	50.0	50.0	50.0	56.3	75.0	86.0	100.0	90.0	90.0	44	44	44	44	44	44	44	44	44	44	44
Providence.....	50.0	50.0	50.0	50.0	50.0	60.0	70.0	100.0	100.0	85.0	44	44	44	44	44	44	44	44	44	44	44
Richmond, Va.....	37.5	37.5	37.5	37.5	48.8	62.5	62.5	72.5	72.5	72.5	48	48	48	48	48	48	48	47	47	47	47
St. Louis.....	62.5	62.5	62.5	62.5	65.0	70.0	82.5	100.0	125.0	110.0	44	44	44	44	44	44	44	44	44	44	44
St. Paul.....	50.0	50.0	50.0	50.0	55.0	60.0	75.0	100.0	100.0	80.0	48	48	48	48	48	44	44	44	44	44	44
Salt Lake City.....	62.5	62.5	62.5	62.5	75.0	75.0	100.0	112.5	100.0	⁸ 90.0	44	44	44	44	44	44	44	44	44	44	44
San Francisco.....	62.5	62.5	62.5	62.5	68.8	75.0	87.5	106.3	112.5	104.4	44	44	44	44	44	44	44	44	44	44	44
Scranton.....	42.5	47.5	47.5	50.0	50.0	60.0	70.0	87.5	87.5	87.5	48	48	44	44	44	44	44	44	44	44	44
Seattle.....	56.3	56.3	56.3	56.3	65.0	82.5	93.8	100.0	87.5	87.5	44	44	44	44	44	44	40	44	44	44	44
Washington.....	50.0	50.0	55.0	55.0	62.5	62.5	87.5	95.0	105.0	105.0	44½	44½	44½	44½	44½	44½	44	44	44	44	44

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Cement finishers.

Baltimore.....				50.0	50.0	62.5	75.0	100.0	100.0	100.0				48	48	44	44	44	44
Birmingham.....	50.0	50.0	50.0	62.5	62.5	62.5	75.0	75.0	100.0	100.0	48	48	48	48	48	44	44	44	44
Boston.....	62.5	62.5	62.5	62.5	62.5	70.0	75.0	100.0	100.0	100.0	48	44	44	44	44	44	44	44	44
Buffalo.....				50.0	50.0	65.0	65.0	100.0	100.0	85.0				48	48	48	48	44	44
Chicago.....	65.0	65.0	65.0	65.0	67.5	75.0	80.0	125.0	125.0	110.0	44	44	44	44	44	44	44	44	44
Cincinnati.....	50.0	50.0	50.0	50.0	55.0	57.5	60.0	90.0	90.0	87.5	50	50	50	50	50	50	50	44½	44½
Cleveland.....	60.0	60.0	60.0	60.0	65.0	77.5	80.0	90.0	125.0	104.0	48	¹⁹ 48	¹⁹ 48	44	44	44	44	44	44
Dallas.....	50.0	55.0	55.0	62.5	62.5	62.5	87.5	100.0	125.0	125.0	48	48	48	48	48	48	48	48	48
Denver.....	50.0	62.5	62.5	65.0	62.5	75.0	87.5	100.0	100.0	100.0	44	44				44	44	44	44
Detroit.....	68.8	68.8			55.0	60.0	80.0	125.0	100.0	100.0	44	44				44	44	44	44
Fall River.....				60.0	65.0	75.0	85.0	115.0	115.0	95.0						44	44	44	44
Indianapolis.....	50.0	55.0	57.5	57.5	60.0	62.5	70.0	90.0	100.0	90.0	50	50	50	50	50	50	50	50	50
Kansas City, Mo.....	62.5	65.0	65.0	65.0	65.0	75.0	87.5	107.5	107.5	100.0	44	44	44	44	44	44	44	44	44
Little Rock.....	55.6	55.6	55.6	55.6	75.0	75.0	87.5	100.0	112.5	112.5	54	54	54	54	54	²⁰ 44	²⁰ 44	44	44
Los Angeles.....								100.0	112.5	112.5								44	44
Louisville.....	45.0	45.0	45.0	45.0		60.0	70.0	80.0	90.0	90.0	60	60	60	60		44	44	44	44
Manchester.....				60.0	60.0	75.0	90.0	112.5	112.5	112.5					44	44	44	44	44
Milwaukee.....	45.0	45.0	45.0	45.0	50.0	60.0	70.0	85.0	100.0	100.0	48	48	48	48	44	44	44	44	44
Minneapolis.....		50.0	50.0	50.0	55.0	55.0	75.0	100.0	100.0	100.0		48	48	48	48	48	44	44	44
Newark, N. J.....	62.5	62.5	65.0	70.0	75.0	87.5	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44
New Haven.....				60.0	65.0	70.0	82.5	100.0	100.0	100.0					44	44	44	44	44
New Orleans.....									100.0	100.0									45
New York.....	62.5	62.5	62.5	62.5	70.0	70.0	75.0	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44
Omaha.....		{ 55.0	62.5	62.5	62.5	62.5	75.0	112.5	100.0	100.0			44	44	44	44	44	44	44
Philadelphia.....	45.0	47.5	50.0	50.0	55.0	65.0	72.5	100.0	100.0	80.0	49½	48	44	44	44	44	44	44	44
Pittsburgh.....		50.0	50.0	50.0	56.3	75.0	75.0	82.5	112.5	87.5		48	48	44	44	44	44	44	44
Portland, Oreg.....	62.5	62.5	62.5	62.5	62.5	87.5	87.5	100.0	90.0	90.0	48	48	48	48	44	44	44	44	44
Providence.....		50.0	50.0	62.5	62.5	62.5	80.0	100.0	100.0	87.5		44	44	44	44	44	44	44	44
Richmond, Va.....								87.5	87.5	87.5									44
St. Louis.....	60.0	60.0	60.0	{ 62.5	62.5	75.0	82.5	125.0	125.0	100.0	44	44	44	44	44	44	44	44	44
St. Paul.....	50.0	50.0	55.0	60.0	60.0	60.0	75.0	100.0	100.0	80.0	48	48	48	48	48	48	44	44	44
Salt Lake City.....	62.5	62.5	62.5	62.5	75.0	75.0	87.5	112.5	100.0	³ 87.5	48	48	48	48	48	48	48	44	44
San Francisco.....	75.0	75.0	75.0	75.0	75.0	87.5	100.0	112.5	112.5	104.4	44	44	44	44	44	44	44	44	44
Seattle.....	62.5	62.5	62.5	62.5	68.8	81.3	100.0	112.5	112.5	100.0	48	48	48	48	48	48	40	40	40
Washington.....				62.5	70.0	70.0	87.5	90.0	100.0	100.0					44	44	44	44	44

³ Prevailing rate; no effective union scale.

¹⁹ 44 hours per week, June to September, inclusive.

²⁰ 48 hours per week, October to March, inclusive.

UNION SCALE OF WAGES AND HOURS OF LABOR.

UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922—Continued.

Compositors: Book and job.

City.	Rates per hour (cents).										Hours per week.									
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Atlanta.....	34.4	37.5	37.5	37.5	37.5	37.5	43.8	57.5	75.0	80.0	48	48	48	48	48	48	48	48	48	44
Baltimore.....	37.5	37.5	37.5	37.5	43.8	43.8	54.2	81.3	83.3	83.3	48	48	48	48	48	48	48	48	48	48
Birmingham.....	40.6	40.6	40.6	40.6	44.8	44.8	44.8	76.0	80.0	80.0	48	48	48	48	48	48	48	48	44	44
Boston.....	41.7	43.8	43.8	43.8	45.8	50.0	55.2	72.9	87.0	87.0	48	48	48	48	48	48	48	48	44	44
Buffalo.....	39.6	39.6	41.7	41.7	43.8	45.8	59.4	71.9	83.3	90.9	48	48	48	48	48	48	48	48	48	44
Charleston, S. C.....	33.3	33.3	33.3	33.3	37.5	37.5	37.5	37.5	98.9	98.9	48	48	48	48	48	48	48	48	48	44
Chicago.....	46.9	50.0	50.0	50.0	50.0	57.3	75.0	95.8	106.0	106.0	48	48	48	48	48	48	48	48	48	44
Cincinnati.....	40.6	43.8	43.8	43.8	46.9	46.9	51.0	75.0	104.5	104.5	48	48	48	48	48	48	48	48	48	44
Cleveland.....	39.6	41.7	41.7	41.7	43.8	50.0	62.5	87.5	93.8	93.8	48	48	48	48	48	48	48	48	48	44
Dallas.....	52.1	52.1	52.1	52.1	52.1	57.3	70.8	88.5	100.0	93.2	48	48	48	48	48	48	48	48	48	44
Denver.....	54.2	54.2	54.2	54.2	54.2	59.4	65.6	81.3	81.3	81.3	48	48	48	48	48	48	48	48	48	48
Detroit.....	38.5	39.6	43.8	45.8	50.0	54.7	72.9	92.7	96.9	105.0	48	48	48	48	48	48	48	48	48	44
Fall River.....	33.3	33.3	33.3	35.4	37.5	39.6	41.7	62.5	72.7	72.7	48	48	48	48	48	48	48	48	44	44
Indianapolis.....	43.8	43.8	45.8	45.8	45.8	52.1	54.2	75.0	100.0	92.7	48	48	48	48	48	48	48	48	48	44
Jacksonville.....	37.5	43.8	43.8	43.8	43.8	43.8	52.1	75.0	81.8	81.8	48	48	48	48	48	48	48	48	44	44
Kansas City, Mo.....	41.7	41.7	43.8	43.8	45.8	50.0	54.2	72.9	84.4	84.4	48	48	48	48	48	48	48	48	48	48
Little Rock.....	37.5	37.5	41.7	41.7	43.8	43.8	43.8	72.9	72.9	70.0	48	48	48	48	48	48	48	48	48	44
Los Angeles.....	46.9	50.0	50.0	50.0	50.0	52.1	58.3	75.0	95.5	95.5	48	48	48	48	48	48	48	48	48	44
Louisville.....	37.5	39.6	39.6	39.6	39.6	43.8	45.8	45.8	79.2	79.0	48	48	48	48	48	48	48	48	48	44
Manchester.....	35.4	35.4	35.4	35.4	37.5	39.6	41.7	66.7	77.3	79.5	48	48	48	48	48	48	48	48	48	44
Memphis.....	40.0	40.0	45.0	45.0	47.1	48.1	55.4	93.8	93.8	82.3	48	48	48	48	48	48	48	48	48	44
Milwaukee.....	41.7	43.8	45.8	45.8	47.9	47.9	54.2	72.9	85.4	93.2	48	48	48	48	48	48	48	48	48	44
Minneapolis.....	43.8	43.8	43.8	43.8	45.8	45.8	54.0	87.5	87.5	95.5	48	48	48	48	48	48	48	48	48	44
Newark, N. J.....	47.9	47.9	47.9	50.0	50.0	56.3	72.9	91.7	111.4	102.3	48	48	48	48	48	48	48	48	44	44
New Haven.....	40.6	40.6	40.6	40.6	40.6	44.8	45.8	58.3	58.3	86.4	48	48	48	48	48	48	48	48	48	44
New Orleans.....	43.8	43.8	43.8	43.8	43.8	43.8	50.0	71.9	71.9	78.4	48	48	48	48	48	48	48	48	48	44
New York.....	50.0	50.0	50.0	52.1	52.1	58.3	75.0	93.8	113.6	113.6	48	48	48	48	48	48	48	48	44	44
Omaha.....	37.5	37.5	43.8	45.8	46.9	53.1	68.8	87.5	93.2	93.2	48	48	48	48	48	48	48	48	44	44
Philadelphia.....	39.6	41.7	41.7	41.7	43.8	50.0	60.4	89.6	89.6	89.6	48	48	48	48	48	48	48	48	48	44
Pittsburgh.....	39.6	41.7	41.7	43.8	43.8	47.9	60.4	81.3	100.0	100.0	48	48	48	48	48	48	48	48	48	44
Portland, Oreg.....	53.1	53.1	53.1	53.1	53.5	59.4	75.0	85.4	95.8	95.8	48	48	48	48	48	48	48	48	48	44
Providence.....	37.5	37.5	37.5	37.5	37.5	45.8	50.0	72.9	72.9	79.5	48	48	48	48	48	48	48	48	48	44
Richmond, Va.....	33.3	33.3	37.5	37.5	37.5	37.5	48.5	56.3	56.3	81.8	48	48	48	48	48	48	48	48	48	44

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St. Louis.....	43.8	43.8	43.8	45.8	47.9	52.7	52.7	79.2	92.8	92.8	48	48	48	48	48	48	48	44	44
St. Paul.....	43.8	43.8	43.8	43.8	45.8	45.8	54.0	83.3	87.5	95.5	48	48	48	48	48	48	48	48	44
Salt Lake City.....	50.0	50.0	52.1	54.2	54.2	54.2	62.5	75.0	75.0	75.0	48	48	48	48	48	48	48	48	48
San Francisco.....	50.0	50.0	50.0	52.6	54.2	58.3	62.5	81.3	104.5	104.5	48	48	48	48	48	48	48	48	44
Scranton.....	43.8	43.8	43.8	43.8	47.9	47.9	52.1	71.9	77.1	77.1	48	48	48	48	48	48	48	48	48
Seattle.....	53.1	53.1	53.1	53.1	56.3	59.4	75.0	87.5	93.8	93.8	48	48	48	48	48	48	48	48	44
Washington.....	40.0	40.0	40.0	43.8	47.9	50.0	62.5	83.3	90.9	90.9	48	48	48	48	21 48	21 48	21 48	21 48	44

Compositors, daywork: Newspaper.

Atlanta.....	43.8	43.8	43.8	43.8	43.8	50.0	60.6	63.8	91.0	86.5	48	48	48	48	48	48	48	48	48
Baltimore.....	50.0	57.1	59.5	59.5	61.9	61.9	65.5	93.3	93.3	95.5	42	42	42	42	42	42	42	45	44
Birmingham.....	52.5	53.0	54.5	55.5	56.5	57.5	67.5	67.5	67.5	82.5	22 42	22 42	22 42	22 42	22 42	22 42	22 42	22 42	22 42
Boston.....	63.0	63.0	63.0	63.0	68.0	68.0	83.0	95.0	95.0	107.0	23 42	23 42	23 42	23 42	23 42	23 42	23 42	23 42	44
Buffalo.....	50.0	50.0	50.0	50.0	53.1	59.4	65.6	71.9	87.5	87.5	48	48	48	48	48	48	48	48	48
Charleston, S. C.....	33.3	33.3	33.3	33.3	42.9	42.9	42.9	42.9	90.6	90.6	48	48	48	48	22 42	22 42	22 42	22 42	48
Chicago.....	62.0	62.0	62.0	62.0	66.0	66.0	79.0	89.0	115.0	115.0	24 45	24 45	24 45	24 45	24 45	24 45	24 45	24 45	48
Cincinnati.....	52.1	54.2	56.3	56.3	56.3	56.3	87.5	107.3	107.3	107.3	25 47½	25 47½	25 47½	25 47½	25 47½	25 47½	25 47½	25 47½	48
Cleveland.....	53.8	53.8	53.8	53.8	62.5	62.5	68.8	87.5	93.8	96.9	48	48	48	48	48	48	48	48	48
Dallas.....	55.0	55.0	55.0	59.4	59.4	62.5	76.0	88.5	88.5	90.6	48	48	48	48	48	48	48	48	48
Denver.....	63.3	63.3	63.3	63.3	63.3	72.7	72.7	97.8	97.8	93.3	45	45	45	45	45	45	45	45	45
Detroit.....	55.0	55.0	55.0	55.0	60.5	60.5	74.5	87.0	97.0	97.0	48	48	26 48	26 48	26 48	26 48	26 48	26 48	45
Fall River.....	37.5	40.6	43.8	43.8	44.8	45.8	49.0	75.0	79.2	79.2	48	48	48	48	48	48	48	48	48
Indianapolis.....	50.0	50.0	50.0	50.0	56.3	56.3	60.4	81.3	93.8	89.6	48	48	48	48	48	48	48	48	48
Jacksonville.....	37.5	46.9	46.9	46.9	46.9	52.1	65.6	83.3	83.3	83.3	48	48	48	48	48	48	48	48	48
Kansas City, Mo.....	59.4	59.4	59.4	59.4	59.4	59.4	68.8	90.6	90.6	90.6	48	48	48	48	48	48	48	48	48
Little Rock.....	47.9	50.0	50.0	50.0	52.1	52.1	62.5	72.9	83.3	83.3	48	48	48	48	48	48	48	48	48
Los Angeles.....	62.5	64.4	64.4	64.4	66.7	66.7	75.6	86.7	86.7	101.1	45	45	45	45	45	45	45	45	45
Louisville.....	49.0	50.0	50.0	50.0	54.2	54.2	62.5	87.5	82.9	82.5	48	48	48	48	48	48	48	48	48
Manchester.....	35.4	35.4	35.4	35.4	47.5	39.6	41.7	66.7	70.8	72.9	48	48	48	48	48	48	48	48	48
Memphis.....	57.8	57.8	57.8	57.8	57.8	60.0	66.7	86.7	92.8	88.9	45	45	45	45	22 45	22 45	22 45	22 45	45
Milwaukee.....	45.8	47.9	50.0	50.0	54.2	56.3	56.3	77.1	93.8	93.8	48	48	48	48	48	48	48	48	48
Minneapolis.....	54.0	54.0	54.0	54.0	54.0	54.0	62.5	87.5	93.8	88.5	48	48	48	48	48	48	48	48	48
Newark, N. J.....	60.9	60.9	60.9	60.9	63.0	69.6	76.1	89.1	110.9	110.9	46	46	46	46	46	46	46	46	46
New Haven.....	46.9	46.9	47.9	47.9	50.0	50.0	50.0	72.9	79.2	79.2	48	48	48	48	48	48	48	48	48
New York.....	66.7	66.7	66.7	66.7	66.7	71.1	96.7	122.2	122.2	122.2	45	45	45	45	45	45	45	45	45
Omaha.....	50.0	50.0	53.1	53.1	53.1	53.1	68.8	87.5	87.5	87.5	48	48	48	48	48	48	48	48	48
Philadelphia.....	41.7	41.7	41.7	41.7	41.7	50.0	66.7	81.3	79.2	79.2	48	48	48	48	48	48	48	48	48
Pittsburgh.....	55.0	60.0	60.0	60.0	61.0	65.0	77.0	87.5	111.8	111.8	48	22 45	22 45	22 45	22 45	22 45	22 45	48	46½
Portland, Oreg.....	68.3	68.3	68.3	68.3	68.3	72.7	100.0	106.7	106.7	106.7	45	45	45	45	45	45	45	45	45

²¹ 44 hours per week for 3 months, between June 1 and Sept. 30.²² Minimum; maximum, 8 hours per day.²³ Actual hours worked; minimum, 6; maximum, 8 hours per day.²⁴ Actual hours worked; minimum, 7; maximum, 8 hours per day.²⁵ Work 47½ hours, paid for 48.²⁶ Maximum; minimum, 7 hours per day.

UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922—Continued.

Compositors, daywork: Newspaper—Concluded.

City.	Rates per hour (cents).										Hours per week.									
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Providence.....	47.9	47.9	50.0	50.0	50.0	52.1	66.7	87.5	100.0	95.8	48	48	48	48	48	48	48	48	48	48
Richmond, Va.....	33.3	33.3	37.5	37.5	37.5	45.8	45.8	58.3	87.5	87.5	48	48	48	48	48	48	48	48	48	48
St. Louis.....	58.7	58.7	58.7	58.7	63.4	63.4	63.4	91.3	91.3	91.3	46	46	46	46	46	46	46	46	46	46
St. Paul.....	54.5	54.5	54.5	54.5	54.5	54.5	63.0	87.5	88.8	88.8	48	48	48	48	48	48	48	48	48	48
Salt Lake City.....	62.5	62.5	62.5	62.5	62.5	62.5	71.9	87.5	87.5	94.4	48	48	48	48	48	48	48	48	48	48
San Francisco.....	64.4	64.4	69.0	69.0	69.0	68.9	75.6	93.3	107.8	107.8	45	45	42	42	42	45	45	45	45	45
Scranton.....	47.9	47.9	47.9	47.9	52.1	52.1	60.4	81.3	87.5	87.5	48	48	48	48	48	48	48	48	48	48
Seattle.....	75.0	75.0	75.0	75.0	78.6	78.6	100.0	114.3	114.3	114.3	42	42	42	42	42	42	42	42	42	42
Washington.....	60.7	60.7	60.7	60.7	60.7	69.8	92.9	104.0	104.0	104.0	42	42	42	42	42	42	42	42	42	42

Electotypers: Finishers.

Atlanta.....	45.8	50.0	50.0	50.0	50.0	50.0	57.3	88.5	96.6	93.2	48	48	48	48	48	48	48	48	48	44	44
Birmingham.....	50.0	50.0	50.0	50.0	50.0	50.0	50.0	72.9	89.8	89.8	48	48	48	48	48	48	48	48	48	44	44
Boston.....	50.0	50.0	50.0	50.0	50.0	52.5	52.5	78.1	90.6	90.6	48	48	48	48	48	48	48	48	48	48	48
Buffalo.....	43.8	43.8	43.8	43.8	43.8	50.0	56.3	72.9	77.1	77.1	48	48	48	48	48	48	48	48	48	48	48
Chicago.....	49.0	52.1	52.1	52.1	56.3	58.3	77.1	104.2	113.7	108.0	48	48	48	48	48	48	48	48	48	44	44
Cincinnati.....	43.8	45.8	45.8	45.8	45.8	47.9	52.1	66.7	87.5	95.5	48	48	48	48	48	48	48	48	48	48	44
Cleveland.....	41.7	44.8	47.9	47.9	47.9	52.1	58.3	83.3	83.3	75.0	48	48	48	48	48	48	48	48	48	48	48
Denver.....	43.8	43.8	43.8	43.8	47.9	47.9	54.2	62.5	75.0	75.0	48	48	48	48	48	48	48	48	48	44	44
Detroit.....	37.5	47.9	47.9	52.1	52.1	56.3	56.3	93.8	102.3	102.3	48	48	48	48	48	48	48	48	48	44	44
Indianapolis.....	43.8	45.8	45.8	47.9	50.0	50.0	63.6	63.6	63.6	85.2	48	48	48	44	44	44	44	44	44	44	44
Kansas City, Mo.....	43.8	43.8	46.9	46.9	50.0	50.0	62.5	90.6	89.6	89.6	48	48	48	48	48	48	48	48	48	48	48
Los Angeles.....	50.0	50.0	50.0	56.3	56.3	56.3	70.8	86.4	86.4	86.4	48	48	48	48	48	48	48	48	48	44	44
Milwaukee.....	43.8	43.8	43.8	43.8	50.0	50.0	56.3	75.0	81.3	81.3	48	48	48	48	48	48	48	48	48	48	48
Minneapolis.....	36.1	43.8	43.8	45.8	50.0	50.0	59.4	81.3	91.7	91.7	54	48	48	48	48	48	48	48	48	48	48
Newark, N. J.....	.....	.....	.....	.....	.....	.....	75.0	109.1	134.1	134.1	.....	.....	.....	.....	.....	44	44	44	44	44	
New Haven.....	37.4	39.6	40.7	40.7	44.9	44.9	46.7	62.5	75.0	75.0	54	53	54	54	53½	53½	53½	53½	48	48	
New Orleans.....	.....	.....	.....	40.0	40.0	40.0	55.0	88.9	90.9	90.9	.....	.....	.....	.....	45	45	45	45	44	44	
New York.....	62.5	62.5	65.6	68.8	68.8	68.8	75.0	109.1	134.1	134.1	44	44	44	44	44	44	44	44	44	44	
Omaha.....	43.8	43.8	43.8	43.8	52.1	52.1	66.7	113.6	102.3	102.3	48	48	48	48	48	48	48	48	44	44	
Philadelphia.....	41.7	47.9	47.9	50.0	52.1	64.2	70.0	103.1	113.6	113.6	48	48	48	48	48	48	48	48	44	44	

Pittsburgh.....	43.8	43.8	43.8	43.8	45.8	45.8	85.4	79.2	70.2	48	48	48	48	48	48	48	48	48	48
Portland, Oreg.....	50.0	50.0	50.0	50.0	56.3	56.3	90.9	104.5	104.5	48	48	48	48	48	48	48	48	48	48
Richmond, Va.....			46.3	46.3	52.1	57.3	60.4	78.1	93.8			54	54	48	48	48	48	48	48
St. Louis.....	45.8	45.8	45.8	45.8	47.9	55.0	55.0	85.4	89.6	48	48	48	48	48	48	48	48	48	48
St. Paul.....	43.8	43.8	43.8	45.8	50.0	50.0	59.4	81.3	91.7	48	48	48	48	48	48	48	48	48	48
San Francisco.....	56.3	56.3	56.3	56.3	56.3	62.5	62.5	79.2	113.6	48	48	48	48	48	48	48	48	48	44
Seranton.....	41.7	41.7	41.7	41.7	43.8	43.8	50.0	75.0	90.9	48	48	48	48	48	48	48	48	48	44
Seattle.....	52.1	52.1	52.1	52.1	52.1	66.7	77.8	104.5	104.5	48	48	48	48	48	45	45	44	44	44
Washington.....	50.0	50.0	52.1	54.2	56.3	58.3	58.3	93.8	102.3	44	44	48	48	48	48	48	48	48	44

Electrotypers: Molders.

Atlanta.....	45.8	50.0	50.0	50.0	50.0	50.0	57.3	88.5	96.6	90.9	48	48	48	48	48	48	48	48	44	44
Birmingham.....	50.0	50.0	50.0	56.3	50.0	50.0	50.0	72.9	89.8	89.8	48	48	48	48	48	48	48	48	44	44
Boston.....	50.0	50.0	50.0	50.0	50.0	52.5	52.5	78.1	90.6	90.6	48	48	48	48	48	48	48	48	48	48
Buffalo.....	43.8	43.8	43.8	50.0	50.0	50.0	56.3	72.9	77.1	77.1	48	48	48	48	48	48	48	48	48	48
Chicago.....	54.2	56.3	56.3	56.3	60.4	60.4	77.1	104.2	113.7	108.0	48	48	48	48	48	48	48	48	44	44
Cincinnati.....	47.9	50.0	50.0	50.0	50.0	52.1	52.1	70.8	87.5	95.5	48	48	48	48	48	48	48	48	48	44
Cleveland.....	43.8	52.1	52.1	52.1	52.1	56.3	60.4	83.3	83.3	75.0	48	48	48	48	48	48	48	48	48	48
Denver.....	52.1	52.1	52.1	52.1	54.2	54.2	60.4	69.8	79.5	79.5	48	48	48	48	48	48	48	48	44	44
Detroit.....	37.5	47.9	47.9	52.1	52.1	56.3	56.3	93.8	102.3	102.3	48	48	48	48	48	48	48	48	48	44
Indianapolis.....	45.8	47.9	47.9	50.1	52.3	52.3	65.9	65.9	65.9	85.2	48	48	48	44	44	44	44	44	44	44
Kansas City, Mo.....	43.8	43.8	46.9	46.9	50.0	50.0	62.5	90.6	95.8	95.8	48	48	48	48	48	48	48	48	48	48
Los Angeles.....	50.0	50.0	50.0	56.3	56.3	70.8	70.8	86.4	86.4	86.4	48	48	48	48	48	48	48	48	44	44
Milwaukee.....	43.8	43.8	43.8	43.8	50.0	50.0	56.3	75.0	81.3	81.3	48	48	48	48	48	48	48	48	48	48
Minneapolis.....	36.1	50.0	50.0	52.1	56.3	56.3	59.4	81.3	91.7	91.7	54	48	48	48	48	48	48	48	48	48
Newark, N. J.....							75.0	109.1	134.1	134.1									44	44
New Haven.....	37.4	39.6	40.7	40.7	44.9	44.9	46.7	62.5	75.0	75.0	54	53	54	54	53 ²²	53 ²²	53 ²²	53 ²²	48	48
New Orleans.....					40.0	40.0	55.6	88.9	90.9	90.9					45 ²²	45 ²²	45 ²²	45 ²²	44	44
New York.....	62.5	62.5	65.6	68.8	68.8	68.8	75.0	109.1	134.1	134.1	44	44	44	44	44	44	44	44	44	44
Omaha.....	43.8	43.8	43.8	43.8	52.1	52.1	66.7	113.6	102.3	102.3	48	48	48	48	48	48	48	48	44	44
Philadelphia.....	45.8	52.1	52.1	54.2	56.3	64.2	70.0	103.1	113.6	113.6	48	48	48	48	48	48	48	48	44	44
Pittsburgh.....	50.0	50.0	50.0	50.0	52.1	53.1	53.1	87.5	87.5	87.5	48	48	48	48	48	48	48	48	48	48
Portland, Oreg.....	50.0	50.0	50.0	56.3	56.3	90.9	90.9	104.5	104.5	104.5	48	48	48	48	48	48	48	48	44	44
Richmond, Va.....			46.3	46.3	52.1	57.3	60.4	78.1	93.8	93.8			54	54	48	48	48	48	48	48
St. Louis.....	47.9	47.9	47.9	47.9	50.0	57.3	57.3	85.4	89.6	89.6	48	48	48	48	48	48	48	48	48	48
St. Paul.....	50.0	50.0	50.0	52.1	56.3	56.3	59.4	81.3	91.7	91.7	48	48	48	48	48	48	48	48	48	48
San Francisco.....	56.3	56.3	56.3	56.3	56.3	62.5	62.5	79.2	113.6	113.6	48	48	48	48	48	48	48	48	48	44
Seranton.....	47.9	47.9	47.0	47.9	50.0	50.0	56.3	75.0	90.9	90.9	48	48	48	48	48	48	48	48	44	44
Seattle.....	52.1	52.1	52.1	52.1	52.1	66.7	77.8	104.5	104.5	104.5	48	48	48	48	48	48	45	45	44	44
Washington.....	50.0	50.0	52.1	54.2	56.3	58.3	58.3	93.8	102.3	90.9	44	44	48	48	48	48	48	48	48	44

²² Minimum; maximum, 8 hours per day.

²⁷ Maximum; minimum, 45 hours per week.

UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922—Continued.

Granite cutters, inside.

City.	Rates per hour (cents).										Hours per week.										
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	
Atlanta.....	41.3	41.3	41.3	50.0	50.0	60.0	70.0	75.0	100.0	100.0	45	45	45	44	44	44	44	44	44	44	44
Baltimore.....	50.0	50.0	50.0	50.0	50.0	62.5	75.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Boston.....	45.6	45.6	45.6	50.0	50.0	60.0	75.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Buffalo.....	43.8	43.8	50.0	52.1	53.1	63.1	75.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Charleston, S. C.....	45.0	45.0	45.0	45.0	45.0	50.0	69.0	87.5	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Chicago.....	50.0	50.0	50.0	53.1	56.3	66.3	76.3	86.3	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44
Cincinnati.....		50.0	50.0	50.0	50.0	62.5	75.0	100.0	100.0	100.0	44	45	44	44	44	44	44	44	44	44	44
Cleveland.....	50.0	50.0	50.0	50.0	50.0	62.5	81.3	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Dallas.....		50.0	50.0	50.0	50.0	62.5	81.3	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Denver.....	57.0	57.0	57.0	57.0	57.0	68.8	85.0	100.0	106.3	106.3	44	44	44	44	44	44	44	44	44	44	44
Detroit.....	45.0	45.0	45.0	50.0	51.3	62.5	75.0	100.0	100.0	100.0	44½	44½	44½	44	44	44	44	44	44	44	44
Fall River.....	43.0	43.0	43.0	50.0	50.0	62.5	75.0	100.0	100.0	100.0	45	45	45	44	44	44	44	44	44	44	44
Los Angeles.....	62.5	62.5	62.5	66.3	67.5	70.0	87.5	100.0	112.5	112.5	48	48	44	44	44	44	44	44	44	44	44
Louisville.....	45.0	45.0	47.5	50.0	50.0	60.0	75.0	100.0	100.0	100.0	45	45	45	44	44	44	44	44	44	44	44
Manchester.....	40.6	40.6	40.6	50.0	50.0	50.0	72.5	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Newark, N. J.....	50.0	50.0	50.0	50.0	50.0	62.5	79.0	100.0	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44
New Haven.....	41.0	41.0	45.5	50.0	50.0	60.0	72.5	87.5	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
New Orleans.....	45.0	45.0	45.0	50.0	50.0	50.0	75.0	80.0	100.0	100.0	45	45	45	44	44	44	44	44	44	44	44
New York.....	50.0	50.0	50.0	50.0	50.0	68.8	79.0	100.0	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44
Philadelphia.....	50.0	50.0	56.3	56.3	56.3	65.0	80.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Pittsburgh.....	50.0	50.0	50.0	53.1	54.4	62.5	81.3	100.0	106.3	100.0	44	44	44	44	44	44	44	44	44	44	44
Providence.....	40.6	40.6	40.6	50.0	50.0	60.0	70.0	70.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Richmond, Va.....	43.8	45.0	45.0	50.0	50.0	50.0	70.0	82.5	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
St. Louis.....	50.0	50.0	50.0	50.0	50.0	60.0	75.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44
Salt Lake City.....	62.5	62.5	62.5	62.5	62.5	75.0	81.3	100.0	100.0	112.5	44	44	44	44	44	44	44	44	44	44	44
San Francisco.....	62.5	62.5	62.5	66.3	67.5	70.0	87.5	100.0	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44
Seattle.....	62.5	62.5	62.5	62.5	62.5	75.0	87.5	100.0	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44
Washington.....	45.0	45.0	45.0	50.0	50.0	62.5	87.5	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44

1960

Hod carriers.

Baltimore.....	31.3	31.3	34.4	34.4	40.0	56.3	75.0	87.5	87.5	75.0	²⁸ 45	²⁸ 45	²⁸ 45	²⁸ 45	44	44	44	44	44	44	44	44
Boston.....	35.0	35.0	35.0	35.0	40.0	42.5	50.0	70.0	70.0	70.0	44	44	44	44	44	44	44	44	44	44	44	44
Chicago.....	40.0	40.0	40.0	42.5	45.0	50.0	57.5	100.0	100.0	72.5	44	44	44	44	44	44	44	44	44	44	44	44
Cincinnati.....	42.5	42.5	42.5	42.5	45.0	50.0	57.5	85.0	85.0	72.5	45	45	45	45	45	45	45	45	45	45	45	45
Cleveland.....	31.3	{ 32.5 35.0 }	31.3 35.0	31.3 35.0	31.3 45.0	{ 55.0 57.5 }	{ 57.5 87.5 }	87.5	87.5	60.0	48	{ ⁹ 44 48 }	{ ⁹ 44 48 }	⁹ 44	⁹ 44	44	44	44	44	44	44	44
Denver.....	{ 37.5 40.6 }	{ 37.5 40.6 }	{ 37.5 40.6 }	{ 37.5 40.6 }	{ 43.8 46.9 }	{ 53.1 56.3 }	{ 65.6 78.1 }	{ 75.0 78.1 }	{ 75.0 78.1 }	{ 75.0 78.1 }	44	44	44	44	44	44	44	44	44	44	44	44
Detroit.....	35.0	35.0	{ 35.0 40.0 }	{ 35.0 40.0 }	{ 40.0 43.8 }	{ 50.0 57.5 }	{ 65.0 87.5 }	100.0	75.0	75.0	48	¹⁰ 48	49½	49½	44	¹² 44	44	44	44	44	44	44
Fall River.....										50.0												44
Indianapolis.....	{ 40.0 42.5 }	{ 40.0 42.5 }	{ 40.0 42.5 }	{ 40.0 42.5 }	{ 42.5 45.0 }	{ 47.5 50.0 }	{ 55.0 62.5 }	{ 72.5 80.0 }	{ 67.5 70.0 }	{ 70.0 80.0 }	44	44	44	44	44	44	44	44	44	44	44	44
Kansas City, Mo.....	{ 42.5 37.5 }	{ 42.5 37.5 }	{ 42.5 45.0 }	{ 42.5 45.0 }	{ 45.0 45.0 }	{ 45.0 50.0 }	{ 50.0 62.5 }	{ 75.0 90.0 }	{ 70.0 90.0 }	{ 70.0 80.0 }	44	44	44	44	44	44	44	44	44	44	44	44
Little Rock.....					30.0	40.0	50.0	62.5	62.5	50.0					54	54	49½	49½	44	44	44	44
Louisville.....	{ 35.0 38.0 }	{ 35.0 38.0 }	{ 35.0 38.0 }	{ 35.0 38.0 }	{ 45.0 45.0 }	{ 45.0 50.0 }	{ 55.0 55.0 }	{ 80.0 80.0 }	{ 80.0 80.0 }	{ 80.0 80.0 }	48	48	44	44	44	50	50	44	44	44	44	44
Manchester.....										75.0												44
Memphis.....	30.0	30.0	30.0	30.0	37.5	50.0	50.0	75.0	62.5	62.5	44	44	44	44	44	44	44	44	44	44	44	44
Newark, N. J.....	35.0	35.0	35.0	37.5	45.0	45.0	50.0	87.5	87.5	75.0	44	44	44	44	44	44	44	44	44	44	44	44
New Orleans.....										65.0												45
Omaha.....				40.0	40.0	50.0	55.0	75.0	75.0	65.0					44	44	44	44	44	44	44	44
Philadelphia.....	35.0	35.0	35.0	{ 40.0 40.0 }	45.0	60.0	70.0	100.0	85.0	85.0	44	44	44	44	44	44	44	44	44	44	44	44
Pittsburgh.....	{ 25.0 40.0 }	{ 25.0 40.0 }	{ 25.0 40.0 }	{ 30.0 45.0 }	{ 30.0 45.0 }	{ 30.0 55.0 }	{ 60.0 90.0 }	{ 90.0 100.0 }	{ 80.0 100.0 }	{ 80.0 80.0 }	{ 44 49 }	{ 44 49½ }	44	44	44	44	44	44	44	44	44	44
Portland, Oreg.....	50.0	50.0	50.0	50.0	50.0	62.5	75.0	93.8	90.0	90.0	48	48	48	48	48	48	48	48	44	44	44	44
Providence.....	{ 28.1 30.0 }	{ 28.1 30.0 }	{ 28.1 30.0 }	{ 30.0 30.0 }	35.0	38.0	50.0	65.0	55.0	45.0	50	50	50	50	50	50	50	50	44	44	44	44
St. Louis.....	{ 42.5 45.0 }	{ 47.5 50.0 }	{ 47.5 50.0 }	{ 47.5 50.0 }	{ 47.5 50.0 }	{ 46.9 55.0 }	{ 62.5 65.0 }	{ 70.0 80.0 }	85.0	85.0	44	44	44	44	44	44	44	44	44	44	44	44
St. Paul.....				37.5	40.6	40.6	60.0	80.0	75.0	75.0					48	44	44	44	44	44	44	44
Salt Lake City.....	{ 37.5 50.0 }	{ 37.5 50.0 }	{ 37.5 50.0 }	{ 37.5 50.0 }	{ 43.8 56.3 }	{ 53.3 62.5 }	{ 62.5 68.8 }	{ 87.5 93.8 }	{ 75.0 81.3 }	{ 75.0 81.3 }	{ 44 44 }	{ 44 44 }	{ 44 44 }	{ 44 44 }	44	44	44	44	44	44	44	44
San Francisco.....	50.0	50.0	50.0	50.0	50.0	62.5	75.0	93.8	100.0	71.3	44	44	44	44	44	44	44	44	44	44	44	44
Scranton.....	30.0	30.0	30.0	35.0	35.0	50.0	58.5	70.0	60.0	60.0	48	48	¹³ 44	¹³ 44	¹³ 44	¹³ 44	¹³ 44	¹³ 44	44	44	44	46½
Washington.....	{ 23.1 28.1 }	{ 23.1 28.1 }	28.1	28.1	31.3	50.0	62.5	75.0	75.0	75.0	¹⁶ 45	¹⁶ 45	¹⁶ 45	¹⁶ 45	¹⁶ 45	¹⁶ 45	¹⁶ 45	¹⁶ 45	44	44	44	44

² Prevailing rate; no effective union scale.

⁹ 48 hours per week, September to April, inclusive.

¹⁰ 44 hours per week, October to April, inclusive.

¹² 48 hours per week, December to February, inclusive.

¹³ 48 hours per week, October to April, inclusive.

¹⁶ 44½ hours per week, October to April, inclusive.

²⁸ 44 hours per week, November to March, inclusive.

UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922—Continued.

Inside wiremen.

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MONTHLY LABOR REVIEW.

City.	Rates per hour (cents).										Hours per week.									
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Atlanta.....	44.5				38.9	55.0	75.0	90.0	90.0	90.0	54				54	48	44	44	44	44
Baltimore.....	43.8	43.8	43.8	43.8	50.0	70.0	70.0	92.5	112.5	100.0	48	48	48	48	48	48	44	44	44	44
Birmingham.....	62.5	62.5	50.0	50.0	50.0	62.5	80.0	100.0	100.0	85.0	44	44	44	44	44	44	44	44	44	44
Boston.....	55.0	55.0	60.0	62.5	65.0	70.0	77.5	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
Buffalo.....	45.0	46.9	50.0	56.3	62.5	70.0	70.0	90.0	90.0	90.0	48	48	48	48	48	44	44	44	44	44
Chicago.....	75.0	75.0	75.0	75.0	75.0	81.3	87.5	125.0	125.0	110.0	44	44	44	44	44	44	44	44	44	44
Cincinnati.....	50.0	50.0	53.1	56.3	62.5	68.8	71.9	100.0	100.0	95.0	44	44	44	44	44	44	44	44	44	44
Cleveland.....	57.5	60.0	68.8	70.0	75.0	81.3	90.0	125.0	137.5	110.0	48	44	44	44	44	44	44	44	44	44
Dallas.....	56.3	56.3	62.5	62.5	65.0	80.0	87.5	100.0	112.5	112.5	44	44	44	44	44	44	44	44	44	44
Denver.....	56.3	56.3	56.3	60.0	62.5	82.5	82.5	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
Detroit.....	46.9	50.0	53.1	59.4	66.9	75.0	93.8	125.0	100.0	100.0	48	48	48	48	44	44	44	44	44	44
Fall River.....	37.5	37.5	37.5	41.0	50.0	60.0	70.0	85.0	90.0	85.0	48	48	48	48	44	44	44	44	44	44
Indianapolis.....	47.5	47.5	47.5	53.0	57.0	67.5	72.0	100.0	100.0	100.0	48	48	48	44	44	44	44	44	44	44
Jacksonville.....	45.0	45.0	45.0	45.0	45.0	65.0	85.0	100.0	100.0	85.0	48	45	45	48	48	48	44	44	44	44
Kansas City, Mo.....	62.5	62.5	68.8	65.0	68.8	75.0	87.5	100.0	100.0	100.0	48	48	44	44	44	44	44	44	44	44
Little Rock.....	50.0	50.0	50.0	50.0	50.0	55.0	75.0	87.5	87.5	87.5	48	48	48	48	48	48	44	44	44	44
Los Angeles.....	50.0	50.0	50.0	50.0	50.0	62.5	80.0	100.0	100.0	100.0	48	48	48	48	48	48	44	44	44	44
Louisville.....	40.0	40.0	40.0	40.0	45.0	50.0	75.0	75.0	100.0	90.0	48	48	48	48	48	48	44	44	44	44
Manchester.....	81.3	34.4	34.4	37.5	42.5	60.0	75.0	100.0	100.0	80.0	48	48	48	48	44	44	44	44	44	44
Memphis.....	45.0	50.0	50.0	50.0	56.3	62.5	75.0	100.0	100.0	87.5	48	44	44	44	44	44	44	44	44	44
Milwaukee.....	45.0	50.0	50.0	50.0	56.3	56.3	75.0	85.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
Minneapolis.....	50.0	50.0	56.3	56.3	56.3	68.8	68.8	81.3	100.0	87.5	48	44	44	44	44	44	44	44	44	44
Newark, N. J.....	56.3	62.5	62.5	62.5	62.5	68.8	75.0	100.0	112.5	112.5	44	44	44	44	44	44	44	44	44	44
New Haven.....				44.5	60.0	60.0	75.0	82.5	93.8	85.0					44	44	44	44	44	44
New Orleans.....	45.0	50.0	50.0	50.0	50.0	56.3	70.0	90.0	100.0	100.0	48	48	48	48	48	48	48	44	44	44
New York.....	56.3	60.0	60.0	60.0	65.0	65.0	75.0	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44
Omaha.....	50.0	50.0	50.0	57.5	57.5	70.0	87.5	112.5	112.5	100.0	44	44	44	44	44	44	44	44	44	44
Philadelphia.....	45.0	45.0	45.0	50.0	56.3	65.0	75.0	100.0	112.5	90.0	44	44	44	44	44	44	44	44	44	44
Pittsburgh.....	57.5	57.5	57.5	62.5	62.5	68.8	75.0	100.0	125.0	112.5	48	48	44	44	44	44	44	44	44	44
Portland, Oreg.....	56.3	56.3	56.3	56.3	56.3	72.2	80.0	100.0	100.0	90.0	44	44	44	44	44	44	44	44	44	44
Providence.....	43.8	50.0	50.0	50.0	55.0	60.0	70.0	85.0	115.0	90.0	44	44	44	44	44	44	44	44	44	44
Richmond, Va.....	43.8	43.8	43.8	43.8	50.0	60.0	75.0	75.0	75.0	75.0	48	48	48	48	48	48	44	44	44	44
St. Louis.....	65.0	70.0	75.0	75.0	75.0	75.0	87.5	100.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44
St. Paul.....	46.9	50.0	53.1	56.3	62.5	68.8	68.8	81.3	100.0	80.0	44	44	44	44	44	44	44	44	44	44

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Salt Lake City.....	56.3	56.3	62.5	62.5	62.5	75.0	87.5	112.5	90.0	⁸ 90.0	44	44	44	44	44	44	44	44	44
Scranton.....	46.9	46.9	46.9	50.0	60.0	62.5	75.0	95.0	87.5	87.5	48	48	48	44	44	44	44	44	44
Seattle.....	62.5	62.5	62.5	62.5	75.0	87.5	100.0	112.5	112.5	100.0	44	44	44	44	44	44	40	40	40
Washington.....	55.0	60.0	60.0	60.0	60.0	75.0	100.0	100.0	106.3	106.3	44	44	44	44	44	44	44	44	44

Machine operators: Book and job.

Baltimore.....	46.9	46.9	46.9	46.9	50.0	50.0	60.4	81.3	83.3	83.3	48	48	48	48	48	48	48	48	48
Birmingham.....	52.5	52.5	54.5	54.5	57.3	57.3	57.3	78.1	80.0	80.0	48	48	48	48	48	48	48	48	44
Boston.....	45.8	47.9	47.9	47.9	50.0	54.2	59.4	77.1	91.5	91.5	48	48	48	48	48	48	48	48	44
Buffalo.....	50.0	50.0	50.0	50.0	53.1	59.4	59.4	71.9	95.5	95.5	48	48	48	48	48	48	48	48	44
Charleston, S. C.....		37.5	37.5	37.5	50.0	50.0	50.0	50.0	103.4	103.4		48	48	48	48	48	48	48	44
Chicago.....	50.0	50.0	50.0	50.0	50.0	60.2	77.9	98.8	109.2	109.2	48	48	48	48	48	48	48	48	44
Cincinnati.....	49.0	52.1	52.1	52.1	54.2	54.2	58.3	81.3	104.5	104.5	48	48	48	48	48	48	48	48	44
Cleveland.....	53.8	53.8	53.8	53.8	62.5	62.5	68.8	87.5	93.8	93.8	48	48	48	48	38	48	48	48	44
Dallas.....	³¹ 12.5	³¹ 12.5	³¹ 12.5	³¹ 12.5	³¹ 12.0	³¹ 12.0	³¹ 12.0	³¹ 15.0	³¹ 15.0	³¹ 15.0	48	48	48	48	48	48	48	48	44
Denver.....	54.2	54.2	54.2	54.2	54.2	59.4	65.6	81.3	81.3	95.5	48	48	48	48	48	48	48	48	44
Detroit.....	55.0	55.0	55.0	55.0	60.5	60.5	85.0	100.0	100.0	100.0	48	48	48	48	48	48	48	48	48
Fall River.....					45.8	46.9	46.9	62.5	72.7	72.7					48	48	48	48	44
Indianapolis.....	50.0	50.0	50.0	50.0	56.3	56.3	60.4	81.3	100.0	92.7	48	48	48	48	48	48	48	48	44
Jacksonville.....	43.8	52.1	52.1	52.1	53.1	53.1	58.3	75.0	102.3	102.3	48	48	48	48	48	48	48	48	44
Kansas City, Mo.....	55.2	55.2	57.3	57.3	57.3	62.5	69.8	78.1	89.6	89.6	48	48	48	48	48	48	48	48	48
Little Rock.....	50.0	50.0	50.0	50.0	50.0	50.0	50.0	72.9	72.9	70.0	48	48	48	48	48	48	48	48	44
Los Angeles.....	58.3	60.4	60.4	60.4	60.4	62.5	70.8	81.3	104.5	104.5	48	48	48	48	48	48	48	48	44
Louisville.....	49.0	50.0	50.0	50.0	50.0	52.1	54.2	54.2	79.2	79.0	48	48	48	48	48	48	48	48	44
Manchester.....	35.4	35.4	35.4	35.4	37.5	39.6	41.7	66.7	77.3	79.3	48	48	48	48	48	48	48	48	44
Memphis.....	62.5	62.5	56.3	56.3	56.3	56.3	68.8	93.8	93.8	109.1	48	48	48	48	48	48	48	48	44
Milwaukee.....	47.9	50.0	52.1	52.1	54.2	54.2	60.4	75.0	87.5	95.5	48	48	48	48	48	48	48	48	44
Minneapolis.....	50.0	50.0	50.0	50.0	52.1	52.1	61.5	87.5	87.5	95.5	48	48	48	48	48	48	48	48	44
Newark, N. J.....	47.9	47.9	47.9	50.0	50.0	56.3	72.9	91.7	111.4	102.3	48	48	48	48	48	48	48	48	44
New Haven.....	45.8	45.8	45.8	45.8	45.8	45.8	45.8	58.3	58.3	86.4	48	48	48	48	48	48	48	48	44
New Orleans.....									76.7	78.4									45
New York.....	54.2	54.2	54.2	54.2	54.2	58.3	75.0	93.8	113.6	113.6	48	48	48	48	48	48	48	48	44
Omaha.....	50.0	50.0	53.1	53.1	53.1	53.1	68.8	87.5	93.2	93.2	48	48	48	48	48	48	48	48	44
Philadelphia.....	43.8	45.8	45.8	45.8	47.9	54.2	64.6	93.8	93.8	94.1	48	48	48	48	48	48	48	48	44
Pittsburgh.....	47.9	50.0	50.0	52.1	52.1	56.3	68.8	87.5	106.8	106.8	48	48	48	48	48	48	48	48	44
Portland, Oreg.....	65.6	65.6	65.6	65.6	65.6	68.8	100.0	100.0	110.0	110.0	48	48	48	48	48	48	48	48	44

¹ 44 hours per week, June to August, inclusive.

³ Prevailing rate; no effective union scale.

¹⁹ 44 hours per week, June to September, inclusive.

²⁹ 44 hours per week, August to December, inclusive.

³⁰ 44 hours per week, July to September, inclusive.

³¹ Per 1,000 ems nonpareil.

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UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922—Continued.

Machine operators: Book and job—Concluded.

City.	Rates per hour (cents).											Hours per week.									
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	
Providence.....	47.9	47.9	47.9	47.9	47.9	52.1	54.2	72.9	79.2	86.4	48	48	48	48	48	48	48	48	48	44	
Richmond, Va.....	41.7	41.7	45.8	45.8	45.8	45.8	54.2	62.5	81.8	48	48	48	48	48	48	48	48	48	48	44	
St. Louis.....	50.0	50.0	50.0	52.1	54.2	59.6	63.8	87.5	101.0	101.0	48	48	48	48	48	48	48	48	48	44	
St. Paul.....	50.0	50.0	50.0	50.0	52.1	52.1	61.5	83.3	87.5	95.5	48	48	48	48	48	48	48	48	48	44	
Salt Lake City.....	56.3	56.3	56.3	56.3	56.3	56.3	64.6	75.0	75.0	75.0	48	48	48	48	48	48	48	48	48	48	
San Francisco.....	64.4	64.4	64.4	65.0	65.0	68.8	68.8	81.3	104.5	104.5	45	45	45	48	48	48	48	48	44	44	
Seranton.....	45.8	45.8	45.8	45.8	50.0	50.0	54.2	81.3	85.4	85.4	48	48	48	48	48	48	48	48	48	48	
Seattle ⁸³	75.0	75.0	75.0	75.0	78.6	85.7	107.1	121.4	121.4	121.4	48	48	48	48	48	48	48	48	48	44	
Washington.....	50.0	50.0	50.0	50.0	56.3	56.3	75.0	87.5	95.5	95.5	48	48	48	48	48	48	48	48	44	44	

Machine operators, day work: Newspaper.

Atlanta.....	81 8.5	81 8.5	81 8.5	81 8.5	81 8.5	81 8.5	81 8.5	81 9.0	81 10.5	81 10.0	48	48	48	48	48	48	48	48	26 48	26 48
Baltimore.....	53.6	57.1	59.5	59.5	61.9	61.9	65.5	93.3	93.3	95.5	42	42	42	42	42	42	42	42	45	45
Birmingham.....	52.5	53.0	54.5	55.5	56.5	57.5	67.5	67.5	67.5	82.5	22 42	22 42	22 42	22 42	22 42	22 42	22 42	22 42	22 42	22 42
Boston.....	63.0	63.0	63.0	63.0	68.0	68.0	83.0	95.0	95.0	107.0	23 42	23 42	23 42	23 42	23 42	23 42	23 42	23 42	23 42	23 42
Buffalo.....	50.0	50.0	50.0	50.0	53.1	59.4	65.6	71.9	87.5	87.5	48	48	48	48	48	48	48	48	48	48
Charleston, S. C.....	81 9.0	81 9.0	81 9.0	81 9.0	81 9.0	81 9.0	81 9.0	81 9.0	81 9.0	81 9.0	22 39	22 39	22 39	22 39	22 39	22 39	22 39	22 39	22 42	22 42
Chicago.....	84 50.0	84 50.0	84 50.0	84 50.0	84 50.0	85 53.0	86 64.0	86 72.0	86 72.0	86 72.0	48	48	45	45	45	45	45	45	48	48
Cincinnati.....	52.1	54.2	56.3	56.3	56.3	56.3	87.5	107.3	107.3	107.3	26 47 1/2	48	48	48	48	48	48	48	45	45
Cleveland.....	53.8	53.8	53.8	53.8	62.5	62.5	68.8	87.5	93.8	96.9	48	48	48	48	48	48	48	48	48	48
Dallas.....	81 12.5	81 12.5	81 12.5	81 12.0	81 12.0	81 12.0	81 12.0	81 15.0	81 15.0	81 15.0	39	39	38 39	38 39	38 39	38 39	38 39	38 39	38 39	38 39
Denver.....	63.3	63.3	63.3	63.3	63.3	72.7	72.7	97.8	97.8	93.3	45	45	45	45	45	45	45	45	45	45
Detroit.....	55.0	55.0	55.0	55.0	60.5	60.5	74.5	87.0	97.0	97.0	48	48	26 48	26 48	26 48	26 48	26 48	26 48	26 48	26 48
Fall River.....	45.8	45.8	45.8	45.8	45.8	46.9	50.0	75.0	79.2	79.2	48	48	48	48	48	48	48	48	48	48
Indianapolis.....	50.0	50.0	50.0	50.0	56.3	56.3	60.4	81.3	93.8	89.6	48	48	48	48	48	48	48	48	48	48
Jacksonville.....	81 9.0	81 9.0	81 9.0	81 9.0	81 9.0	81 9.0	81 9.0	81 9.0	81 9.0	81 9.0	45	48	26 48	26 48	48	48	48	48	48	48
Kansas City, Mo.....	59.4	59.4	59.4	59.4	59.4	59.4	68.8	90.6	90.6	90.6	48	48	48	48	48	48	48	48	48	48
Little Rock.....	81 9.5	81 9.5	81 9.5	81 9.5	81 9.5	81 9.5	81 9.5	81 9.5	81 9.5	81 9.5	42	42	42	42	42	42	42	42	42	42
Los Angeles.....	62.2	64.4	64.4	64.4	66.7	66.7	75.6	86.7	101.1	101.1	45	45	45	45	45	45	45	45	45	45
Louisville.....	49.0	50.0	50.0	50.0	54.2	54.5	62.5	87.5	82.9	82.5	48	48	48	48	48	48	48	48	48	48
Manchester.....	35.4	35.4	35.4	35.4	37.5	39.6	41.7	66.7	70.8	72.9	48	48	48	48	48	48	48	48	48	48
Memphis.....	81 9.5	81 9.5	81 9.5	81 9.5	81 9.5	81 9.5	81 9.5	81 12.9	81 12.5	81 12.0	22 45	22 45	22 45	22 45	22 45	22 45	22 45	22 45	22 45	22 45
Milwaukee.....	45.8	47.9	50.0	50.0	54.2	56.3	66.3	77.1	93.8	93.8	48	48	48	48	48	48	48	48	48	48
Minneapolis.....	81 10.0	81 10.0	81 10.0	81 10.0	81 10.0	81 10.0	81 10.0	81 11.0	81 12.5	81 12.5	48	48	48	48	48	48	48	48	48	22 36

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Newark, N. J.....	60.9	60.9	60.9	60.9	63.0	69.6	76.1	89.1	110.9	110.9	46	46	46	46	46	46	46	46	46
New Haven.....	46.9	46.9	47.9	47.9	50.0	50.0	50.0	72.9	79.2	79.2	48	48	48	48	48	48	48	48	48
New York.....	66.7	66.7	66.7	66.7	66.7	71.1	96.7	122.2	122.2	122.2	45	45	45	45	45	45	45	45	45
Omaha.....	50.0	50.0	53.1	53.1	53.1	53.1	68.8	87.5	87.5	87.5	48	48	48	48	48	48	48	48	48
Philadelphia.....	45.8	45.8	45.8	45.8	45.8	52.1	66.7	81.3	79.2	79.2	48	48	48	48	48	48	48	48	48
Pittsburgh.....	55.0	60.0	60.0	60.0	61.0	65.0	77.0	87.5	111.8	111.8	48	²² 45	²² 45	²² 45	²² 45	²² 45	²² 45	48	⁴⁶ $\frac{1}{2}$
Portland, Oreg.....	68.3	68.3	68.3	68.3	68.3	72.7	100.0	106.7	106.7	106.7	45	45	45	45	45	45	45	45	45
Providence.....	47.9	47.9	50.0	50.0	50.0	52.1	66.7	87.5	100.0	95.8	48	48	48	48	48	48	48	48	48
Richmond, Va.....									87.5	87.5									48
St. Louis.....	³¹ 11.0	³¹ 11.0	³¹ 11.0	³¹ 11.0	³¹ 11.5	³¹ 11.5	³¹ 11.5	³¹ 15.0	³¹ 15.0	³¹ 15.0	⁴⁰ 39	⁴⁰ 39	⁴⁰ 39	⁴⁰ 39	⁴⁰ 42	⁴⁰ 42	⁴⁰ 42	⁴⁰ 42	46
St. Paul.....	54.5	54.5	54.5	54.5	54.5	63.0	63.0	94.0	88.8	89.8	48	48	48	48	48	48	48	48	48
Salt Lake City.....	³¹ 10.0	³¹ 10.0	³¹ 10.0	³¹ 10.0	³¹ 10.0	³¹ 10.0	³¹ 11.0	⁴² 11.0	⁴³ 11.0	³¹ 13.5	48	⁴⁴ 48	⁴⁴ 48	⁴⁴ 48	⁴⁴ 48	⁴⁴ 48	⁴⁴ 48	⁴⁴ 46 $\frac{1}{2}$	⁴⁴ 46 $\frac{1}{2}$
San Francisco.....	64.4	64.4	69.0	69.0	69.0	68.9	75.6	93.8	107.8	107.8	45	45	42	42	42	42	45	45	45
Scranton.....	47.9	47.9	47.9	47.9	52.1	52.1	60.4	81.3	87.5	87.5	48	48	48	48	48	48	48	48	48
Seattle.....	75.0	75.0	75.0	75.0	78.6	80.1	100.0	114.3	114.3	114.3	42	42	42	42	42	42	42	42	42
Washington.....	60.7	60.7	60.7	60.7	60.7	69.8	92.9	104.0	104.0	104.0	42	42	42	42	42	42	42	42	42

Machinists: Manufacturing shops.

Birmingham.....	35.0	{ 35.0 } 40.0	40.0	45.0	47.5	60.0	68.0	78.5	75.0	75.0	60	{ 54 } 60	60	54	54	54	48	48	48
Boston.....	{ 38.9 } 43.8	38.9	28.0	35.0	50.0	55.0	65.0	{ 75.0 } 90.0	75.0	75.0	48	{ 48 } 54	50	50	48	48	48	48	48
Chicago.....	39.0	{ 41.7 } 43.5	41.7	46.9	55.0	65.0	80.0	100.0	90.0	83.0	54	{ 48 } 54	48	48	¹⁹ 48	44	44	44	44
Cincinnati.....	{ 25.0 } 35.0	25.0	32.5	35.0	42.0	42.0	50.0	75.0	75.0	60.0	55	52 $\frac{1}{2}$	52 $\frac{1}{2}$	48	48	48	48	48	48
Cleveland.....	33.3	{ 33.3 } 35.0	35.0	45.0	45.0	60.0	60.0	75.0	65.0	65.0	54	54	54	50	50	50	50	50	50

¹⁹ 44 hours per week, June to September, inclusive.²¹ 44 hours per week, for 3 months, between June 1 and Sept. 30.²² Minimum; maximum, 8 hours per day.²³ Actual hours worked; minimum 6, maximum 8 hours per day.²⁵ Work 47 $\frac{1}{2}$ hours, paid for 48.²⁶ Maximum; minimum, 7 hours per day.³¹ Per 1,000 ems nonpareil.³² 45 hours per week, June to August, inclusive.³³ For the years 1918 to 1922, inclusive, the rates are for machinist operators.³⁴ For 3,500 ems per hour; for 4,500 ems per hour, 55 cents and 1 cent bonus for each additional 100 ems per hour.³⁵ For 3,500 ems per hour; for 4,500 ems per hour 58 cents and 1 cent bonus for each additional 100 ems per hour.³⁶ For 3,500 ems per hour; for 4,500 ems per hour 70 cents and 1 cent bonus for each additional 100 ems per hour.³⁷ For 4,000 ems per hour; for 4,500 ems per hour \$1.06 and 1 cent bonus for each additional 100 ems per hour.³⁸ Maximum; minimum 5 $\frac{1}{2}$ hours per day.³⁹ Per 1,000 ems nonpareil and 45 cents per day bonus.⁴⁰ Minimum; maximum, 7 $\frac{3}{4}$ hours per day.⁴¹ Maximum; minimum, 7 $\frac{1}{2}$ hours per day.⁴² Per 1,000 ems nonpareil and \$1 per day bonus.⁴³ Per 1,000 ems nonpareil and \$1.25 per day bonus.⁴⁴ Maximum; minimum 6 $\frac{1}{2}$ hours per day.

UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922—Continued.

Machinists: Manufacturing shops—Concluded.

City.	Rates per hour (cents).										Hours per week.									
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Dallas.....	40.0	40.0	42.0	42.0			70.0	80.0	80.0	80.0	54	54	48	48			48	48	48	48
Denver.....	40.0	40.0	40.0	40.0	42.5	52.0	68.0	72.0	85.0	72.0	54	54	54	54	51	48	48	48	48	48
Indianapolis.....					47.5	62.5	70.0	80.0	80.0	75.0					50	48	48	48	45	50
Kansas City, Mo.....	37.0	40.0	40.0	50.0	50.0	75.0	75.0	100.0	100.0	90.0	54	54	54	48	48	48	48	44	44	44
Little Rock.....	42.5	42.5	42.5	42.5	45.0	60.0	68.0	85.0	85.0	85.0	54	54	54	54	54	54	48	45	48	48
Los Angeles.....							70.0	70.0	70.0	70.0							48	48	48	48
Manchester.....							50.0	50.0	50.0	50.0							48	48	48	48
Memphis.....	42.0	42.0	42.0	42.0	50.0	55.0	70.0	100.0	100.0	90.0	54	54	54	54	48	48		48	48	48
Milwaukee.....							65.0	75.0	62.5	55.0							52½	48	48	48
New Haven.....	33.3 35.0	33.3 35.0		42.5	50.0	60.0	60.0	80.0	72.0	65.0	54 59	54 59		48	48	48	48	48	48	48
New Orleans.....	38.9	38.9	38.9	43.8	50.0	68.8	80.0	80.0	80.0	75.0	54	54	54	48	48	48	48	48	44	44
New York.....	38.2 40.6	38.2 40.6	38.2 40.6	46.9	56.3	73.0 82.0	73.0 90.0	80.0 90.0	85.0 95.0	85.0 90.0	48 51	48 51	48 51	48	48	48	48	48	44	44
Omaha.....	40.0	40.0	40.0	40.0	45.0 50.0	60.0	70.0	85.0	85.0	80.0	54	54	54	54	54	48	48	48	48	48
Philadelphia.....	33.3	33.3	35.0	45.0	48.0	65.0 72.5	72.0 80.0	80.0	75.0	75.0	54	54	54	54	48 54	48 54	48 54	48	48	48
Portland, Oreg.....	45.0	45.0	45.0	45.0	50.0	75.0	80.0	88.0	88.0	80.0	48	48	48	48	48	48	44	44	44	44
Richmond, Va.....	35.5	35.5	35.5	35.5	37.5 51.0	57.0	75.0	75.0	68.0	68.0	55	55	55	55	48 55	50	48	48	48	48
St. Louis.....	33.0	37.0 33.5	37.0	37.0	44.0	60.0	70.0	85.0	90.0	70.0	54	54	54	54	54	48	48	48	48	48
St. Paul.....	33.5	33.5 35.0	35.0	40.0	40.0	40.0	72.5	90.0	90.0	90.0	54 59	54 59	54	54	54	54	48	44	44	44
Salt Lake City.....	44.0	44.0	43.0	43.0	56.3	62.5	75.0	87.5	87.5	65.0	48	48	54	54	48	48	44	1 48	1 48	1 48
San Francisco.....	43.8	43.8	43.8	50.0	50.0	72.5	80.0	90.0	90.0	90.0	48	48	48	48	48	1 48	44	44	44	44
Seattle.....	45.0	45.0	45.0	45.0	50.0	75.0	80.0	88.0	80.0	72.0	48	48	48	48	48	48	44	44	44	44
Washington.....	40.6	40.6	40.6 50.0	40.6 50.0	50.0 55.0	57.5 68.0	68.8 78.0	81.3 86.0	90.0 86.0	80.0	48	48	48	48	48	48	1 48	1 48	1 48	1 48

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Molders, iron.

Atlanta.....	35.0	35.0	35.0	35.0	41.7	50.0	70.0	80.0	80.0	60.0	60	60	60	60	54	54	54	50	50
Baltimore.....	36.1	36.1	36.1	36.1	46.9	68.8	68.8	93.8	87.5	75.0	54	54	54	54	48	48	48	48	48
Boston.....	38.9	38.9	38.9	44.4	50.0	58.3	58.3	90.0	90.0	75.0	54	54	54	54	54	54	54	48	48
Charlotte, S. C.....									85.0	65.0								44	44
Chicago.....	44.4	44.4	44.4	50.0	56.3	68.8	80.0	105.0	90.0	75.0	54	54	54	48	48	48	48	48	48
Cincinnati.....	36.1	38.9	38.9	44.4	44.4	55.5	58.3	81.3	75.0	68.8	54	54	54	54	54	54	54	48	48
Cleveland.....	38.9	38.9	38.9	38.9	44.4	61.1	61.1	90.0	75.0	75.0	54	54	54	54	54	54	54	48	48
Denver.....	44.4	44.4	44.4	44.4	50.0	59.4	75.0	100.0	100.0	78.1	54	54	54	54	48	48	48	48	48
Detroit.....	38.9	38.9	38.9	44.4	50.0	61.1	80.0	100.0	90.0	75.0	54	54	54	54	54	54	54	48	48
Fall River.....	33.3	33.3	33.3	36.1	41.7	50.0	65.6	72.5	78.1	75.0	54	54	54	54	54	54	54	48	48
Indianapolis.....	36.1	36.1	36.1	38.9	44.4	55.6	55.6	90.0	75.0	70.0	54	54	54	54	54	54	54	48	48
Kansas City, Mo.....	40.0	40.0	40.0	45.0	50.0	60.0	67.5	90.0	90.0	76.5	54	54	54	54	54	54	54	48	48
Little Rock.....	38.9	38.9	38.9	38.9	41.7	44.4	68.0	80.0	90.0	90.0	54	54	54	54	54	54	54	54	54
Louisville.....									75.0	63.8								48	48
Manchester.....							72.5	72.5	90.0	90.0								48	48
Memphis.....	38.9	40.0	40.0	40.0	40.0	56.0	68.0	82.0	85.0	77.0	54	54	54	54	54	54	54	54	54
Newark, N. J.....	38.9	38.9	38.9	41.7	47.2	55.6	75.0	88.0	80.0	80.0	54	54	54	54	54	54	54	48	48
New Haven.....									80.0	78.1								48	48
New Orleans.....	36.1	36.1	36.1	38.9	50.0	62.5	80.0	80.0	80.0	75.0	54	54	54	54	48	48	48	48	48
New York.....	38.9	41.7	41.7	41.7	47.2	52.8	75.0	88.0	88.0	78.1	54	54	54	54	54	54	54	48	48
Omaha.....	36.7	40.0	40.0	40.0	45.0	55.6	68.0	85.0	93.8	80.0	54	54	54	54	47 54	54	48	48	48
Philadelphia.....	36.1	38.9	38.9	44.4	50.0	68.8	68.8	100.0	90.0	78.0	54	54	54	54	54	43	48	48	48
Pittsburgh.....	44.4	44.4	44.4	44.4	50.0	65.6	75.0	93.8	84.4	70.0	54	54	54	54	48	48	48	48	48
Portland, Oreg.....	41.7	{ 37.5 } 41.7	41.7	41.7	56.3	72.5	87.5	93.8	88.0	80.0	54	54	54	54	48	48	44	44	48
St. Louis.....	38.9	38.9	38.9	41.7	50.0	61.1	75.0	90.0	85.0	75.0	54	54	54	54	54	54	48	48	48
St. Paul.....	38.9	38.9	38.9	42.8	47.2	55.6	72.5	90.0	90.0	70.0	54	54	54	54	54	54	54	48	48
Salt Lake City.....	41.7	41.7	41.7	44.4	56.3	62.5	75.0	87.5	87.5	65.0	54	54	54	54	48	48	1 48	1 48	1 48
San Francisco.....	50.0	50.0	50.0	50.0	53.1	72.5	80.0	88.0	100.0	80.0	48	48	48	48	48	48	44	44	44
Scranton.....	25.0	27.5	27.5	27.5	38.9	58.3	71.9	87.5	75.0	75.0	60	60	60	60	54	54	48	48	48
Seattle.....	44.4	44.4	44.4	44.4	56.3	82.5	87.5	88.0	80.0	80.0	54	54	54	54	48	48	44	44	44
Washington.....		30.6	30.6	34.4	43.8	68.8	68.8	80.0	80.0	78.0		54	54	48	48	48	48	48	48

¹ 44 hours per week, June to August, inclusive.² Prevailing rate; no effective union scale.⁴⁶ 49½ hours per week, June to August, inclusive.⁴⁵ 54 hours per week, November to April, inclusive.⁴⁷ 49½ hours per week, May 19 to Sept. 15, inclusive.

UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922—Continued.

Painters.

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MONTHLY LABOR REVIEW.

City.	Rates per hour (cents).										Hours per week.									
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Atlanta.....	33.3	33.3	33.3	33.3	36.1	50.0	60.0	60.0	85.0	75.0	2 53	2 53	2 53	2 53	2 53	48	44	44	44	44
Baltimore.....	37.5	37.5	37.5	37.5	43.8	56.3	68.8	90.0	90.0	80.0	48	48	48	48	48	44	44	44	44	44
Birmingham.....	45.0	45.0	45.0	45.0	50.0	62.5	75.0	87.5	87.5	75.0	48	48	48	48	44	44	44	44	44	44
Boston.....	50.0	50.0	55.0	60.5	62.5	75.0	82.5	100.0	100.0	100.0	44	44	44	40	40	40	40	40	40	40
Buffalo.....	43.8	46.9	46.9	46.9	50.0	56.3	62.5	87.5	87.5	87.5	48	48	1 48	1 48	1 48	48 48	48 48	48 48	48 48	48 48
Charleston, S. C.....	25.0	25.0	25.0	25.0	25.0	31.3	50.0	65.0	65.0	50.0	48	48	48	48	48	48	48	48	44	44
Chicago.....	65.0	70.0	70.0	70.0	72.5	75.0	87.5	125.0	125.0	110.0	44	44	44	44	44	44	44	44	44	44
Cincinnati.....	50.0	50.0	50.0	55.0	55.0	60.0	62.5	87.5	100.0	87.5	44	44	44	44	44	44	44	44	44	44
Cleveland.....	50.0	50.0	50.0	55.0	55.0	67.5	75.0	112.5	112.5	100.0	44	44	44	44	44	44	44	44	44	44
Dallas.....	50.0	50.0	50.0	50.0	60.0	70.0	87.5	100.0	100.0	87.5	44	44	44	44	44	44	44	44	44	44
Denver.....	50.0	50.0	50.0	55.0	62.5	68.8	85.0	100.0	112.5	100.0	44	44	44	44	44	44	44	44	44	44
Detroit.....	45.0	45.0	45.0	50.0	60.0	70.0	80.0	100.0	100.0	90.0	48	48	48	44	44	44	44	44	44	44
Fall River.....	37.5	37.5	37.5	41.0	41.0	55.0	62.5	100.0	100.0	75.0	44	44	44	44	44	44	44	44	44	44
Indianapolis.....	47.5	50.0	50.0	50.0	55.0	55.0	70.0	100.0	100.0	90.0	44	44	44	44	44	44	44	44	44	44
Jacksonville.....	37.5	37.5	37.5	37.5	45.0	50.0	75.0	87.5	75.0	75.0	48	48	48	48	48	48	44	44	44	44
Kansas City, Mo.....	60.0	60.0	60.0	60.0	60.0	70.0	82.5	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
Little Rock.....	50.0	50.0	50.0	55.0	55.0	60.0	80.0	100.0	100.0	87.5	48	48	48	44	44	44	44	44	44	44
Los Angeles.....	43.8	43.8	43.8	43.8	50.0	56.3	75.0	87.5	100.0	100.0	48	48	48	48	48	44	44	44	44	44
Louisville.....	45.0	50.0	50.0	50.0	50.0	50.0	62.5	75.0	87.5	87.5	48	48	48	48	48	48	44	44	44	44
Manchester.....		31.3	31.3	37.5	37.5	50.0	62.5	80.0	80.0	70.0		48	48	48	48	44	44	44	44	44
Memphis.....	50.0	52.5	52.5	52.5	60.0	62.5	75.0	100.0	100.0	87.5	44	44	44	44	44	44	44	44	44	44
Milwaukee.....	50.0	50.0	50.0	50.0	55.0	60.0	70.0	85.0	85.0	85.0	44	44	44	44	44	44	44	44	44	44
Minneapolis.....	50.0	50.0	50.0	55.0	55.0	62.5	70.0	100.0	100.0	80.0	44	44	44	44	44	44	44	44	44	44
Newark, N. J.....	44.0	44.0	44.0	46.9	50.0	62.5	75.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
New Haven.....	40.9	40.9	40.9	40.9	45.5	53.1	62.5	87.5	100.0	100.0	44	44	44	44	44	44	44	44	44	44
New Orleans.....	40.0	40.0	40.0	40.0	40.0	50.0	65.0	75.0	90.0	80.0	48	48	48	48	48	48	44	44	44	44
New York.....	50.0	50.0	50.0	62.5	62.5	62.5	75.0	112.5	112.5	112.5	44	44	44	44	44	44	44	40	40	40
Omaha.....	50.0	50.0	50.0	55.0	62.5	62.5	75.0	100.0	101.3	90.0	44	44	44	44	44	44	44	44	44	44
Philadelphia.....	42.5	42.5	42.5	42.5	45.0	60.0	75.0	100.0	100.0	100.0	44	44	44	44	44	44	44	40	40	40
Pittsburgh.....	55.0	56.3	58.1	58.1	65.0	67.5	87.5	112.5	112.5	100.0	44	44	44	44	44	44	44	44	44	44

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Portland, Oreg.....	50.0	50.0	50.0	50.0	50.0	70.0	90.0	100.0	90.0	90.0	48	44	44	44	44	44	44	44	44
Providence.....	45.5	45.5	45.5	45.5	50.0	62.5	82.5	90.0	90.0	80.0	44	44	44	44	44	44	44	44	44
Richmond, Va.....	37.5	30.6	30.6	30.6	37.5	50.0	60.0	65.0	75.0	67.5	48	54	54	54	48	48	48	48	48
St. Louis.....	57.5	60.0	62.5	62.5	62.5	75.0	75.0	100.0	125.0	100.0	44	44	44	44	44	44	44	44	44
St. Paul.....	50.0	50.0	50.0	55.0	55.0	62.5	70.0	100.0	100.0	80.0	44	44	44	44	44	44	44	44	44
Salt Lake City.....	56.3	56.3	56.3	62.5	75.0	75.0	90.0	100.0	100.0	90.0	44	44	44	44	44	44	44	44	41
San Francisco.....	56.3	59.4	62.5	62.5	62.5	75.0	87.5	106.3	106.3	100.0	44	44	44	44	44	44	44	44	44
Scranton.....	40.0	40.0	42.5	45.0	50.0	50.0	65.0	87.5	87.5	87.5	48	48	44	44	44	44	44	44	44
Seattle.....	56.3	56.3	56.3	56.3	65.0	75.0	90.0	100.0	93.8	93.8	44	44	44	44	44	40	40	40	40
Washington.....	50.0	50.0	50.0	50.0	56.3	75.0	75.0	90.0	100.0	100.0	44	44	44	44	44	44	44	44	44

Plasterers.

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Atlanta.....	45.0	45.0	45.0	45.0	45.0	50.0	60.0	100.0	100.0	100.0	53	53	53	53	53	49½	49½	44	44	44
Baltimore.....	62.5	62.5	62.5	62.5	68.8	72.0	87.5	112.5	125.0	125.0	44	44	44	44	44	44	44	44	44	44
Birmingham.....	62.5	62.5	62.5	62.5	62.5	62.5	75.0	75.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
Boston.....	65.0	65.0	65.0	70.0	70.0	70.0	80.0	100.0	125.0	112.5	44	44	44	40	40	40	40	40	40	40
Buffalo.....	60.0	60.0	60.0	60.0	65.0	70.0	85.0	100.0	100.0	100.0	48	44	44	44	44	44	44	40	40	40
Charleston, S. C.....	40.0	40.0	40.0	40.0	40.0	50.6	75.0	100.0	85.0	85.0	2 53	2 53	2 53	2 53	2 53	48	48	48	48	48
Chicago.....	75.0	75.0	75.0	75.0	75.0	81.3	87.5	125.0	125.0	110.0	44	44	44	44	44	44	44	44	44	44
Cincinnati.....	68.8	75.0	75.0	75.0	75.0	75.0	87.5	100.0	112.5	112.5	44½	44½	44½	44½	44½	44½	44½	44½	44½	44½
Cleveland.....	62.5	62.5	68.8	68.8	75.0	85.0	90.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44
Dallas.....	75.0	87.5	87.5	87.5	87.5	100.0	112.5	112.5	150.0	137.5	44	44	44	44	44	44	44	44	44	44
Denver.....	75.0	75.0	75.0	75.0	87.5	87.5	87.5	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44
Detroit.....	68.8	68.8	68.8	68.8	75.0	75.0	87.5	125.0	125.0	112.5	44	44	44	44	44	44	44	44	44	44
Fall River.....	55.0	60.0	60.0	60.0	65.0	75.0	85.0	115.0	115.0	95.0	48	48	48	44	44	44	44	44	44	44
Indianapolis.....	62.5	65.0	68.8	68.8	72.0	75.0	87.5	100.0	112.5	112.5	44½	44½	44½	44½	44½	44½	44½	44	44	44
Jacksonville.....	56.3	62.5	62.5	56.3	68.8	75.0	87.5	87.5	87.5	87.5	48	48	48	48	48	44	44	44	44	44
Kansas City, Mo.....	75.0	75.0	75.0	75.0	75.0	87.5	100.0	120.0	120.0	112.5	44	44	44	44	44	44	44	44	44	44
Little Rock.....	62.5	62.5	62.5	62.5	75.0	75.0	87.5	112.5	112.5	112.5	48	48	48	20 44	20 44	20 44	20 44	44	44	44
Los Angeles.....	75.0	75.0	75.0	75.0	62.5	75.0	87.5	112.5	125.0	125.0	44	44	44	44	44	44	44	44	40	40
Louisville.....	65.0	65.0	65.0	65.0	65.0	70.0	75.0	100.0	112.5	90.0	44	44	44	44	44	44	44	44	44	44
Manchester.....	50.0	50.0	50.0	60.0	60.0	75.0	90.0	112.5	112.5	112.5	48	44	44	44	44	44	44	44	44	44
Memphis.....	75.0	75.0	75.0	75.0	75.0	87.5	87.5	100.0	112.5	112.5	44	44	44	44	44	44	44	44	44	44
Milwaukee.....	65.0	65.0	65.0	65.0	65.0	70.0	87.5	87.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44
Minneapolis.....	70.0	70.0	70.0	70.0	75.0	75.0	90.0	112.5	125.0	100.0	44	44	44	44	44	44	44	44	44	44
Newark, N. J.....	65.0	65.0	65.0	70.0	75.0	75.0	87.5	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44
New Haven.....	60.0	60.0	60.0	60.0	65.0	70.0	82.5	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44

¹ 44 hours per week, June to August, inclusive.

Work 53 hours, paid for 54.

⁴⁸ 48 hours per week, Nov. 16 to Mar. 15, inclusive.

²⁰ 48 hours per week, October to March, inclusive.

⁴⁸ 44 hours per week, July to March, inclusive.

⁴⁸ 44 hours per week, Nov. 14 to May 14, inclusive

UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922—Continued.

Plasterers—Concluded.

City.	Rates per hour (cents).										Hours per week.									
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
New Orleans.....	62.5	62.5	50.0	50.0	62.5	62.5	75.0	100.0	100.0	100.0	48	48	48	48	45	45	45	45	45	45
New York.....	68.8	68.8	68.8	75.0	75.0	75.0	93.8	118.8	125.0	125.0	44	44	44	44	44	44	44	44	44	44
Omaha.....	75.0	75.0	75.0	75.0	75.0	80.0	87.5	112.5	125.0	125.0	44	44	44	44	44	44	44	44	44	44
Philadelphia.....	62.5	62.5	62.5	65.0	70.0	75.0	80.0	125.0	125.0	125.0	44	44	40	40	40	40	40	40	40	40
Pittsburgh.....	62.5	68.8	71.9	75.0	75.0	75.0	85.0	115.0	125.0	112.5	44	44	44	44	44	44	44	44	44	44
Portland, Oreg.....	75.0	75.0	75.0	75.0	75.0	87.5	110.0	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44
Providence.....	62.5	62.5	62.5	62.5	68.8	80.0	100.0	115.0	105.0	105.0	44	44	44	44	40	40	40	40	40	40
Richmond, Va.....	37.5						62.5	75.0	87.5	87.5	48							44	44	44
St. Louis.....	75.0	75.0	75.0	75.0	75.0	87.5	100.0	125.0	137.5	137.5	44	44	44	44	44	44	44	44	44	44
St. Paul.....	62.5	62.5	62.5	70.0	70.0	75.0	90.0	112.5	100.0	100.0	44	44	44	44	44	44	44	44	44	44
Salt Lake City.....	75.0	75.0	75.0	75.0	87.5	87.5	100.0	125.0	112.5	³ 112.5	44	44	44	44	44	44	44	44	44	44
San Francisco.....	87.5	87.5	87.5	87.5	87.5	100.0	112.5	125.0	137.5	127.5	44	44	44	40	40	40	40	40	40	44
Seranton.....	55.0	55.0	60.0	65.0	65.0	70.0	80.0	100.0	150.0	125.0	44	44	44	44	44	44	44	44	44	44
Seattle.....	75.0	75.0	75.0	75.0	87.5	100.0	112.5	125.0	125.0	112.5	44	44	44	40	40	40	40	40	40	40
Washington.....	62.5	62.5	62.5	62.5	70.0	70.0	87.5	100.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44

1920

Plasterers' laborers.

Boston.....	40.0	40.0	41.5	45.0	45.0	50.0	60.0	80.0	80.0	80.0	44	44	44	40	40	40	40	40	40	40
Chicago.....	41.5	41.5		50.0	50.0	50.0	56.3	62.5	106.3	106.3	78.8	44	44	44	44	44	44	44	44	44
Cincinnati.....	48.0	50.0	50.0	45.0	45.0	50.0	65.0	85.0	85.0	72.5	45	45	45	45	45	45	45	45	45	45
Cleveland.....	35.0	35.0	35.0	35.0	45.0	50.0	57.5	87.5	87.5	60.0	48	48	44	44	44	44	44	44	44	44
Denver.....	43.8	43.8	43.8	43.8	50.0	59.4	68.8	81.3	81.3	81.3	44	44	44	44	44	44	44	44	44	44
Detroit.....	37.5	43.0	43.8	43.8	50.0	75.0	100.0	75.0	75.0	75.0	44	44	44	44	44	44	44	44	44	44
Indianapolis.....				42.5	45.0	50.0	55.0	75.0	70.0	70.0				44	44	44	44	44	44	44
Kansas City, Mo.....	37.5	45.0	45.0	45.0	50.0	55.0	68.8	90.0	90.0	80.0	44	44	44	44	44	44	44	44	44	44
Los Angeles.....	61.4	56.3	56.3	56.3	50.0	62.5	75.0	100.0	112.5	112.5	44	44	44	44	44	44	44	44	44	40
Louisville.....	38.0	38.0	38.0	38.0	45.0	45.0	55.0	55.0	80.0	80.0	44	44	44	44	44	44	44	44	44	44
Memphis.....	32.5	37.5				50.0	50.0	75.0	62.5	62.5	44	44				44	44	44	44	44
Milwaukee.....	32.5	35.0	37.5	37.5	42.9	50.0	55.0	70.0	85.0	75.0	48	48	48	48	48	48	¹¹ 44	44	44	44
Minneapolis.....	40.6	40.6	¹⁰ 45.0	¹⁰ 45.0	50.0	60.0	85.0	85.0	85.0	75.0	48	44	44	44	44	44	44	44	44	44

Newark, N. J.			35.0	37.5	45.0	45.0	50.0	87.5	87.5	75.0			44	44	44	44	44	44	44
New Orleans	22.5	22.5	22.5	28.3	28.3	35.0 45.0	50.0 65.0	87.5	50.0	50.0	48	48	48	48	45	45	45	45	45
New York	40.6	40.6	40.6	43.8	46.9	56.3	62.5	87.5	93.8	93.8	44	44	44	44	44	44	44	44	44
Philadelphia	43.8	43.8	44.0	44.0	46.9	50.0	62.5	110.0	110.0	100.0	44	44	44	44	40	44	44	44	44
Pittsburgh	40.0	40.0	40.0	45.0	45.0	55.0	60.0	90.0	100.0	80.0	44	44	44	44	44	44	44	44	44
Portland, Oreg.	⁵⁰ 50.0	⁵⁰ 50.0	⁵⁰ 50.0	⁵⁰ 50.0	50.0	62.5	75.0	93.8	90.0	90.0	48	48	48	48	48	48	44	44	44
Providence					45.0	50.0	55.0	75.0	75.0	55.0					44	44	44	44	44
St. Louis	⁵¹ 56.3	⁵¹ 56.3	56.3	56.3	56.3	62.5	62.5	75.0	87.5	100.0	44	44	44	44	44	44	44	44	44
Salt Lake City	56.3	56.3	56.3	56.3	62.5	68.8	75.0	100.0	87.5	⁸ 87.5	44	44	44	44	44	44	44	44	44
San Francisco	62.5	62.5	62.5	62.5	62.5	68.8	87.5	106.3	112.5	95.1	44	44	44	44	44	44	44	40	46 ³
Seranton				35.0	35.0	35.0	50.0	58.5	70.0	60.0				44	44	44	44	44	44
Seattle	50.0	50.0	50.0	50.0	62.5	75.0	87.5	87.5	87.5	87.5	44	44	44	44	44	44	40	40	40
Washington	31.3	31.3	31.3	31.3	37.5	50.0	50.0	75.0	62.5	75.0	44	44	44	44	44	44	44	44	44

Plumbers.

Atlanta		44.4							75.0	100.0		² 53							44
Baltimore	50.0	50.0	50.0	50.0	56.3	68.8	75.0	87.5	100.0	93.8	48	48	48	44	44	44	44	44	44
Birmingham	68.8	75.0	75.0	75.0	75.0	87.5	112.5	150.0	150.0	125.0	44	44	44	44	44	44	44	44	44
Boston	60.0	65.0	65.0	65.0	68.8	75.0	80.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44
Buffalo	56.3	56.3	56.3	56.3	62.5	68.8	75.0	100.0	100.0	100.0	48	¹ 48	¹ 48	¹ 48	¹ 48	44	44	44	44
Charleston, S. C.		43.8	43.8	43.8	50.0	59.0	75.0	100.0	100.0	100.0		48	48	48	48	48	48	44	44
Chicago	75.0	75.0	75.0	75.0	75.0	84.4	125.0	125.0	110.0	110.0	44	44	44	44	44	44	44	44	44
Cincinnati	61.8	61.8	61.8	61.8	65.6	65.0	75.0	100.0	100.0	100.0	44 ³	44 ³	44 ³	44	44	44	44	44	44
Cleveland	62.5	62.5	62.5	68.8	75.0	81.3	90.0	100.0	137.5	110.0	44	44	44	44	44	44	44	44	44
Dallas	68.8	75.0	75.0	75.0	81.3	87.5	100.0	125.0	137.5	125.0	44	44	44	44	44	44	44	44	44
Denver	62.5	62.5	62.5	62.5	75.0	87.5	87.5	100.0	106.3	106.3	44	44	44	44	44	44	44	44	44
Detroit	56.3	56.3	60.0	62.5	68.8	75.0	90.0	125.0	100.0	100.0	48	48	48	44	44	44	44	44	44
Fall River	43.8	43.8	43.8	50.0	50.0	56.3	67.5	100.0	100.0	85.0	48	48	48	44	44	44	44	44	44
Indianapolis	62.5	62.5	62.5	62.5	67.5	75.0	87.5	100.0	125.0	115.0	44	44	44	44	44	44	44	44	44
Jacksonville	62.5	62.5	62.5	62.5	62.5	75.0	80.0	93.8	112.5	100.0	48	48	48	48	48	44	44	44	44
Kansas City, Mo.	62.5	68.8	68.8	75.0	75.0	87.5	100.0	100.0	125.0	112.5	48	44	44	44	44	44	44	44	44
Little Rock	56.3	62.5	62.5	62.5	68.8	75.0	87.5	125.0	112.5	100.0	¹⁹ 48	¹¹ 44	¹¹ 44	¹¹ 44	44	44	44	44	44
Los Angeles	56.3	56.3	56.3	56.3	62.5	68.3	81.3	112.5	112.5	112.5	48	48	48	48	48	48	44	44	44
Louisville	60.0	60.0	60.0	60.0	60.0	70.0	70.0	80.0	100.0	100.0	44	44	44	44	44	44	44	44	44
Manchester	31.3	31.3	31.3	47.7	47.7	50.0	70.0	100.0	90.0	80.0	48	48	48	44	44	44	44	44	44

¹ 44 hours per week, June to August, inclusive.² Work 53 hours, paid for 54.³ Prevailing rate; no effective union scale.⁴ 48 hours per week, November to April, inclusive.⁵ 44 hours per week, June to September, inclusive.⁶ For tenders.⁷ For helpers.

UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922—Continued.

Plumbers—Concluded.

City.	Rates per hour (cents).										Hours per week.									
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Memphis.....	62.5	62.5	62.5	62.5	62.5	81.3	93.8	125.0	125.0	112.5	48	48	48	48	48	48	44	44	44	44
Milwaukee.....	62.5	62.5	62.5	62.5	62.5	68.8	75.0	87.5	100.0	90.0	44	44	44	44	44	44	44	44	44	44
Minneapolis.....	56.3	62.5	62.5	62.5	62.5	68.8	75.0	100.0	100.0	87.5	48	44	44	44	44	44	44	44	44	44
Newark, N. J.....	62.5	62.5	62.5	62.5	62.5	75.0	87.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44
New Haven.....	50.0	50.0	54.5	54.5	54.5	62.5	75.0	87.5	100.0	87.5	44	44	44	44	44	44	44	44	44	44
New Orleans.....	56.3	56.3	56.3	56.3	56.3	68.8	80.0	90.0	100.0	90.0	48	48	48	48	48	48	48	48	44	44
New York.....	68.8	68.8	68.8	68.8	68.8	75.0	75.0	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44
Omaha.....	68.3	68.3	68.3	68.3	75.0	75.0	87.5	125.0	125.0	100.0	44	44	44	44	44	44	44	44	44	44
Philadelphia.....	43.8	43.8	43.8	43.8	56.3	62.5	80.0	90.0	115.0	90.0	44	44	44	44	44	44	44	44	44	44
Pittsburgh.....	62.5	62.5	68.8	68.8	75.0	75.0	93.8	106.3	125.0	112.5	44	44	44	44	44	44	44	44	44	44
Portland, Oreg.....	75.0	75.0	75.0	75.0	75.0	81.3	100.0	112.5	112.5	106.3	44	44	44	44	44	44	44	44	44	44
Providence.....	56.3	56.3	56.3	56.3	62.5	75.0	75.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
Richmond, Va.....	50.0	50.0	50.0	50.0	50.0	62.5	75.0	75.0	75.0	75.0	48	48	48	48	48	48	44	44	44	44
St. Louis.....	66.3	75.0	75.0	75.0	75.0	81.3	100.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44
St. Paul.....	62.5	62.5	62.5	62.5	62.5	68.8	75.0	87.5	100.0	100.0	44	44	44	44	44	44	44	44	44	44
Salt Lake City.....	75.0	75.0	75.0	75.0	75.0	87.5	100.0	112.5	100.0	8 90.0	44	44	44	44	44	44	44	44	44	44
San Francisco.....	75.0	75.0	75.0	75.0	81.3	87.5	100.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44
Scranton.....	50.0	53.1	53.1	53.8	53.8	62.5	75.0	87.5	87.5	87.5	48	48	1 48	44	44	44	44	44	44	44
Seattle.....	81.3	75.0	75.0	75.0	81.3	90.0	100.0	112.5	112.5	100.0	44	44	44	44	44	44	40	40	40	40
Washington.....	50.0	56.3	56.3	56.3	56.3	75.0	87.5	100.0	100.0	106.3	48	48	48	44	44	44	44	44	44	44

Sheet-metal workers.

Baltimore.....	40.0	40.0	40.0	40.0	45.8	62.5	80.0	80.0	90.0	90.0	48	48	48	48	48	44	44	44	44	44
Birmingham.....	55.0	55.0	55.0	50.0	50.0	65.0	75.0	100.0	100.0	85.0	44	44	44	44	44	44	44	44	44	44
Boston.....	55.0	55.0	55.0	60.0	60.0	70.0	80.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
Buffalo.....	45.0	50.0	50.0	50.0	50.0	53.3	62.5	87.5	87.5	87.5	48	48	1 48	44	44	1 48	44	44	44	44
Chicago.....	65.0	68.8	68.8	70.0	70.0	70.0	75.0	125.0	125.0	110.0	44	44	44	44	44	44	44	44	44	44
Cincinnati.....	45.0	45.0	50.0	50.0	50.0	52.5	56.0	70.0	80.0	80.0	44	44	44	44	48	48	48	48	48	48
Cleveland.....	45.0	45.0	50.0	50.0	60.0	80.0	85.0	125.0	125.0	104.0	48	48	48	44	44	44	44	44	44	44

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Dallas.....	50.0	56.3	62.5	62.5	68.8	75.0	87.5	100.0	100.0	100.0	48	44	44	44	44	44	44	44	44
Denver.....	56.3	56.3	56.3	56.3	62.5	75.0	87.5	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44
Detroit.....	40.0	50.0	50.0	50.0	60.0	70.0	80.0	125.0	100.0	100.0	48	48	48	48	44	44	44	44	44
Fall River.....				37.5	43.8	50.0	62.5	100.0	100.0	85.0				44	44	44	44	44	44
Indianapolis.....	47.5	50.0	55.0	55.0	57.0	60.0	60.0	100.0	100.0	92.5	48	44	44	44	44	44	44	44	44
Kansas City, Mo.....	57.5	60.0	62.5	62.5	62.5	67.5	70.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44
Little Rock.....	50.0	52.5	52.5	52.5	60.0	65.0	80.0	100.0	100.0	90.0	48	48	48	48	48	48	48	48	48
Los Angeles.....	56.3	56.3	56.3	56.3	56.3	68.5	68.5	100.0	112.5	112.5	44	44	44	44	44	44	44	44	44
Louisville.....	40.0	42.5	45.0	45.0	47.5	50.0	65.0	80.0	80.0	80.0	48	48	44	44	44	44	44	44	44
Manchester.....	34.4	34.4	34.4	34.4	34.4	37.5	44.3	100.0	90.0	80.0	48	48	48	48	48	44	44	44	44
Memphis.....	45.0	50.0	50.0	50.0	53.1	62.5	75.0	100.0	100.0	87.5	48	48	48	48	48	48	44	44	44
Milwaukee.....	42.5	45.0	47.5	50.0	52.5	60.0	60.0	67.5	100.0	85.0	48	⁶² 48	⁶² 48	⁶² 48	⁶² 48	¹ 48	¹ 48	44	44
Minneapolis.....	50.0	50.0	50.0	50.0	50.0	56.3	70.0	100.0	100.0	90.0	48	48	48	48	48	44	44	44	44
Newark, N. J.....	60.0	60.0	60.0	60.0	62.5	75.0	87.5	100.0	112.5	112.5	44	44	44	44	44	44	44	44	44
New Haven.....	47.7	47.7	47.7	50.0	54.5	59.1	75.0	87.5	100.0	87.5	44	44	44	44	44	44	44	44	44
New Orleans.....	40.0	40.0	40.0	40.0	45.0	68.8	80.0	100.0	100.0	90.0		48	48	48	44	44	44	44	44
New York.....	59.4	62.5	62.5	62.5	62.5	70.0	75.0	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44
Omaha.....	42.5	42.5	42.5	42.5	50.0	68.0	75.0	112.5	112.5	100.0	44	44	44	44	44	44	44	44	44
Philadelphia.....	50.0	50.0	50.0	50.0	56.3	70.0	75.0	110.0	100.0	90.0	44	44	44	44	44	44	44	44	44
Pittsburgh.....	55.0	55.0	57.5	60.0	60.0	70.0	80.0	90.0	112.5	100.0	44	44	44	44	44	44	44	44	44
Portland, Oreg.....	56.3	56.3	56.3	56.3	65.6	82.5	86.0	100.0	100.0	90.0	44	44	44	44	44	44	44	44	44
Providence.....	46.0	48.0	48.0	50.0	52.0	57.0	65.0	100.0	100.0	87.5	44	44	44	44	44	44	44	44	44
Richmond, Va.....					41.9	50.0	70.0	80.0	80.0	80.0					48	48	48	48	48
St. Louis.....	60.0	60.0	60.0	60.0	62.5	65.0	75.0	85.0	125.0	100.0	44	44	44	44	44	44	44	44	44
St. Paul.....	50.0	50.0	50.0	50.0	50.0	56.3	70.0	100.0	100.0	90.0	48	48	48	48	44	44	44	44	44
Salt Lake City.....	57.5	57.5	62.5	62.5	62.5	62.5	87.5	100.0	90.0	³ 90.0	44	44	44	44	44	44	44	44	44
San Francisco.....	68.8	68.8	68.8	68.8	75.0	82.5	100.0	112.5	125.0	106.3	44	44	44	44	44	44	44	44	44
Scranton.....	43.8	46.9	46.9	46.9	50.0	56.3	75.0	87.5	87.5	87.5	48	¹⁹ 48	44	44	44	44	44	44	44
Seattle.....	56.3	62.5	62.5	62.5	68.8	82.5	90.0	100.0	100.0	93.8	44	44	44	44	44	44	44	44	44
Washington.....	50.0	50.0	50.0	50.0	56.3	70.0	75.0	92.5	100.0	100.0	44	44	44 ₁	44 ₂	44 ₂	44	44	44	44

¹ 44 hours per week, June to August, inclusive.
³ Prevailing rate; no effective union scale.

¹³ 48 hours per week, October to April, inclusive.
¹⁹ 44 hours per week, June to September, inclusive

³⁰ 44 hours per week, July to September, inclusive.
⁵² 44 hours per week, June 15 to Sept. 15, inclusive.

UNION SCALE OF WAGES AND HOURS OF LABOR.

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UNION SCALE OF WAGES AND HOURS OF LABOR IN SPECIFIED CITIES AND OCCUPATIONS, 1913 TO 1922—Concluded.

Stonecutters.

City.	Rates per hour (cents).										Hours per week.									
	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Atlanta.....	50.0	50.0	50.0	50.0	50.0	62.5	75.0	100.0	100.0	90.0	48	48	48	48	44	44	44	44	44	44
Baltimore.....	50.0	50.0	50.0	56.3	56.3	56.3	75.0	100.0	100.0	90.0	44½	44½	44½	44	44	44	44	44	44	44
Boston.....	56.3	56.3	56.3	56.3	62.5	70.0	70.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
Buffalo.....	56.3	56.3	56.3	56.3	62.5	62.5	75.0	100.0	100.0	100.0	48	48	48	44	44	44	44	44	44	44
Chicago.....	62.5	62.5	62.5	62.5	70.0	70.0	81.3	125.0	125.0	102.5	44	44	44	44	44	44	44	44	44	44
Cincinnati.....	56.3	56.3	60.0	62.5	65.0	70.0	77.5	115.0	125.0	125.0	44½	44½	44½	44½	44	44	44	44	44	44
Cleveland.....	60.0	62.5	62.5	62.5	70.0	77.5	80.0	112.5	125.0	110.0	44	44	44	44	44	44	44	44	44	44
Dallas.....	62.5	62.5	62.5	62.5	75.0	75.0	87.5	100.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44
Denver.....	62.5	62.5	62.5	62.5	62.5	75.0	87.5	100.0	112.5	100.0	44	44	44	44	44	44	44	44	44	44
Detroit.....	62.5	62.5	62.5	65.0	70.0	70.0	80.0	125.0	112.5	112.5	44	44	44	44	44	44	44	44	44	44
Indianapolis.....	56.3	56.3	56.3	56.3	62.5	62.5	75.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
Kansas City, Mo.....	56.3	62.5	62.5	62.5	62.5	62.5	75.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
Little Rock.....	55.0	55.0	55.0	55.0	55.0	60.0	65.0	100.0	100.0	80.0	44	44	44	44	44	44	44	44	44	44
Louisville.....	56.3	56.3	56.3	56.3	60.0	60.0	75.0	100.0	100.0	100.0	48	48	48	44	44	44	44	44	44	44
Memphis.....	65.0	65.0	65.0	65.0	65.0	75.0	75.0	100.0	112.5	112.5	44	44	44	44	44	44	44	44	44	44
Milwaukee.....									90.0	90.0										
Minneapolis.....	56.3	62.5	62.5	62.5	62.5	62.5	75.0	87.5	112.5	100.0	44	44	44	44	44	44	44	44	44	44
Newark, N. J.....	68.8	68.8	68.8	68.8	68.8	68.8	84.4	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44
New Haven.....	56.3	56.3	56.3	56.3	56.3	60.0	60.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
New Orleans.....									125.0	125.0										
New York.....	68.8	68.8	68.8	68.8	68.8	68.8	84.4	100.0	112.5	112.5	44	44	44	44	44	44	44	44	44	44
Omaha.....	58.8	58.8	58.8	58.8	62.5	67.5	75.0	100.0	112.5	100.0	44	44	44	44	44	44	44	44	44	44
Philadelphia.....	50.0	53.0	56.3	56.3	65.0	65.0	82.5	135.0	135.0	100.0	44	44	44	44	44	44	44	44	44	44
Richmond, Va.....	54.5	54.5	54.5	54.5	54.5	62.5	75.0	87.5	100.0	100.0	44	44	44	44	44	44	44	44	44	44
St. Louis.....	56.3	62.5	62.5	62.5	62.5	70.0	85.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44
St. Paul.....	56.3	60.0	60.0	60.0	62.5	62.5	75.0	87.5	112.5	100.0	44	44	44	44	44	44	44	44	44	44
San Francisco.....	70.0	70.0	70.0	70.0	70.0	70.0	100.0	100.0	112.5	100.0	44	44	44	44	44	44	44	44	44	44
Scranton.....	50.0	50.0	50.0	50.0	50.0	56.3	60.0	90.0	100.0	100.0	48	48	48	44	44	44	44	44	44	44
Seattle.....									125.0	112.5										
Washington.....	54.0	54.0	54.0	56.3	56.3	65.0	87.5	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44

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Structural-iron workers.

Baltimore.....	56.3	56.3	56.3	62.5	62.5	75.0	100.0	125.0	125.0	112.5	44	44	44	44	44	44	44	44	44
Boston.....	62.5	62.5	62.5	62.5	68.8	80.0	80.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44
Buffalo.....	60.0	62.5	62.5	62.5	62.5	70.0	85.0	100.0	125.0	100.0	48	¹⁹ 48	¹⁹ 48	¹⁹ 48	¹⁹ 48	44	44	44	44
Chicago.....	68.0	68.0	68.0	68.0	69.0	70.0	87.5	125.0	125.0	105.0	44	⁵⁸ 44	⁵⁸ 44	⁵⁸ 44	⁵⁸ 44	⁵⁸ 44	44	44	44
Cincinnati.....	62.5	62.5	62.5	62.5	65.0	75.0	75.0	100.0	90.0	95.0	44 ₂	44 ₂	44 ₂	44 ₂	44	44	44	44	44
Cleveland.....	65.0	70.0	70.0	70.0	80.0	90.0	100.0	125.0	125.0	110.0	¹³ 44	¹³ 44	⁵⁴ 44	44	44	44	44	44	44
Dallas.....	62.5	62.5	67.5	67.5	67.5	75.0	75.0	100.0	100.0	100.0	44	¹⁹ 48	44	44	44	44	44	44	44
Denver.....	56.3	56.3	62.5	62.5	70.0	75.0	87.5	100.0	103.1	103.1	44	44	44	44	44	44	44	44	44
Detroit.....	60.0	65.0	65.0	65.0	65.0	80.0	90.0	125.0	125.0	100.0	¹⁹ 48	¹⁹ 48	48	44	44	44	44	44	44
Indianapolis.....	65.0	68.0	70.0	70.0	75.0	75.0	85.0	125.0	125.0	112.5	44	44	44	44	44	44	44	44	44
Kansas City, Mo.....	62.5	65.0	68.8	68.8	68.8	75.0	90.0	110.0	110.0	107.5	44	44	44	44	44	44	44	44	44
Los Angeles.....	50.0	50.0	50.0	50.0	50.0	62.5	75.0	87.5	100.0	100.0	48	48	48	48	48	48	44	44	44
Louisville.....	50.0	50.0	50.0	50.0	60.0	70.0	80.0	100.0	100.0	100.0	48	44	44	44	44	44	44	44	44
Milwaukee.....	56.3	62.5	62.5	62.5	62.5	70.0	80.0	100.0	100.0	90.0	¹¹ 44	¹¹ 44	¹¹ 44	¹¹ 44	¹¹ 44	⁵⁸ 44	44	44	44
Minneapolis.....	56.3	62.5	62.5	62.5	62.5	68.8	87.5	87.5	100.0	100.0	48	⁹ 44	⁹ 44	⁹ 44	⁹ 44	44	44	44	44
Newark, N. J.....	62.5	62.5	62.5	68.8	72.5	75.0	87.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44
New Haven.....	62.5	62.5	62.5	62.5	62.5	80.0	92.5	106.3	106.3	100.0	44	44	44	44	44	44	44	44	44
New Orleans.....	62.5	62.5	62.5	62.5	62.5	75.0	75.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44
New York.....	62.5	62.5	62.5	66.3	68.8	80.0	87.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44
Omaha.....	58.8	60.0	62.5	65.0	68.8	75.0	90.0	115.0	112.5	100.0	48	48	¹¹ 44	¹¹ 44	¹¹ 44	44	44	44	44
Philadelphia.....	60.0	60.0	60.0	60.0	70.0	92.5	92.5	112.5	112.5	100.0	44	44	44	44	44	44	44	44	44
Pittsburgh.....	62.5	62.5	62.5	62.5	70.0	87.5	100.0	100.0	125.0	100.0	44	44	44	44	44	44	44	44	44
Portland, Oreg.....	62.5	62.5	62.5	62.5	70.0	87.5	100.0	112.5	101.3	101.3	44	44	44	44	44	44	44	44	44
Providence.....	56.3	62.5	62.5	62.5	68.8	80.0	92.5	100.0	100.0	92.5	44	44	44	44	44	44	44	44	44
Richmond, Va.....	56.3	56.3	62.5	62.5	62.5	80.0	92.5	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44
St. Louis.....	65.0	65.0	65.0	67.5	70.0	80.0	92.5	125.0	125.0	105.3	44	44	44	44	44	44	44	44	44
St. Paul.....	56.3	62.5	62.5	62.5	62.5	68.8	80.0	100.0	100.0	100.0	48	¹⁹ 48	¹⁹ 48	¹⁹ 48	¹⁹ 48	44	44	44	44
Salt Lake City.....	62.5	62.5	62.5	62.5	68.8	81.3	100.0	112.5	100.0	90.0	44	44	44	44	44	44	44	44	44
San Francisco.....	75.0	75.0	75.0	75.0	75.0	87.5	100.0	112.5	125.0	112.5	44	44	44	44	44	44	44	44	44
Scranton.....	56.3	56.3	56.3	62.5	62.5	68.8	87.5	100.0	112.5	100.0	48	48	48	¹⁹ 48	¹⁹ 48	¹⁹ 48	44	44	44
Seattle.....	62.5	62.5	62.5	62.5	75.0	87.5	100.0	112.5	112.5	100.0	44	44	44	44	44	44	44	44	44
Washington.....	56.3	62.5	62.5	62.5	70.0	80.0	92.5	98.0	125.0	125.0	44	44	44	44	44	44	44	44	44

⁹ 48 hours per week, September to April, inclusive.

¹¹ 48 hours per week, November to April, inclusive.

¹³ 48 hours per week, October to April, inclusive.

¹⁹ 44 hours per week, June to September, inclusive.

⁵⁸ 48 hours per week, December to March, inclusive.

⁵⁴ 48 hours per week, October to March, inclusive.

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UNION SCALE OF WAGES AND HOURS OF LABOR.

Wages and Hours of Labor in the Boot and Shoe Industry, 1913 to 1922.

COMPARATIVE figures of average earnings per hour, average full-time hours per week, and average full-time earnings per week are presented in this article for employees in the principal occupations of the boot and shoe industry in the United States for the years 1913, 1914, 1916, 1918, 1920, and 1922. Index numbers (percentages) based on these averages with 1913 taken as the base or 100 per cent are also presented for all occupations for which 1913 data are available.

The figures for 1922, including 47,361 employees, are drawn from a survey made by the Bureau of Labor Statistics in 104 representative factories located in 13 States, namely, Massachusetts, New York, Ohio, Pennsylvania, Missouri, New Hampshire, Maine, Illinois, Wisconsin, New Jersey, Michigan, Minnesota, and Virginia. These States contain 98 per cent of the wage earners in this industry in the United States. The figures for other years are drawn from prior publications of the bureau. Data were not collected by the bureau for the years 1915, 1917, 1919, and 1921.

The data for all years covered were taken by agents of the bureau directly from the pay-roll records of the establishments. The number of establishments furnishing data has varied from year to year: 88 establishments were covered in 1913, the initial year of the table; in 1918, 143 establishments furnished data. The 1922 data were drawn from the January pay rolls of 2 factories, from the March pay rolls of 11 factories, from the April pay rolls of 40 factories, from the May pay rolls of 43 factories, and from the June pay rolls of 8 factories. The mass of the data, therefore, is as of April and May.

In the year ending December 31, 1921, the days of operation of 101 of the 104 establishments range from 174 to 308 days. The average was 282 days. One establishment was in operation a very few days in 1921. Two establishments resumed work January 1, 1922, after being closed all of 1921.

The difference between the average days of operation (282) and a possible full time of 313 days was due to the following conditions: Eight establishments did not operate any Saturday of the year, 5 did not operate some Saturdays; such loss of time ranging from 5 to 38 days; 34 establishments were closed by lack of orders from 5 to 93 days; 31 establishments were closed for inventory from 1 to 20 days; 6 establishments were closed by strikes from 12 to 39 days; and all were closed for holidays from 3 to 17 days.

Between April 1, 1920, and the date of the survey wage changes were reported as follows: One establishment gave an increase of 12½ per cent and later made a reduction of 10 per cent; 5 establishments made an increase of 20 per cent and later a reduction of 22½ per cent; 4 establishments gave an increase of 10 per cent and a later reduction of 10 per cent; 46 establishments made no increase during the period but made reductions ranging from 5 to 30 per cent; 48 establishments reported no change in wage rates within the period.

WAGES AND HOURS OF LABOR IN BOOT AND SHOE INDUSTRY. 97

AVERAGE FULL-TIME HOURS PER WEEK, EARNINGS PER HOUR, FULL-TIME EARNINGS PER WEEK, AND INDEX NUMBERS IN THE BOOT AND SHOE INDUSTRY IN THE UNITED STATES, BY DEPARTMENT AND OCCUPATION, 1913 TO 1922.

Department and occupation.	Year.	Number of establishments.	Number of employes.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers.		
							Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.
<i>Cutting department.</i>									
Cutters, vamp and whole shoe, hand:									
Male.....	1913	71	1,987	54.5	\$0.351	\$19.05	100	100	100
	1914	75	1,812	54.0	.366	19.66	99	104	103
	1916	113	2,355	53.9	.375	20.12	99	107	106
	1918	114	2,319	52.0	.484	25.06	95	138	132
	1920	91	2,050	47.8	.831	40.29	88	236	211
	1922	84	1,915	48.3	.787	38.11	89	224	200
Female.....	1922	2	9	48.0	.612	29.02			
Cutters, vamp and whole shoe, machine:									
Male.....	1913	33	549	55.3	.323	17.77	100	100	100
	1914	40	642	55.3	.325	17.93	100	101	101
	1916	67	1,059	54.9	.331	18.07	99	102	102
	1918	66	1,202	52.2	.444	23.04	94	137	130
	1920	56	942	48.9	.821	37.94	88	250	214
	1922	48	867	49.2	.647	31.99	89	200	180
Female.....	1920	10	73	53.8	.393	21.69			
	1922	8	62	52.5	.433	23.51			
Cutters, trimmings, hand:									
Male.....	1920	87	884	48.0	.454	22.27			
	1922	79	747	48.2	.460	22.02			
Female.....	1920	11	38	50.1	.283	13.98			
	1922	7	42	48.0	.299	14.82			
Cutters, trimmings, machine:									
Male.....	1920	37	163	49.1	.430	21.20			
	1922	30	116	50.3	.398	20.05			
Female.....	1920	12	66	50.7	.273	13.77			
	1922	7	37	49.8	.323	16.20			
Skivers, upper:									
Male.....	1913	32	134	54.5	.299	16.23	100	100	100
	1914	29	116	54.4	.299	16.13	100	100	99
	1916	32	124	54.6	.311	16.93	100	104	104
	1918	23	96	50.9	.423	21.55	93	141	133
	1920	29	87	48.1	.601	28.58	88	193	176
	1922	31	77	47.6	.595	28.48	87	199	182
Female.....	1913	67	439	54.6	.209	11.38	100	100	100
	1914	77	446	54.1	.209	11.30	99	100	99
	1916	113	591	54.0	.209	11.26	99	100	99
	1918	121	697	51.7	.267	14.73	95	128	129
	1920	105	611	48.7	.439	21.47	89	208	189
	1922	94	539	48.6	.430	20.84	89	206	183
Cutters, linings, hand:									
Male.....	1920	58	233	47.8	.670	32.88			
	1922	66	229	48.0	.684	33.82			
Cutters, linings, machine:									
Male.....	1920	48	111	49.2	.562	27.82			
	1922	42	98	49.6	.552	27.58			
Female.....	1922	2	2	51.0	.337	17.01			
<i>Sole leather department.</i>									
Cutters, outsole:									
Male.....	1913	42	196	55.4	.303	16.69	100	100	100
	1914	47	225	55.0	.302	16.64	99	100	100
	1916	64	345	54.7	.307	16.74	99	101	100
	1918	76	416	52.1	.405	21.02	94	134	126
	1920	60	331	48.4	.718	34.79	87	236	208
	1922	52	264	48.5	.706	34.09	88	233	204
Cutters, insole:									
Male.....	1920	40	184	48.4	.692	33.55			
	1922	43	193	48.3	.680	32.77			
Rounders, outsole or insole:									
Male.....	1920	73	161	48.8	.578	28.21			
	1922	76	158	48.9	.563	27.48			
Female.....	1920	8	12	48.5	.411	19.90			
	1922	4	5	48.8	.268	13.04			

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Department and occupation.	Year.	Number of establishments.	Number of employes.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers.		
							Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.
<i>Sole leather department—Concluded.</i>									
Channelers, outsole or insole:									
Male.....	1913	75	196	55.4	\$0.333	\$18.42	100	100	100
	1914	77	213	55.2	.331	18.24	100	99	99
	1916	107	255	55.0	.340	18.69	99	102	101
	1918	122	268	52.5	.430	22.42	95	129	122
	1920	108	240	48.8	.699	34.23	88	209	185
	1922	89	198	49.3	.649	32.02	89	195	174
Female.....	1922	4	5	50.0	.421	21.04			
Cutters, top and heel lifts, machine:									
Male.....	1920	47	232	49.0	.513	24.95			
	1922	43	364	48.5	.537	25.99			
Heel builders, hand:									
Male.....	1920	15	58	50.1	.568	28.44			
	1922	15	49	50.4	.495	24.74			
Female.....	1920	8	60	46.8	.415	19.40			
	1922	9	34	48.0	.429	20.46			
Heel builders, machine:									
Male.....	1920	37	90	49.2	.470	23.19			
	1922	33	119	48.9	.497	24.29			
Female.....	1920	16	90	47.3	.407	19.33			
	1922	17	214	48.3	.411	19.85			
<i>Fitting or stitching department.</i>									
Stampers, linings or uppers:									
Male.....	1920	12	19	48.1	.424	20.59			
	1922	11	14	49.4	.411	20.36			
Female.....	1920	91	281	48.0	.394	19.02			
	1922	90	426	48.6	.369	17.87			
Cementers and doublers, hand and machine:									
Male.....	1920	14	21	47.5	.463	21.78			
	1922	8	29	48.2	.528	25.45			
Female.....	1920	107	1,133	48.6	.357	17.29			
	1922	89	913	48.5	.337	16.36			
Folders, hand:									
Male.....	1922	5	13	48.5	.793	37.24			
Female.....	1920	48	379	47.8	.433	21.09			
	1922	56	471	48.1	.429	20.49			
Folders, machine:									
Male.....	1922	3	7	46.6	.570	26.33			
Female.....	1920	74	390	48.9	.405	19.78			
	1922	71	355	48.7	.391	19.02			
Perforators:									
Male.....	1920	16	22	48.5	.517	24.44			
	1922	28	60	49.0	.482	23.68			
Female.....	1920	82	218	48.2	.435	21.19			
	1922	84	422	48.3	.444	21.43			
Tip stitchers:									
Male.....	1922	6	10	47.5	.546	26.49			
Female.....	1913	79	337	54.7	.219	11.94	100	100	100
	1914	83	348	54.2	.219	11.87	99	100	99
	1916	124	442	54.0	.231	12.45	99	105	104
	1918	125	437	51.8	.288	14.86	95	132	124
	1920	106	355	48.7	.448	21.77	89	204	182
	1922	92	362	48.6	.424	20.68	89	194	173
Closers or seamers:									
Male.....	1920	10	19	47.6	.642	30.72			
	1922	8	12	48.2	.487	22.88			
Female.....	1920	97	441	48.8	.399	19.48			
	1922	92	409	49.1	.370	18.23			
Seam rubbers:									
Male.....	1920	16	28	48.7	.404	19.23			
	1922	18	26	47.6	.348	16.48			
Female.....	1920	69	157	49.1	.308	15.21			
	1922	49	99	48.5	.302	14.79			

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Department and occupation.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers.		
							Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.
<i>Fitting or stitching department—Contd.</i>									
Lining makers:									
Male.....	1922	4	8	46.5	\$0.571	\$25.29	.....	.....	.....
Female.....	1913	80	854	54.6	.180	10.38	100	100	100
	1914	84	852	54.1	.189	10.21	99	99	98
	1916	126	1,004	53.9	.198	10.69	99	104	103
	1918	132	1,138	51.5	.241	12.35	94	127	119
	1920	112	1,149	48.6	.380	18.40	89	199	177
	1922	97	1,055	48.8	.362	17.71	89	191	171
Closers-on:									
Male.....	1922	3	3	49.3	.752	35.71	.....	.....	.....
Female.....	1913	74	349	54.4	.194	10.53	100	100	100
	1914	77	347	53.9	.193	10.42	99	99	99
	1916	83	360	53.6	.204	10.95	99	105	104
	1918	90	351	52.0	.237	12.28	96	122	117
	1920	47	133	49.4	.363	17.94	91	185	170
	1922	35	129	50.2	.394	19.88	92	203	189
Top stitchers:									
Male.....	1920	16	57	48.0	.630	30.74	.....	.....	.....
Female.....	1922	19	64	48.1	.657	31.59	.....	.....	.....
	1913	82	1,070	54.6	.210	11.47	100	100	100
	1914	86	1,076	54.2	.212	11.48	99	101	100
	1916	128	1,427	54.0	.220	11.87	99	105	103
	1918	135	1,364	51.6	.285	14.57	95	136	127
	1920	112	1,187	48.5	.451	21.94	89	213	191
	1922	100	1,195	48.8	.433	21.16	89	206	184
Binders:									
Male.....	1922	5	16	48.5	.683	32.92	.....	.....	.....
Female.....	1920	36	141	50.3	.455	23.03	.....	.....	.....
	1922	49	257	49.3	.485	23.75	.....	.....	.....
Buttonhole makers:									
Male.....	1922	4	4	50.5	.395	19.45	.....	.....	.....
Female.....	1913	74	517	54.7	.194	10.60	100	100	100
	1914	80	506	53.9	.198	10.70	99	102	101
	1916	113	466	53.8	.217	11.65	98	112	110
	1918	82	140	52.2	.262	13.62	95	135	128
	1920	46	70	49.3	.397	19.48	90	202	184
	1922	47	83	49.6	.369	18.20	91	190	172
Button fasteners:									
Male.....	1920	4	8	51.8	.392	20.26	.....	.....	.....
Female.....	1922	4	5	53.3	.316	16.81	.....	.....	.....
	1913	72	232	54.8	.199	10.95	100	100	100
	1914	66	198	53.7	.197	10.57	98	99	97
	1916	94	195	53.8	.211	11.32	98	106	103
	1918	64	102	52.7	.230	12.06	96	116	110
	1920	33	44	48.4	.388	18.56	88	194	169
	1922	44	76	49.2	.338	16.51	90	170	151
Eyeleters:									
Male.....	1920	31	75	48.4	.585	28.08	.....	.....	.....
Female.....	1922	31	73	48.3	.514	24.64	.....	.....	.....
	1918	92	223	51.7	.268	13.64	.....	.....	.....
	1920	92	232	48.7	.443	21.61	.....	.....	.....
	1922	71	160	49.2	.415	20.26	.....	.....	.....
Vampers:									
Male.....	1913	66	554	54.8	.320	17.47	100	100	100
	1914	65	534	54.6	.312	17.04	100	98	98
	1916	82	624	54.6	.333	18.14	100	104	104
	1918	83	573	51.5	.442	22.73	94	138	130
	1920	55	400	47.9	.704	33.85	87	219	194
	1922	52	357	47.8	.628	30.09	87	196	172
Female.....	1913	79	1,072	54.7	.246	13.45	100	100	100
	1914	85	1,116	54.1	.243	13.14	99	99	98
	1916	121	1,383	53.9	.254	13.66	99	103	102
	1918	132	1,477	51.7	.312	16.11	95	127	120
	1920	111	1,313	48.8	.512	25.09	89	206	187
	1922	98	1,142	49.0	.480	23.54	90	195	175

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Department and occupation.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers.		
							Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.
<i>Fitting or stitching department—Concd.</i>									
Barrers:									
Male.....	1922	5	6	50.0	\$0.472	\$23.17			
Female.....	1920	69	138	48.5	.393	19.21			
	1922	64	110	48.7	.368	17.93			
Tongue stitchers:									
Male.....	1922	1	1	44.0	.965	42.46			
Female.....	1920	69	194	48.8	.350	16.95			
	1922	63	205	48.7	.362	17.75			
Fancy stitchers:									
Male.....	1922	8	18	48.3	.561	27.19			
Female.....	1920	43	179	47.7	.460	22.50			
	1922	75	764	48.6	.444	21.54			
Backstay stitchers:									
Male.....	1922	4	9	46.7	.769	35.03			
Female.....	1913	78	389	54.7	.195	10.62	100	100	100
	1914	82	432	54.3	.197	10.68	99	101	101
	1916	125	575	54.0	.213	11.47	99	109	108
	1918	124	560	51.9	.261	13.49	95	134	127
	1920	98	428	48.7	.471	20.52	89	214	193
	1922	83	402	48.8	.378	18.47	89	194	174
Table workers:									
Male.....	1922	3	11	49.5	.327	16.11			
Female.....	1920	47	332	47.3	.330	15.78			
	1922	86	797	48.7	.285	13.85			
Lacers:									
Male.....	1920	9	14	48.1	.452	21.48			
Female.....	1922	8	12	47.8	.325	14.39			
	1920	86	193	48.5	.350	16.94			
	1922	71	142	48.5	.367	17.83			
<i>Lasting department.</i>									
Last pickers or sorters:									
Male.....	1920	72	271	48.3	.458	22.05			
Female.....	1922	81	238	48.8	.426	20.78			
	1922	1	3	48.0	.269	12.91			
Assemblers, for pulling over machine:									
Male.....	1913	54	597	55.4	.272	15.01	100	100	100
	1914	64	708	55.3	.279	15.37	100	103	102
	1916	97	801	55.0	.291	16.02	99	107	107
	1918	102	726	52.6	.398	20.85	95	146	139
	1920	88	691	48.6	.642	31.49	88	235	210
	1922	70	593	49.0	.567	27.94	88	208	181
Female.....	1920	23	77	48.5	.500	24.20			
	1922	15	58	49.0	.434	21.35			
Pullers-over, hand:									
Male.....	1913	52	937	55.3	.333	18.37	100	100	100
	1914	49	749	54.9	.350	19.21	99	105	105
	1916	46	543	54.8	.347	18.99	99	104	103
	1918	35	344	51.7	.478	24.62	93	144	134
	1920	25	211	47.0	.803	38.17	85	241	208
	1922	16	97	46.7	.813	38.29	84	244	208
Pullers-over, machine:									
Male.....	1913	60	421	55.4	.351	19.42	100	100	100
	1914	71	443	55.5	.356	19.66	100	101	101
	1916	116	640	55.0	.377	20.70	99	107	107
	1918	124	612	52.6	.512	26.77	95	146	138
	1920	101	552	48.8	.837	41.08	88	238	212
	1922	91	554	48.9	.732	36.06	88	209	186
Side lasters, hand:									
Male.....	1913	20	224	54.2	.303	16.40	100	100	100
	1914	20	237	54.0	.308	16.59	100	102	101
	1916	40	358	54.1	.325	17.57	100	107	107
	1918	43	394	51.9	.440	22.74	96	145	139
	1920	42	445	48.2	.706	35.35	89	234	216
	1922	31	362	47.8	.614	29.28	88	203	179

WAGES AND HOURS OF LABOR IN BOOT AND SHOE INDUSTRY. 101

AVERAGE FULL-TIME HOURS PER WEEK, EARNINGS PER HOUR, FULL-TIME EARNINGS PER WEEK, AND INDEX NUMBERS IN THE BOOT AND SHOE INDUSTRY IN THE UNITED STATES, BY DEPARTMENT AND OCCUPATION, 1913 TO 1922—Continued.

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<i>Lasting department—Concluded.</i>									
Side lasters, machine:									
Male.....	1913	16	155	56.1	\$.323	\$18.23	100	100	100
	1914	16	167	54.3	.343	18.54	97	106	102
	1916	45	291	54.9	.339	18.53	98	105	102
	1918	57	292	52.2	.468	24.35	93	145	134
	1920	51	322	48.9	.776	37.68	87	239	207
	1922	56	338	49.3	.620	30.79	88	192	169
Bed machine operators:									
Male.....	1913	65	1,220	55.2	.330	18.21	100	100	100
	1914	70	1,173	55.1	.321	17.68	100	97	97
	1916	93	1,336	55.0	.349	19.13	100	106	105
	1918	104	1,303	52.1	.500	25.98	94	152	143
	1920	93	1,252	48.7	.791	38.61	88	239	212
	1922	86	1,167	48.9	.668	32.78	89	202	180
Hand-method lasting machine operators:									
Male.....	1913	41	449	55.3	.357	19.72	100	100	100
	1914	41	456	55.5	.348	19.25	100	97	98
	1916	66	556	55.1	.361	19.82	100	101	101
	1918	59	411	52.9	.479	25.22	96	134	128
	1920	30	213	48.9	.895	39.06	88	223	198
	1922	27	178	49.3	.735	36.38	89	206	184
Turn lasters, hand:									
Male.....	1913	28	524	55.0	.310	17.00	100	100	100
	1914	31	689	54.4	.324	17.56	99	105	118
	1916	42	974	54.9	.365	20.07	100	118	118
	1918	35	752	53.8	.453	24.34	98	146	143
	1920	33	666	47.1	.889	42.49	86	254	250
	1922	30	571	48.5	.732	35.76	88	236	210
Turn lasters, machine:									
Male.....	1920	10	102	48.6	.756	37.35	.....	.....	.....
	1922	7	31	48.1	.639	30.59	.....	.....	.....
Turn sewers:									
Male.....	1916	29	81	54.4	.442	24.00	.....	.....	.....
	1918	25	67	53.7	.500	26.75	.....	.....	.....
	1920	39	71	49.1	.940	46.26	.....	.....	.....
	1922	25	55	49.8	.801	40.14	.....	.....	.....
Tack pullers, hand:									
Male.....	1920	39	155	47.8	.472	22.53	.....	.....	.....
	1922	38	114	47.9	.471	22.58	.....	.....	.....
Tack pullers, machine:									
Male.....	1920	70	270	48.9	.451	21.88	.....	.....	.....
	1922	62	234	49.0	.399	19.68	.....	.....	.....
Female.....	1920	7	21	49.0	.349	16.84	.....	.....	.....
	1922	5	23	48.9	.299	14.57	.....	.....	.....
<i>Bottoming department.</i>									
Goodyear welters:									
Male.....	1913	70	472	55.3	.501	27.60	100	100	100
	1914	74	439	55.2	.503	27.68	100	100	100
	1916	89	467	54.9	.520	28.50	99	104	103
	1918	93	469	52.3	.620	32.29	95	124	117
	1920	80	415	48.6	.978	47.81	88	194	173
	1922	74	375	48.4	.889	43.30	88	177	157
Welt beaters and slashers:									
Male.....	1920	70	156	48.6	.591	28.85	.....	.....	.....
	1922	63	107	48.9	.531	25.98	.....	.....	.....
Bottom fillers, hand and machine:									
Male.....	1920	69	131	48.7	.570	27.29	.....	.....	.....
	1922	69	125	48.7	.500	24.45	.....	.....	.....
Female.....	1922	1	2	48.0	.615	29.52	.....	.....	.....
Sole cementers, hand and machine:									
Male.....	1920	70	134	48.8	.428	20.85	.....	.....	.....
	1922	68	143	48.8	.408	20.11	.....	.....	.....
Female.....	1920	20	30	48.9	.339	16.33	.....	.....	.....
	1922	8	10	50.3	.343	17.41
Sole layers, hand:									
Male.....	1920	17	43	49.4	.595	28.39
	1922	7	9	47.1	.619	29.15

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<i>Bottoming department—Continued.</i>									
Sole layers, machine:									
Male.....	1920	77	206	48.4	\$0.718	\$34.39
	1922	79	229	48.6	.645	31.32	.....	.....	.....
Female.....	1922	1	1	50.0	.384	19.22	.....	.....	.....
Rough rounders:									
Male.....	1913	69	265	55.2	.497	27.37	100	100	100
	1914	73	252	55.1	.503	27.64	100	101	101
	1916	91	296	54.9	.491	26.89	99	99	98
	1918	97	285	52.4	.593	31.99	95	119	117
	1920	82	240	48.7	.938	45.68	88	187	167
	1922	75	228	48.7	.818	40.00	88	165	146
Female.....	1922	1	2	50.0	.514	25.71	.....	.....	.....
Channel openers and channel closers:									
Male.....	1920	84	280	49.0	.491	23.75	.....	.....	.....
	1922	77	255	49.2	.443	21.76	.....	.....	.....
Female.....	1920	17	44	49.8	.348	17.66	.....	.....	.....
	1922	14	29	50.0	.390	20.17	.....	.....	.....
Goodyear stitchers:									
Male.....	1913	70	642	55.2	.399	21.96	100	100	100
	1914	74	594	55.1	.410	22.57	100	103	103
	1916	97	656	54.8	.437	23.87	99	110	109
	1918	105	680	52.4	.527	27.47	95	132	125
	1920	86	599	48.6	.822	40.07	88	205	182
	1922	77	543	48.6	.755	36.67	88	190	167
Female.....	1922	1	5	50.0	.408	20.40	.....	.....	.....
McKay sewers:									
Male.....	1913	32	136	55.6	.319	17.70	100	100	100
	1914	39	147	55.7	.338	18.77	100	106	106
	1916	61	210	55.2	.349	19.51	99	109	110
	1918	62	203	52.9	.449	23.56	95	141	133
	1920	45	158	49.4	.712	35.53	89	223	201
	1922	39	138	50.2	.659	33.38	90	207	189
Stitch separators:									
Male.....	1920	63	156	49.0	.563	27.16	.....	.....	.....
	1922	45	108	48.7	.498	24.45	.....	.....	.....
Female.....	1922	4	4	47.8	.408	18.89	.....	.....	.....
Levelers:									
Male.....	1913	75	289	55.2	.304	16.74	100	100	100
	1920	94	323	48.9	.654	32.09	89	214	192
	1922	96	318	49.0	.580	28.43	89	191	170
Female.....	1922	2	3	51.7	.370	19.14	.....	.....	.....
Heelers, leather:									
Male.....	1913	72	291	55.3	.424	23.32	100	100	100
	1914	84	324	55.3	.402	22.18	100	95	95
	1916	130	440	55.0	.430	23.59	99	101	101
	1918	137	419	52.8	.502	26.37	95	118	113
	1920	111	382	48.7	.832	40.73	88	196	175
	1922	98	345	48.9	.759	37.15	88	179	159
Heelers, wood:									
Male.....	1918	18	248	54.1	.477	25.61	.....	.....	.....
	1920	33	553	47.4	.899	42.92	.....	.....	.....
	1922	27	245	47.9	.706	33.54	.....	.....	.....
Heel trimmers or shavers:									
Male.....	1913	81	277	55.4	.448	24.74	100	100	100
	1914	85	277	55.2	.433	23.88	100	97	97
	1916	121	367	54.9	.449	24.55	99	100	99
	1918	128	350	52.6	.535	27.99	95	119	113
	1920	103	284	48.8	.897	44.26	88	199	179
	1922	94	246	48.9	.853	38.04	88	190	154
Heel breasters:									
Male.....	1913	75	171	55.4	.313	17.27	100	100	100
	1914	82	173	55.3	.303	16.71	100	97	97
	1916	111	232	54.8	.319	17.50	99	102	101
	1918	113	218	52.9	.412	21.70	95	132	126
	1920	100	195	48.8	.725	35.38	88	230	205
	1922	80	161	49.2	.587	29.05	89	188	168
Female.....	1922	1	1	52.5	.298	15.64	.....	.....	.....

WAGES AND HOURS OF LABOR IN BOOT AND SHOE INDUSTRY. 103

AVERAGE FULL-TIME HOURS PER WEEK, EARNINGS PER HOUR, FULL-TIME EARNINGS PER WEEK, AND INDEX NUMBERS IN THE BOOT AND SHOE INDUSTRY IN THE UNITED STATES, BY DEPARTMENT AND OCCUPATION, 1913 TO 1922—Continued.

Department and occupation.	Year.	Number of establishments.	Number of employes.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers.		
							Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.
<i>Bottoming department—Concluded.</i>									
Edge trimmers:									
Male.....	1913	81	838	55.4	\$0.410	\$22.66	100	100	100
	1914	85	886	55.1	.400	22.01	99	98	97
	1916	129	1,081	54.9	.423	23.16	99	103	102
	1918	138	1,015	52.5	.545	28.44	95	133	126
	1920	112	828	48.7	.908	44.19	88	220	195
	1922	100	789	48.9	.764	37.36	88	186	165
Sluggers:									
Male.....	1920	79	153	49.2	.604	29.57			
	1922	68	96	49.2	.547	26.95			
Female.....	1922	1	2	50.0	.388	19.39			
<i>Finishing department.</i>									
Buffers:									
Male.....	1913	72	358	55.3	.318	17.52	100	100	100
	1914	81	396	55.3	.309	17.05	100	97	97
	1916	129	535	54.9	.327	17.92	99	103	102
	1918	129	476	52.7	.424	22.20	95	133	127
	1920	111	449	48.8	.729	35.69	88	228	204
	1922	98	408	49.0	.630	30.95	89	198	177
Female.....	1922	2	2	48.8	.493	23.82			
Edge setters:									
Male.....	1913	77	826	55.3	.411	22.70	100	100	100
	1914	86	872	55.2	.410	22.54	100	100	99
	1916	131	966	54.9	.414	22.62	99	101	100
	1918	138	924	52.7	.525	27.57	95	128	121
	1920	112	845	48.7	.881	42.84	88	212	189
	1922	99	779	48.9	.757	37.02	88	184	163
Heel scourers:									
Male.....	1913	78	364	55.4	.314	17.35	100	100	100
	1914	84	372	55.3	.310	17.10	100	99	99
	1916	125	504	55.0	.346	18.94	99	110	109
	1918	129	470	52.7	.438	22.92	95	139	132
	1920	108	451	48.7	.732	35.38	88	231	204
	1922	97	421	48.9	.607	29.79	88	193	172
Heel burnishers:									
Male.....	1913	75	280	55.5	.317	17.54	100	100	100
	1914	84	283	55.5	.322	17.86	100	102	102
	1916	127	367	55.2	.325	17.84	99	103	102
	1918	128	325	52.8	.433	22.66	95	137	129
	1920	109	304	48.7	.710	34.50	88	222	197
	1922	92	300	48.9	.584	28.75	88	184	164
Brushers:									
Male.....	1920	86	300	48.4	.476	22.96			
	1922	80	298	48.9	.431	21.10			
Female.....	1920	17	36	49.6	.350	16.62			
	1922	10	24	50.5	.324	16.42			
Shoe cleaners:									
Male.....	1920	34	109	48.1	.488	23.10			
	1922	36	150	49.0	.431	21.15			
Female.....	1920	28	175	48.8	.337	16.09			
	1922	33	193	48.1	.325	15.79			
Last pullers:									
Male.....	1920	97	266	48.9	.525	25.34			
	1922	88	233	49.0	.460	22.74			
Female.....	1922	1	1	48.0	.187	8.98			
Treers:									
Male.....	1913	73	1,110	55.3	.282	15.54	100	100	100
	1914	80	1,204	55.3	.279	15.33	100	99	99
	1916	124	1,652	54.9	.291	15.99	99	103	103
	1918	125	1,387	52.3	.403	21.09	95	143	136
	1920	98	1,106	48.3	.683	33.18	87	244	214
	1922	90	970	48.6	.577	28.12	88	205	181
Female.....	1913	13	110	54.6	.158	8.56	100	100	100
	1914	18	107	52.1	.175	9.06	95	111	106
	1916	15	144	53.1	.188	9.93	97	119	116
	1918	31	211	53.3	.232	12.25	98	147	143
	1920	37	296	49.8	.408	20.07	91	255	234
	1922	35	228	49.3	.396	19.51	90	251	232

AVERAGE FULL-TIME HOURS PER WEEK, EARNINGS PER HOUR, FULL-TIME EARNINGS PER WEEK, AND INDEX NUMBERS IN THE BOOT AND SHOE INDUSTRY IN THE UNITED STATES, BY DEPARTMENT AND OCCUPATION, 1913 TO 1922—Concluded.

Department and occupation.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers.		
							Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.
<i>Finishing department—Concluded.</i>									
Repairers (not cobblers):									
Male.....	1920	57	169	48.1	\$0.510	\$24.37	.....	.....	.....
	1922	49	126	48.3	.462	22.30	.....	.....	.....
Female.....	1920	87	711	47.7	.394	18.69	.....	.....	.....
	1922	79	668	48.2	.377	18.18	.....	.....	.....
Dressers:									
Male.....	1920	11	16	47.6	.391	18.47	.....	.....	.....
	1922	14	18	48.6	.395	19.04	.....	.....	.....
Female.....	1920	78	253	48.5	.369	17.81	.....	.....	.....
	1922	73	288	49.0	.339	17.35	.....	.....	.....
Sock liners:									
Male.....	1920	14	30	48.8	.381	18.70	.....	.....	.....
	1922	11	21	48.5	.378	18.25	.....	.....	.....
Female.....	1920	95	321	48.7	.375	18.13	.....	.....	.....
	1922	90	279	49.0	.355	17.36	.....	.....	.....
Lacers:									
Male.....	1920	9	11	48.5	.444	20.70	.....	.....	.....
	1922	4	7	47.9	.281	13.71	.....	.....	.....
Female.....	1920	89	304	48.7	.325	15.64	.....	.....	.....
	1922	81	235	48.9	.304	14.81	.....	.....	.....
Packers:									
Male.....	1920	38	96	49.2	.472	24.02	.....	.....	.....
	1922	17	43	50.0	.477	23.75	.....	.....	.....
Female.....	1920	100	503	48.3	.355	17.10	.....	.....	.....
	1922	90	397	48.2	.351	16.97	.....	.....	.....
<i>All departments.</i>									
Other employees:									
Male.....	1914	91	20,887	55.0	.224	12.29	.....	.....	.....
	1916	135	24,010	55.0	.243	13.35	.....	.....	.....
	1918	143	23,324	52.7	.327	17.17	.....	.....	.....
	1920	117	10,445	48.7	.518	25.22	.....	.....	.....
	1922	104	10,027	49.0	.461	22.58	.....	.....	.....
Female.....	1914	89	12,347	54.0	.168	9.05	.....	.....	.....
	1916	134	14,851	53.8	.179	9.62	.....	.....	.....
	1918	142	16,007	51.8	.226	11.67	.....	.....	.....
	1920	116	6,964	48.6	.361	17.73	.....	.....	.....
	1922	101	5,032	48.8	.334	16.39	.....	.....	.....

Wages and Hours of Labor in the Cotton Manufacturing Industry in the Southern States, 1907 to 1922.¹

A SURVEY of wages and hours of labor was made in representative cotton mills of the South by special agents of the Bureau of Labor Statistics in the early part of 1922. Data were obtained from the records of 58 mills and covered 29,759 employees. Of the 58 mills, 6 were in Alabama, 9 in Georgia, 21 in North Carolina, 19 in South Carolina, and 3 in Virginia. Of the 29,759 employees, 4,799 were in Alabama, 5,845 in Georgia, 7,371 in North Carolina, 9,158 in South Carolina, and 2,586 in Virginia. In 43 mills, the data were drawn from pay rolls of May, 1922; for 14 mills, the data are as of April; and for 1 mill, as of June.

¹ A similar statement as to wages and hours of labor in cotton mills in Massachusetts was published in the May, 1922, MONTHLY LABOR REVIEW.

From the data collected, a table has been made showing average earnings per hour, average full time hours per week, and average full time earnings per week, for each of the principal occupations and for a group of "other employees" which includes all occupations not presented separately.

The averages for 1922 are shown in the following table, in comparison with like figures for preceding years taken from bulletins of the bureau, which, for some occupations, were available for certain years back as far as 1907. Wage data are not available for 1915, 1917, 1919, and 1921.

Paralleling the averages, the table shows index numbers for full time hours per week, earnings per hour, and full time earnings per week, in which 1913 is taken as the base, or 100, so far as 1913 data are available.

The high point of wages was reached in 1920. Up to the time of the survey, the 58 mills reported reductions ranging from 23½ per cent to 50 per cent, with an average for all mills of 38 per cent, as compared with the peak of 1920.

During the year ending December 31, 1921, these 58 mills were in operation an average of 284 days. The causes of the average 81 days of idleness were reported as follows: Lack of orders, 11 days; holidays and vacations, 8 days; strikes, 7 days; shortage of power, 2 days; repairs, etc., 1 day; Sundays, 52.

WAGES AND HOURS OF LABOR IN THE COTTON-MANUFACTURING INDUSTRY IN THE SOUTHERN STATES, 1907 TO 1922.

Alabama.

Occupation and sex.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers for a average—		
							Full-time hours per week.	Earnings per hour.	Full-time earnings per week.
Picker tenders:									
Male.....	1920	6	84	58.9	\$0.312	\$18.38			
	1922	6	65	56.2	.203	11.41			
Card tenders and strippers:									
Male.....	1907	3	13	66.0	.093	6.14	107	88	94
	1913	7	21	61.9	.106	6.56	100	100	100
	1914	8	23	60.1	.112	6.73	97	106	103
	1916	8	29	60.6	.119	7.24	98	112	110
	1918	8	26	60.3	.136	11.79	97	185	180
	1920	6	110	58.5	.323	18.90	95	305	288
	1922	6	113	56.0	.209	11.70	90	197	178
Card grinders:									
Male.....	1920	6	25	58.2	.486	28.29			
	1922	6	25	55.6	.322	17.90			
Drawing frame tenders:									
Male.....	1907	3	15	66.0	.069	4.55	108	79	86
	1913	6	30	61.0	.087	5.31	100	100	100
	1914	5	49	60.2	.094	5.64	99	108	106
	1916	5	56	60.2	.101	6.10	99	116	115
	1918	4	15	60.3	.163	9.81	99	187	185
	1920	4	27	57.2	.279	15.96	94	321	301
	1922	4	32	54.4	.179	9.74	89	206	183
Female.....	1907	3	30	66.0	.067	4.42	110	79	87
	1913	6	30	60.0	.085	5.10	100	100	100
	1914	4	26	60.0	.069	4.11	100	81	81
	1916	6	51	60.0	.086	5.18	100	101	102
	1918	6	61	59.8	.144	8.61	100	169	169
	1920	5	65	59.0	.253	14.93	98	298	293
	1922	5	60	56.3	.162	9.12	94	191	179

WAGES AND HOURS OF LABOR IN THE COTTON-MANUFACTURING INDUSTRY IN THE SOUTHERN STATES, 1907 TO 1922—Continued.

Alabama—Continued.

Occupation and sex.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers for average—		
							Full-time hours per week.	Earnings per hour.	Full-time earnings per week.
Shubber tenders:									
Male.....	1916	8	76	60.2	\$0.148	\$8.91			
	1918	8	70	59.4	.212	12.67			
	1920	6	70	58.9	.425	25.03			
	1922	6	59	56.1	.276	15.48			
Speeder tenders:									
Male.....	1907	3	42	66.0	.092	6.07	108	72	78
	1913	6	57	61.2	.128	7.83	100	100	100
	1914	5	56	60.0	.137	8.19	98	107	105
	1916	6	160	60.0	.147	8.79	98	115	112
	1918	6	112	60.0	.204	12.26	98	159	157
	1920	5	132	58.8	.400	23.52	96	313	300
	1922	6	136	55.6	.253	14.07	91	198	180
Female.....	1907	3	37	66.0	.103	6.80	107	84	90
	1913	7	77	61.7	.122	7.53	100	100	100
	1914	8	103	60.2	.123	7.42	98	101	99
	1916	8	137	60.1	.139	8.37	97	114	111
	1918	8	123	60.1	.177	10.66	97	145	142
	1920	6	118	58.7	.331	19.43	95	271	258
	1922	6	89	55.6	.230	12.79	90	189	170
Spinners, frame:									
Male.....	1907	3	11	66.0	.072	4.75			
	1922	3	41	56.5	.174	9.83			
Female.....	1907	3	361	66.0	.073	4.82	107	75	80
	1913	7	374	61.8	.097	5.99	100	100	100
	1914	8	454	60.1	.098	5.91	97	101	99
	1916	8	587	60.1	.105	6.29	97	108	105
	1918	8	501	59.0	.169	10.00	95	174	167
	1920	6	510	57.5	.293	16.85	93	302	281
	1922	6	505	55.7	.179	9.97	90	185	166
Doffers:									
Male.....	1916	8	324	60.2	.131	6.42			
	1918	8	282	58.8	.189	11.11			
	1920	6	320	58.6	.356	20.86			
	1922	6	302	55.7	.228	12.70			
Spooler tenders:									
Female.....	1916	8	314	60.0	.098	5.88			
	1918	8	280	59.8	.144	8.63			
	1920	6	255	58.5	.275	16.09			
	1922	6	280	55.8	.178	9.93			
Creelers or tiers-in:									
Female.....	1920	6	45	58.2	.267	15.54			
	1922	6	44	55.9	.173	9.67			
Warper tenders:									
Female.....	1916	7	24	60.2	.149	8.96			
	1918	7	31	60.1	.200	11.93			
	1920	6	29	58.8	.358	21.05			
	1922	6	30	55.8	.245	13.67			
Slasher tenders:									
Male.....	1907	3	11	66.0	.117	7.72	108	81	88
	1913	7	20	61.2	.144	8.81	100	100	100
	1914	7	22	60.1	.141	8.47	98	98	96
	1916	7	24	60.1	.145	8.69	98	101	99
	1918	7	29	60.0	.216	12.96	98	150	147
	1920	6	28	57.3	.391	22.40	94	272	254
	1922	6	31	55.5	.271	15.04	91	188	171
Drawers-in:									
Female.....	1916	7	30	60.3	.123	7.39			
	1918	7	30	60.2	.162	9.76			
	1920	6	24	57.3	.294	16.85			
	1922	5	28	55.4	.191	10.58			
Warp-tying machine tenders:									
Male.....	1920	6	13	57.3	.456	26.13			
	1922	6	20	55.3	.302	16.70			

WAGES AND HOURS OF LABOR IN COTTON MANUFACTURING. 107

WAGES AND HOURS OF LABOR IN THE COTTON-MANUFACTURING INDUSTRY IN THE SOUTHERN STATES, 1907 TO 1922—Continued.

Alabama—Concluded.

Occupation and sex.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers for average—		
							Full-time hours per week.	Earnings per hour.	Full-time earnings per week.
Loom fixers:									
Male.....	1907	3	82	66.0	\$0.160	\$10.56	107	90	97
	1913	7	137	61.7	.177	10.92	100	100	100
	1914	8	169	60.1	.188	11.28	97	106	103
	1916	8	179	60.1	.198	11.85	97	112	109
	1918	8	158	60.2	.284	17.11	98	160	157
	1920	6	156	57.4	.529	30.36	93	299	278
	1922	6	188	55.7	.363	20.22	90	205	185
Weavers:									
Male.....	1907	3	200	66.0	.124	8.18	107	86	93
	1913	7	343	61.4	.144	8.84	100	100	100
	1914	8	531	60.0	.146	8.74	98	101	99
	1916	8	520	60.0	.160	9.60	98	111	109
	1918	8	331	60.0	.235	14.10	98	163	160
	1920	6	305	57.4	.439	25.20	93	305	285
	1922	6	426	55.8	.255	14.23	91	177	161
Female.....	1907	3	158	66.0	.112	7.39	107	88	94
	1913	7	320	61.5	.128	7.87	100	100	100
	1914	8	377	60.3	.132	7.98	98	103	101
	1916	8	347	60.2	.146	8.80	98	114	112
	1918	8	471	60.2	.190	11.42	98	148	145
	1920	6	315	57.4	.378	21.70	93	295	276
	1922	6	327	55.8	.231	12.88	91	180	164
Trimmers or inspectors:									
Female.....	1907	2	25	66.0	.076	5.02	106	76	80
	1913	6	56	62.4	.100	6.24	100	100	100
	1914	8	70	60.0	.095	5.68	96	95	91
	1916	8	68	60.4	.096	5.82	97	95	93
	1918	8	81	60.2	.139	8.36	96	139	134
	1920	6	72	58.1	.239	13.89	93	239	223
	1922	6	76	55.6	.159	8.84	89	159	142
Other employees:									
Male.....	1914	8	2,377	60.5	.114	6.90	.....	.....	.....
	1916	8	2,181	60.4	.134	8.12	.....	.....	.....
	1918	8	1,863	60.2	.195	11.80	.....	.....	.....
	1920	6	1,209	57.4	.321	18.43	.....	.....	.....
	1922	6	1,501	56.0	.202	11.31	.....	.....	.....
Female.....	1914	8	836	60.1	.080	4.83	.....	.....	.....
	1916	8	312	60.3	.080	4.82	.....	.....	.....
	1918	8	400	58.5	.122	7.15	.....	.....	.....
	1920	6	592	56.3	.217	12.22	.....	.....	.....
	1922	6	421	54.6	.140	7.64	.....	.....	.....

Georgia.

Picker tenders:									
Male.....	1920	9	114	58.7	\$0.346	\$19.62	.....	.....	.....
	1922	9	69	55.7	.213	11.86	.....	.....	.....
Card tenders and strippers:									
Male.....	1907	4	14	64.5	.093	6.00	108	79	85
	1913	13	68	60.0	.118	7.08	100	100	100
	1914	13	79	60.0	.128	7.68	100	108	108
	1916	12	102	60.0	.134	8.05	100	114	114
	1918	12	73	60.0	.191	11.45	100	162	162
	1920	9	132	56.8	.359	20.39	95	304	288
	1922	9	111	56.2	.226	12.70	94	192	179
Card grinders:									
Male.....	1920	8	32	56.9	.506	28.79	.....	.....	.....
	1922	9	33	56.2	.327	18.38	.....	.....	.....

WAGES AND HOURS OF LABOR IN THE COTTON-MANUFACTURING INDUSTRY IN THE SOUTHERN STATES, 1907 TO 1922—Continued.

Georgia—Continued.

Occupation and sex.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers for average—		
							Full-time hours per week.	Earnings per hour.	Full-time earnings per week.
Drawing frame tenders:									
Male.....	1907	3	8	65.6	\$0.080	\$5.25	109	80	88
	1913	13	86	60.0	.100	6.00	100	100	100
	1914	12	90	60.0	.106	6.36	100	106	106
	1916	11	101	60.0	.107	6.44	100	107	107
	1918	11	75	60.0	.164	9.82	100	164	164
	1920	7	45	56.3	.339	19.09	94	339	318
	1922	9	64	56.1	.200	11.22	94	200	187
Female.....	1907	3	22	63.8	.073	4.66	106	68	73
	1913	9	62	60.0	.107	6.42	100	100	100
	1914	7	54	60.0	.103	6.18	100	96	96
	1916	5	40	60.0	.097	5.83	100	91	91
	1918	5	48	60.0	.143	8.59	100	134	134
	1920	8	69	56.1	.311	17.45	94	291	272
	1922	8	64	56.2	.189	10.62	94	177	165
Slubber tenders:									
Male.....	1916	12	103	60.0	.153	9.19	.....	.....	.....
	1918	12	82	60.0	.230	13.81	.....	.....	.....
	1920	9	92	56.2	.490	27.48	.....	.....	.....
	1922	9	84	56.1	.316	17.73	.....	.....	.....
Speeder tenders:									
Male.....	1907	4	24	64.8	.105	6.80	108	74	80
	1913	12	167	60.0	.142	8.52	100	100	100
	1914	12	165	60.0	.152	9.12	100	107	107
	1916	12	211	60.0	.155	9.33	100	109	110
	1918	12	225	60.0	.229	13.73	100	161	161
	1920	8	205	56.8	.460	26.13	95	324	307
	1922	9	233	56.2	.293	16.47	94	206	193
Female.....	1907	4	30	63.8	.105	6.70	106	79	84
	1913	12	130	60.0	.133	7.98	100	100	100
	1914	12	122	60.0	.136	8.16	100	102	102
	1916	9	119	60.0	.152	9.11	100	114	114
	1918	9	109	60.0	.197	11.83	100	148	148
	1920	6	74	56.6	.441	24.96	94	332	313
	1922	9	111	56.5	.263	14.86	94	198	186
Spinners, frame:									
Female.....	1907	4	196	64.3	.087	5.59	107	84	90
	1913	13	788	60.0	.104	6.24	100	100	100
	1914	13	787	60.0	.108	6.48	100	104	104
	1916	12	789	60.0	.114	6.87	100	110	110
	1918	12	739	59.8	.170	10.14	100	163	162
	1920	9	679	54.6	.356	19.44	91	342	312
	1922	9	654	55.8	.225	12.56	93	216	201
Doffers:									
Male.....	1916	12	497	60.0	.124	7.44	.....	.....	.....
	1918	12	385	59.7	.213	12.73	.....	.....	.....
	1920	9	342	55.9	.437	24.43	.....	.....	.....
	1922	9	353	56.0	.259	14.50	.....	.....	.....
Spooler tenders:									
Female.....	1916	12	380	60.0	.105	6.29	.....	.....	.....
	1918	12	366	59.8	.154	9.21	.....	.....	.....
	1920	9	311	55.5	.321	17.82	.....	.....	.....
	1922	9	349	55.7	.194	10.81	.....	.....	.....
Creelers or tiers-in:									
Female.....	1920	7	47	56.0	.313	17.53	.....	.....	.....
	1922	8	49	56.2	.191	10.73	.....	.....	.....
Warper tenders:									
Male.....	1920	4	13	56.2	.379	21.30	.....	.....	.....
	1922	4	8	55.6	.267	14.85	.....	.....	.....
Female.....	1916	10	42	60.0	.140	8.37	.....	.....	.....
	1918	10	40	60.0	.184	11.04	.....	.....	.....
	1920	5	27	56.0	.374	20.94	.....	.....	.....
	1922	8	31	56.0	.246	13.78	.....	.....	.....

WAGES AND HOURS OF LABOR IN COTTON MANUFACTURING. 109

WAGES AND HOURS OF LABOR IN THE COTTON-MANUFACTURING INDUSTRY IN THE SOUTHERN STATES, 1907 TO 1922—Continued.

Georgia—Concluded.

Occupation and sex.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers for average—		
							Full-time hours per week.	Earnings per hour.	Full-time earnings per week.
Slasher tenders:									
Male.....	1907	4	12	64.3	\$0.126	\$8.10	107	86	92
	1913	13	61	60.0	.146	8.76	100	100	100
	1914	13	68	60.0	.146	8.76	100	100	100
	1916	12	73	60.0	.149	8.93	100	102	102
	1918	11	62	60.0	.236	14.25	100	162	163
	1920	9	55	56.4	.442	24.93	94	303	285
	1922	9	59	56.8	.299	16.98	95	205	194
Drawers-in:									
Female.....	1916	11	59	60.0	.131	7.86	.....	.....	.....
	1918	11	52	60.0	.169	10.12	.....	.....	.....
	1920	7	39	56.8	.402	22.83	.....	.....	.....
	1922	7	42	56.7	.268	15.20	.....	.....	.....
Warp-tying machine tenders:									
Male.....	1920	6	14	56.4	.520	29.33	.....	.....	.....
	1922	8	20	56.5	.350	19.78	.....	.....	.....
Loom fixers:									
Male.....	1907	4	40	64.4	.152	9.79	107	83	89
	1913	13	211	60.0	.183	10.98	100	100	100
	1914	13	224	60.0	.183	10.98	100	100	100
	1916	12	205	60.0	.193	11.56	100	105	105
	1918	12	230	60.0	.270	16.20	100	148	148
	1920	9	228	56.7	.527	29.88	95	288	272
	1922	9	206	57.2	.353	20.19	95	193	184
Weavers:									
Male.....	1907	4	207	64.9	.116	7.53	108	80	87
	1913	13	850	60.0	.145	8.70	100	100	100
	1914	13	842	60.0	.157	9.42	100	108	108
	1916	12	782	60.0	.161	9.64	100	111	111
	1918	12	618	60.0	.218	13.07	100	150	150
	1920	9	494	56.2	.476	26.75	94	328	307
	1922	9	610	56.8	.282	16.01	95	194	184
Female.....	1907	4	249	63.8	.109	6.95	106	82	87
	1913	13	556	60.0	.133	7.98	100	100	100
	1914	13	690	60.0	.140	8.40	100	105	105
	1916	12	561	60.0	.144	8.67	100	108	109
	1918	12	629	59.9	.187	11.22	100	141	141
	1920	9	393	56.7	.430	24.38	95	323	306
	1922	9	386	56.7	.274	15.54	95	206	195
Trimmers or inspectors:									
Male.....	1920	2	8	55.0	.262	14.41	.....	.....	.....
	1922	4	8	54.9	.216	11.86	.....	.....	.....
Female.....	1913	9	61	60.0	.103	6.18	100	100	100
	1914	8	72	60.0	.105	6.30	100	102	102
	1916	10	87	59.8	.097	5.78	100	94	94
	1918	10	79	60.0	.136	8.15	100	132	132
	1920	7	87	55.7	.269	14.98	93	261	242
	1922	8	116	55.8	.179	9.99	93	174	162
Other employees:									
Male.....	1914	12	3,053	60.3	.125	7.54	.....	.....	.....
	1916	12	2,670	60.2	.135	8.12	.....	.....	.....
	1918	12	2,279	60.2	.198	11.99	.....	.....	.....
	1920	9	1,558	56.2	.348	19.56	.....	.....	.....
	1922	9	1,769	56.7	.223	12.64	.....	.....	.....
Female.....	1914	12	785	60.0	.098	5.88	.....	.....	.....
	1916	12	210	60.0	.087	5.81	.....	.....	.....
	1918	10	344	57.3	.146	8.43	.....	.....	.....
	1920	8	358	57.4	.290	16.65	.....	.....	.....
	1922	9	416	55.3	.186	10.29	.....	.....	.....

WAGES AND HOURS OF LABOR IN THE COTTON-MANUFACTURING INDUSTRY IN
THE SOUTHERN STATES, 1907 TO 1922—Continued.

North Carolina.

Occupation and sex.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers for average—		
							Full-time hours per week.	Earnings per hour.	Full-time earnings per week.
Picker tenders:									
Male.....	1920	16	69	55.2	\$0.417	\$23.02			
	1922	21	89	55.3	.267	14.77			
Card tenders and strippers:									
Male.....	1907	4	13	66.0	.100	6.60	110	85	94
	1913	13	40	60.0	.117	7.02	100	160	100
	1914	13	47	60.0	.122	7.34	100	104	105
	1916	22	87	60.0	.129	7.74	100	110	110
	1918	22	72	60.0	.203	12.18	100	174	174
	1920	19	145	55.2	.477	26.33	92	408	375
	1922	21	131	55.2	.288	15.90	92	246	226
Card grinders:									
Male.....	1920	17	47	55.2	.574	31.68			
	1922	20	43	55.2	.376	20.76			
Drawing frame tenders:									
Male.....	1907	4	16	66.0	.086	5.68	110	86	95
	1913	13	85	60.0	.100	6.00	100	100	100
	1914	13	108	60.0	.119	7.14	100	119	119
	1916	22	130	60.0	.126	7.50	100	126	127
	1918	22	123	60.0	.206	12.34	100	206	206
	1920	19	127	55.1	.468	25.79	92	468	430
	1922	21	110	55.1	.295	16.25	92	295	271
Slubber tenders:									
Male.....	1916	22	90	60.0	.159	9.53			
	1918	22	85	60.2	.240	14.44			
	1920	19	90	55.2	.562	31.02			
	1922	21	89	55.3	.350	19.36			
Speeder tenders:									
Male.....	1907	4	39	66.0	.115	7.59	110	79	87
	1913	13	125	60.0	.145	8.70	100	100	100
	1914	13	148	60.0	.157	9.40	100	108	108
	1916	22	381	60.0	.159	9.51	100	110	109
	1918	22	345	60.0	.249	14.97	100	172	172
	1920	19	319	55.2	.559	30.86	92	386	355
	1922	21	327	55.2	.353	19.49	92	243	224
Female.....	1907	3	8	66.0	.113	7.46	110	91	100
	1913	8	46	60.0	.124	7.44	100	100	100
	1914	8	58	60.0	.122	7.32	100	98	98
	1916	17	63	60.0	.143	8.56	100	115	115
	1918	17	72	60.0	.208	12.50	100	168	168
	1920	9	46	55.0	.482	26.51	92	389	356
	1922	14	37	55.1	.322	17.74	92	260	238
Spinners, frame:									
Male.....	1920	2	9	55.1	.566	31.19			
	1922	8	22	52.7	.191	10.07			
Female.....	1907	4	128	66.0	.084	5.54	110	83	91
	1913	13	452	60.0	.101	6.06	100	100	100
	1914	13	473	60.0	.110	6.63	100	109	109
	1916	22	853	60.0	.111	6.65	100	110	110
	1918	22	844	58.5	.186	10.88	98	184	180
	1920	19	721	54.2	.420	22.76	90	416	376
	1922	21	775	54.5	.251	13.68	91	249	226
Doffers:									
Male.....	1916	22	511	60.0	.104	8.54			
	1918	22	503	56.6	.191	10.84			
	1920	19	503	53.7	.468	25.13			
	1922	21	519	54.4	.279	15.13			
Spooler tenders:									
Female.....	1916	22	462	60.0	.110	6.58			
	1918	22	475	59.6	.168	10.00			
	1920	19	441	54.4	.388	21.11			
	1922	21	438	54.8	.239	13.10			
Creelers or tiers-in:									
Male.....	1920	6	19	55.1	.436	24.02			
	1922	9	23	55.1	.302	16.64			
Female.....	1920	11	67	55.2	.359	19.82			
	1922	13	51	55.2	.252	13.91			

WAGES AND HOURS OF LABOR IN COTTON MANUFACTURING. 111

WAGES AND HOURS OF LABOR IN THE COTTON-MANUFACTURING INDUSTRY IN THE SOUTHERN STATES, 1907 TO 1922—Continued.

North Carolina—Continued.

Occupation and sex.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers for average—		
							Full-time hours per week.	Earnings per hour.	Full-time earnings per week.
Warper tenders:									
Male.....	1916	17	52	60.0	\$0.160	\$9.58			
	1918	17	53	60.0	.236	14.14			
	1920	13	47	55.0	.555	30.53			
	1922	19	58	54.9	.318	17.46			
Female.....	1916	7	17	60.0	.130	7.82			
	1918	7	17	60.0	.196	11.78			
	1920	8	30	55.3	.419	23.17			
	1922	8	20	55.4	.291	16.12			
Beamer tenders:									
Male.....	1916	7	89	60.0	.191	11.47			
	1918	7	87	60.1	.300	18.47			
	1920	7	85	55.1	.659	36.31			
	1922	9	100	55.2	.422	23.29			
Slasher tenders:									
Male.....	1907	3	5	66.0	.136	8.98	110	90	99
	1913	11	34	60.0	.151	9.06	100	100	100
	1914	11	37	60.0	.149	8.94	100	99	99
	1916	20	57	60.0	.179	10.77	100	119	119
	1918	20	64	60.2	.245	14.74	100	162	163
	1920	16	61	55.2	.561	30.97	92	372	342
	1922	19	66	55.2	.360	19.87	92	238	219
Drawers-in:									
Female.....	1916	12	45	60.0	.128	7.66			
	1918	12	36	60.0	.200	12.01			
	1920	11	38	55.4	.465	25.76			
	1922	14	47	55.4	.297	16.45			
Warp-tying machine tenders:									
Male.....	1920	8	18	55.3	.568	31.41			
	1922	11	22	55.2	.372	20.53			
Loom fixers:									
Male.....	1907	4	32	66.0	.144	9.50	110	85	93
	1913	13	131	60.0	.170	10.20	109	100	100
	1914	13	153	60.0	.189	10.14	100	99	99
	1916	21	259	60.0	.189	11.36	100	111	111
	1918	21	270	60.0	.286	17.16	100	168	168
	1920	18	299	55.2	.658	36.32	92	387	356
	1922	21	296	55.2	.420	23.18	92	247	227
Weavers:									
Male.....	1907	4	142	66.0	.124	8.18	110	85	93
	1913	13	844	60.0	.146	8.76	100	100	100
	1914	13	863	60.0	.156	9.36	100	107	107
	1916	21	1,266	60.0	.167	10.09	100	114	115
	1918	21	1,099	59.8	.251	15.03	100	172	172
	1920	18	959	55.1	.582	32.07	92	399	366
	1922	21	1,050	55.1	.350	19.27	92	240	220
Female.....	1907	4	69	66.0	.114	7.52	110	85	94
	1913	13	388	60.0	.134	8.04	100	100	100
	1914	13	492	60.0	.138	8.28	100	103	103
	1916	21	689	60.0	.151	9.06	100	113	113
	1918	21	779	59.6	.221	13.21	99	165	164
	1920	17	492	54.8	.519	28.44	91	387	354
	1922	21	648	55.0	.313	17.22	92	234	214
Trimmers or inspectors:									
Male.....	1920	10	35	55.3	.438	24.22			
	1922	9	22	55.5	.265	14.71			
Female.....	1913	9	26	60.0	.097	5.82	100	100	100
	1914	6	26	60.0	.101	6.06	100	104	104
	1916	11	43	60.0	.100	6.02	100	103	103
	1918	11	54	59.2	.142	8.42	99	146	145
	1920	10	39	55.0	.376	20.68	92	388	355
	1922	14	65	54.7	.219	11.98	91	226	206

WAGES AND HOURS OF LABOR IN THE COTTON-MANUFACTURING INDUSTRY IN THE SOUTHERN STATES, 1907 TO 1922—Continued.

North Carolina—Concluded.

Occupation and sex.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers for average—		
							Full-time hours per week.	Earnings per hour.	Full-time earnings per week.
Other employees:									
Male.....	1914	13	2,108	60.2	\$0.118	\$7.08			
	1916	22	2,829	60.5	.131	7.92			
	1918	22	2,735	60.1	.206	12.42			
	1920	19	1,771	54.4	.429	23.34			
	1922	21	1,969	55.7	.266	14.82			
Female.....	1914	13	607	60.0	.090	5.42			
	1916	22	433	60.0	.093	5.61			
	1918	22	476	58.1	.143	8.36			
	1920	18	357	53.1	.336	17.84			
	1922	21	354	53.3	.203	10.82			

South Carolina.

Picker tenders:									
Male.....	1920	19	115	55.0	\$0.373	\$20.52			
	1922	19	122	55.0	.199	10.95			
Card tenders and strippers.....									
Male.....	1907	5	24	62.0	.115	7.13	103	99	102
	1913	21	109	60.0	.116	6.96	100	100	100
	1914	21	112	60.0	.117	7.02	100	101	101
	1916	19	80	60.0	.126	7.58	100	109	109
	1918	19	53	60.0	.188	11.25	100	162	162
	1920	19	162	55.0	.419	23.05	92	361	331
	1922	19	182	55.0	.232	12.76	92	200	183
Card grinders:									
Male.....	1920	19	59	55.1	.574	31.63			
	1922	19	51	55.0	.347	19.09			
Drawing frame tenders:									
Male.....	1907	5	42	62.0	.080	4.96	103	84	87
	1913	21	151	60.0	.095	5.70	100	100	100
	1914	21	155	60.0	.100	6.00	100	105	105
	1916	19	178	60.0	.101	6.09	100	106	107
	1918	19	137	57.6	.162	9.42	96	171	165
	1920	19	179	54.9	.407	22.34	92	428	392
	1922	19	154	54.5	.221	12.04	91	233	211
Female.....	1920	2	4	55.0	.349	19.20			
	1922	2	5	55.0	.228	12.54			
Slubber tenders:									
Male.....	1916	19	124	60.0	.146	8.78			
	1918	19	104	60.0	.227	13.63			
	1920	19	118	54.9	.508	27.89			
	1922	19	117	55.0	.291	16.01			
Speeder tenders:									
Male.....	1907	5	96	62.0	.129	8.00	103	89	92
	1913	21	358	60.0	.145	8.70	100	100	100
	1914	21	375	60.0	.150	9.00	100	103	103
	1916	19	484	60.0	.149	8.93	100	103	103
	1918	19	328	60.1	.220	13.21	100	152	152
	1920	19	392	54.9	.500	27.45	92	345	316
	1922	19	414	55.0	.277	15.24	92	191	175
Female.....	1907	5	30	62.0	.132	8.18	103	103	107
	1913	19	117	60.0	.128	7.68	100	100	100
	1914	16	153	60.0	.129	7.74	100	101	101
	1916	17	159	60.0	.134	8.04	100	105	105
	1918	17	180	59.8	.198	11.84	100	155	154
	1920	18	173	54.8	.438	24.00	91	342	313
	1922	18	168	54.9	.250	13.73	92	195	179
Spinners, frame:									
Male.....	1907	3	26	62.0	.098	6.08	103	89	92
	1913	13	100	60.0	.110	6.60	100	100	100
	1914	8	46	52.4	.109	5.54	87	99	84
	1916	14	98	60.0	.092	5.51	100	84	83
	1918	14	84	54.6	.150	8.22	91	135	125
	1920	13	108	51.5	.313	16.12	86	285	244
	1922	13	165	52.8	.179	9.45	88	163	143

WAGES AND HOURS OF LABOR IN COTTON MANUFACTURING. 113

WAGES AND HOURS OF LABOR IN THE COTTON-MANUFACTURING INDUSTRY IN THE SOUTHERN STATES, 1907 TO 1922—Continued

South Carolina—Continued.

Occupation and sex.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers for average.—		
							Full-time hours per week.	Earnings per hour.	Full-time earnings per week.
Spinners, frame—Concluded.									
Female.....	1907	5	327	62.0	\$0.095	\$5.89	103	93	96
	1913	21	1,288	60.0	.102	6.12	100	100	100
	1914	21	1,260	60.0	.107	6.42	100	105	105
	1916	19	1,321	60.0	.103	6.20	100	101	101
	1918	19	1,176	56.5	.168	9.78	94	165	160
	1920	19	1,004	54.0	.391	21.11	90	383	345
	1922	19	1,175	54.2	.206	11.17	90	202	183
Doffers:									
Male.....	1916	19	644	60.0	.100	6.02	.....	.....	.....
	1918	19	545	58.1	.188	10.92	.....	.....	.....
	1920	19	613	54.2	.445	24.12	.....	.....	.....
	1922	19	574	54.9	.245	13.45	.....	.....	.....
Spooler tenders:									
Female.....	1916	19	571	60.0	.094	5.66	.....	.....	.....
	1918	19	549	58.6	.149	8.71	.....	.....	.....
	1920	19	488	54.2	.357	19.35	.....	.....	.....
	1922	19	543	54.4	.188	10.23	.....	.....	.....
Creelers or tiers-in:									
Female.....	1920	16	64	55.0	.354	19.47	.....	.....	.....
	1922	16	66	55.0	.214	11.77	.....	.....	.....
Warper tenders:									
Male.....	1920	6	8	55.0	.481	26.46	.....	.....	.....
	1922	6	9	55.0	.308	16.94	.....	.....	.....
Female.....	1916	14	43	59.9	.134	8.09	.....	.....	.....
	1918	14	41	60.0	.198	11.91	.....	.....	.....
	1920	17	53	55.0	.438	24.09	.....	.....	.....
	1922	16	63	55.0	.249	13.70	.....	.....	.....
Slasher tenders:									
Male.....	1907	5	25	62.0	.126	7.81	103	91	94
	1913	21	57	60.0	.138	8.28	100	100	100
	1914	21	77	60.0	.134	8.04	100	97	97
	1916	18	72	60.0	.137	8.21	100	99	99
	1918	18	80	60.0	.206	12.35	100	149	149
	1920	18	84	55.0	.449	24.70	92	325	293
	1922	18	87	55.0	.260	14.30	92	188	173
Drawers-in:									
Female.....	1916	16	97	60.0	.135	8.12	.....	.....	.....
	1918	16	71	59.6	.179	10.67	.....	.....	.....
	1920	15	71	54.6	.403	22.00	.....	.....	.....
	1922	14	80	54.8	.219	12.00	.....	.....	.....
Warp-tying machine tenders:									
Male.....	1920	17	30	55.0	.550	30.25	.....	.....	.....
	1922	17	29	55.3	.349	19.30	.....	.....	.....
Loom fixers:									
Male.....	1907	5	95	62.0	.168	10.42	103	95	99
	1913	21	378	60.0	.176	10.56	100	100	100
	1914	21	400	60.4	.176	10.63	101	100	101
	1916	19	397	60.7	.194	11.80	101	110	112
	1918	18	338	61.1	.275	16.79	102	156	159
	1920	18	380	55.9	.596	33.32	93	339	316
	1922	18	376	55.8	.360	20.09	93	205	190
Weavers:									
Male.....	1907	5	416	61.5	.132	8.12	103	92	95
	1913	21	1,976	60.0	.143	8.58	100	100	100
	1914	20	1,850	60.0	.147	8.82	100	103	103
	1916	18	1,425	60.0	.154	9.21	100	108	107
	1918	18	999	59.9	.232	13.89	100	162	162
	1920	18	917	55.0	.532	29.26	92	372	341
	1922	18	1,105	55.0	.286	15.72	92	200	183
Female.....	1907	5	172	62.0	.122	7.56	103	94	97
	1913	21	719	60.0	.130	7.80	100	100	100
	1914	20	881	60.0	.130	7.80	100	100	100
	1916	18	638	60.0	.140	8.40	100	108	108
	1918	18	680	59.4	.200	11.86	99	154	152
	1920	18	500	54.3	.468	25.41	91	360	326
	1922	18	566	54.9	.260	14.28	92	200	183

WAGES AND HOURS OF LABOR FOR THE COTTON-MANUFACTURING INDUSTRY IN THE SOUTHERN STATES, 1907 TO 1922—Continued.

South Carolina—Concluded.

Occupation and sex.	Year.	Number of establishments.	Number of employes.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers for average—		
							Full-time hours per week.	Earnings per hour.	Full-time earnings per week.
Trimmers or inspectors:									
Female.....	1907	5	40	62.0	\$0.073	\$4.53	103	87	90
	1913	20	152	60.0	.084	5.04	100	100	100
	1914	19	149	60.0	.086	5.18	100	102	103
	1916	16	134	60.0	.086	5.18	100	102	103
	1918	14	143	58.7	.132	7.62	98	157	151
	1920	14	155	54.8	.311	17.04	91	370	338
	1922	13	170	54.7	.176	9.63	91	210	191
Other employees:									
Male.....	1914	19	4,985	60.3	.114	6.86	.....	.....	.....
	1916	19	3,827	60.5	.125	7.53	.....	.....	.....
	1918	19	2,939	60.2	.184	11.10	.....	.....	.....
	1920	19	2,300	54.2	.380	20.60	.....	.....	.....
	1922	19	2,422	55.4	.203	11.25	.....	.....	.....
Female.....	1914	19	1,533	60.0	.089	5.37	.....	.....	.....
	1916	19	443	60.0	.080	4.82	.....	.....	.....
	1918	18	283	59.2	.145	8.60	.....	.....	.....
	1920	19	637	53.1	.278	14.76	.....	.....	.....
	1922	18	515	52.6	.149	7.84	.....	.....	.....

Virginia.

Picker tenders:									
Male.....	1920	2	18	55.2	\$0.377	\$20.81	.....	.....	.....
	1922	3	41	55.2	.274	15.12	.....	.....	.....
Card tenders and strippers:									
Male.....	1920	2	27	55.2	.379	20.92	.....	.....	.....
	1922	3	45	55.1	.312	17.19	.....	.....	.....
Card grinders:									
Male.....	1920	2	5	55.4	.540	29.92	.....	.....	.....
	1922	3	16	55.2	.362	19.98	.....	.....	.....
Drawing frame tenders:									
Male.....	1920	2	14	55.4	.419	23.21	.....	.....	.....
	1922	3	40	55.2	.314	17.33	.....	.....	.....
Slubber tenders:									
Male.....	1920	2	11	55.5	.490	27.20	.....	.....	.....
	1922	3	25	55.2	.389	21.47	.....	.....	.....
Speeder tenders:									
Male.....	1920	2	46	55.4	.494	27.37	.....	.....	.....
	1922	3	132	55.2	.391	21.58	.....	.....	.....
Female.....	1920	2	20	55.7	.441	24.56	.....	.....	.....
	1922	3	27	55.3	.328	18.14	.....	.....	.....
Spinners, frame:									
Male.....	1920	1	5	56.0	.360	20.16	.....	.....	.....
	1922	1	25	54.6	.362	19.77	.....	.....	.....
Female.....	1920	2	131	54.8	.318	17.43	.....	.....	.....
	1922	3	243	55.2	.318	17.55	.....	.....	.....
Doffers:									
Male.....	1920	2	79	54.3	.382	20.74	.....	.....	.....
	1922	3	139	54.3	.311	16.89	.....	.....	.....
Spooler tenders:									
Female.....	1920	2	65	55.4	.307	17.01	.....	.....	.....
	1922	3	129	55.1	.260	14.33	.....	.....	.....
Creelers or tiers-in:									
Female.....	1920	2	8	54.5	.282	15.37	.....	.....	.....
	1922	3	10	55.5	.223	12.38	.....	.....	.....
Warper tenders:									
Male.....	1920	1	2	55.0	.382	21.01	.....	.....	.....
	1922	1	1	55.0	.280	15.40	.....	.....	.....
Female.....	1920	2	6	55.8	.410	22.88	.....	.....	.....
	1922	2	26	55.1	.427	23.53	.....	.....	.....
Slasher tenders:									
Male.....	1920	2	12	55.4	.455	25.21	.....	.....	.....
	1922	3	25	55.7	.373	20.78	.....	.....	.....

WAGES AND HOURS OF LABOR FOR THE COTTON-MANUFACTURING INDUSTRY IN THE SOUTHERN STATES, 1907 TO 1922—Concluded.

Virginia—Concluded.

Occupation and sex.	Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average earnings per hour.	Average full-time earnings per week.	Index numbers for average—		
							Full-time hours per week.	Earnings per hour.	Full-time earnings per week.
Drawers-in:									
Female.....	1920	2	6	55.7	\$0.368	\$20.50	.....	.....	.....
	1922	2	30	55.3	.328	18.14	.....	.....	.....
Warp-tying machine tenders:									
Male.....	1920	2	4	55.5	.544	30.19	.....	.....	.....
	1922	3	6	55.3	.388	21.46	.....	.....	.....
Loom fixers:									
Male.....	1920	2	32	55.4	.598	33.13	.....	.....	.....
	1922	3	94	55.2	.475	26.22	.....	.....	.....
Weavers:									
Male.....	1920	2	101	55.4	.511	28.31	.....	.....	.....
	1922	3	383	55.2	.408	22.25	.....	.....	.....
Female.....	1920	2	55	55.4	.447	24.76	.....	.....	.....
	1922	3	155	55.2	.368	20.30	.....	.....	.....
Trimmers or inspectors:									
Female.....	1920	2	24	53.4	.246	13.14	.....	.....	.....
	1922	3	27	55.3	.272	15.04	.....	.....	.....
Other employees:									
Male.....	1920	2	306	54.6	.328	17.91	.....	.....	.....
	1922	3	680	56.1	.299	16.77	.....	.....	.....
Female.....	1920	2	123	55.2	.233	12.86	.....	.....	.....
	1922	3	287	55.1	.220	12.12	.....	.....	.....

Miners' Wages in Alaska.

THE Territorial mine inspector of Alaska in his report for 1921 states that labor conditions in the mining industry in Alaska "were very satisfactory throughout the year." There was a plentiful supply of workers and no troubles of any kind were reported. Some reductions in wages were made in 1921. According to the report, the 1921 wage scales in the more important mines in the coastal districts were as follows:

For an 8-hour shift:	
Machine drill men.....	\$4.00 to \$5.50
Machine helpers.....	4.00 to 5.00
Muckers.....	3.50 to 5.00
Timbermen.....	4.50 to 6.00
Timber helpers.....	4.00 to 4.50
Trackmen.....	4.00 to 4.90
Pipemen.....	4.00 to 5.50
Carpenters.....	5.15 to 7.00
Carpenters' helpers.....	4.00 to 5.50
Blacksmiths.....	5.00 to 7.00
Blacksmiths' helpers.....	4.00 to 5.50
Hoisting engineers.....	4.00 to 5.75
Cagers.....	4.00 to 4.90
Laborers.....	3.50 to 5.00

From these wages deductions ranging from \$1 to \$1.50 per day were made for room and board and from \$1.50 to \$2.40 per month for hospital fees and medical attendance. In the Matanuska field in 1921 coal miners' wages were \$8.60 per day of 8 hours. Unskilled

laborers were paid \$7.90 per day. Both the working conditions and living accommodations were reported excellent.

At nearly all of the larger camps workers with families may rent cottages at a reasonable rate from the operators.

The cost of living in Alaska is not very much higher than in Seattle, and rents are lower. In the interior of the Territory both wages and living conditions vary so much that it is not easy to make general statements in this connection. In the larger camps, for example, Iditarod and Fairbanks, placer miners' wages range from \$5 to \$6 per day, exclusive of board furnished by the operators, the estimated value of which is from \$2 to \$3 per day. In the very remote districts mine workers receive from \$7 to \$10 per day and their board.

The amount of wages paid in the mining industry in Alaska in 1921 is estimated as approximately \$5,260,000, distributed as follows:

Placer mines (estimated on the basis of 2,000 men employed for an average of 150 days during the year).....	\$1,500,000
Gold lode mines, productive properties and mills.....	1,494,482
Gold lode mines, miscellaneous small operations.....	185,228
Copper mines and mills.....	1,154,876
Coal mining (estimated).....	875,000
Nonmetal mines (not including quarries).....	50,542
	5,260,128

About 4,000 men were employed in the various branches of mining in 1921.

Agricultural Wages and Wage Earners in Norway and Sweden.

By MRS. V. B. TURNER.

Norway.

IN Norway, as in the other Scandinavian countries, agriculture is the predominant occupation. According to the census of 1910¹ of 923,047 occupied persons, 288,322, or nearly one-third of the number employed, were engaged in some form of agriculture. Broadly speaking, they were divided as follows: Independent farmers, 144,190; salaried employees, 3,864; laborers, 140,268. From 1890 to 1910 there was a conspicuous tendency towards an increase in the number of independent farmers and a corresponding decrease in the number of laborers. The increase in the number of land-owners was probably due to the greater ease with which ownership of small holdings was secured, while the decrease in the number of wage earners may also be attributed to the encouragement given these workers through propaganda and legislation to acquire small holdings of their own, to migration to the cities, and to trans-Atlantic emigration. But the war practically did away with trans-Atlantic emigration, caused a demand for the most intensive cultivation of the land, and rendered living in towns almost unbearable. While there are no available statistics at present to support such a conclusion, it is believed, because of what is known of the increase in the whole rural population in excess of the increase by birth rate for the

¹ International Review of Agricultural Economies, March, 1920, p. 195.

year 1917, that there must have been an extraordinary change for the better in this respect, and that the rural exodus which had for some years constituted as serious a problem in Norway as elsewhere had, for a time at least, to some extent been checked.

Classes of Workers.

The wage earners in Norwegian agriculture, as distinct from the independent farmers, may be broadly grouped as (1) farm servants; (2) day laborers, or journeymen; (3) cotters (*husmaend*); (4) pieceworkers. In these groups of workers are included foremen (*gaardeskarer*) and laborers' sons and daughters who live at home and work on the land. Wage statistics are usually confined to the first three classes.

The following extract from a recent report made by the Norwegian Government to the International Labor Office² covers in a concise form the duties and other distinguishing characteristics of these classes of agricultural laborers and is therefore quoted in full.

1. "Servants" is the name applied to hands who are engaged for a longer period of time, formerly mostly for a half or a whole year, now often by the month, but always with the right to receive notice a certain time in advance in case of discharge. As a rule the position of farm servant is also characterized by the fact that the servants have board and lodging on the farm and are bound to perform all work that may arise within limits determined by custom or by agreement. The male servant (farm man), as a rule, has to do with all the outdoor work, including also the care of horses, even when this work occurs outside of the proper working time, as it generally must in the mornings and evenings.

The female servants may be divided into two groups—the house servants and the milkmaids or outdoor female servants. The house servant has to do all work occurring in the house, sometimes also lighter outdoor tasks in the harvest and sowing season or at other busy times. The outdoor servant (milkmaid) attends to the live stock on the farm, with the exception of the horses. In most cases, however, the farms are so small that only one girl is employed as house servant and milkmaid combined. On the other hand, if the number of live stock is comparatively large, the indoor servant helps the outdoor servant with some of the work in the byres, especially with the milking. Or else there is a cattleman (the so-called "sveitser"), sometimes unmarried and getting board and lodging on the farm, sometimes married, in which case he generally feeds himself, but has a free dwelling for himself and family. The wife then helps her husband, if necessary, in the care of the live stock.

Owing to the difficulties in obtaining unmarried male servants, but perhaps especially in order to secure more settled conditions of labor, the farmers have of late begun to engage married men on terms which may be regarded as almost the same as for resident servants. These men are in most cases hired on the terms that they supply their own food, but are given a free family dwelling house and sometimes a piece of ground for potatoes and vegetables, as well as free fuel from the wood attached to the farm.

The resident servants constitute the great majority of the actual hired labor on the farms. They form together with the cotters (*husmaend*) the permanent working staff of the farm. The other hands are taken on mostly to supplement this permanent nucleus under special circumstances or in exceptionally busy times (for instance, in the sowing and harvesting seasons).

The number of resident servants—both male and female—amounts to about 75,000.

2. Day laborers: The day laborers proper are hired for a short time—with payment by the hour or by the day—to supplement the permanent workers on the farm. Sometimes they have board and lodging on the farm, sometimes only board, and sometimes neither the one nor the other. They consist partly of itinerant casual workers, partly of the small holders of the district who can spare some time for work outside their own farms.

3. Pieceworkers: These are in reality the same kind of workers as the day laborers, but, owing to the nature of the work they perform, their payment is calculated according

²International Labor Office. Technical survey of agricultural questions. Geneva, 1921. pp. 25-27.

to the amount of work done, instead of by a unit of time. Of farm work proper it is mainly ditch making and sometimes the breaking up of new land that is given out as piecework. The work in the forests on the other hand is for the most part performed as piecework. To a great extent this work is done by the small holders living in the district, who thereby find a profitable employment for the winter period, both for themselves and for their horse, if they have one.

4. Cotters (*husmaend*): This is the name given to agricultural workmen who are attached to the farm by having the right of use of a holding belonging to the farm with the obligation of performing more or less work on the farm.

The cotters (*husmaend*), it may be added, constitute a special class in Norwegian agriculture, and their relation to employing farmers differs somewhat in different sections of the country.

In the eastern part of the country the husmand as a rule receives his lot without liability to pay a due for entry on it; its buildings belong to the head farm, but he is bound to repair them; he is obliged to give his labor constantly except on one or two days a week; the annual rent for his lot is a cash rent and is usually deducted from the wages due to him for his work. Besides his wages, which are fixed by contract, the laborer has the right to pasture his cows and sheep on the head farm, and generally has turbary and the right to take firewood, the use of the landowner's horses for the plowing of his land, the right to receive seed and seed potatoes at reduced rates, etc. Contracts are now almost always made for a year, with a reciprocal right of terminating them, but the laborer usually stays a long time on his lot.

In the western districts the husmand conforms to a slightly different type. Sometimes he has to pay a small due for entry on his lot; he generally owns the buildings which he buys from his predecessor or inherits from his father or puts up himself, and he is responsible for their repair. He sometimes has the right of pasturage on the head farm, but seldom the right to firewood, to the use of draft animals, etc. Contracts are normally for life. The annual rent is partly in cash and partly in days of work. The work rendered as a due is concentrated in a determined number of days during the sowing and harvest and the mowing seasons; and the husmand has no further obligation to the head farm but is free to find work where he chooses.³

Statistics, however, show that this class of farm workers, which corresponds to some extent, at least, to the allotment farmers in Denmark and the "bound tenants" in Wales is gradually disappearing, the number in Norway having declined from 67,396 in 1855 to 19,811 in 1910.

Wages of Farm Workers.

Whatever may have been and are the delinquencies of other countries in the matter of collecting agricultural wage statistics, Norway and Sweden, at least, have made commendable efforts to give agricultural wage data the same attention as that shown wage statistics for other industries. In the case of Norway this is manifest in the fact that from 1850 to 1915 wage data were collected, by five-year periods, for various Norwegian industries, including agriculture.

In the tables which follow the average cash daily wages of cotters (*husmaend*) and of day laborers, as well as the average cash yearly wages of servants and the percentage increases for each class are given, distinctions being made as to the season, class of work, sex of workers, and their condition as regards board and lodging. Table 1 presents statistics collected by the Central Office of Statistics (*Statistiske Centralbyrå*) covering five-year periods from 1885 to 1915, as follows:

³ International Review of Agricultural Economics, Rome, March, 1920, p. 201.

TABLE 1.—AVERAGE CASH DAILY WAGES OF COTTERS (HUSMAEND) AND DAY LABORERS, 1885 TO 1915, BY SEX AND SEASON.

[Norway, Statistiske Centralbyrå. Statistisk Årbok, 1921. Christiania, 1922, p. 177; International Review of Agricultural Economics, Rome, March, 1920, p. 203. Krone at par=23.8 cents.]

Class of worker and season.	1885	1890	1895	1900	1905	1910	1915	Per cent of increase, 1915 over 1885.
Cotters:								
With board—	<i>Kroner.</i>	<i>Kroner.</i>	<i>Kroner.</i>	<i>Kroner.</i>	<i>Kroner.</i>	<i>Kroner.</i>	<i>Kroner.</i>	
Summer.....	0.63	0.71	0.87	1.03	1.06	1.58	1.90	202
Winter.....	.41	.45	.57	.71	.73	1.20	1.49	263
Average.....	.52	.58	.72	.87	.90	1.39	1.70	227
Without board—								
Summer.....	1.18	1.34	1.46	1.64	1.67	2.23	2.80	137
Winter.....	.93	1.00	1.45	1.27	1.33	1.87	2.33	151
Average.....	1.05	1.17	1.31	1.45	1.50	2.05	2.57	145
Male day laborers:								
With board—								
Summer.....	1.22	1.26	1.38	1.63	1.73	2.08	2.82	131
Winter.....	.76	.82	.90	1.11	1.19	1.53	2.26	197
Average.....	.99	1.04	1.14	1.37	1.46	1.81	2.54	157
Without board—								
Summer.....	1.94	1.99	2.10	2.37	2.50	2.94	3.85	98
Winter.....	1.42	1.47	1.58	1.82	1.92	2.35	3.25	129
Average.....	1.68	1.73	1.84	2.10	2.21	2.65	3.55	111
Female day laborers:								
With board—								
Summer.....	.62	.66	.72	.84	.89	1.06	1.42	129
Winter.....	.41	.44	.49	.59	.64	.81	1.11	171
Average.....	.52	.55	.61	.72	.77	.94	1.27	144
Without board—								
Summer.....	1.12	1.16	1.23	1.36	1.42	1.66	2.17	94
Winter.....	.84	.89	.93	1.02	1.08	1.29	1.78	112
Average.....	.98	1.02	1.08	1.19	1.25	1.48	1.98	102

Data submitted in Table 1 indicate that during the 30 years from 1885 to 1915, the rise in the wages of farm workers was both continuous and pronounced, the increases in the case of the cotters' (*husmaend's*) wages being greatest, while the increases in the wages of male workers were proportionately greater than those of female workers. The low rate of wages paid the cotters' (*husmaend*) generally is explained by the fact that these wages are only a part of their yearly incomes, the major portion of which, in a large number of instances, is derived from the profits of their holdings, from fishing, forestry, or possibly some domestic industry.

No five years' abstract has been made since 1915, but in that year the (Royal) Society for Norway's Welfare (*Selskapet for Norges Vel*) undertook a study of agricultural wage conditions which covered each year up to 1920, and the Central Office of Statistics (*Statistiske Centralbyrå*) has also conducted an inquiry into the wages of all labor, whereby it is able to publish yearly averages for wages on Norwegian farms. The average amounts of wages for 1915 arrived at by these two organizations differ somewhat, due to the fact that the data submitted by the Society for Norway's Welfare not only take into account the conditions included in the statistics of the Central Office of Statistics, viz, seasons, board and lodging, and sex of workers, but consider separately, in the case of the summer half year, the wages for the various kinds of work. The figures published by this society are nevertheless considered authoritative by

the Central Office of Statistics, and, therefore, though exact comparisons can not be made, the changes in the wages of agricultural labor can thus be traced from 1850 to 1920. The figures in Table 2 show average wages of day laborers from 1915 to 1920, by sex, season, class of work, and percentage of increase in 1920 over 1915.

TABLE 2.—AVERAGE CASH DAILY WAGES OF DAY LABORERS, BY SEX OF WORKERS, SEASON, AND CLASS OF WORK, 1915 TO 1920.

[Norway. Statistiske Centralbyrå. Statistisk årbok for 1921. Christiania, 1922, p. 176; Selskap for Norges Vel. Arbeidslønningen i jordbruket, 1915-16 to 1919-20. Krone at par=26.8 cents.]

Sex of workers, season, and class of work.	Wages with board.				Percent of increase, 1920 over 1915	Wages without board.				Percent of increase, 1920 over 1915
	1915	1918	1919	1920		1915	1918	1919	1920	
<i>Men.</i>										
Summer half year:	<i>Kr.</i>	<i>Kr.</i>	<i>Kr.</i>	<i>Kr.</i>		<i>Kr.</i>	<i>Kr.</i>	<i>Kr.</i>	<i>Kr.</i>	
Spring work.....	2.51	6.64	7.88	8.71	247	3.64	9.66	11.55	12.50	243
Hay harvest.....	2.95	7.41	9.00	9.88	235	4.00	10.27	12.42	13.64	241
Grain harvest.....	2.49	6.73	7.78	8.83	255	3.64	9.83	11.41	12.71	249
Other work.....	2.37	6.13	7.32	8.11	242	3.32	9.26	10.96	11.95	260
Winter half year.....	1.81	5.31	6.14	6.84	278	3.08	8.26	9.61	10.25	233
<i>Women.</i>										
Summer half year:										
Spring work.....	1.30	3.32	4.17	4.60	254	2.12	5.43	6.53	7.09	234
Hay harvest.....	1.53	3.78	4.68	5.13	235	2.35	5.92	7.06	7.67	226
Grain harvest.....	1.42	3.56	4.43	4.93	247	2.22	6.02	6.81	7.44	235
Other work.....	1.18	3.09	3.72	4.14	251	2.00	5.20	6.10	6.76	238
Winter half year.....	1.02	2.63	3.17	3.50	243	1.84	4.84	5.41	5.81	216

According to these data average wages of day laborers, 1915 to 1920, continued to increase, the greatest annual advances, though not shown in detail in the table, being made in the years between 1915 and 1918.

Domestic servants are, as stated before, young unmarried men and women who board and lodge with their employers' families, do both indoor and outdoor work, and are hired by the year or half year. Increases in their wages, especially those of the young men, average generally higher than increases affecting other groups. Statistics given in Table 3 indicate changes in the wages of this class of farm workers, 1915 to 1920, by season, sex of workers, and per cent of increase from 1915 to 1920.

TABLE 3.—HALF-YEARLY CASH WAGES OF DOMESTIC SERVANTS, BY SEASON AND SEX OF WORKERS, 1915 TO 1920.

Norway. Statistiske Centralbyrå. Statistisk årbok for 1921. Christiania, 1922, p. 176. Krone at par=26.8 cents.]

Sex of workers.	Summer.				Per cent of increase, 1920 over 1915.	Winter.				Per cent of increase, 1920 over 1915.
	1915	1918	1919	1920		1915	1918	1919	1920	
Men.....	<i>Kroner.</i> 242	<i>Kroner.</i> 583	<i>Kroner.</i> 730	<i>Kroner.</i> 807	233	<i>Kroner.</i> 159	<i>Kroner.</i> 431	<i>Kroner.</i> 529	<i>Kroner.</i> 598	276
Women.....	120	263	348	400	233	91	214	288	328	260

Wage Increases and Cost of Living.

In July, 1920, cost of living in Norway, including all items, had increased 202 per cent over the 1914 level, retail food prices alone being 219 per cent above the rates prevailing in 1914.⁴ By December, 1920, the cost-of-living figure had risen 235 per cent⁵ above that for 1914. From a comparison of the wage increases, as shown in the preceding tables, with the rise in cost of living it is apparent that the advances in wage rates a little more than counter-balanced the rising cost of the family budget.

Discussing the possible effect of this rather remarkable increase in the wages of farm labor upon the economic position of the workers the International Review of Agricultural Economics for March, 1920 (p. 207) says:

The position of agricultural laborers, which was usually economically inferior, before the war, to that of urban workers, seems to be substantially unchanged, in spite of the apparently very high pay. It therefore seems not improbable that in the near future the competition for labor of industry and of agriculture will be resumed in Norway, and there are some who already prophesy that the State will be obliged to intervene in order to prevent a decline, due to a deficient labor supply, of the cultivation which the war has intensified.

Hours of Labor.

In general a 10-hour workday prevails during the summer half year; an 8-hour day during the winter half year, between 6 or 7 a. m. and 6 or 8 p. m., according to the season. The work period is broken by two or three hours of rest, during which four or five meals are provided.

Sweden.

FARMING operations, affecting, as they do, the class, quality, and remuneration of labor, vary in every country—and even in the particular districts of every country—according to diversities in physical features, to dissimilarities of climate, and to possibilities for the distribution and sale of products; and while these variations in agriculture are as distinct in Sweden as in the other Scandinavian countries, for example, a marked similarity exists in the division of the land area. Small holdings in Sweden, as in Denmark and Norway, form a large majority of the agricultural units, the large holdings comprising only about one-fifth of the cultivated area of the country. The distribution of cultivated agricultural property is shown in Table 4.

⁴ Labor Gazette, London, June, 1922, p. 276.

⁵ Norway. Departementet for Sociale Saker. Sociale Meddelelser, No. 1, 1922, p. 57.

TABLE 4.—DISTRIBUTION OF CULTIVATED LAND IN SWEDEN, BY SIZE OF HOLDINGS, IN 1919.

[Sweden. Delegation for International Collaboration in Social Politics. The Swedish agricultural laborer. Stockholm, 1921. p. 12.]

[Hectare=2.471 acres.]

Area of individual holding.	Agricultural holdings.		Total area of holdings.	
	Number.	Per cent of total.	Hectares.	Per cent of total.
Under 2 hectares.....	120,788	28.2	139,137	3.7
2 and under 10 hectares.....	208,804	48.7	1,081,407	28.6
10 and under 50 hectares.....	91,235	21.3	1,753,976	46.4
50 hectares and over.....	7,931	1.8	807,304	21.3
Total.....	428,758	100.0	3,781,824	100.0

Parcels of land in the first group (under 2 hectares) are too small to furnish the entire living of their occupants, who must, therefore, supplement their meager annual incomes from the land by a principal occupation such as fishing, mining, or market gardening, or by home industries like weaving, knitting, and woodworking. The increase in factory-made products, however, is gradually limiting the home industries. Cultivated areas of from 2 to 10 hectares (4.94 to 24.71 acres) are known as small peasant farms (*småbondehemman*) when derived under the old system of tenure; as small holdings (*småbruk*) if granted under modern agrarian legislation. These small farms as a rule provide their cultivators an independent living. On the medium-sized peasant farms (*storbondehemman*) of from 10 to 50 hectares (24.7 to 123.6 acres) of arable land the farmers employ some labor, while on the manors or large farms (*herrgårdar*) of over 50 hectares (123.6 acres) the work is all performed by hired labor. Of the 428,758 agricultural holdings in 1919, only 23.2 per cent were held by tenants, whose holdings comprised 25.6 per cent of the cultivated land in the kingdom,⁶ a large majority of the holdings obviously being occupied and cultivated by their owners.

Classes of Agricultural Laborers in Sweden.

In 1870 nearly 72 per cent of the Swedish people depended upon agriculture and its supplementary occupations for their livelihood. By 1910, the latest period for which occupational data in agriculture are available, this proportion had shrunk to 48 per cent. The total agricultural population of Sweden in 1910 was 2,233,311 persons, 797,731 of whom were children under 15 years of age "and certain other members of the family," and 379,111 of whom were "wives without any occupation." Subtracting these two classes—though, in view of the work done by women, especially on the small farms, the description of the wives seems something of a misnomer—the actual working agricultural population was 1,056,469 persons, of which number 746,791, or 71 per cent, were men and 309,678, or 29 per cent, were women.

⁶ Sweden. Delegation for International Collaboration in Social Politics. The Swedish agricultural laborer. Stockholm, 1921.

According to the census of 1910 wage earners on Swedish farms were divided occupationally into more or less inclusive groups as shown in Table 5.

TABLE 5.—WAGE EARNERS IN SWEDISH AGRICULTURE IN 1910, BY SEX AND OCCUPATION.

Occupation.	Men.	Women.	Total.
Agricultural apprentices.....	887		887
Bailiffs and foremen.....	6,120		6,120
Stewards, inspectors, etc.....	3,092	8	3,100
Total.....	10,099	8	10,107
Agricultural laborers:			
With land—			
Cotters and small holders.....	22,658	10,501	33,159
Members of their families.....	6,605	8,705	15,310
Crofters.....	59,650	4,135	63,785
Members of their families.....	28,327	26,443	54,770
Total.....	117,240	49,784	167,024
Without land—			
Cattlemen, cowmen.....	4,961	2,211	7,172
Married farm servants.....	25,423	42	25,465
Members of their families.....	3,930	4,008	7,938
Unmarried farm servants.....	38,289	51,193	89,482
Other agricultural workers.....	94,344	13,022	107,366
Members of their families.....	11,107	12,226	23,333
Total.....	178,054	82,702	260,756
Total agricultural laborers.....	295,294	132,486	427,780
Dairymen and dairymaids ¹	1,258	2,532	3,790
Gardeners and undergardeners ²	9,480	328	9,808
Total.....	10,738	2,860	13,598
Grand total.....	316,131	135,354	451,485

¹ Includes the workers in cooperative dairies.

² Includes independent market gardeners.

Criticism is made by the authors of *The Swedish Agricultural Laborer* of the division shown in the occupational census on the ground that owing to the inclusive character of some of the classes and the exclusive character of others, the data submitted do not give sufficiently comprehensive information regarding the occupational divisions of the agricultural population. They estimate the number of agricultural laborers in 1910 as 400,000, about two-thirds of whom were men and one-third women.

The "statare," of whom in 1910 there were 25,423, are a group of special workmen, usually married, representing the typical agricultural laborer on large farms. They are hired by the year, receive allowances in part payment of wages, and have their own homes. Some of the crofters own their holdings; others give a contracted number of days work as rent for the use of the land they till. The landless day workers constituted in 1910 the largest group (107,366) of agricultural wage earners and probably do still. At the present time their working conditions are to a large extent determined in much the same way as those of employees in industry.

As is customary in a country where small farms predominate, social distinctions between the classes of farm labor exist only to a limited extent. Since a small farmer must often supplement the income from

his farm by working for others, he may be at once an employer and an employee. Sons of small farmers work on neighboring farms with the sons of their employer. It is only on the large farms that distinctions between skilled and unskilled, between professional and other work, are sharply drawn.

Woman and Child Labor.⁷

There has been no complete inquiry into the extent of female and child labor on Swedish farms since 1915, when a survey of the working and living conditions of agricultural laborers on 238 typical farms was made. The study covered 11,970 workers, 6,181 of whom were permanent workers; 5,789 temporary workers. Of the permanent workers 8.6 per cent were women; 6.0 per cent minors under 18 years of age. In the case of the temporary workers, however, the percentages of women and children were much greater, being 42.8 per cent and 31.6 per cent, respectively, three-fifths of the children being under 15 years of age.

The work performed by women and children in agriculture, especially on the small and medium-sized farms which (as shown in Table 4) predominate in Sweden, is important. Among the kinds of work which they do, milking holds first place, though during recent years the introduction of milking machines has caused a decline in the demand for woman labor of this character. Women are also engaged in harvest work and in the thinning and weeding of root crops of various kinds. The care of animals is largely taken by women, especially on the smaller farms. Children work in the sugar beet and turnip fields during the summer months and also keep watch over grazing flocks. The extent of grazing work on the part of children has, however, been somewhat limited of late by the growing practice of feeding animals in the barns or of keeping them in specially fenced pastures. The wages paid women for agricultural labor are shown in Tables 6, 7, and 8.

Organization of Employees and Employers in Swedish Agriculture.⁸

Employees.—Organization of the Swedish agricultural laborers which began about the close of the last century progressed rapidly until 1908 when the Swedish Agricultural Laborers' Federation was formed. Soon after a decline set in and it was not until 10 years later that the old federation regained its original standing. In 1921 its district branches in the counties of southern and central Sweden numbered 300, with 22,000 members.

The newly awakened interest in the organization of farm labor manifested itself also in the formation during 1918 of an independent group known as the Uppland Agricultural Laborers' Federation, with a reported membership in 1921 of 5,000. In 1919 the Forest and Agricultural Laborers' Federation of central Sweden, in which the land workers and forest workers of the industrial midlands (*Bergslagen*) are organized, was established, its membership in 1921 numbering about 1,000 persons. The total number of agricultural trade-unionists

⁷ Sweden. Delegation for International Collaboration in Social Politics. The Swedish agricultural laborer. Stockholm, 1921, pp. 67-74.

⁸ Sweden. Delegation for International Collaboration in Social Politics. The Swedish agricultural laborer. Stockholm, 1921, pp. 36, 37.

in Sweden in 1921 was then apparently about 28,000, or a little less than 10 per cent of the total number of male agricultural laborers.

Employers.—The organization of Swedish agricultural employers proceeded simultaneously with that of their employees. The movement developed first in county associations, which in 1908 combined to form the Delegates of the Swedish Agricultural Employers' Associations. In 1920 a closer national combination was entered into, called the Central Association of Swedish Agricultural Employers.

Cash Wages and Earnings.

Official wage statistics for Swedish agricultural labor are secured from three sources, namely, employers' and employees' associations, and the chairman of parish councils. By this system the statistical office is able to secure locally differentiated figures for the wages in cash and in kind for the most important groups of workers, and to compute the averages for the kingdom as a whole. The wage data given in the tables which follow are averages for the whole country and are based upon figures furnished by the chairmen of the parish councils.

Payments in Kind.—Payments in kind are still made to Swedish farm labor to a great extent. In addition to board and lodging the unmarried workers, in some parts of Sweden at least, receive clothing and other things, of a "fairly considerable value." The "statare" (usually married) found on the larger farms are provided, in addition to their cash wages, with allowances of milk, corn, potatoes, etc., a rent-free cottage, which in southern Sweden consists of two rooms and a kitchen, and in the rest of the country, of a single-room tenement (average yearly rental, in 1919, 133 kronor (\$35.64, par) and free fuel estimated (1919) at 147 kronor (\$39.40, par).

Earnings.—In Table 6 the average yearly earnings of these two classes of farm laborers, including in addition to their cash wages the value of board and lodging in the case of the unmarried workers, and of allowances in that of the married men, are given for 1911, and from 1914 to 1920.

TABLE 6.—AVERAGE YEARLY EARNINGS OF SWEDISH AGRICULTURAL LABORERS, 1911 AND 1914 TO 1920, BY CLASS AND SEX OF WORKER.

[Sweden. Statistiska Centralbyrån. Statistisk Årsbok, 1922. Stockholm, 1922, p. 214. Krona at par = 26.8 cents.]

Year.	Farm servants.						Statare. ¹		
	Cash wages.		Board and lodging.		Total.		Cash wages.	Wages in kind.	Total.
	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.			
	<i>Kronor.</i>	<i>Kronor.</i>	<i>Kronor.</i>	<i>Kronor.</i>	<i>Kronor.</i>	<i>Kronor.</i>	<i>Kronor.</i>	<i>Kronor.</i>	
1911.....	311	184	337	272	648	456	314	373	687
1914.....	332	202	370	299	702	501	334	477	811
1915.....	343	212	412	335	755	547	346	537	883
1916.....	398	241	508	414	906	655	390	597	987
1917.....	489	286	657	532	1,146	818	457	799	1,256
1918.....	689	376	940	755	1,629	1,131	646	1,118	1,764
1919.....	884	502	1,019	818	1,903	1,320	826	1,262	2,088
1920.....	1,075	661	1,030	834	2,105	1,495	1,047	1,305	2,352

¹ Includes horsemen and other men hired by the year.

It will be seen from this table that the rise in the total yearly earnings of these classes of farm workers, 1914 to 1920, was for male servants, 200 per cent; female servants, 198 per cent, and statura, 190 per cent. Cash wages of male servants increased 224 per cent; of female servants, 227 per cent; and of statura, 213 per cent.

Cash wages.—The day laborers on Swedish farms may be either permanent or temporary workers. In the iron-working properties in Bergslagen, for instance, day workers having small holdings contract to work for their employers a certain length of time and are known as permanent day workers. The majority of the day workers, however, are laborers who work by the day or hour, and make neither oral nor written agreements. The cash wages of these two classes of day laborers, those boarded by the employer and those boarding themselves, with reference also to season and to sex, for 1911 and from 1914 to 1920 are shown in Table 7.

TABLE 7.—AVERAGE DAILY CASH WAGES OF SWEDISH AGRICULTURAL DAY LABORERS, 1911 AND 1914 TO 1920, BY SEX AND SEASON.

[Sweden. Statistiska Centralbyrån. Statistisk Årsbok, 1922. Stockholm, 1922, p. 214. Krona at par=26.8 cents.]

Permanent day laborers.

Year.	Laborers boarding themselves.				Laborers boarded by employer.			
	Summer.		Winter.		Summer.		Winter.	
	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.
	<i>Kronor.</i>	<i>Kronor.</i>	<i>Kronor.</i>	<i>Kronor.</i>	<i>Kronor.</i>	<i>Kronor.</i>	<i>Kronor.</i>	<i>Kronor.</i>
1911.....	2.40	1.52	1.81	1.14	1.64	1.01	1.13	0.74
1914.....	2.62	1.65	1.97	1.24	1.80	1.10	1.25	.82
1915.....	2.72	1.71	2.07	1.29	1.88	1.16	1.31	.86
1916.....	3.28	2.05	2.55	1.59	2.30	1.39	1.69	1.06
1917.....	4.23	2.60	3.20	2.00	2.95	1.74	2.24	1.31
1918.....	5.99	3.58	4.69	2.73	3.95	2.35	3.08	1.76
1919.....	7.36	4.36	5.90	3.33	4.95	2.91	3.65	2.15
1920.....	8.33	5.22	6.51	4.01	5.71	3.27	4.23	2.57

Temporary day laborers.

1911.....	2.79	1.67	2.04	1.25	1.94	1.14	1.32	0.83
1914.....	3.02	1.81	2.24	1.38	2.10	1.24	1.46	.92
1915.....	3.13	1.87	2.34	1.43	2.18	1.29	1.55	.98
1916.....	3.77	2.23	3.02	1.75	2.63	1.52	1.96	1.18
1917.....	5.00	2.95	4.00	2.29	3.43	1.93	2.63	1.46
1918.....	7.14	4.00	5.62	3.07	4.75	2.67	3.63	2.02
1919.....	8.58	4.82	6.72	3.71	5.76	3.22	4.33	2.43
1920.....	9.37	5.62	7.20	4.30	6.41	3.72	4.71	2.79

The increases in the cash wages of the day workers were not generally as great as those of the permanent workers. The percentage increases in summer wages of these groups, 1914 to 1920, appear in the following statement:

Per cent of increase in summer wages, 1914 to 1920.

Permanent workers:	Per cent.	Temporary workers:	Per cent.
Men boarded by employer.....	217	Men boarded by employer.....	205
Men boarding themselves.....	218	Men boarding themselves.....	210
Women boarded by employer....	197	Women boarded by employer....	200
Women boarding themselves....	216	Women boarding themselves....	210

In the general industrial depression of 1921 marked decreases in the wages of all Swedish agricultural laborers occurred. Table 8 gives these decreases for the various classes of workers with the per cent of decrease.

TABLE 8.—DECREASE IN CASH WAGES (IN KRONOR) IN SWEDISH AGRICULTURE, 1921, AS COMPARED WITH 1920, BY CLASS OF WORKER, SEX, AND SEASON.

[Sweden. K. Socialstyrelsen. Sociala Meddelanden. Stockholm, No. 2, 1922, p. 85. Krona at par=26.8 cents.]

Class of employees.	1920.	1921.	Per cent of decrease.
Permanent workers:	<i>Per year.</i>	<i>Per year.</i>	
Male servants.....	1,075	794	25.1
Female servants.....	661	542	18.0
Statare—			
Horsemen.....	1,047	811	22.7
Cattlemen.....	1,158	912	21.2
Day laborers:			
Men boarding themselves—	<i>Per day.</i>	<i>Per day.</i>	
Summer.....	9.37	6.79	27.7
Winter.....	7.20	5.14	28.6
Men boarded by employer—			
Summer.....	6.41	4.72	26.4
Winter.....	4.71	3.15	33.1
Women boarding themselves—			
Summer.....	5.62	4.42	21.4
Winter.....	4.30	3.34	22.3
Women boarded by employer—			
Summer.....	3.72	3.07	17.5
Winter.....	2.79	2.24	19.7

Overtime.—Wages for overtime are usually 50 per cent higher than the regular hourly wages.

Wage Increase and Cost of Living for the Whole of Sweden.

Between 1913 and the end of 1919 total earnings of unmarried farm servants had increased by from about 170 to 180 per cent, and those of married servants by 190 per cent, while increases in the wages of day laborers ranged from 166 to 207 per cent.⁹ In July, 1919, as compared with July, 1914, the cost of living had increased 157 per cent, retail food prices being, July to December, 1919, from 210 to 220 per cent above the 1914 level.

By July, 1920, cost of living had increased to 170 per cent and in October, 1920, to 181 per cent above the 1914 level.¹⁰ Meanwhile, as shown in Tables 6 and 7, wages had also been rising. During the period 1913 to 1920 cash wages of all agricultural laborers reached an estimated average increase of 220 per cent.¹¹

Wage Contracts.

The yearly contract prevails among the permanent workers on Swedish farms, the hiring year being reckoned from October 24.

⁹ Sweden. Delegation for International Collaboration in Social Politics. The Swedish agricultural laborer. Stockholm, 1921, pp. 56, 57, and 61.

¹⁰ Sweden. Statistiska Centralbyrån. Statistisk Årsbok, 1922. Stockholm, 1922, pp. 221 and 224.

¹¹ See The Swedish Agricultural Laborer, p. 64.

Collective Bargaining.¹²

Collective agreements in Swedish agriculture date back to 1906-7, but their use in the regulation of working conditions affecting farm labor did not become general until 1919, when a national agreement was entered into in which provisions dealing with overtime, right of organization, direction of work, accident insurance, etc., were included. During the same year a number of local agreements concerning wages and hours of labor were made. New local agreements in 1920 indicated an extension of the principle of collective bargaining to portions of the country where it had hitherto not existed. The national agreement of 1919, however, expires October 24, 1922, and local agreements of 1920 touching the question of wages and hours terminated in 1921.

As to the range of the collective agreements it may be said that while they are in force in three of the most important agricultural districts of Sweden, viz, Skåne, Östergötland, and the Vale of Mälars, the reports state that in not more than one-fourth of all the rural districts of the country are agricultural working conditions thus regulated, and that in parishes where the agreements have come into force they concern, in the main, only holdings of at least 50 hectares (123.6 acres).

In addition to the matters of increased wages, better housing, and shorter hours, the employees have from the first sought through collective agreements to safeguard their right of association. The national agreement of 1919 provided for the inviolability of the right of association on either side. It provided also that a dismissed worker might call for an inquiry through his association for the purpose of redress, but that an employer's objection to his employee's membership in a trade organization should not be considered a violation of the right of association. The agreement of the following year, however, went a step further and made the dismissal of a workman because of membership in a union a violation of the right of association. The refusal of an employer to give reasons, upon the demand of the employees' trade organization, for the dismissal of a workman was also to be regarded as a violation of the right of association. Provisions such as these are regarded as a marked departure from the patriarchal system which has hitherto largely prevailed in agricultural labor contracts. The personal relation existing between master and servant has been gradually transmuted into impersonal agreements between employers and employed, and the settlement of labor disputes, once a question between man and man, is now in the last resort referred to organizations of the two parties.

Hours of Labor.

Hours of labor in Swedish agriculture have gradually decreased as wages increased. The changes in this respect are shown in Table 9, which summarizes the results of investigations made over the period from 1911 to 1920.

¹² Sweden. Delegation for International Collaboration in Social Politics. The Swedish agricultural laborer. Stockholm, 1921, pp. 37-40.

TABLE 9.—LENGTH OF AVERAGE WORKING DAY (HOURS) IN SWEDISH AGRICULTURE IN SUMMER, 1911 TO 1920.

[Sweden. Delegation for International Collaboration in Social Politics. The Swedish agricultural laborer. Stockholm, 1921, p. 41.]

Item.	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Gross time.....	12.7	12.7	12.6	12.6	12.5	12.3	12.3	12.3	12.1	11.9
Meal times, etc.....	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1
Net time.....	10.5	10.4	10.4	10.4	10.3	10.1	10.1	10.1	9.9	9.8

¹ Sweden. Statistiska Centralbyrån. Årsbok, 1922. Stockholm, 1922, p. 212.

It appears from the table that the average net daily hours in summer for these workers decreased 0.7 hour (42 minutes), or 4.2 hours per week, between 1911 and 1920, the largest annual decrease, 0.2 hour (12 minutes) per day occurring between 1915 and 1916 and 1918 and 1919.

The length and distribution of hours of labor in agriculture always vary greatly with different classes of workers on different kinds of work. Information regarding average daily hours of three principal classes of farm workers in Sweden, viz, cattlemen, horsemen, and ordinary laborers in 1918 and 1919 is given in Table 10.

TABLE 10.—AVERAGE DAILY HOURS OF WORK IN SWEDISH AGRICULTURE, 1918 AND 1919, BY CLASS OF WORKER AND SEASON.

[Sweden. Delegation for International Collaboration in Social Politics. The Swedish agricultural laborer. Stockholm, 1921, p. 43.]

Class of worker and year.	Summer.			Winter.		
	Gross time.	Meals.	Net time.	Gross time.	Meals.	Net time.
Cattlemen:						
1918.....	13.9	2.9	11.0	13.4	2.8	10.6
1919.....	13.8	3.0	10.8	13.3	3.0	10.3
Horsemen:						
1918.....	12.6	2.3	10.3	9.5	1.4	8.1
1919.....	12.5	2.3	10.2	9.5	1.4	8.1
Ordinary laborers:						
1918.....	12.3	2.2	10.1	9.2	1.3	7.9
1919.....	12.1	2.2	9.9	9.1	1.3	7.8

As usual and for obvious reasons the hours of labor of the cattlemen and horsemen were longer than those of ordinary laborers, but on the other hand the net decreases for the two former classes were greater than those for the latter in both years. The length of the working hours of cattlemen in winter, as compared with those of the other two classes, is a noticeable feature of the table.

Statistics regarding the length of the working year for 1919-20 were secured by an investigation covering 74 representative farms in central and southern Sweden, employing 1,637 workers regularly. The data submitted in Table 11 are based upon 656 of the male workers who had been employed for at least 11 months of the fiscal year in question. It was found that the average number of effective working hours, after deducting days off (89 hours per annum provided for in collective agreements), days of sickness, etc, amounted to 2,824 if

ordinary working time is considered, and to 2,978, or 154 more, if the additional hours spent in feeding stock, grooming horses, etc., are taken into account. The facts as they related to the different classes of workers follow:

TABLE 11.—AVERAGE NUMBER OF YEARLY WORKING HOURS OF SWEDISH AGRICULTURAL LABOR, 1919-20, BY AGE AND CLASS OF WORKER.

[Sweden. Delegation for International Collaboration in Social Politics. The Swedish agricultural laborer. Stockholm, 1921, p. 48.]

Item.	Cattlemen.	Horsemen.	Laborers.	Special workers.	Other workers.	General average.	Age groups.		
							Under 18 years.	18 to 59 years.	60 years and over.
Ordinary working hours.....	3,250	2,669	2,624	2,706	2,658	2,824	2,709	2,813	2,944
Total working hours.....	3,299	2,983	2,669	2,748	2,776	2,978	2,838	2,983	3,013

As compared with the length of working hours shown in the preceding tables the local collective agreements fixing hours of labor for the hiring year 1920-21 made in connection with the national agreement of 1919 are significant. In central Sweden, for instance, hours were fixed as follows: November, 8 hours per day; December, 7½; January, 8; February, 8½; March 1 to April 15, 9; April 16 to September 30, 10; October, 9 hours. In southern Sweden a more even distribution of working time was made. But with the exception of Skåne, where the working time is about 50 hours longer than in other counties, the average annual working time, under the new agreements, required deductions being made, amounted to 2,650 hours. According to available information it seems to be clear that the agreements for 1920-21 were not renewed, and just what the changes were in this respect during 1921 have not as yet been reported.

Agricultural work does not as a rule begin before 7 a. m. or end later than 7 p. m., though an extra hour off is granted on Saturdays, making the closing hour 6 p. m.

MINIMUM WAGE.

Minimum Wage as Basis for Compensation Award.

A NOVEL application of the minimum wage law appears in an award by the Industrial Accident Commission of California published in volume 9 of its reported decisions, at page 31. The injured employee was a woman working as a machine operator for Clarence T. Braun & Co. at San Francisco, the injury resulting in the loss of her left arm near the elbow. She was receiving wages of \$15 per week, in disregard of the rate fixed by the California Industrial Welfare Commission, which was \$16 per week. In making the award the accident commission held that the indemnity should be computed upon the basis of the legal wage fixed by the welfare commission rather than on the wage actually paid in violation of law.

Kansas Report on Minimum Wage, 1921.

THE minimum wage law of Kansas is now administered by the court of industrial relations of the State, and the report of the court gives an account of operations during the year 1921. The court was not organized until March, 1921, so that the work was subject to delay. However, the former secretary of the welfare commission was retained for a part of the year, and carried on surveys as to costs of living, wages, etc., as in earlier years. The results of the investigations are given in a suggested general cost of living budget amounting to \$16.93 per week. Cost of room is put at \$3.40, board at \$6.35, clothing at \$3.31, and sundries at \$3.87. Of the latter, car fare (\$1.05), laundry (50 cents), and amusements (50 cents), are the largest items.

All orders have been reopened, and dates were set for hearings in December, but these were postponed on account of the packers' strike, which occupied the attention of the court. New dates were set in February, 1922, after which tentative orders were to be drawn, followed by a final public hearing and promulgation. The abrogation of representative boards, which took place with the transfer of the work to the court, was looked upon as a step in the direction of efficiency and prompt action, as the boards "had proved a clumsy arrangement and had often been able to block all legislation because of disagreement."

PRODUCTIVITY OF LABOR.

Output of Coal Miners in Great Britain and Various Other Countries.

A REPORT published by the Monmouthshire and South Wales Coal Owners' Association¹ gives data (pp. 68-73) relating to the individual output of miners in the Monmouthshire and South Wales coal fields and similar information (pp. 226, 227) for the coal miners of the United Kingdom, other British possessions, and the principal coal-producing countries of the world.

The following table shows the number of miners (pieceworkers) actually engaged in getting out coal and the average weekly output of pieceworkers in the coal mines of Monmouthshire and South Wales, by quarters, from 1919 to 1922:

NUMBER OF PIECEWORKERS, AND AVERAGE WEEKLY OUTPUT PER PIECEWORKER IN MONMOUTHSHIRE AND SOUTH WALES COAL FIELDS, BY QUARTERS, OCTOBER 11, 1919 TO JANUARY 7, 1922.

Quarter ending—	Pieceworkers: Average number of coal getters (including colliers' helpers).	Weekly output per pieceworker (tons of 2,240 pounds).
October 11, 1919.....	109,072	7.22
January 10, 1920.....	112,108	8.25
April 10, 1920.....	113,190	8.39
July 10, 1920.....	114,034	8.18
October 9, 1920.....	114,531	7.81
January 8, 1921.....	115,670	6.26
April 9, 1921.....	114,271	5.59
July 9, 1921.....	(1)	(1)
October 8, 1921.....	87,061	9.29
January 7, 1922.....	92,049	9.59

¹ National strike.

The table following, taken from the report (with the exception of additional data for the United States, Belgium, and Japan), shows the average yearly tonnage output per man for underground and surface workers combined, for various periods in the different countries from 1885 to 1921:

¹ Gibson, Finlay A. A compilation of statistics of the coal mining industry of the United Kingdom, the various coal fields thereof, and the principal foreign countries of the world. Cardiff, 1922.

PRODUCTIVITY OF LABOR.

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AVERAGE OUTPUT PER MAN PER YEAR IN PRINCIPAL COAL-PRODUCING COUNTRIES,
1885 TO 1921.

[In tons of 2,240 pounds.]

Year.	United Kingdom.	British India.	Canada.	Australia and New Zealand.	South Africa (Cape of Good Hope, Natal, Transvaal, and Orange Free State.	United States.	Germany.	France.	Belgium.	Russia.	Austria-Hungary.	Japan.	Sweden.	Spain.
1885	318	57	315	353	74	263	190	166	134	177	143	102		
1886	312	56	332	354	105	263	193	169	136	174	164	103		
1887	317	55	375	348	91	274	205	179	136	180	147	118		
1888	327	58	353	353	305	285	214	183	134	187	145	111		
1889	320	65	306	345	71	421	276	217	181	141	185	104	132	
1890	299	66	347	301	113	443	264	213	171	146	180	123	117	123
1891	288	67	360	365	111	453	256	195	162	152	176	89	124	102
1892	275	66	.....	356	101	468	243	194	162	157	176	112	129	112
1893	247	68	388	321	161	448	250	191	163	155	177	109	128	113
1894	271	65	391	379	162	405	252	202	172	166	175	99	126	107
1895	273	61	359	391	188	450	256	202	169	173	175	88	143	110
1896	284	62	383	390	175	443	267	206	175	175	174	93	137	105
1897	293	68	447	427	164	450	267	213	176	168	178	63	136	134
1898	288	73	501	432	174	490	265	214	177	172	177	88	140	139
1899	304	68	472	429	158	552	264	211	173	160	179	111	137	142
1900	291	69	477	452	.....	537	260	203	174	146	160	106	135	129
1901	273	70	497	456	142	539	238	195	163	137	164	118	128	130
1902	277	76	552	435	187	520	234	179	174	153	163	122	138	120
1903	275	84	462	446	190	563	244	206	167	166	169	117	143	123
1904	276	89	468	421	195	529	242	196	155	164	175	120	149	139
1905	277	95	509	456	210	560	242	202	159	153	187	149	154	142
1906	287	99	514	487	224	577	264	188	166	147	195	121	142	131
1907	287	99	425	487	233	630	258	197	163	155	195	106	149	153
1908	297	99	422	494	231	538	243	189	160	146	190	115	147	150
1909	292	99	400	399	285	617	236	195	162	155	181	97	123	162
1910	254	104	453	453	301	618	239	192	164	.....	183	112	146	156
1911	257	109	395	484	313	613	248	192	157	.....	191	119	144	145
1912	241	111	472	535	341	660	269	200	155	.....	207	127	165	.....
1913	255	.....	.....	.....	.....	681	.....	.....	2 155	.....	.....	122	.....	.....
1914	234	.....	.....	.....	.....	531	.....	.....	2 128	.....	.....	120	.....	.....
1915	285	.....	.....	.....	.....	646	.....	.....	2 112	.....	.....	1104	.....	.....
1916	257	.....	.....	.....	.....	721	.....	.....	2 132	.....	.....	1114	.....	.....
1917	243	.....	.....	.....	.....	707	.....	.....	2 131	.....	.....	1103	.....	.....
1918	226	.....	.....	.....	.....	794	.....	.....	2 123	.....	.....	1 96	.....	.....
1919	193	120	.....	.....	280	3 637	.....	.....	.....	.....	.....	1 88	.....	.....
1920	183	97	.....	.....	297	3 743	.....	.....	.....	.....	.....	.....	.....	.....
1921	147	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Computed from the Twenty-first Financial and Economic Annual of Japan, 1921. Tokyo [1922]. Pp. 61, 65.

² R. A. G. A. The Mineral Industry during 1919, New York, 1920. P. 119.

³ Computed from report of U. S. Geological Survey, Apr. 1, 1922, No. 246.

LABOR AGREEMENTS, AWARDS, AND DECISIONS.

Building Trades—Boston.

AN AGREEMENT has recently been signed by the Building Trades Employers' Association and the United Building Trades Council of Boston which is expected to stabilize wages and working conditions in that locality. In the summer of 1921 the workers in building trades struck for an increase of wages, and after a hard fight were defeated. The employers established a rate of 90 cents an hour for the basic trades and declared the open shop. When, this spring, the boom in building brought about a scarcity of skilled building workers, the men began to demand increases in pay, and the situation was such that they were likely to get them. Under these circumstances, it seemed to both sides that it would be better to return to a formal contract between the two sides, so that both might have a reliable basis for estimating expenses and earnings, and the present agreement, signed July 14, 1922, is the outcome of this attitude.

The wage set for the basic trades is, in general, \$1 an hour, running up to \$1.12½ for bricklayers, stonemasons, and plasterers, and \$1.20 for hoisting engineers. The employers agree not to hire nonunion men unless the unions are unable to furnish a sufficiency of members to do the work, and the unions bind themselves, if this latter situation arises, to work with nonunion men. The 44-hour week is established, with time and a half for overtime and double pay for Sunday and holiday work. Both sides agree that there shall be no lockouts, strikes, or stoppages of work, excepting only cases in which nonunion men are hired when union men are obtainable; in this case 48 hours' notice of the situation must be given to the secretaries of the two associations before work is stopped. Grievances of every kind are to be adjusted by an arbitration board. To form this board, both employers and employees shall designate one member and one alternate from each of their trade subdivisions, the number of employer and employee representatives to be equal. The employer and employee representatives thus chosen are each to select a chairman and secretary for their own side, and also to name three umpires, the six people thus selected to form the panel of umpires. The board may, when it thinks best, work through subcommittees. This board is to have jurisdiction over all disputes.

It is clearly understood that this arbitration board is to settle any and all disagreements, misunderstandings, or questioned interpretations of any kind that may arise in any trade or between any employer or employee group, or between two or more employer or employee groups that may occur during the life of this agreement. All findings and judgments of this arbitration board are to be conclusive and binding upon all parties concerned during the life of this agreement.

If the board is unable to reach a unanimous agreement in any case, the question is to be referred to a special section "consisting of equal

number of members from each group representing the trades or subdivisions who have an interest in the question." If this section fails to reach a unanimous agreement within 48 hours of its appointment, it is to choose by lot one name from the panel of umpires. The umpire thus chosen is to hear the case and to make an award within 72 hours from the time all evidence and argument have been presented to him, and his award shall be final and binding on all parties.

This agreement will expire on April 1, 1923, but if neither party to this agreement gives notice in writing to the other party on or before January 1, 1923, that it desires a change, then this agreement shall continue in effect until April 1, 1924, and so on each year thereafter. If, however, three months' notice in writing is given by either party to this agreement to the other party on January 1 of any year that it desires a change in this agreement, then negotiations shall be entered into for a new agreement by both parties not later than January 10 of any year.

Agreement Concerning Employment of Bricklayers' Helpers.

ON JUNE 5, 1922, an agreement was signed in New York City between the Mason Builders' Association and the Independent Bricklayers' Helpers and Building Laborers' Union of America (Inc.), covering hours, wages, and working conditions. The wage is fixed at 87½ cents an hour, and the week at 44 hours, with an hour and a half more permitted for men engaged in mixing, tempering, or distributing mortar. Time and a half is to be paid for overtime and double pay for work on Sunday or holidays. The work of bricklayers' helpers is defined, and it is stipulated that wages are to be paid weekly, "before 12 noon, Saturday." The men bind themselves not to affiliate with any other labor organization and not to go out on any sympathetic strike. They agree not to quit the work of a member of the Mason Builders' Association and to submit all disputes to the joint arbitration committee for settlement. Business agents of the union are to be free to visit jobs during working hours. The agreement is to expire December 31, 1922.

Hat and Cap Industry—New York.

THE strike of 5,000 hat and cap workers of New York City was settled by an agreement entered into on July 19, between the Cloth Hat and Cap Manufacturers' Association and the Joint Council of New York of the United Cloth Hat and Cap Makers of North America. Sections V and VIII of the new agreement embody important changes. Section V is intended to eliminate the social shop by requiring the manufacturers to do practically all of their work in their inside shops. Section VIII provides for the establishment of production standards and for arbitration of this question in case of disagreement. Following is the new two-year agreement:

Both parties are desirous of bettering conditions in the cloth hat and cap industry, and of obtaining as far as possible equalization of standards of labor throughout the industry by methods of conciliation and arbitration. To accomplish this end, the union and the association enter herewith into this collective agreement, pledging their good faith to cooperate for the enforcement of its provisions.

More specifically, the association herewith assumes full responsibility for its individual members, that all provisions of this agreement and board decisions will be faithfully carried out by them. The union believing in the principle of a fair day's labor for a fair day's pay, obligates itself in good faith for all of its members, that they will perform their work conscientiously, faithfully, and efficiently.

I. EMPLOYMENT.

(a) The association agrees that its members will employ none but members in good standing of the United Cloth Hat and Cap Makers of North America.

(b) The members of the association requiring help shall apply to the association which in turn shall arrange with the union for the supplying of cap makers for caps and hat makers for hats, and such other skilled help as may be required.

Workers efficient in both hat making and cap making employed in either department shall have the preference for employment in the other departments of the same shop before any new help.

Any claim of neglect or improper allocation of help to manufacturers in the supply of help by the union shall be considered and acted upon by the board of adjustment.

(c) The employees shall give three days' notice to employers before leaving their positions.

(d) When a worker who is indispensable in the factory serves notice of leaving, the employer shall immediately notify the union, through the association, and such worker shall not leave before the union is able to replace him or her. This, however, shall not be applied to workers who are leaving the trade or the city.

(e) No worker shall be discharged without sufficient cause or reason, nor until an opportunity has been given for a joint investigation as to the sufficiency of the cause and reason. In case of disagreement the board of adjustment shall decide after a trial.

II. HOURS AND OVERTIME.

(a) A week's work shall consist of 44 hours, as follows: During the months of June, July, and August, on the first four working days of the week, work shall begin at 8 a. m. and continue to 12 m., and from 1 p. m. to 6 p. m., and on the fifth working day of the week, work shall begin at 8 a. m. and continue to 12 m., and from 1 p. m. to 5 p. m. During the balance of the year the 44 working hours may be distributed either as provided above or as follows:

On the first five working days of the week work shall begin at 8 a. m. and continue to 12 m., and from 1 p. m. to 5 p. m. On Saturdays work shall begin at 8 a. m. and continue to 12 m.

(b) No overtime work shall be permitted during the months of June, July, and August, nor on Saturdays and Sundays during the balance of the year, nor shall more than eight hours overtime be permitted in any one week, same to be worked during the first four days of the week. Should conditions in the trade at any time warrant a deviation from the above regulation of overtime, the matter shall be taken up in conference between the association and the union, with the chairman of the board of adjustment as chairman, for such adjustment as the needs of the industry may require.

(c) All overtime work shall be paid for at the rate of time and one-half.

(d) Any worker who habitually comes in late during the week when overtime is being worked shall be entitled to the overtime rate of time and one-half for as many hours only as he or she works in excess of 44 hours.

III. HOLIDAYS.

(a) The following legal holidays shall be observed and the workers shall receive pay for same, namely: New Year's Day, Washington's Birthday, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and the latter half of election day. During the week in which a legal holiday occurs employees working less than a full week shall be paid for the holidays pro rata for the hours worked.

New employees shall not be entitled to pay for holidays during the two weeks of trial; such workers, however, upon becoming permanent workers should receive back pay for such holidays with their fourth week's pay.

(b) Employees of firms that observe all the Jewish holidays shall substitute for the above-named holidays the latter half of election day, and the following religious holidays, and be paid for same: The first day of the Jewish New Year, Day of Atonement, Eighth Day of the Feast of Tabernacles, first day and last day of Passover,

and the first day of Shevuos. During the week in which the holiday occurs employees working less than the full week shall be paid pro rata for the hours worked.

IV. WAGES.

- (a) The system of work shall be by the week in all departments.
- (b) Newly engaged workers not covered by a standard of production shall work for the two weeks' trial period at a price mutually agreed upon by the employer and the employee. During, or at the end of this period, the employer and worker shall agree upon a price which shall be his or her fixed wages.
- (c) All wages shall be paid weekly, in full, and in cash on a specified day.

V. CONTRACTORS.

(a) The practice of giving out a large part of the work to outside shops encouraged the establishment and development of the so-called "corporation" and social shops, which in turn kept the workers of the legitimate shops unemployed for months and months.

It is the position of the union that by giving out their work, the greatest part of which went to the social or "corporation" shops, the manufacturers have thrown off all responsibility to the workers and the industry. For hours, wages, and working conditions in these social or "corporation" shops, as well as standards of workmanship and sanitation are below reasonable standards.

It is the position of the manufacturers that they had to adopt that course because of the lack of standards of production which made it impossible for them to ascertain definitely in advance the labor cost of every article.

Both parties agree that the development of the social shop is bound to undermine the entire industry. For the cut-throat competition of the social shop is based on the lowering of all working conditions and trade standards, on a cheapening of the quality of the article, and on the gradual reduction of the trade to the position of a sweatshop trade. Both sides fully indorse the statement of the board of arbitration of May, 1921, to the effect that "the illegitimate social shop is detrimental to the industry as a whole, and therefore to the legitimate manufacturers and to the organized workers."

The association pledges itself, for its members, to assume full responsibility to their workers especially with regard to supplying them with continuous employment as far as possible.

The union pledges itself to cooperate in the establishment of a reasonable and uniform standard of production in the trade, so as to meet the point raised by the manufacturers as their reason for giving out work.

In accordance with the above declaration the following provisions are to be enforced:

(b) The members of the association shall have their work made in their own shops, with the exception of such work as may be agreed upon between the association and the union for every individual manufacturer, subject to the following rules:

(1) Exceptions are to be permitted for such work which the respective manufacturer is not adapted to make in his own shop. The question whether a manufacturer is or is not adapted to do certain kinds of work shall be determined by the long established practice of the firm, especially that prevailing during normal times.

(2) The respective manufacturer shall register with the union the shops with which he contracts for work that is subject to exception in accordance with clause 1 above. No manufacturer shall give out such work to any shop that is not a duly recognized union shop.

VI. MISCELLANEOUS PROVISIONS.

(a) Time lost by the workers on account of an accidental breakdown of power, caused by agencies beyond the control and remedy of the employer should be made up during a period of one to two weeks in regular time. The arrangements to make up such lost time should be made between the employer and the committee of the shop.

(b) During a period when there is not enough work in either the trimming or lining making branches to keep the workers of either branch fully occupied, the workers may be shifted from either of these branches to the other, or to the operators' branch to sew covers or to work on the special machines, provided the transfer of a worker from one branch to another does not replace a worker in any other branch. The employer must notify the union, through the association, of such change. It is further understood that such workers are to be returned to their original branch of work when there is sufficient work in such branches to keep them occupied.

(c) Foremen, foreladies, or any member of the firm shall not perform any work which could be done by a regular worker, but must confine themselves to their managerial duties.

(d) The workers shall not be required to work for any firm, although a member of the association, which will work for or supply work to any firm during the pendency of strikes called or conducted by the union, against the latter firm.

(e) There shall be no opposition or interference with the introduction of new machinery on the part of the union, provided that such introduction does not eliminate from employment workers in the shop where such machinery is introduced.

(f) There shall be equal division of work among all the workers in the shop at all times. Arrangements for the division of work shall be made at least one day in advance between the firm and the committee of the workers.

(g) The union agrees that in any other agreement to be made with any other individual employer in Greater New York during the life of this agreement, the stipulated condition of work and wages shall be in no wise less than the terms of this agreement.

VII. ADJUSTMENT OF DISPUTES.

(a) The parties to this agreement agree that there shall be no strike or lockout during the continuance of this agreement for any reason whatsoever, or because of any matter in controversy or dispute between the association and the union, or between any member of the association and any member of the union, but that all matters in controversy or dispute, if any, which the firm and its workers have been unable to adjust, shall be immediately referred to the managers of the respective organizations, by the party or parties aggrieved for immediate joint investigation and adjustment.

(b) During the pendency of the controversy, a stoppage or a cessation of work shall not be permitted, whether by the authority of a representative of the union, or in any other way. In the event that the representatives of the parties hereto shall be unable to adjust the controversy or dispute, the same shall immediately be referred to the committee on adjustment whose decision shall be final and binding upon the parties to this agreement.

(c) The committee on adjustment shall consist of five members, two representing the association, two representing the union, and the chairman agreed upon by the four, and designated for the life of the agreement.

VIII. STANDARDS OF PRODUCTION.

(a) Immediately upon the signing of this agreement, arrangements shall be made by the union and the association to continue the negotiations that have been going on immediately preceding the signing of this agreement for the establishment of a reasonable and uniform standard of production in the trade.

(b) Both sides pledge themselves to make every effort in order to complete the negotiations and arrive at a mutually satisfactory understanding on the question of standards of production, as soon as possible.

(c) In case the union and the association shall fail to come to an understanding on the question of standards of production by the end of three months from the date of the signing of this agreement, the question shall immediately be submitted to arbitration, both sides binding themselves to abide by the decision of the arbitrator, such decision to become an integral part of this agreement.

IX. DURATION.

(a) This agreement goes into effect the week of July 19, 1922, and shall terminate on June 30, 1924. On or about March 15, 1923, the association or the union shall have the right to call the other side into conference for the consideration of the question of wages, standards of production and other trade questions. In the event that the parties of this agreement fail to agree on the question of wages or standards of production, their differences shall be submitted to a board of arbitration consisting of one representative of the association, one representative of the union and a chairman designated by the association and the union. The decision of the board of arbitration, which must be rendered not later than June 1, shall be binding upon the parties for the life of the agreement, namely, up to June 30, 1924.

(b) Not later than May 1, 1924, a conference shall take place between the authorized representatives of the association and the union to take up the question of renewal, revision, or modification of the agreement.

Iron and Steel Industry.

THE annual conferences of the Amalgamated Association of Iron, Steel, and Tin Workers with the Western Bar Iron Association and the Western Association of Sheet and Tin Plate Manufacturers held in June, resulted in a renewal for another year of the sliding scale agreements between these associations of manufacturers and the union. There were minor changes only in the sheet and tin mill scales. The base rates on coke machines were reduced 5 per cent. This reduction affects tin house workers only, who represent but a small proportion of the workers in the tin mills. A number of minor changes were made affecting working conditions, and the following new clauses were added to the memorandum of agreement:

It is further agreed that when improved machinery or methods of operation are introduced into mills, thus increasing the output and reducing the work of the men, there shall be a readjustment of the scale governing such work.

It is further agreed that when and where misunderstandings arise as to the proper interpretation of any part of this agreement, that the proper official or officials of the association with the local committee shall first discuss the matter with the management before any rulings on same are rendered. It is understood that pending such investigation and discussion, there shall be no cessation of work by men affected.

Eighteen companies participated in the conferences which resulted in this agreement.

In the contract between the Western Bar Iron Association and the Amalgamated Association of Iron, Steel, and Tin Workers an advance in the base rates for boiling metal was granted to the bar iron workers for the 12-month period beginning July 1. The basic puddling rate was increased from \$5.50 to \$6 a ton on a 1-cent card rate, and a 50-cent advance applied at all card points above the 1-cent card rate. For the May-June period the boiling rate of \$7.63 was based on a 1.50-cent card. The new rate is \$8.13. Otherwise this agreement remains virtually unchanged.

Printing Trades.

Cleveland.

THE new "continuing" agreement between the Employing Printers of Cleveland, Ohio, and the Cleveland Typographical Union No. 53 is of interest, not only for its content, but also for its form. It illustrates the attempt of the International Typographical Union to evolve a model universal contract form. In January, 1922, the International Typographical Union published in "The Bulletin" a tentative plan for a uniform contract and scale, suggesting a certain arrangement of the items of the contract. The Cleveland Typographical Union No. 53 has adopted this form for its new agreement effective May 1, 1922. Following is this agreement in full:

SCHEDULE A—ARBITRATION AGREEMENT.

PART I—IDENTIFICATION.

This agreement is made between Employing Printers of Cleveland, Ohio, hereinafter called "the association," and Cleveland Typographical Union No. 53, hereinafter called "the union."

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PART II—DURATION.

Effective April 1, 1922, to April 1, 1925, in full force in all of its terms and as set forth in this agreement.

Terms of this agreement shall continue in full force and effect for three years and thereafter from year to year unless either party to the agreement shall, not less than ninety days before the expiration, notify the other party in writing of its intention to terminate same.

PART III—PROTECTION.

All members of "the association" shall be protected under this agreement by "the union" against walkouts, strikes, boycotts, or any other form of concerted interference with the peaceful operation of all departments coming under the jurisdiction of "the union"; and it is further provided that "the association" agrees with "the union" to arbitrate any and all differences that may arise under this agreement between "the association" and "the union," if those differences can not be first settled by conciliation.

All disputes arising over provisions in the wage scale and working conditions contract herein referred to as "Schedule B," shall be subject to arbitration under the provisions of this agreement if such disputes can not be adjusted through conciliation.

All employers holding membership in "the association" shall be accorded terms and conditions as good as or better than those accorded employers who are not members of "the association."

Pending final decisions by the arbitrators, work without interference under existing conditions shall continue in the office of the employing printer, party to the case, and the award by said arbitrator shall in all cases include a determination of the issues involved, covering the period between the raising of the issues and their final settlement; and any change or changes in the wage scale of employees may, at the discretion of the arbitrator, be made effective from the date issues were first made.

PART IV—REFERENCE TO WAGE SCALE AND WORKING CONDITIONS CONTRACT.

"The association" and "the union" hereby agree to enter into a wage scale and working conditions contract, herein referred to as "Schedule B," for a set period, fixing the wages, hours, and working conditions of members of "the union" employed by members of "the association," which scale contract may be amended, extended, or abrogated in accordance with provisions herein expressed without in any way affecting any of the terms or conditions of this arbitration agreement, and this arbitration agreement may be altered, amended or extended without affecting any of the terms or conditions of said scale contract. The wages, hours and working conditions set forth in the said "Schedule B" contract will be inaugurated and maintained by both parties to this agreement, and "the union" further agrees that it will not allow any of its members to work for less wages or more hours than those set forth in said "Schedule B."

PART V—REFERENCE TO LOCAL AND INTERNATIONAL UNION LAWS.

The constitution and by-laws of Cleveland Typographical Union No. 53, as existing and in force May 1, 1922, and the constitution and by-laws of the International Typographical Union, as existing and in effect on May 1, 1922, a copy of each of which is hereto attached, are made a part of this contract, subject to such changes as will not alter nor affect the relations of the principals of this document during the life of this contract.

PART VI—ORGANIZATION AND TIME LIMITS.

There shall be a standing committee known as the joint conference committee, which shall consist of five members and five alternates appointed by "the association" and a like number of members and alternates appointed by "the union." This committee shall meet separately on the call of the chairman of each part for consultation, and jointly by the call of the chairman of each committee, at such time and place as may be determined by them. Due notice in writing of such meeting shall be given all interested parties. A majority vote of each part of the committee shall be necessary to a decision.

The chairman of the joint conference committee for "the association" and the president of "the union" or such representative as they may delegate shall be constituted a preliminary joint conference committee for conciliation.

The said joint conference committee must act within five (5) full business days when its services are desired by either party.

The alternates may meet with the committee of the organization to which they belong, but shall not take part in the proceedings of the joint conference committee except as substitutes.

When the joint conference committee renders a decision which is unsatisfactory to either side, or when it is unable to reach a decision within ten (10) full business days after the final submission of the case to said committee, then review by an arbitrator to be appointed by mutual agreement may be asked for by the dissatisfied party through appeal, provided written notice of appeal to the other party be given within five (5) full business days after decision has been rendered, and a written statement setting forth the grounds of the appeal is filed with the joint conference committee within ten (10) full business days after the decision has been rendered.

In event it becomes necessary under this agreement to have an arbitrator, he is to be selected by a majority vote of each part of the joint conference committee. Should the conferees fail to agree on an arbitrator within ten (10) full business days, he shall be selected by the presiding judge of common pleas court.

The conditions obtaining before the initiation of the dispute shall remain in effect pending the finding of the joint conference committee or arbitrator.

PART VII—PROCEDURE.

All difference of opinion, complaints, disputes of any character on any question arising between the parties of this agreement shall be submitted for conciliation to the preliminary joint conference committee made up of the president of "the union" or his appointed representatives, and the chairman of the conference committee of "the association" or his appointed representative, and if conciliation fails, then and at all times said differences shall be submitted to the joint conference committee.

The preliminary joint conference committee may settle minor questions not involving far-reaching precedents; all questions involving precedents shall be referred to the joint conference committee for decision.

The following rules shall govern the joint conference committee in adjusting differences between parties to this agreement:

- (a) It may demand duplicate typewritten statements of grievances.
 - (b) It may examine all parties involved in any differences referred to it for adjudication.
 - (c) It may employ such stenographer or clerks as may prove necessary to facilitate its business.
 - (d) It may require affidavit on any or all disputed points.
 - (e) It shall allow equal opportunity for presentation of evidence or argument.
 - (f) Its deliberations shall be conducted in executive session and the findings, whether unanimous or not, shall be signed by all members of the board in each instance, or shall be certified to by the chairman and secretary of the joint committee to the two parties to this agreement. A member of the joint conference committee may hand in a dissenting opinion to become a part of the records of the proceedings.
 - (g) In the event that either party to the dispute refuses to appear or present his case after due notice, it may be adjudicated and findings rendered in accordance with such evidence as may be in the possession of the committee.
 - (h) All evidence communicated to the committee in confidence shall be preserved inviolate and no record of such evidence shall be kept except for use on appeal, in which case such inviolability shall still be preserved.
 - (i) All expenses attendant upon the settlement of any appeal of hearing before the committee or arbitrator shall be borne by the party losing the appeal or, in case of a compromise being reached, each party to the controversy shall bear half of the cost.
- In case the matter in dispute is finally referred to an arbitrator both parties to the controversy shall appear personally or by proxy, the proxy to be a duly recognized member of either body, in good standing, or may submit records and briefs, and may make oral or written arguments in support of their several contentions. They may submit an agreed statement of facts or a transcript of testimony, properly certified to before a notary public by the stenographer taking the original evidence or depositions.

PART VIII—BINDING FORCE OF DECISIONS AND PENALTIES FOR VIOLATION.

The decision of the impartial arbitrator shall be final and binding on both parties to this agreement. In the event that either party to the dispute refuses to accept and comply with the decision of the arbitrator, all aid and support to the firm or employer, or member or members of "the union" refusing such acceptance and compliance shall

be withdrawn by both parties to this agreement. The act or acts of such employer or member of "the union" shall be publicly disavowed and the aggrieved party to this agreement shall be furnished by the other party thereto with an official document to such effect.

SCHEDULE B—WAGE SCALE AND WORKING CONDITIONS.

PART I—IDENTIFICATION.

Wage scale and working conditions contract between the Employing Printers of Cleveland and Cleveland Typographical Union No. 53.

PART II—DURATION.

Effective as of April 1, 1922, to April 1, 1925, subject to opening by either party for readjustment on January 1, 1923, and January 1, 1924, only as to the rate of wages set forth in the wage schedule of this agreement; such readjustments to be based on changes in the cost of living and the economic condition of the industry at the date of readjustment. The changes in the cost of living are to be computed from 1914 as a base, using the data of the United States Bureau of Labor Statistics, where available, published or officially issued next prior to thirty days prior to the date when the new wage scale, if any, goes into effect; or in lieu thereof when not available such authorities, for the period defined for the data from the United States Bureau of Labor Statistics, as are jointly agreed upon.

Either party desiring to open up the wage scale on the dates specified must give the other party at least sixty days' notice prior to the date agreed upon for the opening of the wage scale.

PART III—CONCILIATION AND ARBITRATION.

No precedents or previous conditions, rules or agreements shall be recognized in any way, or affect or modify this contract, which is to be interpreted or changed only in accordance with the procedure set forth in the arbitration agreement known as Schedule A.

All complaints emanating from either party to this contract shall receive prompt acknowledgment and attention and every effort shall and must be made to reach a prompt and satisfactory adjustment thereof.

PART IV—SCALE OF PRICES.

The scale of prices and working conditions hereinafter set forth shall govern the members of Cleveland Typographical Union No. 53 employed in commercial plants from and after April 1, 1922, for a period of three years, or until April 1, 1925, subject to readjustment only as to rate of wages as provided in Part II, Schedule B, in consideration of which the union agrees to furnish a sufficient number of competent workmen to enable the employers to prosecute their business in the usual manner; and the said employers agree to employ in their composing rooms as foremen, assistant foremen, hand compositors, proofreaders, stonemen, bankmen, machine operators, caster operators, and machine tenders none but members of Cleveland Typographical Union No. 53.

SEC. 1. The minimum day scale of wages for hand compositors, proofreaders, stonemen, bankmen, machine operators, caster operators, machine tenders, and all other classes of composing-room work performed by journeymen members of Cleveland Typographical Union No. 53 shall be \$41.25 per week.

SEC. 2. The minimum night scale of wages for hand compositors, proofreaders, stonemen, bankmen, machine operators, caster operators, machine tenders, and all other classes of composing-room work performed by journeymen members of Cleveland Typographical Union No. 53 shall be \$45.37 per week.

SEC. 3. The minimum "lobster shift" scale of wages for hand compositors, proofreaders, stonemen, bankmen, machine operators, caster operators, machine tenders, and all other classes of composing-room work performed by journeymen members shall be \$49.90 per week. The "lobster shift" hours to be between those of the night and day shifts, or at the convenience of plants operating continuous hours.

SEC. 4. The Employing Printers of Cleveland, Ohio (party of the first part), agree to pay for all services rendered by members of Cleveland Typographical Union (party of the second part) in good and lawful money of the United States, on a regular and established pay day, within forty-eight hours of the close of the trade week during which the individual has been employed.

SEC. 5. The party of the second part agrees that its members shall not leave the service of any of the firms constituting the party of the first part until reasonable notice to the foreman of the department shall have enabled him to fill the vacancy.

SEC. 6. The party of the second part further agrees that its members will work at any and all times where the emergency of the office may require.

SEC. 7. It is agreed and understood that the composing rooms shall be kept in a sanitary condition at all times, the party of the first part agreeing to furnish such necessary facilities as will tend to the observance of this provision, and the party of the second part agreeing to make the necessary regulations to cooperate with the party of the first part in this regard.

PART V—WORKING CONDITIONS.

Day shift.

Hours: Five days of eight consecutive hours (exclusive of time for lunch) and four hours on Saturday shall constitute a week's work, the hours to be between 7.30 a. m. and 5 p. m., except on Saturday, when the hours shall be between 7.30 a. m. and 12 noon.

Holidays: January 1, May 30, July 4, Labor Day, Thanksgiving Day, December 25 and Sundays. The night of the holiday shall be the holiday for night shifts.

Overtime: Price and one-half for work performed after the regular time until midnight; double time thereafter.

Double price for work performed on all holidays and Saturday afternoons.

Employees on either day or night shift shall be notified the night previous to being laid off. Should they not be notified and show up for work they shall be paid one-half day's pay.

Night shift.

Hours: Five nights of eight consecutive hours (exclusive of lunch time) and four hours on Saturday shall constitute a week's work.

Overtime for night crews.

Time and one-half of the night scale for the first four hours and after that double time.

Work performed after the regular established hours by night crew shall be paid for at double of night scale.

Apprentice regulations.

Apprentices may be employed in the offices of the Employing Printers of Cleveland, Ohio, subject to the following regulations:

1. One apprentice for five journeymen or major fraction thereof, regularly employed; two apprentices for from eight to fourteen journeymen; three apprentices for from fifteen to twenty-two journeymen; four apprentices for from twenty-three to thirty-four journeymen; five apprentices to thirty-five or more journeymen. In no office shall there be more than five apprentices.

2. Apprentices shall be not less than sixteen years of age at the beginning of their apprenticeship, and shall serve a term of five years. The term of five years may be extended by the joint apprentice committee when in its judgment conditions warrant an extension. All apprentices must be indentured and registered by the Employing Printers of Cleveland, Ohio, Cleveland Typographical Union No. 53, and the International Typographical Union.

3. In the first and second years an apprentice may be required to perform general work in the composing room, at the discretion of the foreman; in the third year an apprentice shall be employed at least four hours each day at composition and distribution; in the fourth year an apprentice shall be employed at least six hours each day at composition and distribution; an apprentice in his fifth year shall be employed at least seven hours each day at composition and distribution.

4. Office boys (not registered apprentices), are prohibited from leading or unloading matter, setting or distributing type, correcting proofs, or lifting matter in or out of forms.

5. The minimum scale of wages to be paid apprentices of the years stated shall be in the following percentage ratio to the journeymen's scale: Third year, first six months, 40 per cent; second six months, 50 per cent; fourth year, first six months, 60 per cent; second six months, 70 per cent; fifth year, first six months, 80 per cent; second six months, 90 per cent.

6. At the completion of the second year of their apprenticeship all apprentices, if competent, must be admitted as apprentice members of the union, and the union shall protect them against unfair discrimination and discharge.

7. Beginning with the third year of apprenticeship, the secretary of Cleveland Typographical Union No. 53 shall grant the apprentice a card endorsed for each year's service.

8. The apprentice shall receive the same protection as journeymen, and shall be governed by the same rules, working conditions and hours. No apprentice shall work overtime unless eighteen years of age, and then only when one or more of the regular journeymen, other than the foreman, is employed. Ratio as given above shall be maintained.

Joint apprentice committee.

1. A joint apprentice committee, composed of two members of the Employing Printers of Cleveland, Ohio, and two members of Cleveland Typographical Union No. 53 shall be formed.

2. The committee is charged with the duty and responsibility of making and enforcing regulations that will afford apprentices every opportunity to thoroughly learn the trade.

3. The committee shall see to it that all apprentices, before being indentured and registered, possess a grammar school education and are physically, mentally, and morally fitted to the needs of the trade.

4. The committee shall devise means and ways for the further education of the apprentices by continuation study.

5. The committee can require the apprentice to take a reasonable amount of home study so as to prepare himself for examination at the end of each year of his apprenticeship.

6. The committee shall outline the grade and classes of work apprentices shall follow from year to year, and shall require apprentices to appear for examination at the end of each year of their apprenticeship.

7. The committee shall have full power and authority any time during the term of apprenticeship to cancel the indenture papers of an apprentice who does not show aptitude and proper qualifications for the work. Apprentices can not leave the office of one employer and accept work in the office of another employer without the written consent of the joint apprentice committee.

8. The committee shall require that apprentices in the fourth and fifth years complete the International Typographical Union Course of "Lessons in Printing."

PART VI—ACKNOWLEDGMENT AND EXECUTION.

In witness whereof, and in full attest of ratification by both bodies, the undersigned presidents, respectively, of the parties to this agreement have hereunto signed their names, attested by the secretaries of each organization, and committees duly authorized to act for and in behalf of the Employing Printers of Cleveland, Ohio, and Cleveland Typographical Union No. 53 hereunto set their official seals, duly attested this third day of March, 1922, to this contract, which is to be effective for the period of time as above set forth under the "duration" section of the contract.

New York City.

FOR the purpose of establishing an orderly procedure for the renewal of all scale contracts and arbitration agreements promptly upon their expiration in 1922, the following memorandum agreement was entered into on June 9, 1922, between the closed shop branch, New York Employing Printers' Association and Printing Pressmen's Union No. 51, I. P. P. & A. U.; New York Press Assistants' Union No. 23, I. P. P. & A. U.; New York Job Pressmen and Job Press Feeders' Union No. 1, I. P. P. & A. U.; New York Paper Handlers' Union No. 1, I. P. P. & A. U.; Paper Cutters' Union No. 119, I. B. of B.; Bindery Women's Union No. 43, I. B. of B.; Mailers' Union No. 6, I. T. U.

1. All contracts and agreements shall be worded as nearly uniformly as possible.

2. Each union shall present to the closed shop branch, New York Employing Printers' Association, and the closed shop branch shall present to each union, on or before

June 15, 1922, a statement of demands for changes in such shop rules contract as may exist between that union and the closed shop branch, with the exception that the scale demands shall be submitted not later than August 1, 1922. All demands excepting scale demands shall be included in these first statements subject to modification in negotiations which shall follow.

3. Negotiations shall be entered into promptly following the interchange of demands and efforts made by each party with the other to conciliate the points of difference.

4. In case there is any dispute as to whether any point of difference is arbitrable, the question as to whether it is arbitrable shall be submitted to the international joint conference council not later than July 15, to be acted upon by the international joint conference council at its meeting on August 1. Any such points which the council rules are arbitrable shall then be submitted to the board of arbitration. Any points on which the council on August 1 fails to reach a decision, or any points which it does not consider, shall be referred back, without prejudice, to the parties to this agreement for action. All remaining points of difference which shall have been declared arbitrable either by the international joint conference council or by the parties to this agreement before August 15, 1922, are to be submitted in an agreed statement of facts to a board of arbitration.

5. If it appears to any party to this agreement on or after August 1 that arbitration of one or more points is inevitable, negotiations for the selection of the arbitration board shall be started immediately upon the giving of notice by that party to the other parties. These negotiations shall not interfere with the continuance of conciliation on the points of difference until August 15, as specified above.

6. The board of arbitration shall consist of three men jointly selected by the disputing parties. Each union appearing before the arbitration board shall be entitled to three representatives, and the closed shop branch to an equal number of representatives for each case. The decisions of the board shall be binding without further recourse on all points covered therein, and on all parties to this agreement, and shall become effective on October 1, 1922, or upon the first full fiscal week after the decision is rendered.

7. Negotiations for the renewal of arbitration agreements may be started at any time provided that they do not take precedence over or interfere with the above procedure for shop rules contracts. Arbitration agreements will be entered into or renewed by the closed shop branch and the undersigned unions at the earliest possible date following the renewal of the shop rules contract, and in case of failure of agreement upon the terms of the arbitration agreement the present arbitration agreement shall continue in effect over those firms which renew the shop rules and scale contract, pending the signing of a new arbitration agreement. Nothing in this paragraph shall be construed as abridging the right of either party to terminate the existing arbitration agreement on the date of its expiration by giving due notice as provided in the preamble of said agreement.

8. Any term or terms of this memorandum agreement may be altered only by mutual consent.

9. It is understood that the undersigned union officials represent only workmen who are members of their respective organizations, and that the officers of the closed shop branch represent only those employers who are now operating under contracts with the respective unions, with the proviso that on or before August 1, 1922, a list of members of the closed shop branch who accept and will operate under the terms of the new contracts, will be submitted to the respective unions; those firms only, and new members of the closed shop branch, and such other firms as may accept prior to the decision of the arbitration board, shall be bound by the new scale and shop rules contract.

CHILD LABOR.

Industrial Home Work of Children in Rhode Island.

THE United States' Children's Bureau has recently published a report (Bureau Publication No. 100) on the industrial home work of children in Providence, Pawtucket, and Central Falls, R. I., during the year 1918, a year which is believed to represent, in this matter, normal conditions. It was found that 5,006 children under 16 years of age had worked at home on factory products during the course of the year.

Only 2,338 children were found, however, who were engaged in home work for more than 30 days during the year and received compensation. For the purpose of this study schedules were taken only for these 2,338 children, of whom 966 were boys and 1,372 girls. In the majority of these cases home work was not done continuously or regularly, but was begun, dropped, and resumed for varying periods. Of the other 2,668 children who were found to have done home work, 2,590 had worked for less than 30 days, 78 had worked for 30 days or more but had received no compensation, many of them assisting with home work at the house of a playmate or a contractor and receiving only some candy or perhaps a penny or two for their services, so they were not included in the study.

The 2,338 children with whom the study deals formed 3.5 per cent of the children aged 5 to 16 in the three cities. They were practically all native-born whites, only 11 colored families being included in the study. A large proportion were in the younger age groups. Of the 2,336 whose ages were learned, 45.7 per cent were under 11; the age groups 11, 12, and 13 furnished 40.6 per cent, and only 12.3 per cent were 14 and 15.

The work done varied widely, but for the most part consisted of simple repetitive hand processes.

The principal home occupations of the children, in the order of their importance, were carding snaps (dress fasteners), stringing tags, drawing threads on lace, linking and wiring beads, setting stones, working on military buttons, carding shoe buttons, finishing underwear, carding jewelry, and putting together chain fasteners. This work consisted of very simple processes constantly repeated. Ninety-one children, however, worked on machines.

To a considerable extent the children worked in the evening or at night. Only 373 were found who worked only in the daytime; 103 did night work exclusively, and 1,860 worked both in the daytime and at night. As factory laws do not apply to the home, there is no restriction on night work, and children were found who had worked up to 10, 11, and even 12 o'clock at night.

The reasons for doing the work, as given by the children's parents, and the number and proportion affected by each, were as follows:

	Number.	Per cent.
To relieve actual family need.....	412	17.6
To buy books and clothes.....	140	6.0
To supplement family income.....	103	4.4
To buy war savings certificates or bonds.....	75	3.2
To earn spending money.....	278	11.9
To help other home workers in family.....	736	31.5
To keep child out of mischief.....	187	8.0
Because friends or neighbors worked.....	362	15.5
All other.....	33	1.4
Not reported.....	12	.5
Total.....	2,338	100.0

The first three reasons are taken to indicate definite economic need on the part of the families concerned. A study of the earnings of the fathers shows that this reason may have actuated even a larger proportion than the 28 per cent for which it is assigned, since in 10 per cent of the families the father was dead or had deserted, so that there was no income from that source, and in 27 per cent the father's earnings for the year were under \$850.

It was hard to get any idea of the children's earnings, since generally several members of a family worked together, and individual accounts were not kept. In fact, the family group was the customary working unit. The amounts earned by these family groups during 1918 were learned for 928 families, whose returns ranged as follows:

Earnings of families from home work.

	Families	Per cent.
Under \$25.....	527	56.8
\$25 and under \$50.....	148	15.9
\$50 and under \$100.....	147	15.8
\$100 and under \$200.....	69	7.4
\$200 and over.....	37	4.0
Total.....	928	100.0

The number of workers in these families ranged from 1 to 7 or over, in one case reaching 12. In only 7.3 per cent of the families was there but 1 worker.

Of the 76 home workers who worked all alone—all children, since only families in which there was a child worker were included in the study—51 per cent earned less than \$5 a year, 68 per cent earned less than \$10, and only two earned \$50 or over. Of the 249 groups of two workers each, 35 per cent earned less than \$10, 50 per cent earned less than \$20, and 22 per cent earned \$50 or over. Groups of 5 to 8 home workers earned in some instances less than \$10, and in a few instances they earned \$500 or more.

Home work was, in general, an intermittent affair. Only one-tenth of the families studied had handled home work throughout the year, and less than half had worked at it over four months. Of the group of children studied, less than one-half (43.6 per cent) were doing home work in December, 1918. The low pay was the reason most frequently given for stopping it, 363, or 27.5 per cent, of those who had discontinued the work giving this cause. In some cases the workers found they earned scarcely enough to pay for the gas by which they worked. Something over one-fifth stopped because

work was no longer available. Almost the same proportion stopped because of family reasons, and about one-eighth dropped it because the home work interfered with their school progress.

The report contains a study of the methods used by manufacturers for obtaining home workers and distributing work and gives their view of the advantages and disadvantages of home work. Specifically, they were asked why they used the system.

Five chief reasons were reported by the 153 producers. Shortage of labor was the explanation most often given. The next most frequent explanation was saving in cost of production, either because home workers received lower wages than factory workers, or because of the elimination of overhead expenses—rent, light, heat, insurance, etc. The need for temporary help for seasonal or rush work was the third reason. Giving out home work was simply a custom, according to the statement of other manufacturers, while a number asserted that they were actuated chiefly by motives of charity.

As to whether a prohibition of home work would injure business, the manufacturers differed, 57 replying that such a prohibition would have some injurious effects, while 92 thought it would do no harm if applied to all.

The fact that a large majority of manufacturers reported that prohibition of home work would not harm their business, and that this majority included some of the larger distributors of home work, was one of the most significant findings of the study.

EMPLOYMENT AND UNEMPLOYMENT.

Employment in Selected Industries in July, 1922.

[The scope of this monthly report is being expanded to include a much larger number of industries and a proportionately larger number of manufacturing establishments. The plan for the expansion is not yet fully under way, but returns for July have been received already from approximately 1,000 of the newly added establishments. These returns, however, can not be included in the regular tables of this report until corresponding information for August is received for comparison. The full expansion planned, therefore, will first be in evidence in the October Monthly Labor Review, although wage changes reported by the newly added establishments, for the period June 15 to July 15, are presented with the changes reported by the establishments which have been making returns to the bureau for previous reports.]

THE Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in July, 1922, from representative establishments in 12 manufacturing industries. Comparing the figures of July, 1922, with those for identical establishments for July, 1921, it appears that in 7 of the 12 industries there were increases in the number of persons employed, while in 5 industries there were decreases. The largest increase, 44.8 per cent, appears in the iron and steel industry. Car building and repairing shows an increase of 25.1 per cent and automobiles an increase of 21.5 per cent. Respective decreases of 26.4 per cent and 16.1 per cent appear for cotton manufacturing and silk.

Five of the 12 industries show increases in the total amount of pay roll for July, 1922, as compared with July, 1921; the remaining 7 industries show decreases. Iron and steel shows the greatest increase, 57.5 per cent, while for automobiles an increase of 18.2 per cent appears. Decreases of 32.6 per cent and 27.4 per cent appear in cotton manufacturing and silk, respectively.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JULY, 1921, AND 1922.

Industry.	Estab-lish-ments report- ing for July, 1921, and July, 1922.	Period of pay roll.	Number on pay roll.		Per cent of increase (+) or decrease (-).	Amount of pay roll.		Per cent of increase (+) or decrease (-).
			July, 1921.	July, 1922.		July, 1921.	July, 1922.	
Iron and steel.....	110	½ month.	98,537	142,721	+44.8	\$3,772,352	\$5,941,489	+57.5
Automobiles.....	42	1 week.	89,714	109,044	+21.5	2,898,614	3,426,127	+18.2
Car building and repairing...	56	½ month.	40,067	50,110	+25.1	2,351,014	1,878,668	-20.1
Cotton manufacturing.....	59	1 week.	60,942	44,837	-26.4	1,049,054	706,844	-32.6
Cotton finishing.....	17	1 week.	12,527	11,311	-9.7	277,375	227,987	-17.8
Hosiery and knit goods.....	60	1 week.	25,967	30,290	+16.6	400,909	464,087	+15.8
Silk.....	45	2 weeks.	18,749	15,739	-16.1	797,448	578,787	-27.4
Men's clothing.....	43	1 week.	29,376	28,201	-4.0	918,820	812,771	-11.5
Leather.....	36	1 week.	13,234	14,974	+13.1	293,546	322,907	+10.0
Boots and shoes.....	77	1 week.	58,098	58,527	+0.7	1,341,658	1,292,818	-3.6
Paper and pulp.....	53	1 week.	19,480	22,691	+16.5	475,635	522,726	+9.9
Cigars and cigarettes.....	54	1 week.	16,393	16,389	(1)	304,965	304,257	-0.2

1 A decrease of less than one-tenth of one per cent.

Comparative data for July, 1922, and June, 1922, appear in the following table. The figures show that in nine industries there were

increases in the number of persons on the pay roll in July as compared with June and in three, decreases. Cigars and cigarettes show an increase of 6.2 per cent and cotton finishing an increase of 4.9 per cent. The three decreases are 7.8 per cent in car building and repairing, 5.6 per cent in hosiery and knit goods, and 0.9 per cent in iron and steel.

When comparing July, 1922, with June, 1922, seven industries show increases in the amount of money paid to employees and five show decreases. The largest increase, 12.7 per cent, appears in men's clothing. Car building and repairing shows the greatest decrease—40.1 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JUNE AND JULY, 1922.

Industry.	Estab- lish- ments report- ing for June and July.	Period of pay roll.	Number on pay roll.		Per cent of in- crease (+) or de- crease (-).	Amount of pay roll.		Per cent of in- crease (+) or de- crease (-).
			June, 1922.	July, 1922.		June, 1922.	July, 1922.	
Iron and steel.....	108	½ month.	142,652	141,336	-0.9	\$6,673,450	\$5,889,278	-11.8
Automobiles.....	40	1 week..	104,889	106,619	+1.6	3,405,112	3,366,115	-1.1
Car building and repairing...	54	½ month.	51,699	47,661	-7.8	3,071,000	1,838,207	-40.1
Cotton manufacturing.....	59	1 week..	44,615	44,837	+0.5	690,467	706,844	+2.4
Cotton finishing.....	17	1 week..	10,778	11,311	+4.9	219,395	227,987	+3.9
Hosiery and knit goods.....	59	1 week..	29,567	28,015	-5.2	487,409	429,569	-11.9
Silk.....	45	2 weeks..	15,691	15,739	+0.3	540,870	578,787	+7.0
Men's clothing.....	47	1 week..	28,083	29,177	+3.9	747,197	842,344	+12.7
Leather.....	35	1 week..	14,133	14,598	+3.3	319,161	316,529	-.8
Boots and shoes.....	79	1 week..	57,747	59,270	+2.6	1,266,813	1,306,582	+3.1
Paper and pulp.....	53	1 week..	22,309	22,691	+1.7	520,024	522,726	+.5
Cigars and cigarettes.....	56	1 week..	15,709	16,680	+6.2	292,508	309,017	+5.6

In addition to the data presented in the above tables as to the number of employees on the pay roll, 76 establishments in the iron and steel industry reported 103,013 employees as actually working on the last full day of the pay period in July, 1922, as against 103,388 for the reported pay-roll period in June, 1922, a decrease of 0.4 per cent. Figures given for 77 plants in the iron and steel industry show that 102,822 employees were actually working on the last full day of the pay period reported for July, 1922, as against 65,189 employees for the period in July, 1921, an increase of 57.7 per cent.

COMPARISON OF PER CAPITA EARNINGS IN JULY, 1922, WITH THOSE IN JUNE 1922.

Industry.	Per cent of increase (+) or decrease (-) in July, 1922, as compared with June, 1922.
Men's clothing.....	+8.5
Silk.....	+6.7
Cotton manufacturing.....	+1.8
Boots and shoes.....	+.5
Cigars and cigarettes.....	-.5
Cotton finishing.....	-1.0
Paper and pulp.....	-1.2
Automobiles.....	-2.7
Leather.....	-4.0
Hosiery and knit goods.....	-7.0
Iron and steel.....	-10.9
Car building and repairing.....	-35.1

CONSTRUCTION CONTRACTS ENTERED INTO BY THE VARIOUS DEPARTMENTS OF THE UNITED STATES GOVERNMENT.

Department and contract number.	Contractor.		Contract.		Nature of contract.	Time limit.
	Name.	Address.	Date.	Amount.		
<i>Treasury.</i>						
.....	S. Faith Co. (Inc.).....	2427 Pennsylvania Avenue., Philadelphia, Pa.	July 7, 1922	\$311,000	Installing outside services and mechanical equipment at U. S. Veterans' Hospital, Jefferson Barracks, St. Louis, Mo.	8 months.
.....	James Stewart & Co. (Inc.)..	30 Church Street, New York, N. Y.	July 5, 1922	779,350	Constructing 7 buildings at U. S. Veterans' Hospital, Jefferson Barracks, St. Louis, Mo.	Do.
.....	Devault & Beirick.....	Massillon Road, Canton, Ohio.....	July 17, 1922	59,817	Constructing post office and customhouse at Apalachicola, Fla.	12 months.
.....	J. B. Hopkins & Co.....	514 St. Paul Street, Baltimore, Md.	.....do.....	29,850	Painting and finishing buildings at U. S. Veterans' Hospital, Perryville, Md.	4 months.
.....	National Decorating Service.	4927 Prairie Avenue, Chicago, Ill.	July 21, 1922	2,460	Painting at post office, Cincinnati, Ohio.....	120 days.
.....	Engineering Structures Co..	Call Building, San Francisco, Calif.	July 22, 1922	24,850	Building pump house and installing pumping system at U. S. Marine Hospital Station, San Francisco, Calif.	150 days.
.....	Mosier & Summers (Inc)....	1266 Seneca Street, Buffalo, N. Y..	July 19, 1922	78,000	Repairing U. S. customhouse and post office at Buffalo, N. Y.	10 months.
.....	Warner Elevator Mfg. Co....	2613 Spring Grove Avenue, Cincinnati, Ohio.	July 28, 1922	12,480	Installing elevators at U. S. Veterans' Hospital, Tuskegee, Ala.	120 days.
.....	Pearce Bros. (Inc.).....	220 West Forty-second Street, New York, N. Y.	July 25, 1922	11,500	Constructing new vestibule and installing wire mesh at post office, Albert Lea, Minn.	4 months.
.....	R. E. Richardson & Co. (Inc.).	Bank of Commerce Building, Norfolk, Va.	July 29, 1922	78,900	Constructing and equipping wing of Marine Hospital, Norfolk, Va. ¹	7 months.
.....	W. C. Cornell Co.....	19 Patterson Street, N. E., Washington, D. C.	Aug. 5, 1922	25,323	Furnishing and installing mechanical equipment, wing of Marine Hospital, Norfolk, Va.	Do.
<i>War.</i>						
.....	John R. Proctor (Inc.).....	16 W. Ninth Street, Bayonne, N. J.	June 29, 1922	18,995	Installing underground electric cables for power and lighting, Governors Island, N. Y.	Oct. 25, 1922.
.....	Burgess & Davenport.....	Honolulu, Hawaii.....	June 28, 1922	98,151	Constructing four hospital buildings at Schofield Barracks, Hawaii Territory.	Jan. 1, 1923.
.....	Hawaiian Contracting Co. (Ltd.).	.....do.....	June 26, 1922	172,402	Constructing reserve gasoline and oil storage tank at Schofield Barracks, Hawaii Territory.	Apr. 30, 1923.
.....	.....do.....	.....do.....	.....do.....	20,875	Constructing underground conduit system, Schofield Barracks, Hawaii Territory.	Nov. 30, 1922.
.....	Batson Cook Co.....	West Point, Ga.....	.....do.....	4,986	Two ammunition magazines, Fort Benning, Ga...	100 days from June 20, 1922.
.....	Hatter Transfer Co. (Inc.)..	Hampton, Va.....	June 30, 1922	12,949	Erecting 1 steel hangar, Langley Field, Va.....	Nov. 7, 1922.
Principal.....	Youmans & McCraney.....	Columbus, Ga.....	.....do.....	157,298	Constructing 20 officers' quarters at Fort Benning, Ga.	155 days.
Sub.....	W. A. Coates Construction Co.do.....	(2)	26,476	Excavations and concrete work, Fort Benning, Ga.	Not reported.

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Sub.....	E. A. Jones Plumbing Co.....	do.....	(?)	16,795	Plumbing, Fort Benning, Ga.....	Do.	
Sub.....	do.....	do.....	(?)	9,300	Heating, Fort Benning, Ga.....	Do.	
Sub.....	T. T. Ray.....	do.....	(?)	4,250	Sheet metal work at Fort Benning, Ga.....	Do.	
Sub.....	Walker Electric & Plumbing Co.....	do.....	(?)	5,400	Electrical work at Fort Benning, Ga.....	Do.	
Sub.....	C. W. Kinne.....	do.....	(?)	2,000	Roofing at Fort Benning, Ga.....	Do.	
Sub.....	Alf Kimbrough and C. P. Bush.....	do.....	(?)	6,500	Painting at Fort Benning, Ga.....	Do.	
Principal.....	Todd & Reid.....	541-543 Bankers Trust Building, Indianapolis, Ind.	June 30, 1922	86,437	Constructing 6 stables at Fort Benjamin Harrison, Indianapolis, Ind.	180 days from July 5, 1922.	
Principal.....	R. H. Scott.....	912 North Hamilton Avenue, Indianapolis, Ind.	(?)	36,990	Constructing 3 gun sheds at Fort Benjamin Harrison, Indianapolis, Ind.	180 days.	
Sub.....	Fred L. Mack.....	Peoples Bank Building, Indianapolis, Ind.	(?)	1,400	Painting 3 gun sheds at Fort Benjamin Harrison, Indianapolis, Ind.	Do.	
Sub.....	Hooiser Roofing Co.....	1024 Hume Mansur Building, Indianapolis, Ind.	(?)	3,027	Installing roofs at Fort Benjamin Harrison, Indianapolis, Ind.	Do.	
Principal.....	Ellicott Machine Corporations.....	Baltimore, Md.....	July 24, 1922	23,364	Construction steel ladder, pipe, gears, and shafting for U. S. dredge Gulfport, at Baltimore.....	120 days.	
Principal ³	Arundel Corporation.....	Pier 2, Pratt Street, Baltimore, Md.	July 26, 1922	745,887	Constructing conduit for water supply for Washington, D. C.	June 30, 1924.	
Principal ³	do.....	do.....	do.....	394,650	do.....	Do.	
Principal ³	do.....	do.....	do.....	918,188	do.....	Do.	
<i>Navy.</i>							
4581.....	G. E. Engineering Co. (Inc.).....	449 West Forty-second Street, New York, N. Y.	June 22, 1922	243,500	Constructing hangars, etc., at naval base, San Diego, Calif.	240 days.	
4621.....	McLean Contracting Co.....	1415 Fidelity Building, Baltimore, Md.	do.....	14,350	Constructing sea wall at Naval Academy, Annapolis, Md.	120 days.	
4623.....	George E. Wright (Inc.).....	1454 Monadnock Building, Chicago, Ill.	June 23, 1922	22,700	Remodeling marine barracks, navy yard, Washington, D. C.	Do.	
4644.....	Doullut & Williams Co. (Inc.).....	816 Howard Avenue, New Orleans, La.	June 21, 1922	97,900	For bulkhead, runway and beach, at naval air station, Pensacola, Fla.	240 days.	
4651.....	Ross Construction Co.....	Van Nuys Hotel, Los Angeles, Calif.	June 19, 1922	69,644	Extension of concrete bulkhead at naval air station, San Diego, Calif.	120 days.	
4664.....	J. Pringle.....	621 Georgia Street, Vallejo, Calif.	June 23, 1922	8,800	Extension to power house at navy yard, Mare Island, Calif.	Do.	
4502.....	Heine Boiler Co.....	1120 Pennsylvania Building, Philadelphia, Pa.	June 15, 1922	19,077	Installing boiler with mechanical stoker, naval hospital, New York, N. Y.	150 days.	
4584.....	W. F. Martens.....	112 Cutler Building, Rochester, N. Y.	June 12, 1922	26,900	Constructing radio quarters at naval radio station, Sayville, Long Island.	Do.	
4626.....	C. H. Turner Co.....	17½ South Palafox Street, Pensacola, Fla.	June 15, 1922	15,327	Constructing pump house and wells at naval air station, Pensacola, Fla.	120 days.	
4633.....	Chicago Bridge & Iron Co.....	30 Church Street, New York, N. Y.	June 17, 1922	9,590	Constructing elevated steel water tank, naval air station, Pensacola, Fla.	Do.	
4645.....	C. H. Turner Co.....	17½ South Palafox Street, Pensacola, Fla.	June 22, 1922	29,501	Extension to landing field at naval air station, Pensacola, Fla.	150 days.	
4681.....	McLean Contracting Co.....	1415 Fidelity Building, Baltimore, Md.	June 26, 1922	16,500	Constructing approach piers, navy yard, Philadelphia Pa.	Do.	

¹ Not including mechanical equipment.² Not reported.³ Three contracts, each a part of same project.

CONSTRUCTION CONTRACTS ENTERED INTO BY THE VARIOUS DEPARTMENTS OF THE UNITED STATES GOVERNMENT—Continued.

Department and contract number.	Contractor.		Contract.		Nature of contract.	Time limit.
	Name.	Address.	Date.	Amount.		
<i>Navy—Con</i>						
4612.....	Electro Mechanical Co.....	432 North Calvert Street, Baltimore, Md.	July 8, 1922	9,230	Installing alternators and auxiliary equipment at Navy mine depot, Yorktown, Va.	145 days.
4627.....	American Engineering Co...	Aramingo Avenue and Cumberland Street, Philadelphia, Pa.	.....do.....	10,750	Installing Diesel oil engines at Navy mine depot, Yorktown, Va.	150 days.
4628.....	Triest Contracting Corporation.	126 East Fifty-ninth Street, New York, N. Y.	June 23, 1922	227,520	Underpinning aircraft storehouse, navy yard, Philadelphia, Pa.	270 days.
4640.....	W. B. Kyle.....	648 Call Building, San Francisco, Calif.	June 24, 1922	129,000	Constructing oil and gasoline storage plant at Cristobal and Coco Solo, Canal Zone.	160 days.
4646.....	Fred W. Steffgen.....	428 Timken Building, San Diego, Calif.	June 19, 1922	22,877	Constructing experimental landing platform at naval base, San Diego, Calif.	120 days.
<i>Interior.</i>						
.....	The Vulcan Iron Works.....	Denver, Colo.....	July 17, 1922	6,587	Turnout, radial gates, and hoists, Sun River, Milk River, and Klamath projects.	Oct. 29, 1922.
.....	Fred Coolidge.....	Laramie, Wyo.....	July 24, 1922	66,548	Earthwork and structures, Sun River project.....	Not reported.
.....	Ditty & Schultz & Sigvardt.	Lewistown, Mont.....	July 26, 1922	27,796	Laterals and wasteways, Nelson Reservoir and Vandalia Canal, Milk River project.	Dec. 31, 1922.
.....	Fred Coolidge.....	Laramie, Wyo.....	July 28, 1922	66,548	Contract No. 885, structures scheduled 12, 13, and 14, Specification 404, Greenfield's division, Sun River project.	June 15, 1923.
.....	Art Metal Construction Co..	Washington, D. C.....	July 5, 1922	10,536	Labor and material to install 18 steel cases, Patent Office Building.	108 days.
.....	Joseph A. Johnson.....	Talihina, Okla.....	July 3, 1922	(?)	Labor in constructing dairy at the Choctaw-Chickasaw Sanatorium, Talihina, Okla.	Within 90 days from beginning of work.
.....	American Car & Foundry Co.	Jackson & Sharp Plant, Wilmington, Del.	July 1, 1922	69,926	To build and furnish 2 railway cars for Mine Rescue Service.	6 months.
<i>Agriculture.</i>						
<i>Alabama:</i>						
115.....	Smith Co.....	Birmingham, Ala.....	July 25, 1922	276,421	Road, gravel, Marion County.....	Not reported.
111.....	Doubert & Williams.....	New Orleans, La.....	July 20, 1922	215,375	Bridge, Marengo County.....	Do.
92.....	Austin Bros. Co.....	Atlanta, Ga.....	July 19, 1922	73,764	Bridge, Macon County.....	Do.
92.....	Vaughan & Davis.....	Montgomery, Ala.....	.....do.....	157,897	Road, gravel, Macon County.....	Do.
87.....	E. L. Batson.....	Birmingham, Ala.....	.....do.....	157,056	Road, gravel, Limestone County.....	Do.
26.....	Stanley & Singer.....	Lafayette, Ala.....	.....do.....	25,506	Road, gravel, Cleburne County.....	Do.
<i>Arkansas:</i>						
100.....	Grady Garner.....	Little Rock, Ark.....	July 26, 1922	347,798	Road, plain concrete, Mississippi County.....	Do.

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Colorado:						
7C.....	Giradet & Hotchkin.....	Delta, Colo.....	July 7, 1922	62,440	Road, gravel and dirt, Montrose County.....	Do.
189.....	Lallier Construction Co.....	Hudson, Colo.....	do.....	38,129	Road, gravel and dirt, Routt County.....	Do.
168A.....	Standard Engineering & Construction Co.....	Denver, Colo.....	July 21, 1922	36,573	Road, gravel, Prowers County.....	Do.
165.....	G. A. Allen.....	Morrison, Colo.....	do.....	63,964	Road, gravel, Fremont County.....	Do.
217.....	Ed. Lundsey.....	Denver, Colo.....	do.....	85,604	Road, plain concrete, Pueblo County.....	Do.
226A.....	White & Johnson.....	do.....	do.....	219,212	Road, plain concrete, Weld County.....	Do.
208A.....	T. L. Hoffman.....	do.....	do.....	30,586	Road, gravel, Mesa County.....	Do.
Illinois:						
9Y.....	C. J. Moritz.....	Effingham, Ill.....	July 6, 1922	33,769	Road, reinforced concrete, Bond and Fayette Counties.....	Do.
8Y-4.....	A. M. Boatma.....	Carlinwith, Ill.....	do.....	7,006	Road, reinforced concrete, Macoupin County.....	Do.
42-161.....	Andrew Ward & Son.....	Oak Glen, Ill.....	do.....	181,816	Road, reinforced concrete, Cook County.....	Do.
26-17.....	Cameron, Joyce & Co.....	Keokuk, Iowa.....	do.....	138,516	Road, reinforced concrete, McLean County.....	Do.
27-31.....	Cameron, Joyce, Smith & Elder.....	do.....	do.....	66,796	Road, reinforced concrete, Woodford County.....	Do.
34-26.....	Jos. Kesel & Son.....	Edwardsville, Ill.....	do.....	117,300	Road, reinforced concrete, Clinton County.....	Do.
35-17.....	J. W. Etchison Co.....	Casey, Ill.....	do.....	76,207	Road, reinforced concrete, Marion County.....	Do.
35-18.....	do.....	do.....	do.....	61,378	do.....	Do.
40-29.....	Keokuk Quarry and Construction Co.....	Keokuk, Iowa.....	do.....	99,339	Road, reinforced concrete, Hancock County.....	Do.
41-16.....	Milburn Bros.....	Rockford, Ill.....	do.....	104,474	Road, reinforced concrete, Winnebago County.....	Do.
2-11.....	J. M. Pierson & Son.....	Chicago Heights, Ill.....	do.....	5,508	Road, gravel and dirt, Will County.....	Do.
34-27A.....	Bernard Kiffmeyer.....	Carlyle, Ill.....	do.....	18,988	Road, gravel and dirt, Clinton County.....	Do.
37-22A.....	Keating Bros.....	Auburn, Ill.....	do.....	10,638	do.....	Do.
39-1A.....	Lord & Talbot.....	Monmouth, Ill.....	do.....	15,127	Road, gravel and dirt, Carroll County.....	Do.
39-2A.....	do.....	do.....	do.....	9,876	do.....	Do.
34-26B.....	W. H. Shans Co.....	Freeport, Ill.....	do.....	11,555	Bridge, Clinton County.....	Do.
34-27B.....	Zimmerly Bridge Co.....	Paris, Ill.....	do.....	24,000	do.....	Do.
37-27B.....	do.....	do.....	do.....	53,732	do.....	Do.
6-K-2.....	Illinois Steel Bridge Co.....	Jacksonville, Ill.....	do.....	14,997	Bridge, Mason and Menard Counties.....	Do.
26-17B.....	E. H. Piebe.....	Lincoln, Ill.....	do.....	20,901	Bridge, McLean County.....	Do.
39-1-C.....	Rochester Bridge Co.....	Rochester, Ind.....	do.....	8,294	Bridge, Carroll County.....	Do.
6-K-1.....	Ferguson Construction Co.....	Rockford, Ill.....	do.....	75,911	Bridge, Mason and Menard Counties.....	Do.
39-1B.....	Ben F. Harrison.....	Decatur, Ill.....	July 6, 1922	2,263	Bridge, Carroll County.....	Do.
37-22C.....	Illinois Steel Bridge Co.....	Jacksonville, Ill.....	do.....	13,148	Bridge, Clinton County.....	Do.
26-16.....	Cameron, Joyce & Co.....	Keokuk, Iowa.....	do.....	151,544	Road, reinforced concrete, McLean County.....	Do.
Kansas:						
122.....	Stilars & Son.....	Hutchinson, Kans.....	July 5, 1922	19,730	Road, brick, Reno County.....	Do.
116D.....	R. P. Harper.....	Leona, Kans.....	July 7, 1922	8,330	Bridge, Doniphan County.....	Do.
116C.....	do.....	do.....	do.....	16,786	do.....	Do.
116B.....	Zeigler & Dalton.....	Junction City, Kans.....	do.....	20,237	Road, reinforced concrete, Doniphan County.....	Do.
87.....	do.....	do.....	do.....	70,552	do.....	Do.
116A.....	do.....	do.....	do.....	140,770	do.....	Do.
Kentucky:						
13BC.....	Thomas Co.....	Huntington, W. Va.....	July 11, 1922	8,839	Bridge, Carter County.....	Do.
Louisiana:						
79.....	L. A. Lonstobot.....	Hammond, La.....	July 25, 1922	139,814	Road, gravel and dirt, Livingston County.....	Do.

² Not reported.

CONSTRUCTION CONTRACTS ENTERED INTO BY THE VARIOUS DEPARTMENTS OF THE UNITED STATES GOVERNMENT—Continued.

Department and contract number.	Contractor.		Contract.		Nature of contract.	Time limit.
	Name.	Address.	Date.	Amount.		
<i>Agriculture—Continued.</i>						
Massachusetts:						
74.....	Frisell Engineering Co.....	Gardner, Mass.....	July 5, 1922	26,201	Bridge, Berkshire County.....	Not reported.
79.....	Lane Construction Corporation.	Meriden, Conn.....	July 11, 1922	116,553	Road, bitumen-macadam, Berkshire County.....	Do.
91.....	Powers Bros.....	Brockton, Mass.....	July 18, 1922	103,918	Road, bitumen-macadam, Middlesex County.....	Do.
84.....	State Construction Co.....	Adams Street, Dorchester, Mass.....	.....do.....	103,870	Road, bitumen-macadam, Worcester County.....	Do.
Michigan:						
83.....	Calarno Construction Co.....	Bay City, Mich.....	July 11, 1922	109,974	Road, plain concrete, Bay County.....	Do.
63A.....	J. V. McKeon Co.....	.....do.....	.....do.....	94,899	.....do.....	Do.
44CD.....	Rockford Construction Co.....	Rockford, Ohio.....	.....do.....	91,522	Road, plain concrete, Lenawee County.....	Do.
72B.....	W. T. Hill.....	East Tawas, Mich.....	.....do.....	43,244	Road, gravel, Cheboygan County.....	Do.
72A.....	.....do.....	.....do.....	.....do.....	21,768	.....do.....	Do.
79.....	Michigan Asphalt & Paving Co.	Flint, Mich.....	July 12, 1922	114,984	Road, bitumen-concrete, Genesee County.....	Do.
53EF.....	C. A. Brown and I. Woodby	Beaverton, Mich.....	.....do.....	9,704	Road, plain concrete, Ogemaw County.....	Do.
Minnesota:						
291.....	Larkin Construction Co.....	Ortonville, Minn.....	July 10, 1922	63,665	Road, gravel and dirt, Clay County.....	Do.
286.....	Fielding & Shipley.....	St. Paul, Minn.....	.....do.....	57,764	Road, bitumen-concrete, Ramsey County.....	Do.
Missouri:						
168A.....	Carterville Construction Co.	Carterville, Mo.....	July 13, 1922	36,678	Road, plain concrete, Jasper County.....	Do.
39.....	Gaines Bros. Co.....	Fairland, Okla.....	June 30, 1922	82,919	Road, gravel, Lewis County.....	Do.
38.....	O. J. Hannick.....	St. Louis, Mo.....	.....do.....	112,158	.....do.....	Do.
178A.....	Allhands & Davis.....	Springfield, Mo.....	June 20, 1922	50,426	Road, gravel, Stoddard County.....	Do.
89B.....	Case & Killian.....	Marshfield, Mo.....	June 5, 1922	31,259	Road, gravel, Laclede County.....	Do.
118B.....	Novacolite Construction Co.	Marion, Ill.....	July 26, 1922	45,870	Road, gravel, Stoddard County.....	Do.
179.....	.....do.....	.....do.....	.....do.....	17,780	.....do.....	Do.
188.....	Riley & Bailey Construction Co.	St. Louis, Mo.....	July 18, 1922	20,499	Bridge, Pike County.....	Do.
54.....	.....do.....	.....do.....	.....do.....	379,967	Road, macadam, Gentry County.....	Do.
Montana:						
160C.....	J. E. Hilton.....	Sheridan, Wyo.....	June 30, 1922	71,436	Road, gravel, Yellowstone County.....	Do.
70B.....	L. T. Lawber.....	Butte, Mont.....	June 29, 1922	52,838	Road, crushed stone, Silver Bow County.....	Do.
176.....	B. P. Melchert.....	Lewistown, Mont.....	June 30, 1922	94,710	Road, gravel, Cascade County.....	Do.
180.....	Faganstrums Bros.....	Great Falls, Mont.....	July 13, 1922	21,702	.....do.....	Do.
154A.....	Toole County commissioners	Shelby, Mont.....do.....	42,008	Road, gravel, Toole County.....	Do.
175.....	Rich & Markus.....	Missoula, Mont.....do.....	28,875	Road, gravel, Granite County.....	Do.

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New Hampshire:	143.....	Colburn Construction Co....	Concord, N. H.....	July 14, 1922	26, 738	Road, bitumen-concrete, Merrimack County.....	Do.
	New Jersey:	39B.....	Bernard E. Tighe Construction Co.	Easton, Pa.....	do.....	127, 784	Road, reinforced concrete, Warren County.....	Do.
	40B.....	Engineering Construction Corp.	Philadelphia, Pa.....	do.....	166, 802	Road, reinforced concrete, Somerset County.....	Do.
New Mexico:	13B.....	Peterson, Shirley & Gunther	Omaha, Nebr.....	June 21, 1922	84, 479	Road, gravel and dirt, Valencia County.....	Do.
	62.....	Lee Moore Construction Co..	El Paso, Tex.....	do.....	94, 907	Road, concrete, Dona Ana County.....	Do.
	85.....	C. E. Mauldin.....	Clovis, N. Mex.....	do.....	51, 945	Road, gravel and dirt, Grant County.....	Do.
North Dakota:	37CD.....	Lindsay & Gillen.....	Mott, N. Dak.....	July 20, 1922	27, 850	Road, gravel and dirt, Hettinger County.....	Do.
	61B.....	J. E. Johnson.....	Buxton, N. Dak.....	July 27, 1922	6, 442	Road, gravel and dirt, Trail County.....	Do.
	61B.....	Carl Winberg.....	Hillsboro, N. Dak.....	do.....	1, 703	do.....	Do.
Ohio:	250.....	L. L. Clymer.....	Bluffton, Ohio.....	June 16, 1922	104, 403	Road, brick, Allen County.....	Do.
	183.....	Gradison Construction Co....	Cincinnati, Ohio.....	do.....	181, 335	Road, plain concrete, Hamilton County.....	Do.
	187.....	T. W. Miller Construction Co.	Youngstown, Ohio.....	June 23, 1922	92, 243	Road, brick, Columbiana County.....	Do.
	268.....	F. J. Mann & Son.....	Ashland, Ohio.....	do.....	147, 351	Road, brick, Ashland County.....	Do.
	195.....	Englewood Construction Co.	Englewood, Ohio.....	do.....	270, 375	Road, plain concrete, Hamilton County.....	Do.
	265.....	Harry M. Bates.....	Steubenville, Ohio.....	do.....	124, 859	Road, brick, Jefferson County.....	Do.
	124.....	Lewis & Copeland.....	Lima, Ohio.....	June 30, 1922	155, 410	Road, reinforced concrete, Auglaize County.....	Do.
	235.....	do.....	do.....	do.....	233, 257	Road, brick, Auglaize County.....	Do.
	213.....	Neff & Rader.....	Circleville, Ohio.....	June 23, 1922	128, 566	Road, bitumen-macadam, Pickaway County.....	Do.
Oklahoma:	40.....	John W. Rooke.....	McAlester, Okla.....	July 11, 1922	548, 467	Road, gravel and dirt, McCurtain County.....	Do.
South Carolina:	174B.....	J. F. Blankenship.....	Greenwood, S. C.....	July 18, 1922	8, 750	Road, gravel and dirt, Greenwood County.....	Do.
	174A.....	Greenville Paving Co.....	do.....	do.....	29, 609	Road, plain concrete, Greenwood County.....	Do.
South Dakota:	94.....	A. L. Waite.....	Redfield, S. Dak.....	July 11, 1922	2, 543	Bridge, Spink County.....	Do.
	61.....	R. P. England.....	Murdo, S. Dak.....	do.....	30, 828	Road, gravel and dirt, Aurora County.....	Do.
	49.....	Federal Bridge Co.....	Des Moines, Iowa.....	do.....	5, 336	Bridge, Lyman and Brule Counties.....	Do.
	49.....	R. P. England.....	Murdo, S. Dak.....	do.....	8, 223	Road, gravel and dirt, Lyman and Brule Counties.....	Do.
	85.....	Iowa Bridge Co.....	Des Moines, Iowa.....	do.....	1, 652	Bridge, Clark County.....	Do.
	99.....	Burke & O'Rourke.....	Aberdeen, S. Dak.....	do.....	14, 364	Road, gravel and dirt, Brown County.....	Do.
	90.....	Federal Bridge Co.....	Des Moines, Iowa.....	do.....	2, 681	Bridge, Hutchinson County.....	Do.
	71b.....	C. J. Wheelock.....	Pierre, S. Dak.....	do.....	16, 084	Road, gravel and dirt, Ziebach County.....	Do.
	106.....	W. T. Morrissey.....	Chadron, Nebr.....	do.....	7, 716	Bridge, Todd County.....	Do.
	106.....	E. C. Pettyjohn.....	Kadoka, S. Dak.....	do.....	18, 353	Road, gravel and dirt, Todd County.....	Do.
	90.....	Steel Bros.....	Meckling, S. Dak.....	do.....	36, 292	Road, gravel and dirt, Hutchinson County.....	Do.
Tennessee:	16.....	Gould Contracting Co.....	Nashville, Tenn.....	July 14, 1922	196, 891	Bridge, Montgomery County.....	Do.

CONSTRUCTION CONTRACTS ENTERED INTO BY THE VARIOUS DEPARTMENTS OF THE UNITED STATES GOVERNMENT—Concluded.

Department and contract number.	Contractor.		Contract.		Nature of contract.	Time limit.
	Name.	Address.	Date.	Amount.		
<i>Agriculture—</i> Concluded.						
Texas:						
170.....	Hoden & Austin.....	Houston, Tex.....	June 26, 1922	129,992	Road, bitumen-macadam, Fort Bend County.....	Not reported.
116B.....	Harris & Powell.....	Marlin, Tex.....	June 30, 1922	93,365	Road, surface-tarred macadam, Tom Green County.	Do.
266.....	R. W. Colezlainer.....	San Antonio, Tex.....	July 11, 1922	88,108	Road, bitumen-macadam, Karnes County.....	Do.
266.....	Wear & Thomas.....	Rogers, Tex.....	.....do.....	191,140	.....do.....	Do.
284.....	Smith County.....	Tyler.....	July 21, 1922	229,094	Road, plain concrete, Smith County.....	Do.
183C.....	R. G. Buckner & Son.....	Cleburne, Tex.....	July 12, 1922	48,528	Road, gravel, Gonzales County.....	Do.
135.....	Schleicher County.....	Eldorado, Tex.....	July 21, 1922	7,279	Road, macadam, Schleicher County.....	Do.
135.....	A. E. Morgan.....	Dallas, Tex.....	.....do.....	26,359	.....do.....	Do.
Utah:						
9A.....	Johnson, Gillespie & Adamson.....	Toole, Utah.....	July 25, 1922	83,876	Road, gravel and dirt, Millard County.....	Do
15.....	Adams-McFarland Construction Co.....	Cedar City, Vt.....	.....do.....	53,287	Road, gravel, Iron County.....	Do
9G.....	Johnson & Badger.....	Holden, Utah.....	.....do.....	24,538	Road, gravel, Millard County.....	Do
H.....	Matthews, Barnes & Wrathell.....	Grantsville, Utah.....	.....do.....	25,942	.....do.....	Do
J.....	Meadow Construction Co.....	Meadow, Utah.....do.....	40,325do.....	Do.
K.....	George & Bird.....	Kanosh, Utah.....do.....	21,656do.....	Do.

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Employment in New York State Factories in July, 1922.

THE industrial commissioner of New York reports in a recent press release that despite a reduction of 60 per cent in employment in the railway repair shops in the State in July, 1922, as compared with the previous month and the closing down of numerous textile mills for vacations, the employment level for July was as high as that of June. In view of the fact that there is usually a decrease in manufacturing in July, this unchanged volume of employment indicates improved business conditions in various industries. The greatest increase in employment was the seasonal rise in the manufacture of food products. In fruit and vegetable canneries the number of employees nearly doubled.

Substantial increases were reported in pig iron and steel mills, in the manufacture of structural iron, elevators, agricultural machinery, telephones, wireless equipment, train lighting systems, and other electrical goods, automobile tires, wooden and paper boxes, and felt hats, and in establishments making crackers and biscuits. Employment also rose in factories making railroad equipment and in the manufacture of aluminum and brass goods, builders' hardware, fire-arms, cutlery, in automobile factories, except those making the more expensive cars, in women's cloak and suit factories, in men's clothing factories, although a few were shut down for summer vacation, in up-State boot and shoe factories, in leather manufacture, in cement and plaster mills and establishments making graphite and abrasives.

Volume of employment decreased in stovemaking and in the fur industry, because of strikes; in silverware manufacture and in soap factories, on account of summer vacations; in women's dress and waist shops, in modistes' shops, in straw-hat manufacture, and in dyeing establishments, due to a seasonal decline; in silk mills and knit-goods factories, due to annual summer shutdowns.

Industrial Coordination—The Solution of the Unemployment Problem.

THE costliness and inadequacy of partial measures in dealing with unemployment are stressed by Mr. G. Frank Beer, former member of the Ontario Royal Commission on Unemployment in his article on "Employment—a problem of coordination," published in the July, 1922, issue of the *International Labor Review* (Geneva).

Labor's insecurity of employment Mr. Beer regards as the most important problem of industry at the present time since all the other problems, he considers, could be speedily solved if continuous employment were assured to the workers. He agrees with those who hold that the basic cause of the present industrial depression is "the lack of an effective demand for the goods which idle labor and idle capital are able to produce." The increasing number of those bent on scrapping the present industrial system should, the writer thinks, expedite the search for a thoroughgoing and permanent solution of the problem of unemployment. The worker's "fear of being out of a job is one of the most destructive elements in industry to-day," and

responsibility for this condition, he believes, must be borne by the business managers who control the volume of production.

It is pointed out that production for the community has expanded into production for the nation and for the world, and that the need for the highest grade ability in organization and management is becoming imperative. The complexity of the present-day problem lies mainly in the determination of the forms of production and in the finding of markets. If the unemployed were at work they would create a market for their own output. The successful marketing, however, "of that portion of all output which is in excess of the workers' own normal requirements seems to control the marketing of the whole. If this marginal marketing is not provided for, the market price of the whole product may be so lowered as to make it unprofitable for employers to start the factories."

The workers, whether employed or unemployed, must still have food and shelter. They must live either on their savings or by some form of unemployment relief. From this the writer concludes that labor's demand on capital is only slightly less when idle than when employed. Machinery still stands when workers are unemployed although it ceases to move. Rent, insurance, interest on borrowed capital, and numerous other overhead expenses remain the same. There is, therefore, "no automatic economy or readjustment to be effected by a period of unemployment except only in regard to new raw material, the supplies of which can be countermanded or restricted." The argument is put forth that if the marketing of the "marginal production" referred to above could (through the improvement or creation of facilities) be permanently insured and consequently insure the possibility of paying for further raw material, "one, at least, of the obstacles to greater continuity of production would appear to be removed." It is suggested that Government cooperation would be well warranted in supplementing private enterprise in an undertaking nationally so important.

Uncertainty concerning market prices is possibly one of the most direct contributory causes of employment fluctuations. Consequently any stabilization of prices tends toward the establishment of employment equilibrium. Price stabilization, however, must be preceded by the standardization of production. Industry should definitely aim to standardize its products. Admitting that complete standardization is not possible, the author holds, nevertheless, that even a few fixed standards would have far-reaching results. The standardization of terminology would in itself be of considerable assistance in many cases in informing prospective buyers as to real values. Lumber standards have already been set up, which are internationally observed and which have proved tremendously important in international trade.

The regularization of the volume of production would also prevent sharp peaks and depressions in the demand for raw material. Some establishments have already accomplished much in the way of regularizing employment. The author thinks it would be well worth while to try similar stabilization experiments for whole industries. "If a new and better organization of industry is demanded, it can be created."

The foregoing considerations suggest the need for a deeper knowledge of "the interplay of the various forces governing employment and distribution; for production is not a single and unrelated activity; in the last analysis it may be found that distribution is the controlling factor. Too much attention is being given to effects; too little study to causes.

According to the article, employment will never be stabilized until management, labor, capital and credit, transportation facilities, and Government policy are brought into alignment. All these elements "determine, maintain, and direct production." The writer favors the creation of permanent advisory councils to consider plans embodying from a national viewpoint the proper working relations of these various forces. He adds:

It is fluctuation of control that makes necessary the creation of a medium through which adaption and coordination may be continually advocated or exercised, for with changing conditions the relative control of these forces will vary. With the experience gained by such councils other and better plans may be suggested, but in the meantime something will be accomplished by bringing together much valuable information now disconnected and unrelated. The issue is a national one, and can be dealt with constructively only by an unprejudiced weighing of the interests involved and a reasonable subordination of individual advantage to a great national objective.

VOCATIONAL EDUCATION.

Work of Federal Board for Vocational Education, 1920-21.

IN ITS June, 1922, news letter, the National Society for Vocational Education reviews the work of the Federal Board for Vocational Education since 1916.

It is stated that prior to the passage of the Federal vocational education act, only seven States had enacted laws recognizing vocational education as a part of the public-school program. Before January 1, 1918, every State in the Union had accepted the provisions of the Federal act. In 1916, Wisconsin and Pennsylvania were the only two States having compulsory part-time or continuation school laws. "As a result of the influence of the Federal act * * * 21 States now have compulsory part-time education for the working children from 14 to 16 or from 14 to 18 years of age."

The following table shows the development of the vocational education work since 1917-18:

NUMBER OF VOCATIONAL SCHOOLS FEDERALLY AIDED, AND ENROLLMENT, 1917-18 AND 1920-21.

Type of school.	Number of schools aided.		Enrollment.		Enrollment in teacher-training courses.	
	1917-18	1920-21	1917-18	1920-21	1917-18	1920-21
Agricultural	609	1,735	15,453	43,131	1,534	3,266
Trade and industrial	1,809	849	117,934	96,629	1,101	6,807
Home economics	323	884	30,770	63,363	3,319	4,941
General continuation	(2)	428	(2)	119,905	3,635	3,344
Total	1,741	3,896	4164,186	323,028	6,589	15,358

¹ Includes also general continuation schools.

² Included with trade and industrial schools.

³ Not classified.

⁴ This number is not the correct sum of the items but is as given in the report.

The expenditure for these schools increased from \$2,683,777 in 1917-18 to \$10,649,852 in 1920-21. Of the amount spent in 1921, \$2,380,354 was contributed by the Federal Government, \$3,086,680 by the State governments, and \$5,182,818 by the local authorities.

For the past year and a half the Federal Board for Vocational Education has administered the act providing for the rehabilitation of persons disabled in industry or otherwise. Thirty-five States have now accepted the provisions of the act. "Vocational rehabilitation of persons disabled in industry, or otherwise, as an organized social movement has been established on a nation-wide basis. The States have taken up the service as a permanent work. Their organizations are expanding rapidly and consistently, and their services are being conducted on a sound practical basis."

It is stated that on July 1, 1921, the States had a "live" roll of a little over 3,000 cases, but by November 15, 1921, the number had increased 265 per cent. Although no formal report has been received by the board since that time, reports by Federal agents indicate that at the present time there is a live roll of about 12,000 cases.

The exact number of persons in need of retraining is not now known but compensation authorities estimate that there are 280,000 disabled persons from industry in the country at the present time, which number is being increased at the rate of 15,000 per year. In addition to this number incapacitated by the accidents in industry, there is perhaps an equal number disabled by street accidents, train accidents, accidents on the farms and in the homes.

The rehabilitation of disabled soldiers of the World War is one of the tasks of the vocational education board. The report states that while this problem "was undoubtedly one of the most difficult ever faced by a board or bureau," up to August 15, 1921, a total of 116,298 disabled soldiers, sailors, and marines had accepted and entered upon courses of training under direction of the board.

Training of Apprentices in the Government Printing Office.

APPRENTICESHIP courses for the training of printers, pressmen, plate makers, bookbinders, and machinists have been undertaken by the Government Printing Office, Washington, D. C. Admission is restricted to persons of from 16 to 20 years. On March 22, 1922, a special examination for the applicants was held by the Civil Service Commission, and the classes opened on July 23, with an enrollment of 23 students. It is announced that "every opportunity will be given the student to ground himself thoroughly in his chosen trade."

According to the printed outline of courses offered,¹ the printing course will cover four years, divided into 11 periods varying from one month to a year. During the first period the student will learn the types, rules, and slugs, and their uses, during the second period how to set and tie type, and during the third period how to take the proof and distribute the type. Bookwork, job work, making up, imposing, and tabular work are taught in the fourth to eighth periods. The ninth period is devoted to instruction in the operation of the linotype and monotype machines, the tenth to proofreading, and the eleventh to a review of all the previous subjects, during the course of which the student will acquire the "finishing touches necessary to the skilled artisan." During the first year the apprentices will be detailed, two at a time, first to the job press section where they will be taught to feed, oil, and clean a press, and then to the proof room, where they will act as copyholders.

The pressman course covers four years of study, during which time the student will learn pressfeeding, press preparation, the make-ready, qualities of ink and grades of paper, and the adjustments of the mechanism of platen and cylinder presses, and will learn to operate the web and Harris presses.

¹ Government Printing Office. The training of apprentices in the Government Printing Office. Washington, 1922.

The plate-making course is divided into three sections requiring four years each: Electrotpe finishing, electrotpe molding, and stereotyping. The remaining courses planned—bookbinding and the machinist course—also require four years' study each.

During the period of apprenticeship the apprentices will, it is announced by the Civil Service Commission, receive the following rates of pay: For the first year, one-third of the rate received by mechanics of the trade to which the apprentice is assigned; for the second and third years, one-half of the rate; and for the fourth year, two-thirds of the rate.² Tests will be given from time to time and, upon completion of the course, the graduates will be eligible for employment as journeymen in their fields.

The constant aim in the courses, it is stated, will be to "develop a craftsman who will be an honor to his Government and a credit to the trade."

² The rate now paid to journeymen printers, pressmen, and bookbinders is 75 cents an hour, and to electrotypers, stereotypers, and machinists, 80 cents an hour.

HOUSING.

Report on Conditions in the Building Industry in New York.

THE Joint Legislative Committee on Housing of New York State, appointed in 1919, has published an intermediate report, bringing the account of its activities up to the early part of this year. The report briefly reviews the authorization and organization of the committee, summarizes its earlier recommendations as to rent laws, remission of taxation on new housing, and the like, gives data as to the actual shortage of housing in New York City, and then deals at length with some of the causes leading to this condition. The shortage of dwellings is held to be serious.

In 1910 when the population of the city was 4,766,833 there were 844,599 apartments available in New York City. In 1917 when the population was 5,276,351 there were 981,843 apartments available, being an increase of 134,249 apartments to meet an increase of approximately 624,034 in population.

The population in Greater New York as of July 1, 1921, is estimated at 5,734,613, and there were then only 982,771 apartments available, or an increase of only 923 apartments to meet an increase of 342,696 in population. * * *

From 1910 to 1917 an average of 24,922 new apartments were built each year. From 1918 to July 1, 1921, the following construction in dwellings took place:

	Number of apartments.
1918.....	5,706
1919.....	1,624
1920.....	4,882
July 1, 1921.....	1,183

This shows an average of 3,643 new apartments constructed in the postwar period, so that the gross construction fell behind 73,832 apartments. The gross construction in three and one-half years fell behind 4,034 more than the net construction which, as above stated, fell behind 69,797. All these calculations are based on official figures showing a shortage of nearly 70,000 houses on July 1, 1921.

The greatest need in New York, it is found, is for tenements which can be rented at from \$8 to \$10 a month per room. Such tenements have not been built because at the prevailing cost of construction these rents would not give an economic return upon the investment.

Unfair practices.

THE committee undertook to see whether the prevailing cost was justified, and the present report deals with some of the wholly unjustifiable factors which they found at work to increase or maintain prices. Briefly, they discovered fraud and extortion and illegal practices on every hand, all tending to raise the cost to the builder or owner. They found fraud and extortion practiced by certain labor union officials; they found unfair practices and requirements on the part of labor unions; they found combinations of employers and contractors to manipulate bids and prevent competition; they found combinations of producers and dealers to restrict supply and keep up prices.

In almost every branch of the many activities which enter into building construction we found these combinations rampant and unchecked and competition completely throttled. The result was accomplished by all manner of devices, from the flagrant matching of bids and illegal combinations between employers' and employees' associations, to the surreptitious agency of the apparently innocuous luncheon club under cover of which production was regulated, territory apportioned, and prices fixed between ostensible competitors. * * *

We find that throughout the length and breadth of the country producers are combined with producers; manufacturers with manufacturers; dealers with dealers; workingmen with workingmen. Not only do these combinations extend horizontally between the members of the same class, but vertically from the members of one class to those of another.

There are combinations between the manufacturers and the dealers; between producers and manufacturers; between dealers and unions of workingmen, so that the whole industrial and commercial system in the industries connected with building construction is riveted in an interwoven and interlocking crisscross of combination and obligatory arrangement. Competition in price and output of these essentials is held under the incubus of a pyramid of combinations extending from the workingman and the retailer and reaching its apex in the original producer. * * *

The cost of construction of buildings in recent years has been grossly and unconscionably inflated to proportions largely in excess of what should be the real cost by reason of the widespread elimination of competition among manufacturers, jobbers, contractors, and retailers in every branch of the industry.

The immediate and obvious purpose of the combinations is, of course, to raise or to maintain prices by eliminating competition, but they have also evolved a number of other devices for increasing costs to those outside and profits to those inside their organizations. One effective plan was the use of two wage schedules, one representing the wage rate agreed upon between the employers' association and the union, and the other the rate at which customers were to be charged for labor. Some instances of the difference in these two schedules is given in the case of one association.

The schedule is a long one, but the following illustrates the extent of the extortion thus practiced:

The association was to pay to union workers—
 Foreman cutter and helper, \$16; charge to the customer, \$28.
 Polisher, \$8.50; charge to the customer, \$13.75.
 Helper, \$7; charge to the customer, \$11.25.
 Foreman, \$10; charge to the customer, \$16.25.

This particular form of extortion was practiced by a number of associations. Another effective device was to insist that builders or contractors must buy their labor and material from the same source.

In other words, a builder could not employ a tile setter directly from the union. He had to get him through a contractor, and in order so to obtain him he had to give to that contractor the furnishing of materials connected with the setting of the tile, grate, or mantel.

Another device was an agreement between members of an association that under certain conditions no member would handle any job which had been begun by another. Sometimes this took the form of a provision in the constitution providing that if a member notified the association that he had not received the full amount due him for work no other member might do any work on the job except with the written permission of the first.

It is not necessary for a member to file a lien against the building, or that he should have a lawful claim. His mere contention that the owner or contractor owes him money, if he chooses to exert it through the association, compels the owner or con-

tractor to comply with his demands whether founded or unfounded. Until they are complied with the work simply stops.

One effect of this arrangement was that "the member would be able to charge anything he pleased for additional work. If the owner did not like his charges, the work would remain undone."

An entirely different practice is that of some of the large steel producing corporations, which, as a method of establishing the open shop not only in their own plants but in every building job in which structural steel is used, refused to sell fabricated steel to any builder or contractor in the New York district who would not erect it on the open-shop principle:

Expert evidence on this subject shows the extent to which the maintenance of this policy is reflected in the cost of construction. Officers of the ——— Construction Co. and the ——— Co. say that by doing their steel erection work themselves by skilled union labor which is more efficient than nonunion labor they could save large sums in the cost of construction. Because of their inability to buy steel f. o. b., these important operators have been obliged to keep their expensive erecting equipment idle and to sublet the steel erection to a member of the Iron League to whom alone the fabricators would sell the steel for erection in the city of New York, and through whom alone they will permit it to be erected.

Prosecutions.

ALL these practices are easier to discover than to punish or to suppress. The report comments on the inadequate machinery in both State and Federal courts for the enforcement of laws against conspiracy in restraint of trade. Both State and Federal authorities have promised active cooperation in the effort to break up the objectionable practices, but they have neither the men nor the means for the extensive prosecutions needed. Consequently, the results obtained are small in comparison with the amount of fraud uncovered. So far, indictments have been secured against 416 individuals and 250 corporations; fines paid by those who pleaded guilty and have been sentenced, total \$550,000; 29 persons have received prison sentences ranging from 1 day upward, only 1, however, being longer than 6 months, and in the case of 32 others, prison sentences were suspended.

Financial Aspects of the Housing Problem.

TURNING to the financial side of the situation, the report emphasizes the part which the changed attitude of insurance companies has played in restricting building. It is stated that one of the chief causes leading to the housing shortage has been the withdrawal of funds of the insurance companies from the loan market, with the notable exception of one company, "which has for some years past been the main support of the loan market and the chief encouragement to building operations." This cause was operative particularly through the years 1915 to 1919, inclusive, the tendency being for both life insurance companies and banking institutions "to decrease the proportion of their resources invested in mortgage loans and to correspondingly increase their investments in bonds, stocks, and other securities." The commission considers the change in policy regrettable both because of its effect on the building industry, and because stocks and bonds have not proved as safe investments as the real estate loans.

Another cause of difficulty has been the practice of insurance companies, savings banks, and other lenders of money of imposing unusual and onerous conditions on loans made during this period. Larger returns on loans were secured by three different methods:

1. By the exaction of large bonuses for making the loan.
2. By compelling the borrower to accept as part of the loan real property generally unmarketable at high values, or United States Government bonds at par when they were selling far below par and could have been duplicated by the lender at the then market price.
3. By compelling the borrower to transfer his property to a corporation in order to avoid the usury law, since corporations are not permitted to plead usury.

Instances of these practices are given, showing how the actual cost of a loan to a borrower was run far above its nominal interest rate. The result was to discourage would-be owners and builders, who saw the price of money, as well as of labor and materials, raised to almost prohibitive figures by such practices. One insurance company and one savings bank are singled out for commendation because of their refusal to join in these practices and their continued policy of encouraging home owning and home building through their mortgage loans.

Recommendations.

THE report closes with a review of the work still to be done by the committee, and a number of recommendations for legislation. Some bills dealing with the administration of the rent laws are proposed, and one bill is suggested for amending the antitrust law of the State by inserting a proviso that when anyone is convicted of violating this law, "it shall be made compulsory upon the court to impose a prison sentence of not less than three months or more than one year" in addition to any fine which may be levied. A memorial to Congress is recommended, calling for a similar addition to the Federal antitrust laws, and for an enlargement of the powers of the Federal Trade Commission. Some other recommendations touch upon investments of insurance companies and stricter supervision of their finances and investments, and finally the report urges the passage of a bill permitting insurance companies, under certain circumstances, to build, own, and manage tenements which are to be rented at not more than \$10 a month per room. It will be recalled that this bill was passed in April,¹ and that the Metropolitan Life Insurance Co. at once undertook the construction of such tenements in Greater New York.

Housing for Employed Women in New York City.

IN 1915 the Young Women's Christian Association made a study of living conditions of employed women in New York City, dealing especially with the accommodations open to them in the way of rooms or apartments, if they were not living with their own families. The Bureau of Social Hygiene has recently made a survey² for the

¹ MONTHLY LABOR REVIEW, May, 1922, p. 165.

² Bureau of Social Hygiene (Inc.). Housing conditions of employed women in the Borough of Manhattan. New York, 1922.

purpose of bringing this study up to date. Data were secured by direct inquiry from organized homes and from various rooms registries which made a specialty of rooms for women, and by questionnaires from 9,460 employed women who were reached through their employers. The survey deals especially with organized homes for women, the work of rooms registries and the rental of the rooms supplied, and with the kind of housing secured and preferred by the women who answered the questionnaires, together with the rents they paid.

Organized homes are defined as "boarding houses for self-supporting women and girls, whose object is not commercial, and which furnish a certain amount of social life and supervision to the residents." Of these, 58 were found in the Borough of Manhattan, with accommodations for 4,417 persons. Practically every home was full to its utmost capacity, and most of the homes had long waiting lists. "Several had a list so long that their directors refused to add any more names." The cost of living in these homes had shared in the general increase since the date of the earlier study.

In these homes the change in prices is as follows: The prices for a room and usually two meals a day and three on Sunday in 1915 ranged from \$1.50 to \$12 a week. The prices for the same in 1921 range from \$4 to \$17. This is an increase of 166 per cent in the minimum and 41.6 per cent in the maximum rates.

In spite of this increase the rates of the homes are still lower than those for similar accommodations elsewhere, owing to the facts that the homes are rarely self-supporting and that they never try to make a profit.

The result of these two factors is that the residents in an organized home, although they may not get better room and board than they could get elsewhere for the money, at least get better parlors and opportunities for recreation and many of the advantages of a club at a price for which they could not possibly buy them elsewhere.

Most of these homes have restrictions upon admission. Sometimes the home is conducted by a religious organization, which naturally prefers residents of its own faith. Most homes are intended for young women, and quite commonly the age limit for admission is fixed at 30 or 35. Some have wage restrictions, refusing to admit those earning above a specified sum a week. In spite of these limitations, the homes do not begin to meet the demands of those qualified to enter. The questionnaire sent out to employed women, selected on no principle except the ability to get the questionnaire before them, showed that of nearly 9,000 reporting on where and how they were living, only 1 per cent were found in organized homes, but that a much larger percentage would prefer such homes if they could get in. This preference diminished, however, as the women rose in the occupational scale. Of 1,109 business and professional women replying, only 3 per cent wished to live in organized homes, while of 5,857 employed in offices, stores, factories, and trade schools, 23 per cent looked upon such homes as the most desirable form of housing. The report raises the question, however, whether it is desirable to meet this demand.

Whether as a large economic problem it is well to accustom girls to a scale of living for which they can not pay and which they can not keep up after marriage; or whether, if on a large scale, homes are established that accommodate women for less money than commercial establishments could afford, it would not tend to depress women's

wages, are fair questions. Perhaps an ideal plan would be to furnish the very best accommodations that could be secured for a price within the reach of the class in mind, and still yield from 5 to 10 per cent on the investment of capital. Whether this can be done at the present cost of building without interesting philanthropy to present the original building is doubtful.

The study of rooms registries showed that there were nine which specialized in rooms for women. In general, these all have the same purpose—that of listing rooms to which a woman may go with an assurance that her surroundings will be healthful and absolutely safe. Several restrict their work to special groups. The Columbia University Board and Room Direction, for instance, is for the use of Columbia students only, while the Travelers' Aid Rooms Registry limits itself to handling rooms for transients. Several others had been established only a short time or did not keep detailed records.

The only rooms registries whose records extended over a considerable period and had been kept with sufficient completeness to make a statistical study worth while are those of the Young Women's Hebrew Association and the Young Women's Christian Association. We chose the central branch and the colored branch of the latter as typical of the work done by that organization.

The rooms listed by these agencies showed a wide range in price. The central branch of the Christian Association reported on 6,730 rooms in which it had placed girls and women from January 1, 1920, to April 1, 1921, giving the rental of the room without board. The lowest rate was \$2 a week (only 9 rooms were as low as this), the highest was \$31, the mode was \$7, and the average \$7.85. Not far from one-third (30.5 per cent) were rented at \$7, but under \$8 a week, and one-fifth at \$8 but under \$9. The next largest group, 937, or 13.8 per cent, were \$10 but under \$11; only 247 (3.7 per cent) were under \$5 a week. The range of rentals for colored women was not so wide. Of 386 rooms in which they were placed, the lowest rent was \$3 a week, the highest \$12, the mode \$5, and the average \$5.86. Only 6 rooms were furnished at \$3 and only 52 at \$4. It is suggested that the amount of overcrowding in Harlem shuts out the cheaper rooms which would otherwise be available for colored women. For the rooms reported by the Young Women's Hebrew Association, the lowest rent was \$1.50 a week, the highest was \$20, the mode was \$3, and the average \$4.09.

These registries are used by women of all classes. The Young Women's Christian Association had records of the occupations of 7,876 women whom it had placed in rooms during the period covered. The applicants ranged from day workers and low-grade domestics up to artists, religious workers, business women, architects, lawyers, etc. The Young Women's Hebrew Association did not include domestic workers of any grade, but with this exception its list of occupations was as varied.

The value of the registries is evident; on the one hand they give the roomer some choice of places to live and protect her from dangerous or undesirable surroundings, while on the other they protect the respectable landlady against undesirable roomers.

By making it possible for self-respecting apartment owners or renters to get a decent and fairly congenial class of roomers, and so be willing to accept lodgers, they practically create more accommodations. By investigating rooms and landladies and keeping in touch with them they make the rooms much more available to the stranger and keep the rooming house industry fairly steady. Incidentally they are able to give a great

deal of valuable advice to young women who do not know the city and who need direction.

The importance of the registries leads to a discussion of their cost. Those dealt with in this survey are noncommercial in character. The Christian Association registry, for instance, makes no charge to applicants for rooms, charges landladies who wish to register rooms only \$2 a year, and makes up any deficit from its general budget. The association maintains six registries in different parts of the city. For the year 1920 it is calculated that the cost of maintaining this service amounted to \$2.48 for each known placement, and to \$1.16 per applicant for a room. The number of applications is always much larger than the number of known placements, partly because many fail to report to the registry when they take a room to which they have been sent. Thus, in 1920, the number of applications was 15,540, while the number of known placements was 7,285. Considering this fact, the cost per applicant is considered the fairer basis of calculation.

The report raises the question of the relative value of organized homes as compared with rooms registries. The registries are not open to the economic objections brought against the homes, and their services are more widely effective.

Organized and subsidized boarding houses for girls are not sufficiently numerous to meet the need of protected housing for unattached girls in a great city like New York. Even with the high cost per placement, or even per applicant, of the rooms registries it is a fair question whether it would not be more socially profitable for the philanthropist anxious to help solve the problem to invest in the latter rather than the former.

The information gathered by questionnaire goes to show that those using the registries obtained rooms at lower rates, on the whole, than those who lived with their families or obtained outside rooms through other channels. The questionnaires were distributed through employers, and the field was limited by the unwillingness of many business heads to place them before their employees. Some 9,000 were collected, filled out more or less completely by women of every occupational class, from low-grade workers with wages ranging upward from \$4 a week to business and professional women with yearly earnings running well up in the thousands. The majority of these women lived with their families, the proportion varying from 55 per cent of the business and professional women to 82 per cent of the office workers. Taking the group as a whole, of 8,635 reporting on this point, 5,949, or 69 per cent, lived at home. This fact, however, does not seem to bring down the general level of rents paid, as appears from the following table:

WEEKLY RENT PAID BY WOMEN IN SPECIFIED ORGANIZATION GROUPS.

Item.	Business and professional.	Offices.	Stores.	Factories and trade schools.	Total.
Number reporting.....	1,119	1,007	1,637	583	4,346
Number paying no rent.....	46	109	38	16	209
Lowest rent paid.....	\$1.50	\$2.00	\$2.00	\$2.00	\$1.50
Best rent paid.....	63.00	33.00	38.00	30.00	63.00
Mode.....	10.00	10.00	10.00	10.00	10.00
Average.....	13.50	9.05	9.09	8.69	10.12

The average rent of the rooms in which women were placed by the three registries studied ranged from \$4.09 for the Young Women's Hebrew Association to \$7.85 for the Young Women's Christian Association, Central Branch, while the mode ranged from \$3 to \$7, figures which run considerably lower than those shown above.

The questionnaire included an inquiry as to what form of housing the recipient would select if it were only a matter of choice. The replies indicated a strong preference for housekeeping apartments, in which the woman could make a home for herself. This was least marked among the business and professional women, only 39 per cent of whom preferred this type of housing. Of 5,857 women in other occupational groups who answered this query, 68 per cent gave housekeeping apartments as their choice, the proportion choosing them ranging from 65 per cent of those in office work and factories and trade schools to 72 per cent of those in stores.

It will be seen that two points stand out prominently in this study: The desirability of extending the work of the rooms registries for women, even though this involved conducting them on a partially subsidized basis, and the strong desire of self-supporting women for housekeeping apartments. Whether it is possible to supply the latter at rents within the reach of the average employed woman is a question left unsolved by the report, but it makes very clear the desire of the women themselves in the matter of housing.

Housing Situation in Paris.¹

THE housing situation in Paris, as affected by the war and subsequent conditions, and the attempts of the public authorities to solve the difficulty, are the subject of an elaborate report by M. Henri Sellier, recently issued by the housing authorities of the city. The general course of events there seems to have been much the same as in the United States, except that naturally the effect was much more marked there than here. Even before the war there had been a housing shortage in Paris, and during the war the building of houses practically ceased, so that at the close of hostilities there was an accumulated scarcity, while, owing to the establishment of munition factories and other war industries, the population had been increasing.

The extent of the housing shortage, the writer thinks, can not possibly be determined with any degree of accuracy, as at the time of writing no up-to-date and reliable figures were available either for number of apartments or for population. A careful and detailed analysis of the figures of 1911 shows that at that date the number of apartments in Paris was less by some 32,118 than the number of households, and that the shortage was greatest in the case of apartments suitable for families of four and five members. During the war there was some clearing away of houses to make room for Government buildings, and little or no new housing, so that the situation has certainly not improved.

¹ France (Département de la Seine). L'office public d'habitations à bon marché. La crise du logement et l'intervention publique en matière d'habitation populaire dans l'agglomération parisienne. 4 vols. Paris, 1921.

Worse than the actual shortage is the local overcrowding, due to the unequal distribution of the population, and the unplanned and abnormal growth of parts of the suburbs, which has brought about all the obnoxious features of slums in regions where space is abundant, and where reasonable foresight and planning might have brought about the development of model villages and garden cities. These two conditions have caused an amount of overcrowded and unhealthful living which can not be measured by any comparison between the population and the total available housing, but which is having an unfortunate influence upon the health and the social life of the city. Two features which he especially deplors are the increase in the use of furnished lodgings, due to the difficulty of securing housing at reasonable rates, and the continued use of old and insanitary buildings, which, as a matter of health precautions, should have been torn down long ago.

The increase in the use of furnished lodgings is shown by the following figures for the Department of the Seine, which includes Paris and its suburbs:

INCREASE IN THE NUMBER OF PERSONS IN FURNISHED LODGINGS, 1914-1921.

Item.	1914	1921	Increase in 1921 over 1914.	
			Number.	Per cent.
Number of furnished lodgings.....	19,010	27,071	8,061	42.4
Number of rooms in these.....	259,414	313,567	54,153	20.9
Number of occupants.....	295,455	389,964	94,509	32.0

In view of the interference with family life, and the risk to health and morals involved in life in furnished apartments, M. Sellier considers it a highly serious matter for the State that within seven years the number living under such conditions has increased by nearly 100,000.

Even worse than this is the continued use of old buildings which defy every principle of sanitation and hygiene. Within Paris proper there are six well-recognized tuberculosis centers, "ilots" or sections covered with old buildings crowded together and dating back to the days when it was considered good business to build over every foot of a lot, or even earlier still, to a time when modern sanitation was wholly unknown. In each of these "ilots" the mortality from tuberculosis rises far above that of the city as a whole, and in each there are houses known as strongholds of tuberculous infection. In 1913 the six combined included 1,553 houses which sheltered some 60,000 persons. Nothing has been done to improve conditions in these sections since 1913, and inevitably they are growing worse.

In the suburbs, where theoretically conditions should be much better, they are sometimes worse, inasmuch as industrial villages have grown up without order or supervision. A factory is established in a certain locality, workers flock in and find shelter where and as they can, and an insanitary and overcrowded settlement develops, with all the worst features of a city slum.

The housing difficulty in Paris is, then, according to the report, both quantitative and qualitative. There is a shortage of dwellings of undetermined proportions, and there is an alarming amount of insanitary housing, which can not be swept away because of the lack of some place to shelter the present occupants.

In considering ways of relieving the difficulty, the possibilities of private initiative are first taken into account, and the conclusion is reached that there is little hope from this source. The costs of land, labor, materials, and capital have risen to such an extent that to replace in 1920 a building constructed in 1914 would require at least five times its original cost. The cost of providing an apartment of three rooms, kitchen, and sanitary arrangements in a typical working-class tenement house of seven stories erected in 1920 would be, it is computed, 38,000 francs (\$7,334, par) against 7,600 (\$1,468, par) in 1914, and the lowest economic rent for such an apartment would be 3,450 francs (\$666, par) per annum. But the average wages of a Parisian workman, making no deductions for time lost through illness or unemployment, range from 6,000 to 9,000 francs (\$1,158 to \$1,737, par) a year. Before the war French budgetary studies set one-seventh of his earnings as the amount a worker could afford to pay for rent; since the war they have increased this to one-sixth, but even so, it is evident that three-room and kitchen apartments for workers can not be built in Paris as an economic proposition, and that private enterprise as a means of meeting the situation is a forlorn hope.

The possibilities of relief through State-assisted private philanthropic societies are next considered. Before the war, some assistance in the way of loans at low interest, etc., had been given to societies for providing dwellings at low cost, and had produced desirable results.² In the Department of the Seine such societies had put up 1,347 individual dwellings and tenements containing 2,579 apartments, but the war and the conditions following it completely checked their activities. In an effort to revive this work some additional concessions were made as to loans and as to rents which might be charged, but even these did not allow the societies to bring the rents up to a figure which would insure an economic return on the cost of building. Further, even if all restrictions as to rents to be charged were removed, there would remain the fundamental difficulty that working people could not pay the rentals necessary to make the enterprises self-supporting, even though they had the advantage of building with capital lent below prevailing rates. Consequently little could be anticipated from this source.

Under these circumstances, the public authorities found themselves rather forced into a certain amount of housing work. In 1912 laws had been passed empowering various public bodies to embark on housing enterprises under strictly regulated conditions, and a beginning had been made. The war put a stop to building, but the public authorities kept the matter in mind, and as opportunity offered, bought a piece of land here or sold one there, or acquired property which might be of value in improving conditions in the

² Details as to amount of assistance received and work accomplished by these societies are given in United States Bureau of Labor Statistics Bul. No. 158: Government aid to home owning and housing of working people in foreign countries.

city. After the war they added to these activities the purchase of unfinished buildings. There were many such buildings in Paris which had been begun before the outbreak of hostilities and on which the owners were unable to resume work. The authorities bought these up and finished them, the total cost being much less than if the total construction had been made at current prices. In addition the authorities put up new houses on the lands they had acquired. By the beginning of March, 1921, the municipality itself had, either completed or well under way, buildings providing 2,862 apartments, the municipal office of low-cost dwellings had 1,120 and the poor law authorities 929, making a total of 4,911 apartments provided at a cost of approximately 181,000,000 francs (\$34,933,000, par). The municipality had additional plans in preparation which were expected to provide 2,112 apartments, at an estimated cost of about 92,000,000 francs (\$17,756,000, par).

Meanwhile the Department of the Seine has also been busy over the housing situation, which it has attempted to alleviate both directly and through the departmental office of low cost dwellings. The formation of this office was authorized in 1915, but owing to war conditions it was not organized for over a year, and did not really begin to function until 1917. Since then credits have been given it for running expenses, for acquiring land and partially constructed buildings, for constructing temporary shelters to meet the urgent needs of the city in the post-war period, and for carrying out necessary work on the lands and buildings purchased, to the amount of 29,160,000 francs (\$5,627,880, par). By the end of 1920 the office had bought land, mostly in the suburbs, to be used largely for garden cities, amounting to 2,115,000 square meters; had bought and finished a number of partially completed buildings, and had done a considerable amount of roadmaking and other improvements on the land purchased. At that date it was calculated that the replacement value of its holdings, without making any allowance for the unearned increment, was 21,799,688 francs (\$4,207,340, par). Also, the office had on hand 7,755,817 francs (\$1,496,873, par), so that it showed a profit on its operations during three years of not far from 400,000 francs (\$77,200, par).

The plans of the office for the garden cities which it hopes to create around Paris are of special interest as being one of the first attempts to plan and direct the development of the suburbs, which have hitherto grown in a helter-skelter fashion with little regard to health, convenience, or beauty. At the time of the preparation of this report, work was under way on several of the properties, but none had been sufficiently developed to be ready for habitation.

By April 1, 1921, the work done by the office in completing partially finished buildings had provided 94 apartments, and the work under way was expected by the end of the year to furnish 577 more, making a total of 671.

Meanwhile the department itself had, on July 23, 1920, concluded an agreement with the State, under which the department undertook to buy tracts in the suburbs and to build thereon for working people in accordance with the laws regulating rents and profits. Its operations were to be limited to the sum of 25,000,000 francs (\$4,825,000,

par), of which the State undertook to furnish half. The department was empowered to raise its half by a 20-year loan at a rate not exceeding $6\frac{3}{4}$ per cent. The lands and buildings were to belong to the department, which was specifically authorized to administer the undertakings itself, or through a low-cost dwellings association, or other agency, at its discretion. Proposed purchases of land and plans for building thereon must be approved by the State. Any profits or losses on the enterprise, after expenses of management were met, were to be shared equally by the State and the department.

This agreement was ratified by the law of August 8, 1920, and the department at once set to work to secure land suitable for its operations. Four parcels of land, amounting to about 77 acres, were purchased at a cost of 3,750,000 francs (\$723,750, par). These were to be used for garden cities and, where these could not well be developed, for groups of workmen's dwellings. The plans call for the immediate erection of dwellings providing for 654 families. It had been hoped that they would be ready for occupancy by the harvest time of 1921, but M. Sellier gravely doubted whether they would be ready before the end of the year. He also doubted whether the 25,000,000 francs (\$4,825,000, par) allotted to the project would cover the cost.

Summing up, then, the number of separate lodgings, finished or under way, provided by the public authorities, was as follows:

Municipality of Paris, and municipal authorities.....	4,911
Department of the Seine, through office of low cost dwellings....	671
Department of the Seine, acting directly.....	654
Total.....	6,236

Comparing this result with the needs of the city, the writer finds that though good in itself it does not hold forth much promise for the future. Not one-fourth of the deficit known to exist in 1911 has been made up, nothing has been done toward removing the overcrowded and insanitary agglomerations of buildings in which tuberculosis makes its headquarters, and the accumulated shortage due to the cessation of building during the war has been left untouched. Nor is it apparent how the needs of the city are to be met. Private initiative will not undertake building without a prospect of profit, and the public can hardly bear the expense of meeting the gap between cost of construction and the rents workers can afford to pay. The author estimates that to build at public expense even the 32,000 lodgings needed in 1911 as the barest minimum would entail a cost of 10,000,000 francs (\$1,930,000, par) yearly for 40 years. To provide the 100,000 lodgings needed to assure every Parisian household a healthful habitation would cost the community from 100 to 120 million francs (\$19,300,000, to \$23,160,000, par) annually through a period of 40 years. Of course, the cost of building may and probably will fall to some extent, but that is in the future, while the need is present and urgent.

Several plans have been put forward for meeting the situation, of which the most striking proposes that the unearned increment in value of all real property in Paris should be taken over by the State and used for providing housing. Apparently this proposition has not made much headway. M. Sellier himself holds that much fuller

knowledge of the actual situation is necessary before any radical plan is adopted. The figures of the census of March, 1921, should be carefully analyzed, and the degree of overcrowding, its distribution and its causes should be studied before any comprehensive scheme of dealing with the situation can be formed. Meanwhile, the various public bodies interested are pushing the plans they have already undertaken, and there is a marked movement of industries from the city to the outlying regions, which should remove some of the industrial population. More and more, also, the extra population brought to Paris by war conditions tends to diminish. Plans are under way for tearing down some of the ancient fortifications, and clearing spaces either for public grounds or for housing purposes. On the whole, there are a number of minor causes working to prevent the situation from becoming as bad as it might, so the greatest immediate need, M. Sellier concludes, is for close study of the facts, on which may be based a comprehensive plan for removing present difficulties and for preventing the development of a similar situation in the future.

INDUSTRIAL ACCIDENTS AND HYGIENE.

Problem of Dust Phthisis in the Granite-stone Industry.

BULLETIN No. 293, recently issued by the Bureau of Labor Statistics, presents the results of an investigation of the problem of dust phthisis in the granite-stone industry of Vermont, carried on by Frederick L. Hoffman with the cooperation and assistance of local labor unions, the Granite Cutters' International Association of America, the manufacturers, and Vermont State officials. It is a continuation of the investigation, the results of which were reported in Bulletin No. 231, on mortality from respiratory diseases in dusty trades (inorganic dusts), published by this bureau in 1918, and the first and second preliminary reports of the committee on mortality in dusty trades, of the National Tuberculosis Association, published in 1919. The statistical, rather than the technical or medical, aspects of the problem are given special consideration in this study.

Statistics show that "mortality from pulmonary tuberculosis among granite cutters increased from a rate of 257.7 per 100,000 in 1896 to 953.4 in 1918 (a maximum figure of 1,330 having been reached in 1916), while the corresponding mortality of the general adult population declined from a rate of 207.5 in 1896 to 96.4 in 1917, excluding in the case of granite cutters the last three months of 1918 on account of the influenza epidemic." Because of the great disparity just shown in regard to deaths from pulmonary tuberculosis, and because at the present time the death rate among granite workers is practically the highest known for any occupation of record and is increasing from year to year, the author believes that "the granite-stone industry, perhaps more than any other dusty trade, demands the utmost and thoroughly qualified consideration on the part of the State, the medical profession, and the labor organizations directly concerned."

Some of the results of the study are summarized as follows:

(1) The granite-stone industry is carried on by wage earners who, broadly speaking, live under sanitary conditions above the average, so that possibly unfavorably environmental factors are of decidedly secondary importance.

(2) The housing conditions under which granite workers live are also above the average, so that in this respect the environmental factors are favorable to a low mortality rather than otherwise.

(3) Anthropometric records clearly establish the fact of a superior physique, indicative of a higher degree of disease resistance, as determined by a relative weight above the average. From this point of view, therefore, granite workers should experience a relatively low mortality from pulmonary tuberculosis instead of a mortality decidedly above the average normal to industrial occupations.

(4) Granite workers, considered by specific occupations, show wide variations in tuberculosis frequency, the excess in the death rate being most marked among the men employed in granite-stone cutting, it being especially severe among the men employed in the use of pneumatic tools. Certain occupations, such as polishing, tool sharpening, bed setting, etc., do not show a marked excess, if any, in the mortality from pulmonary tuberculosis, clearly indicating that the risk is practically proportionate to dust exposure.

(5) Compared with the normal death rate of adult males of the State of Vermont, or of New England, the mortality from pulmonary tuberculosis among granite-stone workers has increased enormously during the last two years, as contrasted with a diminishing mortality in the population at large. * * *

The same conclusion applies to nontuberculous respiratory diseases, for it is shown that the mortality from bronchitis, pneumonia, and asthma is also on the increase among granite cutters, in contrast to a diminishing rate of frequency among adult males of the general population.

While normally the rate of tuberculosis frequency diminishes with increasing adult age, the contrary is shown to be the fact as to granite cutters, among whom the death rate from pulmonary tuberculosis at ages 60 and over reaches truly appalling proportions, so much so that the statistical evidence would seem incredible if it were not supported by the additional and equally suggestive data for nontuberculous respiratory diseases.

(6) The investigation brings out clearly the supremely important fact that the incidence of the disease is practically proportionate to the length of the trade life. In other words, the effect of dust inhalation is one of growing seriousness, according to the rate of dust accumulation in the lungs. * * *

These conclusions are in conformity to the observations made in South Africa and Australia, clearly indicating that the cause of the excessive liability to pulmonary tuberculosis is the inhalation of granite dust in a comminuted form of practically ultramicroscopical particles.

(8) The nature of the dust inhaled also requires much more extended scientific consideration. For the present purpose, however, it is sufficient to state that the average silicotic content of granite is 72.96 per cent; of sandstone, 85.42 per cent; and limestone, 1.22 per cent.

The evidence is absolutely conclusive that the dust hazard depends primarily upon the silicotic content of the dust inhaled. The evidence is also conclusive that workers exposed to marble or limestone dust suffer a decidedly lesser liability to pulmonary tuberculosis than those exposed to granite or sandstone dust, with a high silicotic content.

Dust Phthisis in the Printing Industry.

By FREDERICK L. HOFFMAN.

THE subject of printers' phthisis in 1921 received rather extended consideration in a series of letters contributed to the London Daily Times. Since these letters have not been reprinted elsewhere and the material contained in them, which is of much practical value, would likely remain difficult of access to those interested in the hygiene of the printing trade, it has seemed advisable to bring together a sufficient portion of the correspondence for the present purpose, with such supplementary observations as the facts may call for. The correspondence was initiated by Dr. E. Halford Ross, a distinguished authority on a variety of medical subjects, in a letter dated October 14, 1920, which was followed by a letter from Dr. Leonard Hill, dated October 19, 1920, and a reply dated October 23, by Dr. Ross. A further communication on "The presence of silica dust," by Dr. Leonard Hill, dated October 27, 1920, was followed by a letter on "Silicosis and working conditions," by Dr. Edgar L. Collis, dated October 28, 1920. To these letters Dr. Ross replied on the subject of "Silica and floating fibre," in a letter dated November 1, to which answer was made by Dr. James Crichton-Browne, in a letter dated November 3, 1920, followed by a brief communication dated November 4, 1920, on "Printers' phthisis" from the general secretary of the National Society of Operative Printers and Assistants, Mr. George Isaacs. To these communications Dr. Ross replied

in a communication of "Predisposing Causes," under date of November 20.

The correspondence throughout emphasizes aspects of the hygiene of the printing trade which, it is evident, have not received the requisite extended and minute scientific consideration, except in a recent communication printed in the *Journal of Industrial Hygiene*, by Mr. C. B. Roos, representing the first results of the correspondence, to the more important conclusions of which attention will subsequently be directed.

To facilitate the practical consideration of this question, attention may be directed to Bulletin No. 209 of the United States Bureau of Labor Statistics, by Dr. Alice Hamilton and Mr. Chas. H. Verrill (1917), which contains the results of a comprehensive investigation into the hygiene of the printing trade. Previous to this there had been published in the report of the New York Bureau of Labor Statistics for 1906 a brief report on sanitary conditions in the printing trade. The most recent Government investigation is set forth in a very brief report on Industrial Dermatitis among Printers, by Dr. William J. McConnell, of the United States Public Health Service, Reprint No. 656 (1921). Among other publications mention may be made of the industrial survey in Cincinnati of the printing trade, published by the Cincinnati Chamber of Commerce; a very brief report on business welfare, as practiced by the Curtis Publishing Co. (1916); a report on the lead menace in the printing industry, presented by Jas. M. Lynch, president of the International Typographical Union (1913); and the survey of the industrial hygiene of the different branches of the printing trade, by Dr. E. R. Hayhurst, Ohio State Board of Health (1915). Of interest and value also is the report of the Cleveland Education Survey on the printing trades, by Frank L. Shaw (1916).

Correspondence of Doctors Ross and Hill.

IN HIS first letter, Doctor Ross refers to silica as an active cause of pulmonary tuberculosis among printers. The letter, practically in its entirety, reads as follows:

Your leading article of October 7 on tuberculosis prompts me to relate the progress of my researches, which have been conducted in various printing works in the city of London during the past four years. I think I have discovered the third factor, the prime mover, in the occasion of this disease among printers. Early in 1918 I reported to the health committee of the Joint Industrial Council of the Printing Trades, then being formed, that there is a concentration of hereditary predisposition to consumption in printers' compositors owing to the "closeness" of their craft, and to intermarriage within their families.

As stated in your leading article, we know that "the tubercle bacillus can actually exist in the human body without attacking it or giving rise to any mischief"; and we know that the bacillus is actually dormant in a proportion of the population, infection occurring probably in childhood. Thus we were in possession of two of the factors governing the production of this disease, which can be regarded as a vicious partnership (if I may use an apt metaphor), of which we were familiar with two of the partners.

But these two factors were quiescent—they were sleeping partners only; it remained to find out the active partner, the causative factor, which gives the highest mortality figures from tuberculosis in industry to the printers, as quoted in the *Times*.

About a year ago my suspicions fell on printers' "list" as being this third partner. It is a black, grumous, woolly, fluffy substance, which collects in compositors' boxes, trays, cases, and "chases." It had already been examined by certain bacteriologists

for the presence of the tubercle bacillus; their examination was sterile, and their quest abandoned. But the reason of their discouragement actually encouraged me to further observation, because the fact that the "list" was bacteriologically negative was in itself peculiar. Then I found that it does not readily decompose like the dirt collected in rulers' and readers' and binders' rooms, which soon becomes musty and smells. Then I remarked its weight. Then I realized that there was no object in looking for the tubercle bacillus in the "list"; the bacillus is already within the human subject. A chemical analysis was carried out by unbiased persons. Samples of "list" were obtained from various works, and sent, unlabeled, through the medium of my brother, Dr. H. C. Ross, to Messrs. J. R. Blockey and J. Sheard, chemists in the laboratories of Messrs. William Walker, leather manufacturers, of Bolton. They reported that "list" obtained from composing rooms contains both silica and iron in appreciable quantities; that obtained from printers' machine rooms contains less. These results have since been confirmed, with fresh samples, in other laboratories.

Silica and the oxides of iron are known by the medical profession to light up phthisis when inhaled continually by those predisposed to the disease. Osler describes this well in his "Practice of Medicine" under the name of silicosis—silica causing stonecutters' phthisis or grinders' rot, iron causing a similar affection among workers in brass and in bronze. It would seem likely then that silica and iron inhaled by printers' operatives is the third factor in the production of their phthisis. They have the two sleeping partners—predisposition and infection; and they have the remaining active partner—contained within the "list."

I believe that the prevention of pulmonary tuberculosis occurring in printers' works is now within sight. Messrs. Waterlow have, for some time past, used suction bellows on their compositors' trays, cases, and "chases" to remove the "list"; the Law Stationery Society and some other firms have employed similar methods. By some such contrivance regularly applied throughout the industry collections of "list" should become impossible; and in this way the active factor would be removed from among those who spend a portion of their lives poring over compositors' boxes, tapping the type into place. The production of pulmonary tuberculosis in the printing trade is the work of a combine; if the active partner is removed, leaving the sleeping partners to their sleep, the whole concern (to continue the metaphor) will be smashed. This must be our aim.

This letter was printed in the daily issue of the London Times of October 14, 1920, but, unfortunately, the issue of October 7, referred to herein, is not accessible. Granted that much of the argument advanced rests upon vague information, the points raised in a concrete form are well stated. To argue, however, that a recognition of the immediately inciting cause would be productive of the prevention of pulmonary tuberculosis was to hold out a hope not justified by the experience of many years in other fields of preventive medicine, for, after all, at its worst the "list" in the printing or composing room can be only one of several important contributory causes or conditions, yielding at their best to rational methods of shop hygiene with a possible reduction in phthisis liability of the group of employees most exposed to the immediate danger of dust inhalation.

The letter of Doctor Ross was replied to by an equally extended communication from Doctor Leonard Hill, an eminent authority on atmospheric conditions in their relation to health and disease. Doctor Hill's letter reads in part as follows:

The small committee appointed by the Medical Research Council in 1914 to consider industrial tuberculosis has not lost sight of the question of the dust in the boxes of type handled by compositors, and the fact that antimony is one of the component metals of type has been drawn attention to by one of my colleagues of that committee, Doctor Brownlee. Dr. Edgar Collis, an authority on silicosis of the lungs, is a member of that committee.

Silica and iron will be found in almost any common dust, and the evidence seems to show that silica dust is only harmful when inhaled for a long period and in highly concentrated doses, as by the workers in flint, ganister, granite, and quartz. The evidence also goes to show that very large amounts of silica dust can be inhaled with impunity when mixed with coal dust, or other dust of "edible" matter. It has

been shown that coal dust stimulates the lining cells of the breathing passages to clean up the lungs by their phagocytic action. Pure silica particles, on the other hand seem to have no such stimulating action, and collecting in the lungs tissue excite there a fibroid change, which finally ends in tubercular infection. The coal miners are remarkably free from tuberculosis of the lungs; the tin miners of Cornwall and the gold miners of the Rand are, on the other hand, devastated with this disease. So protective is the action of coal dust that it is considered safe to sprinkle the ways of the coal mines with shale dust containing a high percentage of silica in order to prevent devastating coal-dust explosions. There is hope, too, that the sprinkling of the galleries of the Rand mines with coal dust may stop the disease produced there by inhalation of pure silica dust.

Tuberculosis attacks the operative printers' assistants more severely than the compositors, and they do not handle the boxes of type. The air of printing shops is not particularly dusty, and it seems most improbable that the inhalation of silica dust therein has anything to do with the problem of tuberculosis. The users of public roads paved with granite or flint in dry weather inhale clouds of silica dust stirred up by motor cars, but the exposure of road sweepers to such dust, so far as we know, does not suffice to produce silicosis in their lungs. What is required is daily exposure in very dusty confined places, such as the gritstone worker, mason, or tin and gold miner work in.

Printers work in stagnant, overwarm atmospheres, and in sunless, artificially lit places, conditions which lower the metabolism and vitality of the body, the very opposite to those conditions of the sanatoria which heal tubercular children by exposing them stripped to sun and air. The operative printers have had, in some cases, the habit of working one day a week a double shift, and so exhausting their defense mechanism by overfatigue. Much of the printing work is of so light a nature that active cases of consumption can work nearly up to the end, and thus massively infect their fellows with whom they are very closely brought in contact in the stagnant atmosphere of the shop—for example, four or five men may be seen crowded round a small table engaged in setting up a frame of type for a newspaper sheet. In coughing and speaking one consumptive may then obviously massively infect the others. Examination of printers' insurance cards shows that cases of consumption are not recognized early in the hurry of panel practice. Their sickness is entered as a "chill," influenza, or bronchitis, and only when too late and the mischief is done, as phtthisis.

The question, however, may be raised in this connection whether it is really true "that very large amounts of silica dust can be inhaled with impunity when mixed with coal dust, or other dust of 'edible' nature." This is rather a dangerous statement to make without the requisite and entirely convincing evidence to support it, for of all the varieties of inorganic dust silica dust is the most dangerous to the lungs and possibly to the human organism otherwise. Doctor Hill is probably on safer ground when he holds that tuberculosis attacks the operative printer more severely than the compositors, although here also more convincing evidence would have been feasible. His statement that "printers work in stagnant, overwarm atmospheres, and in sunless, artificially lit places," must be read as referring to inferior shop conditions, whereas really modern print shops are generally well lighted and aired. In this connection the concluding portion of Professor Hill's letter is of special interest:

The National Society of Operative Printers and Assistants have very wisely set up as their war memorial a sanatorium to which active cases can be sent. If the printing shops were removed to garden cities, where the work in the stagnant air of the shop could be balanced by exercise in the playing field and the garden, and fresh young green food, eggs, etc., could be had from the garden, and if medical inspection could pick out and send to the sanatorium early cases of consumption, there would, I believe, be an end to the present high rate of tuberculosis among printers. Apart from the garden city, something may be done by improved ventilation of the shops, and by teaching, through their trade-union journal and lectures, the need of all for open-air exercise and green food, the danger to others of active cases of consumption continuing at work and the need for their segregation at sanatoria, with provision for their families.

It is to be hoped that the Joint Council of the American Printing Trades may some day see its way clear to initiate a strictly scientific inquiry into the whole question of the health and well-being of the persons employed in the printing industry. It is also to be hoped that such an inquiry will present in a consolidated form the entire experience which has been had in the treatment of the disease at the Union Printers' Home at Colorado Springs, and the correlated health education of printers with particular reference to tuberculosis prevention.

The letter by Professor Hill was replied to by Doctor Ross under date of October 23, as follows:

When I announced the presence of silica in printers' "list" as the active cause of printers' phthisis, we are told that the Medical Research Council "has not lost sight of the question of the dust in boxes of type handled by compositors." The dust must have got into their eyes; for they never saw the connection between silica and the printers' disease. Then we are told that the air of printers' shops is not particularly dusty; and the issue is confused by talk of quartz, granite, ganister, of garden cities, and green food. The point at issue is that the "list" contains silica and silica causes phthisis—these are facts, they are not fads and fancies. Professor Hill thinks it most improbable that the inhalation of silica dust in printers' shops has anything to do with the problem of tuberculosis. That is his opinion only; it is not a truth. It is not accomplished science; it is merely his surmise. I am going to prove him wrong.

Silica within the "list" is derived from the sand used in casting and molding the soft iron "chases" or frames into which the type is locked. These are stacked in cases and shelves in the works, and they rust. The rust loosens the sand embedded in the soft iron; and when the compositor comes to release the type and to distribute it among his boxes the sand, silica, and oxide of iron are shaken into them, too. Again, when the type-locked "chases" are passed into the machine room for printing purposes the silica, already loosened, is shaken off them by the constant movement of a ton or more of metal in the jerking, rolling, working of the machines; and the printed paper picks it up, passes it within survey of those who spend a portion of their lives "taking off" in printing works. In the monotype foundries, where the used type is melted down, the "list" comes up seething as dross within the crucibles; it is skimmed off, and often stored in open chests in the close atmosphere of some works sometimes for months until sold. It is obvious that the amount of silica in various works varies greatly and almost from day to day.

I want the interest, the encouragement, the enthusiasm of the Medical Research Council. Still more I want the good will of everyone within the printing trade. Mine is a new thought, a new suggestion, a new idea, specious and practical, based on facts—"lists," silica, phthisis. We want to prevent consumption among printers. We shall not hamper Mr. George Isaacs's excellent sanatorium. He is out to cure, to alleviate suffering in those already affected; but sanatorium treatment has not prevented tuberculosis. I am out for prevention. It can be done by cleanliness, absolute cleanliness, in all works throughout the industry; surely this is neither difficult nor costly.

Doctor Ross would have advanced his argument considerably if he had provided the results of a satisfactory analysis of dust samples from representative shops in different localities. He admits that "it is obvious that the amount of silica in various works varies greatly and almost from day to day." It would have been of value to have determined whether this variation is constant, and, if so, whether it is the shops with a high proportion of silica in the atmosphere that are also the work places subject to a particularly excessive incidence of pulmonary phthisis.

The letter concludes with the suggestion that steps be taken to ascertain the method by which "silica is conveyed from compositors' boxes, etc., to the workers' lungs." Professor Hill replied to the sec-

ond letter by Doctor Ross under date of October 27, and with special reference to silica dust, stating in part as follows:

Dr. E. Halford Ross claims to have discovered the cause of printers' phthisis by collecting dust from boxes of type in printing shops and handing the dust to a chemist for analysis who reported the presence of silica therein. Neither the percentage of silica found in the dust is given nor that of organic material, both of which are of great importance. No estimation of the dust in the air of printing shops has been made. Doctor Ross might as well have collected the dust from the roads and had this analyzed and announced that the whole of the phthisis of the community is due to the breathing of silica in this dust, which the traffic and the wind stir up in abundant clouds, visible and invisible.

In the supplement to the sixty-fifth annual report of the registrar general I find among the relative mortality figures for phthisis the following: All males, 185; agriculturists, 85; railway laborers, navvies, road laborers, 95; inn-hotel servants, 543; printers, 300; ironmongers, 135; metal workers, 189; coal miners, 89; tin miners, 816. The inn-hotel servants are exposed to silica dust which drives in from the roads, dust which they sweep up; the road laborers to the silica dust of the roads; the ironmongers to the dust from soft iron goods molded in sand; the metal workers to dust from the sand in which they mold metal goods, no less than the printers are exposed to dust from their soft iron frames or "chases." Many of the coal miners are exposed to silica dust from the rock strata contiguous to the coal seams. But of the above groups silicosis of the lungs is found only in the tin miners, who work in an excessively dusty atmosphere produced by rock drills containing a very high percentage of silica, and in the metal workers, who grind tools on gritstones.

I have collected some of the evidence concerning silicosis of the lungs in the chapter on dust in my report on the Science of Ventilation and Open-Air Treatment, issued by the Medical Research Council. May I cite the following:

In the Nottingham district the coal dust is mixed with a great deal of silica dust from adjacent seams of rock. One sample showed as much as 70 per cent. The death rate among the miners is, at all ages up to 55, far below that of other employments and even slightly lower than that of farm laborers. The conclusion is drawn, then, that it is safer to mix rock dust, such as shale containing silica, with the coal dust in the ways of other mines, in order to remove the danger of coal-dust explosions (Garforth's method).

In the Rand mines the rock is pure quartzite, and phthisis is rampant. At the Mysore mine, on the other hand, there are quartzite veins, and the dust is mingled with other rock dust, and there is no excess of phthisis. If coal dust be added to flint dust and animals inhale the mixture, the lungs are cleaned up by phagocytic action, and the deadly character of pure flint dust is set aside.

Ganister bonded with lime into bricks provokes no cellular reaction, and the dust causes phthisis; ganister bonded with fire clay provokes cellular reaction, and the dust does not cause phthisis.

The exact and far-reaching researches of Watt, Irving, etc., into silicosis in the Rand mines, of Collis and of Mavrogordato and Haldane have established the facts which render unjustifiable Dr. E. Halford Ross's claim to a discovery of the cause of printers' phthisis, unsupported as it is by the least evidence of silicosis in the lungs of phthisical printers.

The argument regarding the apparent harmlessness of coal dust containing a high proportion of silica, or as much as 70 per cent, is repeated, but the evidence advanced can not be regarded as admissible; since the mortality rates referred to have reference to miners as a whole and not to a particular mine in which this extraordinary degree of silica air pollution has been observed.

The concluding portion of Professor Hill's letter is to the effect that—

Irremediable harm has been done to the health, happiness, and efficiency of the people by the acceptance in the past of the chemical purity of the air as a standard of ventilation. Such a standard has allowed the concentration of people in overwarm, humid, and stagnant atmosphere in tenement dwellings and in workshops, often artificially lit, whereby their metabolism and vital energy is depressed to a low level and they are exposed to massive infection from "carriers." It would be most regrettable if Dr. E. Halford Ross turned the master printers to cleaning up dust in their shops

in place of keeping the atmosphere cool, fresh, and day-lit and making clean and wholesome the bodies of the printers, and their minds contented by placing their shops in garden cities, where sunlight, fresh air, and exercise in gardens and playing fields can be obtained.

As far as is possible to grasp the true importance of these observations, they lean rather toward the advantage of general sanitation than in the direction of specific efforts of dust removal. It would seem better, however, to emphasize the latter point of view than the former, for as long as health-injurious dust is needlessly created or disseminated, so long the general health problems hardly admit of a final solution.

Letter of Dr. Edgar L. Collis.

FOLLOWING this correspondence between Doctor Ross and Professor Hill, an important contribution to the discussion was made by Dr. Edgar L. Collis, professor of preventive medicine of the Welsh National School of Medicine, in a letter to the London Daily Times of October 28, 1920, reading, in part, as follows:

You have recently given hospitality to the suggestion, put forward as a discovery, that the undue prevalence of phthisis among printers is due to the inhalation of dust containing silica and oxide of iron. Dust inhalation exerts its influence in predisposing to phthisis by setting up fibrosis in the lungs. The disease, fibroid phthisis, which results is twofold: First, there is the fibroid condition, which, since it is associated with the inhalation over long periods of fine particles of silica (and possibly to no other form of dust), is called silicosis; secondly, tubercular infection takes place, when the condition of the patient is altered by the ravages of the tubercle bacillus. The disease is really a tubercular silicosis.

The silicosis stage has certain definite and usually easily recognized physical signs, which are well known among gold miners, tin miners, metal grinders, potters, stonemasons, ganister workers, and others. The mortality which follows has certain definite characteristics; it occurs rather later in life than the more ordinary form of pulmonary tuberculosis; and it is always found associated with a high mortality from other diseases of the lungs. The Royal Commission on Metalliferous Mines and Quarries, whose attention was drawn by me to the previously unrecognized peculiarity of silica dust in causing the fibroid condition, carefully considered this disease, and expressed their opinion in their report published in 1914:

If in any given class a high death rate from pulmonary tuberculosis is found occurring at a later period of life than is usual for pulmonary tuberculosis, and if this high death rate is associated with a high death rate from other respiratory diseases, then this class is exposed to the inhalation of injurious dust.

The above facts bear on the question of the causation of phthisis among printers in the following way: (a) Neither clinicians nor pathologists have described during life or after death the easily recognized condition of fibroid silicosis among printers dying from phthisis; (b) phthisis among printers does not occur at the age characteristic of tubercular silicosis; (c) the mortality of printers from respiratory diseases is considerably below the average.

On the other hand, phthisis among printers resembles both clinically and statistically the disease as it occurs, also to an unusual degree, among boot and shoe operatives and among tailors. In these industries dust inhalation does not appear to influence the prevalence of the disease—e. g., in the boot trade clickers, who are not exposed to dust, suffer more than do the men in the finishing department, where there is much fine dust of leather mixed with some silica dust from sandpaper. Another instance which breaks the sequence of dust, silica, phthisis is that of makers of ganister bricks bonded together with fire clay. These men are freely exposed to dust containing a large amount of silica; yet they do not suffer from tubercular silicosis, although makers of ganister bricks bonded with lime suffer to an extent sufficient for their industry to be the first brought under the provisions of the Workmen's Compensation (Silicosis) Act, 1918.

The letter by Professor Collis, who is one of the leading authorities of the present day on dust phthisis, raises a debatable question as to

the occurrence of silicosis among the makers of ganister bricks, generally assumed to be liable to an excessive rate of pulmonary tuberculosis. It is difficult to follow the reasoning advanced without much more specific evidence than has thus far been produced. There are many reasons for believing that the diagnosis of pulmonary tuberculosis in such cases is frequently made by medical men who have no clear conception of the nature or the symptoms of true silicosis. Another portion of Doctor Collis's letter reads as follows:

Personally, after investigations carried out in practically every industry in which there is exposure to dust inhalation, and after prolonged consideration of the influences which occupation exerts upon the prevalence of phthisis, I know of no evidence in support of the view that phthisis as it occurs among printers, bootmakers, and tailors is tubercular silicosis. The position, on the other hand, seems tenable that influences common to these and other semisedentary trades, which expose the workers to adverse physiological conditions—influences already referred to by Dr. Leonard Hill—determine the high incidence of phthisis among the operatives by lowering their general, in contradistinction to their local, power of resisting infection.

It is quite probable that this viewpoint is correct on general principles. As stated before, the incidence of silica dust is at most but one of many factors contributing toward a high death rate from that disease in the printing trades. Without a large number of autopsies it would be impossible to differentiate a silicotic condition of the lungs in cases showing otherwise all the well-known symptoms of true pulmonary tuberculosis. It is in any event safe to assume that if a true silicosis were common among printers, the fact would not have escaped attention so long, but, however that may be, there is urgent need of a really qualified investigation. This has not thus far been made, and its urgency is not emphasized by the two authorities whose opinions have been quoted.

Report of Doctor Ross.

DOCTOR ROSS issued a further reply in the London Times of November 1, 1920, in which he once more dealt with the question of silica and floating fiber, and this time in more detail:

The printers have set themselves to build a sanatorium; they must have had a reason. It is because they have "consumption"; to this I can testify; I, myself, have seen it almost every day; it needs no blue books. The printers seem to know more about their phthisis than do the professors with their contradictory statistics and their conflicting statements.

The challenge in the Times of October 23 was not accepted, so I will tell my story. Silica within the "list" is conveyed from the compositors' trays and boxes into the workers' lungs by tiny, floating, vegetable fibers. These come from printers' paper, which is made from the pulp of trees. This method of carriage was found in the following way: One afternoon I was "observing" in a top-floor composing room when suddenly a sunbeam appeared through the skylight; its light showed a thin, dimly visible haze around the workers' heads and hands as they picked and tapped the type. The haze seemed to consist of minute floating particles such as one sees under similar conditions in most living rooms. I put a microscope into the sunbeam and saw nothing; then I put the sunbeam into the microscope and saw everything. The floating particles are fibers; but in printers' works the fibers are armed with microscopic crystals of silica grit derived from the "list," which in turn comes from the sand in the rusting "chases." The paper fiber gets clogged into the type in the machine rooms; and when the type is released the fiber is distributed with the sand into the compositors' boxes. Here it rests. When the type is used again the worker picks out the letters he wants and the "list" is thrown up into the air, for it wafts like dirty snuff. Then the armed fibers float—the heaving loaded fibers fall, the lighter-weighted rise, fall, then rise again; it is a matter of counterpoise. Some are inhaled.

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In a dense, high, leafy wood, once more I watched a sunbeam. Here was no floating fiber carrying grit. The fiber was in the trees, the grit upon the ground; they had no combination in the air as in our stuffy rooms.

When the fibers are inhaled, some must rise to the tops of the lungs. The fibers are adsorptitious, and can be absorbed; but the grit they hold is indivisible, insoluble, inadhibitible, and is not consumed. It is bright as a brilliant under the direct light of the microscope; and, like a diamond, it cuts. Living cells on gelatin can be made to engulf the fiber; like a bait they take the grit as well—then they swell and die. A giant cell is a dying cell; and, as stated in your leading article of October 7, becomes a nidus of dead tissue ready to be the seat of infection. Then awake the sleeping partners, predisposition and infection, with grit in active combine. Again comes more grit, and more grit, again, again, again; and so the business spreads.

But in the country, as in the woodland sunbeam, where the fibers and grit are not in actual combination, the business often ceases; hence we have open-air treatment and the sanatorium, which is but patchwork, and as a means of wholesale prevention among printers is not practical.

This statement is a useful contribution to a subject which has thus far received but fragmentary consideration. Even granting that possibly "list" is not so serious a factor as is here asserted to be the case, it is, nevertheless, in all probability an important contributory factor, the presence of which should not be lost sight of. But Doctor Ross goes too far when he concludes with "My story is completed," for "it is the secret of fibrosis and of silicosis, of pulmonary tuberculosis as well as of old 'consumption'; it is a tale of a conjunction, a concatenation, a conspiracy of circumstances, which, now that we know, we can and must prevent." As a matter of fact, Doctor Ross advances no more than a hypothesis that leaves the real ascertainment of the facts to the future.

Letter of Dr. James Crichton-Browne.

THE foregoing correspondence is of particular interest as illustrating the want of scientific thoroughness in dealing with an important question affecting the health and well-being of a very considerable proportion of wage earners. The letters attracted the attention of so distinguished an authority as Dr. James Crichton-Browne, who, under date of November 3, 1920, wrote to the London Times as follows:

Mr. Halford Ross gives us a picturesque account—somewhat reminiscent of Tyndall—of the dust in the printer's composing room, but he fails to supply us with any scientific evidence in support of his contention that that dust is immediately responsible for printer's phthisis. Almost all dust contains silica and vegetable fiber, and until Mr. Halford Ross can show that the amount of silica in the dust of the composing room is disproportionately large, and that it is fibrosis and tubercular silicosis, and not ordinary pulmonary tuberculosis, from which printers suffer, his discovery remains merely an ingenious speculation.

A number of years ago, when studying the dust problem, I collected some dust from the top of a wardrobe in the sick room of a lady in the West End of London. The room had been whitewashed and papered a few months previously and dusted regularly, but the wardrobe had been overlooked, and a thick layer of dust had been deposited on it. In a test tube the dust was not unlike basic slag, being of the same gray color, but, of course, much lighter and more flocculent. To analysis it yielded the following results:

Moisture	4.4
Organic matter	52.6
Silica and insoluble silicates.....	21.0
Oxide of iron and alumina.....	9.7
Lime (CaO.).....	6.2
Carbonic acid, with traces of sulphuric and phosphoric acid.....	6.1

100.0

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Under the microscope the dust was seen to consist of inorganic and organic material. The inorganic matter was mostly amorphous, and the organic matter organized. Among the commonest constituents were vegetable and animal fibers derived from fabrics such as linen, cotton, and wool, something resembling jute fiber being also present. In addition, there were a few feather barbs and fragments of wood. Among the most interesting constituents were squamous epithelial cells from the skin and small round cells, both of which were fairly numerous. Food materials were represented by starch granules, and there were certain organized vegetable materials, among which a few pollen spores could be identified.

Such is London domestic dust. Dust of many different kinds may be provocative or aggravative of phthisis, and it is possible that silica may play some part in the origin and advance of that malady in printers, but it seems much more probable that its prevalence amongst them is attributable to the other conditions, enumerated by Dr. Leonard Hill, under which their employment is carried on.

But even this interesting communication does not materially aid the question in that it leaves unsolved the problem as to what the true proportion of silica in the dust of printshops in which the "list" is present in appreciable quantities really is. But the conclusion by Doctor Crichton-Browne would seem to be sound that while it is possible "that silica may play some part in the origin and advance of that malady in printers, it seems much more probable that its prevalence amongst them is attributable to the other conditions, enumerated by Dr. Leonard Hill, under which their employment is carried on." This might be so or might not be so, according to the evidence which thus far has not been forthcoming.

Letter of National Society of Operative Printers.

AN INTERESTING letter bearing upon the controversy was contributed by the secretary of the National Society of Operative Printers, dated November 4, 1920:

As secretary of the National Society of Operative Printers and Assistants, I am naturally keenly interested in the correspondence relating to tuberculosis amongst printers, especially amongst printers' assistants. Whilst anxious to ascertain the cause of the prevalence of the disease among printers, my society is more eager to do what it can to cure those who are now suffering from this terrible disease, and to make the risk of infection less than previously.

Mention has been made of the sanatorium we are building to fight tuberculosis, such sanatorium to be a memorial to our fallen members. This is a huge undertaking for a trade-union of less than 20,000 members to contemplate, but the work has actually commenced, thanks to the ready assistance of newspaper proprietors and master printers. We are, however, in urgent need of funds, and I beg to take this opportunity of making known our necessity. Our institutions have for their president the Right Hon. the Viscount Northcliffe, and the support of other eminent gentlemen in our industry. This is a sufficient guaranty for our bona fides. I am confident that, were our objects known outside the industry, we should receive assistance, and we should be grateful if any reader of this correspondence should feel moved to help us.

In any event, as representing the section most seriously suffering from tuberculosis in the printing industry, we thank you for the publicity given to this matter in your columns, confident that good will arise from the interchange of opinions.

This letter also fails to advance the problem so clearly presented by Doctor Ross, that the question of phthisis in the printing trade should receive the most qualified consideration of those competent to inquire exhaustively into the true nature of the problem stated. Raising huge funds for curative purposes does not go to the root of the question which concerns the prevention of the disease at the outset.

Further Statements of Doctor Ross.

UNDER date of November 20, 1920, Doctor Ross made a further extended statement with particular reference to predisposing causes. This statement includes the interesting observation that thus far the evidence has been inconclusive that printers were suffering from silicosis. This raises a very interesting question as to whether silicotic dust of itself may be the cause of pulmonary tuberculosis without leading to a silicotic condition of the lungs. This, of course, is quite improbable and clearly illustrates the superficial manner in which the underlying facts of a highly suggestive situation have been considered. The letter is as follows:

I shall be grateful if you will allow me to reply to the criticisms of my research into printer's phthisis. These resolve themselves into two. The first concerns the amount of silica within the printer's "list." As stated before, this varies greatly in each work. Its sources must be remembered—the age, the number, the rusting of the "chases," and the temperature and texture of the molten iron used in their manufacture. But the presence of silica in the machine and composing rooms is constant, though if we tried to find its exact constant content, an immense number of analyses would be required from thousands of boxes and rooms in order to satisfy the law of chances to exclude the error of random sampling. Fortunately, this is not necessary, for silica is always there; it is a consistent element in the "list." A more important factor is the amount and range of flight of the tiny floating fiber which carries the silica into the workers' lungs. In all "carried" disease the salient thing is the radius of action of the carrier. There is the example of insect-borne diseases such as malaria, yellow fever, sleeping sickness, infantile enteritis, which vary directly with the activities of the infected mosquitoes, tsetse, or house flies. We set out to arrest the carriers; we do not stop to count their passengers. So it is with printer's phthisis; its incidence varies with the amount, size, shape, weight, and radius of action of the floating loaded fibers, and these vary with the quantity and quality of paper used. It must be realized that the machine and composing room operatives work close to the fiber, and thus readily inhale the carried grit.

The other criticism is that printers have not been shown to suffer from silicosis. I did not say they had. I said that printers have phthisis, and that silica causes phthisis when combined with the sleeping partners, predisposition and infection, which vary in each case like the dose of the carrier. It is a toiling of terms. Silicosis, chalicosis, siderosis, pneumoconiosis, sclerosis, fibrosis, industrial phthisis, is but the old "consumption." If careful inquiry is made into each of the phthisical trades, Rand miners, tin miners, cotton doublers, metal grinders, quartz, granite, and ganister workers, grain shovelers, bootmakers, tin (iron) box manufacturers, and domestic servants, there will be found in active combination near them, as among the printers, silica carried by fiber. But we must beware of the error of random sampling when we consider comparative statistics of this industrial disease, for which there is one end term, namely, pulmonary tuberculosis. And Sir James Crichton-Browne is right when he says that dust may be provocative of phthisis—it is the silica within the dust carried by the fiber which is the active cause.

Does the fiber carry germs as well as grit? I have reasoned very carefully. So far as pulmonary tuberculosis is concerned, the evidence at present is against it; the germs are buried deep within the lungs. Spitting is diminished. Has pulmonary tuberculosis diminished, too? But what of other affections of the mouth, and nose, and throat, of asthma and bronchitis, of "colds," catarrhs, and coughs? Is it possible that sometimes the fiber in our rooms is germ-laden, can be a sword poisoned as well as sharp? I do not know, but I think that a new pathway has been opened for research.

Below is given another letter by Doctor Ross, contributed to the London Times; unfortunately the date of the issue is not available.

It is most gratifying to hear, according to your issue of the 13th instant, that the Medical Research Council has confirmed dust (silica) as being the active factor in the causation of pulmonary tuberculosis. It will be remembered that this was enunciated by me in the Times of October 14, 1920, under the title of "Printers' phthisis," and gave rise to considerable controversy.

The Whitley Council, the Federation of Masters, the trade-unions, and the technical press of the printing trade have taken up the matter strongly, and dust reduction has

already been effected by many firms with good results. But we are not justified in concluding that the industry is out of danger. Yet this is what one of H. M. inspectors of factories would appear to have us believe. He has written an article in the current Home Office Annual Report, in which he draws the deduction that printing is "not a dusty trade." This and other conclusions were made after investigations in eight factories. Sir Arthur Whitelegge, in the last chapter of his well-known book on public health, warns us against such premature deductions, calls them errors of random sampling, and labels them as unscientific. The book quotes a formula by which these mistakes can be avoided. As there are 8,000 printing works in this country, the inspector's deduction shows a statistical error of 25 per cent.

There is no doubt that dust plays a dangerous part in the health of our lives, and can be greatly reduced.

Doctor Ross is entirely justified in his conclusion that the element of error in limited investigations is too serious a factor to be obscured by official authority responsible for emphatic statements not, perhaps, in strict accordance with the facts.

Incidence of Phthisis in Printing Trades.

IT IS interesting to note that in the entire correspondence no specific information is presented as regards the true incidence of phthisis in the printer's trade. Major Greenwood, of the Lister Institute, in the Milroy lectures for 1922, has, however, included some tables which permit of a definite statement regarding the comparative mortality from phthisis and from nontuberculous respiratory diseases, as well as from all causes among printers, according to the occupational mortality experience of England and Wales for the period 1910-1912. This important information has been republished in the *British Medical Journal* of May 13, 1922.

According to Major Greenwood, the relative mortality of printers from all causes, compared with that of clergymen, taken as 100, at ages 20-34, was 218; while for the mortality from phthisis it was 402 and from pneumonia, 200. Here, then, is definite and conclusive evidence that the mortality from phthisis of English printers soon after entrance into the trade is four times that of clergymen, who are assumed to represent a practically nonhazardous occupation.

At ages 35 to 44, in contrast to the comparative mortality of 100 for clergymen, the mortality of printers from all causes was 251; from phthisis, 464, and from pneumonia, 239.

At ages 45 to 55, against a comparative death rate of 100 for clergymen, the mortality of printers from all causes was 192; from phthisis, 571, and from pneumonia, 175. Thus the phthisis death rate for printers is progressively excessive until middle life. At ages 55 to 65, the comparative mortality of printers from all causes is 130; from phthisis, 496; from pneumonia, 137, and from bronchitis, 413. How much of this mortality is erroneously diagnosed as tubercular or non-tubercular respiratory diseases instead of what may possibly have been a true form of silicosis is, of course, a matter of conjecture, but the evidence is absolutely conclusive that the tuberculosis mortality of English printers, throughout life, is relatively enormously in excess of an occupation generally assumed to be the healthiest of all occupations. While the comparison is a severe one, it is, nevertheless, strictly admissible.

Unfortunately, the most recent contribution to this interesting subject, made by Mr. C. B. Roos, H. M. inspector of factories, and

reprinted in the *Journal of Industrial Hygiene* for January, 1922, is not available at this writing. But the major purpose of reprinting the foregoing correspondence has been to place on permanent record the viewpoint of high British authorities on a most important medical and sanitary question concerning the hygiene of the printing trades. The correspondence will prove invaluable in the furtherance of more detailed research into a subject which requires decidedly more exhaustive consideration than it has thus far received.

Heart Disease in Industry.

TWO articles appearing recently in medical journals evidence the interest which is being taken by physicians in cardiac disease, particularly in its effects upon industrial workers. In the general discussion of the subject by Doctor Clark in the *Boston Medical and Surgical Journal*¹ reference is made to a recent study by Dr. Louis I. Dublin which showed that 2 per cent of persons examined by insurance companies are rejected for serious heart defects, that the same percentage of serious heart disease prevails among industrial workers, and that rejections in the draft and camp examinations for this cause formed 2 per cent of the total, while the rate among children examined in the schools has been found to be from 1½ to 2 per cent.

Tuberculosis has long been recognized as one of the prevalent diseases among industrial workers, and while cardiac disease does not produce the early mortality of tuberculosis it is surprising to learn that in the past three years organic heart disease has caused more deaths than tuberculosis. This change in relation of the two diseases has not been caused by an increase of mortality from heart disease, the rate for which has remained fairly stationary in recent years, but by a fall in the number of deaths from tuberculosis. The seriousness of the disease is shown by the statement that organic heart disease causes as many deaths as typhoid fever in persons under 25 years of age. Between 25 and 34 years it causes more deaths than lobar pneumonia; between 35 and 44, more deaths than Bright's disease; and after 45 years, it shows a higher death rate than any other cause.

The definite effect of industrial poisons in producing specific heart disease is more or less an open question at the present time, although it is the personal belief of the writer that there is no industrial poison known which has a specific effect on the heart resulting in disease. There are substances, however, which he states cause disordered action of the heart and cardiac syncope, and while arteriosclerosis, which may be caused by lead poisoning, is a very important cause of heart disease, he still questions whether it can be attributed solely to work in industry. From his experience as an industrial physician, the writer believes that the majority of cases of heart diseases are secondary to germ infection, and that in most of these cases the germ was that harbored in the tonsils or causing rheumatic fever.

In dealing with the individual cardiac in industry the problem for the industrial physician is to prevent strain. To accomplish this a

¹ *Boston Medical and Surgical Journal*, July 6, 1922, pp. 21-23. "Heart disease in industry," by W. Irving Clark, jr., M. D.

careful primary examination and record is necessary, an adjustment of work when required, reexaminations at stated periods, and careful instruction as to proper living. By following such a program, the author says, "organic heart disease may carry on in industry with minimum risk and maximum value to the diseased individual and the community."

The necessity for early recognition of cardiac disease and supervision of these cases is also stressed by Doctor Phipps² in an article in *The Nation's Health*, although he considers that the usual routine physical examination of all men seeking employment fails through placing the stress on the more obvious lesions and overlooking the obscure or border-line cases. Cardiac disease may manifest itself between examinations when these are given periodically, and in order to recognize this condition as soon after its onset as possible it is essential that industrial physicians should investigate all illnesses or incapacities with a clear understanding of what symptoms suggest cardiac difficulty.

The diagnosis of a severe "cold" or bronchitis may perhaps, on investigation, prove to be some degree of cardiac decompensation with resulting cough, expectoration, and dyspnea. The statement that the employee's feet have been "bothering" him may depend upon the edema of a failing heart. "Gas," a common lay diagnosis, may in reality prove to be abdominal enlargement due again to heart disease. "Rheumatism" or "neuritis," involving the left chest and arm, may be the pain from sclerotic coronary arteries, or, more commonly, the complaint of 'indigestion,' with a history of attacks of epigastric discomfort, when occurring after middle age, should always suggest angina pectoris.

Besides the investigation of such symptoms and incapacities, the time sheets and efficiency records of modern manufacturing plants will often be of suggestive value. Hand in hand with the loss of heart power goes usually a corresponding loss of working ability, nor is this surprising when we consider how dependent are our activities upon the circulatory system to meet varying conditions.

The difficulty of recognizing many initial cardiac lesions and their varying degrees of seriousness make careful diagnosis of great importance, but in addition to this and of even greater importance, the writer states, is the determination of the ability of the heart to do its work and what its reserve power is.

For economic reasons, we should not allow men to attempt to fill positions for which they are unfitted because of some heart lesion: They should not be allowed to do poor work, nor should they undermine their health in attempting to do good work. They should be refused work which overtaxes their heart's strength. Opportunity for sudden or violent exertion—or perhaps extreme emotional stress, in some cases—should be removed, and the employee should be warned of such danger. Our second duty to the employee must consist in trying to relieve his cardiac condition in so far as possible, and this entails arranging his work with the idea of giving him less than his heart is able to do without injury. This may mean lighter work, work of a different kind, or perhaps complete rest. Of great importance in the recognition and perhaps the prevention of the border-line case is a knowledge of what conditions enter into its production. The specific diseases—rheumatism, syphilis, diphtheria, scarlet fever, hyperthyroidism—are common causes of heart trouble, and so should be treated with this fact in mind. Arteriosclerosis and chronic Bright's disease, with or without arterial hypertension, almost always have some harmful effect upon the heart, and so in selecting work for such patients, the increasing cardiac embarrassment must be taken into consideration. Certain poisons, such as lead and arsenic, may play at least a part in the production of heart disease, and, beside our prophylactic measures, this fact would suggest more frequent and careful examinations of workmen engaged in their manufacture.

² *The Nation's Health*, July 15, 1922, pp. 434, 435. "Heart disease in industry—border line cases," by Cadis Phipps, M.D.

While rest is essential in many heart conditions, in certain of the arrhythmias which rest upon a distinctly neurotic basis, nothing should be done to increase the patient's apprehension since such a heart would not be injured even by vigorous exercise. Labelling such a patient as "cardiac" and advising giving up all work involving exertion, while it is often done, is said to be distinctly harmful. Besides these purely functional disturbances, it is stated, there are also many cases of heart disease which may be benefited by some degree of exercise, although an ample period of complete rest must be allowed and the return to work should be gradual and should never be allowed to reach a stage where it has an injurious effect.

In conclusion the writer says:

It is not the obviously damaged heart which is neglected; it is the obscure, or border-line, case. A border-line case is oftentimes more amenable to treatment than the established or long-continued lesion, and so may be benefited if recognized. To determine if an obscure heart lesion be present, it is usually not sufficient to depend upon a routine physical examination; a careful history of the symptoms and a consideration of various etiological factors, combined with several physical tests, must be employed.

Besides protecting the industry, the employee's health must be of prime interest. His interests are best served (in regard to cardiac disease) by (1) removal or preventive treatment of possible causes; (2) earliest possible recognition of cardiac disease; (3) complete rest for a sufficient period of time, followed by (4) a gradual return to working conditions, never reaching the limit of the heart's ability.

Safety Activity of a Large Motor Company.

EACH new employee at the works of a certain motor company is given a card which reads as follows:

TO ALL NEW EMPLOYEES.

Greetings: We want your stay with us to be long, prosperous, and free from injury. Whether or not it will be so is partly up to *you*. Are you careful? Are you ambitious? Work safely so we all can enjoy safety.

When injured so that *blood shows*, come to the doctor's office at *once*—not two days later.

Goggles have saved many men from blindness. Get them at tool crib and *wear them* when working on cyanide furnaces, chipping, grinding, babbitting, breaking up concrete, shapers, and all other jobs where small particles fly.

Before working on ladders or scaffolds be sure to test them.

— MOTOR CO.

DEPT. SAFETY AND FACTORY HYGIENE.

SAFETY RECORD: *One death by accident among 50,000 workmen during fiscal year 1918-19.*

In this way the employee is at once made aware of the management's attitude regarding accidents and specially warned regarding three items which experience has shown to be of particular importance.

The following table compiled from the quarterly publications of the company gives an idea of the results secured by the various efforts of the department of safety and factory hygiene. The table covers six months of 1922.

ACCIDENT RECORD IN A LARGE MOTOR WORKS, JANUARY TO JUNE, 1922.

Month.	Days in operation.	Number of workers.	Fatalities.	Nonfatal accidents.	Frequency rate (cases per 1,000,000 hours' exposure).	Severity rate (days lost per 10,000 hours' exposure).
January.....	14	37,766	0	34	8.43	7.89
February.....	16	36,792	0	34	7.22	.55
March.....	20	37,296	0	59	9.89	5.76
April.....	25	41,766	0	91	11.43	2.96
May.....	26	45,946	0	114	12.51	4.74
June.....	26	49,850	0	131	13.25	2.31

The table illustrates again the strong tendency for minor injury to increase when new men are taken on. The second three months of the period covered was marked by the addition of more than 12,000 men to the working force. From month to month while this increase was going on the accident frequency rate increased. It is still an open question whether it is possible to oppose this tendency by sufficiently energetic measures to prevent it altogether.

That this increase was due to a greater number of cases of minor injury becomes evident when the severity rate is considered. The average severity rate of the second three months' period is materially below the first three months notwithstanding the increased frequency.

When the safety department noted this increasing frequency it was determined to stage a week of special accident prevention effort. Group meetings were held throughout the works, at which superintendents and foremen instructed the men in safe methods of procedure in their particular jobs.

The week showed a reduction in frequency of about 50 per cent from the week immediately preceding.

It is proposed to hold such safety meetings on the first workday of each month hereafter, to continue the instruction and keep alive the interest and attention of the men.

Mine Accidents in Alaska, 1921.

THE following table, compiled from the Report of the Territorial Mine Inspector of Alaska, for 1921, shows the number of men employed, the number of shifts worked, the number of accidents occurring, and the days lost thereby, at lode mines, ore-dressing plants, and coal mines in Alaska in 1921:

SUMMARY OF MINE ACCIDENT STATISTICS FOR ALASKA, 1921.

Group.	Number of plants reporting.	Number of men employed.	Number of shifts worked.	Result of accidents.			Total time lost (days).
				Fatal.	Serious.	Slight.	
Gold mines.....	12	698	178,828	7	28	82	1,775
Copper mines.....	7	403	213,977	4	30	74	1,379
Gold-milling plants.....	9	364	97,996	1	3	20	156
Copper-milling plants.....	2	216	77,814	-----	8	4	209
Coal mines.....	(1)	337	103,289	-----	9	15	471
Total.....	-----	2,018	671,904	2 12	78	195	3,990

¹ Number not given.

² In addition to the fatalities listed in the above summary three not directly connected with mining or milling operations occurred during 1921. Two of these were due to snowslides and one to the wrecking of a bunkhouse during a storm. Two occurred at gold mines and one at a copper mine.

First Aid and Mine Rescue.

FOR many years the work of carrying on first aid and mine rescue classes had been neglected in Alaska, but in October, 1921, the United States Bureau of Mines assigned one of its staff to conduct such classes in the territory under the direction of the mine inspectors. The report emphasizes the need for first aid. Since many of the mining camps are too small to support a doctor, and several days may pass before medical aid can be secured for injured persons, the advantages of having the workers able to give first aid are obvious.

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Fatal Accidents in British Coal Mines, 1874 to 1920.

THE following table compiled from statistics published in the report¹ of the Monmouthshire and South Wales Coal Owners' Association (pp. 130-133) shows the number of underground and surface employees, total number of deaths from accidents, and the death rate per 1,000 persons employed in British coal mines, 1874 to 1920, shown by five-year intervals up to 1914. The highest death rate for both groups of workers occurred in 1878, the rate being 3.4 per 1,000 persons employed underground and 2.9 for underground and surface workers combined.

NUMBER OF EMPLOYEES, NUMBER OF DEATHS FROM ACCIDENTS, AND DEATH RATE PER 1,000 IN BRITISH COAL MINES, 1874 TO 1920.

Year.	Underground workers.			Underground and surface workers.		
	Average number employed.	Deaths from accident.	Death rate per 1,000.	Average number employed.	Deaths from accident.	Death rate per 1,000.
1874.....	428,611	947	2.2	538,829	1,056	1.9
1879.....	385,179	902	2.3	476,810	973	2.0
1884.....	422,233	848	2.0	520,376	942	1.8
1889.....	463,600	969	2.0	563,735	1,064	1.8
1894.....	569,678	1,015	1.7	705,240	1,127	1.5
1899.....	583,009	801	1.3	729,009	916	1.2
1904.....	681,683	914	1.3	847,553	1,055	1.2
1909.....	818,381	1,321	1.6	1,013,998	1,453	1.4
1914.....	915,381	1,086	1.1	1,133,746	1,219	1.0
1915.....	754,673	1,167	1.5	953,642	1,297	1.3
1916.....	792,911	1,163	1.4	998,063	1,313	1.3
1917.....	811,510	1,214	1.4	1,021,340	1,370	1.3
1918.....	794,843	1,277	1.6	1,008,867	1,401	1.3
1919.....	945,806	1,003	1.0	1,191,313	1,118	.9
1920.....	990,359	965	1.0	1,248,224	1,103	.9

¹ Gibson, Finlay A. A compilation of statistics of the coal mining industry of the United Kingdom, the various coal fields thereof, and the principal foreign countries of the world. Cardiff, 1922.

WORKMEN'S COMPENSATION AND SOCIAL INSURANCE.

Comparison of Workmen's Compensation Insurance and Administration.

THE Bureau of Labor Statistics has recently issued a bulletin entitled "Comparison of workmen's compensation insurance and administration," being the report of an original investigation (covering 20 States and 2 Canadian Provinces) of the relative costs, security, and service of the various types of insurance carriers.

Exclusive and competitive State funds are differentiated and a general comparison is drawn between State funds and private insurance, especially as to cost, both to the State, to the employee, and to the employer, and as to the nature of the service rendered. As regards promptness of payments the records of the State funds vary widely and there are also great variations in each type of insurance carrier. Long delay on the part of all carriers is shown, and self-insurers are just as slow in paying compensation as the casualty companies or State funds. There are various reasons for the long delay in making payments by the State funds, such as delay of employers, physicians, and employees in reporting accidents, inadequate follow-up methods, complicated procedure, insufficient force, etc.

The cost of compensation insurance to employers under different insurance systems as indicated by their expense ratios is found to average approximately 38 per cent for stock companies, 20 per cent for mutual companies, 10.6 per cent for competitive State funds, and 4 per cent for exclusive State funds. Thus far no injured workman has lost his compensation because of the insolvency of State insurance funds, nor has any large mutual company become insolvent. There have been several disastrous failures of stock companies during the last few years, while in 15 of 21 States whose experience has been reported no self-insured employer has failed or gone into the hands of a receiver, and only 2 States reported failures—one small concern in each State—which resulted in several claims being unpaid.

The report also discusses the administrative functions, personnel, and expenses of the different commissions and funds, and methods of accident reporting and claim procedure are compared and also given in detail for each fund or commission. Data are presented relative to the solvency of State funds, including the questions of rates, merit rating, reserves and surplus, claim reserves, catastrophe reserves, dividends, collection of premiums, auditing of pay rolls, and expenses, premium income, surplus, and dividends. As to reserves and surplus it is said:

The actuarial solvency of a fund means that at any given time the assets of the fund are sufficient to meet all outstanding liabilities and obligations. This would include adequate reserves covering all outstanding claims or deferred payments, unreported

accidents, reopened claims, future administrative expenses, and any other contingent liability. In addition it is also desirable to have a catastrophe reserve to take care of the catastrophe hazard and an additional surplus to meet exceptional and fluctuating losses. The adequacy of the reserves and surplus as shown in the financial statements of the funds depends upon whether proper actuarial methods were used in computing the reserves.

A survey of the accident and compensation statistics of the various States shows there is need for greater completeness and adequacy of data and for harmony in methods of presentation. The effect of the weekly maximum in reducing compensation benefits is brought out in a series of tables, which show that as a matter of fact, because of the operation of this weekly maximum the statutory percentage of, say, 66 $\frac{2}{3}$ is reduced to 30, 25, or even 20.

A discussion of methods of computing wages in workmen's compensation practice compares the legal provisions, commission rulings, and court and commission decisions which outline the various methods now in use in the United States and Canada. What is included in the term "wages" in the various States is also discussed.

Recent Compensation Reports.

Illinois.

THE Industrial Commission of Illinois has issued its annual report covering the fiscal year ending June 30, 1921, but giving accident statistics for the calendar year 1920. A preliminary statement sets forth the nature and purpose of the compensation law, and shows a large increase in the use made of it since it became operative. Thus, in the year 1915 but 12,240 accidents were reported, while for 1920 the number was 50,585. This is regarded not as an increase in the number of accidents actually occurring, but, to a very considerable extent, at least, in the number reported owing to a better understanding of the law and a fuller compliance with it. The commission reports its close cooperation with the widow's pension department of the juvenile court, with the bureau of factory inspection, the employment bureaus of the department of labor, and the insurance department of the State. A close check is kept upon accident reports and receipts filed, and variations between settlements and the provisions of the compensation act are promptly notified to the employer.

A recent important decision largely extends the scope of the act, the supreme court of the State holding that where an establishment comes under the act as extrahazardous all employees of the establishment are included under the act, and not merely those engaged in the characteristic occupation. (*Illinois Publishing & Printing Co. v. Industrial Commission*, 132 N. E. 511.) It is said that "this case extended the provisions of the act to a class of employees, thousands in number, not heretofore covered by the act."

Amendments to the law are also noted, increasing the amount of benefits, and bringing disablement due to occupational disease within the act the same as accidental injuries.

Tables for the year 1920 show the number of fatal and nonfatal accidents closed and pending, with the amount of compensation and

medical aid paid and to be paid; frequency of accidents by industries; with extent of disability and compensation and medical costs, compensation, medical costs, extent and average period of disability, by location of injury; nature of injury, by cause of accident, sex, and wages of injured; distribution, by counties and months and sex and age of injured; fatal cases, by industry, dependency, and total and average cost, etc.

As already stated, there were 50,585 compensable accident reports filed with the commission during the year, of which 597 were fatal. "It is discouraging to note that there was an increase of 62 fatal accidents in the year 1920." The number of all cases was 12,296 more than in 1919, "undoubtedly due to the fact that the employees of the State are more cognizant of their rights under the workmen's compensation act." Payments during the year amounted to \$5,143,300, the estimated amount due on open cases being \$3,415,498; besides this, there were medical and funeral expenses amounting to \$731,911. The mining of coal is responsible for the largest number of accidents and the greatest amount of compensation; metal products rank second, with machinery and instruments third.

The total number of days lost because of injuries was given as 1,291,518, the average period of disability being 26 days. Falling objects caused the greatest number of injuries, falls of persons coming second, and vehicles third.

Though mining leads in the number of accidents and amount of compensation paid, it is interesting to note that the county of Cook, in which Chicago is located, furnishes 49 per cent of all accidents and calls for 45 per cent of all compensation paid in the State.

The age at which the greatest number of males were injured falls between 26 and 30 years, while for females it is between 16 and 20 years.

Of the 597 fatal cases, there were 62 in which no dependents survived. Medical and funeral expenses amounted to \$17,476. There were 412 cases in which total dependents, aggregating 1,027, were left; 123 decedents left partial dependents numbering 177. The compensation paid in fatal cases was \$483,006, while \$1,254,548 remains to be paid. The average cost for fatal cases was \$2,940, while for permanent total disability it was \$9,500. As is always the case, temporary total disabilities involve by far the largest portion of the cost, aggregating \$3,551,365, or an average of \$86 per case.

The report expresses gratification over the increasing knowledge of the law on the part of both employers and employees, and the proper attitude toward each other, which "can not be better illustrated than by reciting the fact that during the last year over 50,000 accidents were reported to the commission, while about 12,000 claims were filed for arbitration; in other words, more than 75 per cent of the accidents have been adjusted without recourse to arbitration."

Kansas.

THE workmen's compensation law of Kansas is administered by the courts of the State, rather than by any special agency, but the court of industrial relations acts in an advisory capacity and receives reports of accidents and the amount of compensation paid. The report of the court for the year 1921 shows 6,311 acci-

dents reported, of which 71 were fatal, 93 caused amputation or other form of permanent disability, 2,656 others caused loss of more than one week's time, while 3,491 caused less than one week's disability. Compensation amounting to \$61,042 was paid in 23 fatal cases reported closed, or an average of \$2,654 per case. There were 33 workmen reported killed, not under the compensation law, in behalf of 16 of whom \$26,174 was collected by dependents, or an average of \$1,636 per case. Fifteen cases remain open under the compensation law, and 17 outside of it. Permanent injury cases called for \$46,904 in benefits, and temporary disablement for \$138,388.

No material amendments have been made to the compensation law since 1917, though several efforts have been made for amendments or the substitution of an entirely new law. More liberal benefits are urged, and the appointment of a commission to administer the law, unless the administration is intrusted to an existing State official, "preferably of the labor department." The present system permits almost, if not quite as much, delay as under liability suits, litigation at the employee's expense often being necessary, cases going even to the supreme court before any award is obtained. Compulsory insurance of the employer's obligations is also recommended.

Ohio.

THE Industrial Commission of Ohio has issued a statement to the subscribers to the State insurance fund, showing the condition of the fund as of December 31, 1921. Assets aggregated \$39,274,516.74, of which \$35,642,702.98 was invested in bonds. Claims reserves amounted to \$30,271,475.97, the statutory surplus (catastrophe fund) to \$2,219,942.82, and the general surplus to \$1,647,523.98. Both these surpluses exceed the estimated amounts needed as catastrophe protection and margin for fluctuations due to industrial changes, legislation, etc. Besides these a dividend has been declared payable at the first adjustment of premiums after July 1, 1922, the amount available for this purpose being \$3,000,000, or 30 per cent on last year's premiums of the employers whose operations fall within the classifications producing the surplus. Seventy-one per cent of the classifications qualified for the dividend. This favorable showing of the fund warrants a reduction in the premium rates in 66 per cent of the premium classifications; in 24 per cent, no change will be made; while in 10 per cent the experience calls for an increase in rates.

The merit rating system has been revised and extended, and, among other changes, will place contractors on the same footing in respect to merit rating as other employers, a separate plan having heretofore operated for contractors. An accident prevention laboratory has also been inaugurated. Working through the division of workshops, factories, and public buildings, there are furnished "data of inestimable value to the inspectors in carrying out their accident prevention work." Further extension of this work is in prospect, but activities in this line are limited by the appropriation made available for the purpose by the legislature, "the fund being at present operated on less than 4 per cent of the annual premium receipts, while insurance companies use from 30 to 40 per cent of their annual premium for administrative expense."

Experience Under Danish Invalidity Insurance Law.

THE president of the invalidity court established by the invalidity insurance law¹ of Denmark has recently made a report² on the work of the court during the first six months of its existence. During this time 8,400 applications for invalidity allowances were received by the fund, 3,455 of which were passed to the court for its decision as to whether or not invalidity existed. Under the law, invalidity exists only when there is a loss of two-thirds of the earning capacity, not in a particular trade but the earning capacity of "a physically and mentally sound person of the same training, in the same locality." Pensions may be allowed for temporary or permanent invalidity, the invalidity being regarded as temporary if there is a possibility of improvement in health or earning capacity through use of artificial limbs, change of work, etc.

As considerable time may intervene before a case is passed upon and the pension received, the law provides that for needy persons advance payments on the pension may be made by municipal councils, and in case application for pension is refused these advances are not to have the force of poor relief unless applicant has given false information.

Of the first 1,000 cases disposed of by the court, 167 were disallowed, while pensions were granted for temporary invalidity in 121 and for permanent invalidity in 712. The following table shows the illnesses for which pensions were granted by the court:

NUMBER OF PERSONS GRANTED INVALIDITY PENSIONS FOR EACH CAUSE, BY TYPE OF PENSION AND SEX.

Cause.	Number of awards for—						Total.		
	Temporary invalidity.			Permanent invalidity.			Men.	Wom-en.	Total.
	Men.	Wom-en.	Total.	Men.	Wom-en.	Total.			
Illness causing body changes (especially diabetes and Basedow's disease).....		2	2	12	5	17	12	7	19
Chronic deforming rheumatism.....		2	2	37	118	155	37	120	157
Pulmonary tuberculosis.....	13	11	24	40	29	69	53	40	93
Other forms of tuberculosis.....	5	13	18	12	9	21	17	22	39
Malignant tumors (cancer).....	2		2	9	5	14	11	5	16
Mental diseases and neurosis.....	4	2	6	27	17	44	31	19	50
Brain and spinal cord ailments, etc.....	10	5	15	91	71	162	101	76	177
Heart and circulation.....	3	3	6	23	24	47	26	27	53
Diseases of respiratory organs.....	4	2	6	19	6	25	23	8	31
Diseases of urinary system and sexual organs.....		1	1	6	2	8	6	3	9
Diseases of digestive organs.....	3	2	5	1	8	9	4	10	14
Impaired eyesight (blindness).....	7	1	8	14	18	32	21	19	40
Skin diseases.....	1	1	2	3	1	4	4	2	6
Ailments due to accidents.....	3		3	12	4	16	15	4	19
Deformities (except due to accidents).....	5	3	8	19	11	30	24	14	38
Amputations.....	3	4	7	10	4	14	13	8	21
General debility or combination of ailments.....	1		1	13	19	32	14	19	33
Other causes.....	3	2	5	7	6	13	10	8	18
Total.....	67	54	121	355	357	712	422	411	833

¹ For a short account of the provisions of this law see MONTHLY LABOR REVIEW, January, 1922, pp. 198, 199.

² Social Forsorg, Copenhagen, Hefte No. 4, pp. 85-91. Meddelelsesblad for Arbejderforsikrings-Raadet, Arbejdsnaevnet, Arbejdsdirektoratet samt Arbejdsraadet.

As is shown in the table, the largest group, of which nearly all are permanent invalids, includes persons with brain or spinal afflictions. The next largest group consists of persons with deforming rheumatism of the joints, so prevalent in Denmark, nearly all of this group being permanent invalids.

Out of 67 cases of amputation, pensions were awarded in only 21. In cases of this sort, it is stated, the loss of a limb very seldom results in a loss of two-thirds of the earning capacity.

Attention is called to the relative number of awards to men and women. Thus in the group awarded pensions because of rheumatism women constitute the great majority; in the group pensioned because of amputations, the opposite is true.

Accident Insurance in Norwegian Fishing Industry, 1920.

STATISTICS on fisherman's insurance published by the Norwegian State Insurance Institute¹ for the year 1920, show that 93,509 persons were insured, slightly less than for the years 1918 and 1919, but with this exception the largest since the enactment of the insurance law of 1908.

Of the total insured 72,294 were deep-sea fishermen, 17,211 fjord fishermen, 682 whalers and sealers, and 3,322 "small shipping", which includes pilot and life-saving crews and all engaged in unloading fishing and other small vessels. Of the 93,509 only 50 were women, nearly one-half of whom belonged in the single township of Talvik in Finmark. During 1920, 288 accidents were reported, of which 203 were compensable. Of these, 127 resulted in death, all except 9 of the deaths being due to drowning. A total of 241,547 kroner (\$64,735, par) was paid out in benefits.

¹ Norway. Riksforsikringsanstalten. Sjømannsforsikringen for året 1919. Ulykkesforsikring for sjømenn. Fiskeriforsikringen for året 1920. Ulykkesforsikring for fiskere m. v. Christiania, 1922.

LABOR LAWS AND COURT DECISIONS.

Power of United States Railroad Labor Board to Enforce Awards.

UNDER the foregoing heading an account was given in the MONTHLY LABOR REVIEW for June, 1922 (pp. 160-163), of an action before the United States District Court for the Northern District of Illinois. The matter under consideration was the rejection by the Pennsylvania Railroad Co. of the finding of the Board in regard to the organization of an adjustment board for the determination of disputes on the subjects of wages and working conditions. The district court concluded that the decision (No. 218) undertaking to enforce the holding of a new election by the employees for the choice of their representatives on the adjustment board was beyond the powers of the Labor Board. However, the court held that the act itself was constitutional, thus rejecting one of the main contentions of the railroad company. The board proposed to publish, under authority of the statute, its findings in regard to the alleged disobedience of the road to its decision with regard to the election, and to prevent this the railroad obtained an injunction from the district court. The board thereupon appealed to the circuit court of appeals for the seventh circuit, and the decision, recently handed down, was unanimously in favor of the power of the board to take the action proposed, and the injunctive decree of the district court is reversed, with direction to dismiss the bill in which it was sought. Judge Alschuler set forth the facts, quoting the provisions of law involved in the contention and taking up first the claim of the railroad that if the statute makes the decision of the Labor Board binding upon the carriers and enforceable by appropriate proceedings, it is unconstitutional. The court found no question of the enforcement of the decision involved in the present case as far as the establishment of wages or working conditions is concerned. What was involved was the attempt of the board to secure an agreement between the carriers and their employees, which failing, the board might find itself called upon to act under its authority to intervene and decide upon and prescribe rules and working conditions. The question of enforcement was therefore not properly before the court, so that no contention of unconstitutionality on this score could be considered.

It was pointed out that the injunction apparently assumed that the Labor Board had acted under section 301 of the transportation act, which contemplates the joint submission of a dispute. However, the law elsewhere (sec. 303) provides for the determination of grievances, rules, and working conditions in any one of four ways, i. e., on application of either party, on petition by not less than 100 unorganized employees, on motion of an adjustment board, and lastly on request of the Labor Board that the adjustment board take action where the dispute seems likely to interrupt commerce. These provisions of section 303 relate to the adjustment boards and their mode

of taking jurisdiction over a dispute. Section 307 (a) authorizes the Labor Board to act where an adjustment board certifies its inability to reach a decision or where the Labor Board reaches the conclusion that the adjustment board has failed or is not using due diligence. The board is also authorized to take jurisdiction where no adjustment board is organized, such action being taken either on application as above or on the board's own motion where the dispute is likely substantially to interrupt commerce.

The court found that these provisions amply justified the exercise of the board's authority, taking the statute in all its provisions, and "it is not material whether it [the dispute] comes to it under section 301 or under any other or all the sections of the title." There was, therefore, no question as to the power of the board if the dispute was covered by the act, and this was the next point considered.

Judge Alschuler described the conditions prior to the passage of the transportation act, when the roads were under Federal control. On the termination of Governmental control undetermined serious disputes respecting wages and working conditions were pending, and on the creation of the Labor Board "it seems that as if by common consent the undetermined disputes were by it taken up and the hearings proceeded." The questions were divided, according to the consent and desire of both parties to the controversy, into two parts, one involving wages and the other rules and working conditions. This division by consent "indicates clearly that the whole subject was then regarded as before the board, to be dealt with by it." This being the case, the railroad's contention that the Labor Board had no power to direct the continuance of existing rules and working conditions until further order, must fail. Wages and working conditions are also so closely interwoven that the determination of wages must be regarded as predicated upon the continuance in effect of the rules and working conditions then existing, "and it was proper for the board to fix the wage with reference to their continuance till changed by agreement or otherwise."

The next contention disposed of was that of the company that it had ultimately made an agreement with its employees respecting rules and working conditions, thus terminating the dispute, so that the Labor Board had lost whatever jurisdiction it might have had. However, at the time that Decision No. 119 was promulgated, calling upon employers and employees to make agreements as to rules and working conditions, there was obviously jurisdiction, and the request that agreements be arrived at would not dismiss the controversy from the jurisdiction of the board. Moreover, the question of employee representation was necessarily included in the controversy over rules and working conditions, and it was on this point that the real contest hinged. The election of employee representatives under the system arranged for by the company was found by the board not to have been participated in by a majority of the employees, and this contention was not disputed, though the company maintained that "since all had opportunity to vote, this made no difference." The company election was held to be void "because it restricted the choice of representatives to natural persons and to actual employees of the road"; on the other hand, the employees' election was void for restricting the choice of representation to an organization, and Decision

No. 218, for these reasons, "directed another election to be held, prescribing the form of ballot." The company contended that the board was in nowise concerned in the matter of the election of representatives, it being wholly procedural and "beyond its jurisdiction." This contention the court rejected. "It was eminently proper that the board, either by general rule or otherwise, indicate in its best judgment how such representation should be manifested and the election conducted." Admittedly the employer might decline to confer with the representatives chosen, "for any reason, sound or capricious," but this would simply mean that the method of adjustment by agreement had failed, the dispute still remaining with the board just as though there had been no undertaking to bring the parties to a mutual understanding. The company further contended that it might of its own motion establish rules and working conditions, upon the termination of Government control, which would be effective until and unless changed under the terms of the transportation act, and that the board could not intervene except on complaint and hearing. The court ruled that to accept this contention would be to recognize the power of the company to oust the board of its jurisdiction of a pending dispute simply by promulgating new rules and working conditions—a position that would make the provisions of the transportation act, relative to the adjustment of disputes, without practical effect.

"It follows that the Labor Board did not as to the matters involved transcend its power and function, and that relief under the bill [for an injunction] should have been denied."

Compensation Awards in Case of Independent Contemporaneous Employments.

A NUMBER of cases have been reported in which there was an injury to a workman serving several employers jointly, the basis for the awards being the total earnings of the injured person from all the employers, the benefit being payable, however, by the employer in whose service he was at the time of the injury. This principle was applied in a California case (*Western Metal Supply Co. v. Pillsbury*, 156 Pac. 491), where a night watchman employed by several employers independently was killed by a burglar on the premises of one; also by the Massachusetts Supreme Court (*Gillen v. Ocean A. & G. Corp.*, 102 N. E. 346), where a longshoreman rendered service to various employers in the course of a week, averaging \$13 wages, though the amount earned while working for the employer whom he was serving when injured was not more than \$8 per week. Compensation was awarded on the total earnings over the contention that the employer was liable only to the extent of his own wage payments. A distinction was drawn where there was full regular employment at a standard rate by one employer, while extra work was taken on as nightwork for another. An injury received while in the latter employment was held to be compensable only at the rate of earnings in that specific service, disregarding the majority employment and earnings (*King's Case*, 125 N. E. 153).

In each of these cases the single employer in whose service the injured man was at the time of the receipt of his injury was held solely responsible for the payment of benefits. A case recently before the Industrial Accident Commission of California involved a different variation in circumstances, and led to an award for which two principal employers were held severally liable, each for a proportionate amount of the award. A young man using a motor cycle with side car made a trip of 60 miles each way daily to bring cream from a ranch of the owner to her establishment in Santa Barbara where the cream was bottled and sold. The boy increased his earnings by regularly delivering newspapers for the publishers along the route of his journey. Besides this there was incidental delivery of packages, though this was irregular and not a part of his established business, which consisted of the transportation of cream and the delivery of papers. Over various contentions, an award was made against both regular employers based on the amount of the fixed wages paid by each, the commission holding that the injured boy was an employee and not an independent contractor, and that, though he was at the moment on a piece of road where he was in the interest of the creamery rather than of the newspaper company, he was nevertheless in the employment of the latter company; also that there was no sufficient reason for joining other persons who might have on that particular day intrusted packages to him for delivery.

Fixing Rates of Wages of Employees on Public Works in Wisconsin.

THE Supreme Court of Wisconsin recently had before it an appeal from a lower court involving the validity of an ordinance of the city of Milwaukee, proposing to fix the wages of employees on public works, the same to be "not less than the prevailing wage in this city for such skilled labor; said prevailing wage to be determined by the wage paid to members of any regular and recognized organization of such skilled laborers for such skilled labor." It was said by the court that the proposition of fixing a minimum wage was within the power of the city, assuming that the power would be exercised "within the bounds of what is reasonable, fair, and proper." It was held here, however, three justices dissenting, that there was an unlawful delegation of authority to a nonlegislative body, namely, the labor unions of the city, by whom the rates would actually be fixed, even though the ordinance also provided that before any rate became effective, "it shall first be determined and approved by a majority vote of the members of the common council." (*Wagner v. City of Milwaukee*, 188 N. W. 487.) There was recognition of the fact that there is a lawful delegation of power to proper bodies created under the Government to determine certain facts or conditions, but a distinction was found to exist.

The distinction between the attempted delegation here to labor unions to determine and fix the prevailing wage scale for the city of Milwaukee and the lawful vesting in some administrative body, a part of the Government itself, appointed by or under the control of the legislative body to determine when certain facts or conditions are within the law, such, for example, as the various commissions now performing such important functions in our present-day administration of public affairs, is too manifest and plain to need further mention.

We have considered and disposed of the questions presented upon the view that the ordinances mean what the great mass of mankind would consider them to mean and as representing to the labor unions in particular and to the community at large that, when the common council undertakes to fix any prevailing wage scale, they will fix that already established by such labor unions.

Regulations Governing Factory Employment in the Punjab, India.

ACCORDING to a consular report of recent date the 1922 amendments of the Indian factory act of 1911¹ will be put into effect in the factories throughout the Punjab after September 10, 1922, superseding the Punjab factory rules of 1919.

The new regulations provide for semiannual inspection by Government inspectors of every factory in the Province and the penalties for infringement of the regulations include fines and the suspension of the license for operation.

The new regulations require that (1) adequate provisions shall be made to secure the health and safety of the operatives; (2) children employed shall have been duly certified by a physician and none allowed to work who are unfit; (3) each factory shall keep a register of all the persons employed and the hours of work; (4) periodical rest periods shall be allowed all workers and the limits of the daily hours of work shall not be exceeded.

The rules governing sanitary conditions provide for painting work-rooms, whitewashing and keeping clean all buildings and yards, and furnishing clean drinking water and proper sanitary accommodations. There are detailed regulations, also, as to the amount of floor space for each individual in order to prevent overcrowding, for means of escape in case of fire, and for safeguarding machinery in textile factories and cotton gins.

Amendment to Eight-hour Law of Netherlands.

THE eight-hour law of The Netherlands¹ which went into effect October 24, 1920, has, according to the July, 1922, issue of the British Ministry of Labor Gazette (p. 290), been amended by an act of May, 1922. The amendments affect those sections relating to the limitation of working hours. The hours of labor in factories, workshops, bakeries, and offices, which the original act fixed at not exceeding 8 per day and 45 per week, are, by the amendment, raised to 8½ per day and 48 per week.

Also the provisions with regard to the working of overtime are relaxed in factories and workshops and in seasonal occupations. Under the provisions of section 26 of the 1919 act the Minister of Labor was empowered to permit specified factories or workshops, for a period not exceeding two years from the date on which the act became effective, to work overtime not in excess of 1 hour a day and 5 hours a week. The period is now increased to 4 years and the overtime to 1½ hours per day and 7 hours per week over the new "normal" work-

¹ See MONTHLY LABOR REVIEW, June, 1922, pp. 168, 169.

¹ For a short account of this law see MONTHLY LABOR REVIEW, January, 1921, p. 123.

ing time of 8½ hours per day and 48 hours per week. In seasonal occupations and on emergency work, under "special circumstances," if both the workers' and employers' associations or "in default of these a body adequately representative of the employers and work-people," are of the opinion that a deviation from the regular working hours is desirable, a permit for the purpose may be granted by the Minister of Labor. In no case, however, may the hours exceed the following: For young people under 16, 10 hours per day and 48 per week; for women, 10 hours per day, 55 per week, and 2,500 per year; for men, 11 hours per day, 62 per week, and 2,500 per year. Under the clause in the 1919 act which states that in urgent cases where it is impossible to apply for a permit, the Minister of Labor may grant a permit for one year for the employment of men for more than the normal hours, this permission is limited to 24 times a year. The new act raises the maximum to 60. The chief district labor inspectors on their own authority may now grant permits for overtime for 14 instead of for 6 days.

The provisions with regard to night and Sunday work and work on Saturday afternoons are also relaxed for factories and workshops. The facilities with regard to overtime in offices and bakeries, and for work done outside factories and workshops, offices, and bakeries, are considerably increased. The provisions with regard to the prohibition of night work in bakeries are to be less stringent in the future.

Decree Concerning Labor on Spanish Vessels.¹

THE royal decree, signed May 31, 1922, approving the regulation covering labor on board Spanish cargo and passenger vessels, was issued upon the recommendation of a commission of employers and employees in the shipping trade to amend the royal decree of October 10, 1919, and to clear up some disputed points.

The decree regulates hours, overtime, discharge, Sunday rest, leave of absence, and age limit and applies to cargo and passenger vessels, but not to fishing vessels, tugboats, and the like.

Hours.—Except in cases of emergency when the ship is actually in danger, the workday shall not be more than 12 hours when at sea, or 10 hours when in port. In the latter instance the day may be extended to 12 hours on the day of arrival or departure, without payment for overtime, but not more than three times a week. On board vessels ranging from 25 to 300 tons and engaged in coastwise trade, the hours of labor for the crew shall be not more than 60 hours nor more than 6 days per week. Nine hours of deck labor constitute a working day on deep-sea vessels. One peseta (19.3 cents, par) per hour is to be paid for overtime work and all such extra labor is to be recorded in the ship's register, which in turn must be visaed by the local port officials or by Spanish consuls in foreign countries. Machinists are required to work 8 hours per day, plus the time necessary for the discharge of cinders; in port they shall work at the rate of 48 hours per week. The length of the watch at sea shall not exceed 6 hours and rest periods shall not be of less than 4 hours' duration.

¹ Spain. Gaceta de Madrid. Madrid, June 15, 1922, pp. 972-974.

Discharge.—Members of the crew shall be employed in accordance with the ship's articles, which they sign, and if discharged for any reason except negligence, inefficiency, insubordination, or as otherwise provided, shall receive an extra month's wage plus maintenance during that time. If discharged because the ship is tied up for lack of freight or a profitable cargo or because the ship will be delayed for repairs for more than one month, they shall be entitled to transportation to the port of enrollment and maintenance during the voyage.

Every captain, deck officer, or machinist if discharged without just cause after three months' service is entitled to one month's full salary, plus the entire salary for the month in which he is discharged. An exception is made in case the navigation of the vessel is discontinued for special reasons or because of the termination of contracts with the officers in question. Radio operators are to be considered as officers.

Sunday rest.—Sunday rest is obligatory in port, except that when for special reasons Sunday labor is required, the crew shall be entitled to a day of rest during the week. Only indispensable labor is to be performed when the ship is on the high seas. This Sunday work shall ordinarily be limited to 2 hours. Except in serious emergencies extra work on Sunday is to be compensated at the rate of 1 peseta (19.3 cents, par) per hour.

Leave of absence.—Deck officers and machinists are entitled to 1 month's leave of absence with full pay after 12 months' continuous service with the same company. The leave period does not include the time necessary for the trip to and from the place where the leave is to be spent, provided such time does not exceed one week. Travel expenses are to be paid by the shipowner, who shall decide when this leave of absence shall take place. In coastwise shipping, the shipowner may grant leave not to exceed 3 days at any regular port, traffic conditions permitting.

Age limit.—The age limit is to be from 14 to 55 years. Minors under 14 years of age, however, may be permitted to work if they comply with certain requirements. Any one over 55 years of age must prove his physical fitness for his duties.

STRIKES AND LOCKOUTS.

Strikes in Buenos Aires in 1921.

AN OFFICIAL report¹ on strikes in the Federal capital of Argentina in 1921 shows that 86 strikes affecting 139,751 workers and causing a loss of 976,270 working-days occurred during the year. As compared with 1920 this represents a decrease of 120 strikes and an increase of 5,736 strikers.

The table following shows the number of strikes and strikers and the average number involved in each strike during the period 1917 to 1921:

NUMBER OF STRIKES AND STRIKERS IN BUENOS AIRES, 1917 TO 1921.

Year.	Number of strikes.	Strikers.	
		Number.	Average per strike.
1917.....	138	136,062	985
1918.....	196	133,042	678
1919.....	367	308,967	841
1920.....	206	134,015	650
1921.....	86	139,751	1,625

Twelve of the strikes were of a general character and involved 128,100 persons. There were 20 strikes in the clothing industry, 16 in transport and communications, 15 in the food industry, and 10 in metallurgy. By far the largest number of persons (55,639) were affected by the strikes in transport and communications.

Wages and organization were the principal causes, 37 strikes affecting 6,727 workers being on account of wage disputes, and 53 strikes affecting 132,773 workers being due to disputes concerning organization.

In general the strikes were unsuccessful from the standpoint of the workers, only 12 being won by the workers; 5 were partly successful, and 64 were lost. Five were still pending at the close of the year.

Most of the strikes were of short duration, 54 of them being settled in less than 20 days. Only 1 lasted more than 80 days.

¹ Argentina. Crónica Mensual del Departamento Nacional del Trabajo. Buenos Aires, May, 1922' pp. 861-866.

CONCILIATION AND ARBITRATION.

Conciliation Work of the Department of Labor in July, 1922.

BY HUGH L. KERWIN, DIRECTOR OF CONCILIATION.

THE Secretary of Labor, through the Division of Conciliation, exercised his good offices in connection with 17 labor disputes during July, 1922. These disputes affected a total of 13,768 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status; the terms of settlement, the date of beginning and ending, and the number of workmen directly and indirectly affected.

On August 1, 1922, there were 34 strikes before the department for settlement and in addition 10 controversies which had not reached the strike stage. The total number of cases pending was 44.

LABOR DISPUTES HANDLED BY THE UNITED STATES DEPARTMENT OF LABOR THROUGH ITS DIVISION OF CONCILIATION, JULY, 1922.

Company or industry and location.	Nature of controversy.	Craft concerned.	Cause of dispute.	Present status.
Cork cutters, Kansas City, Mo.....	Threatened strike.	Carpenters.....	Union jurisdiction...	Adjusted.
Pile drivers, Bremerton, Wash.....	Controversy.	Pile drivers....	Wage below scale. . .	Pending.
Barbers, New York City.....	Threatened strike.	Barbers.....	10 per cent wage cut.	Adjusted.
Millinery workers, New York City.....	Strike.....	Millinery workers.	Union recognition and discrimination.	Do.
Cork cutters, Pittsburgh, Pa.....	Threatened strike.	Building trades.	Union jurisdiction...	Pending.
Carpenters, Baltimore, Md.....	Strike.....	Carpenters.....	Ask 10 cents per hour raise.	Adjusted.
Carpet weavers, Hardwick & McGee, Philadelphia, Pa.	.....do.....	Carpet weavers.....	.....	Pending
40 clothing firms, Philadelphia, Pa.....	.....do.....	Clothing workers.	Wages, hours.....	Do.
Galvanizers, De Kalb, Ill.....	.....do.....	Steel workers...	12-hour shift.....	Unclassified.
Traction companies, Chicago, Ill.....	.....do.....	Traction employees.	Wage cut, 9 hours...	Adjusted.
4 restaurants, Fresno, Calif.....	.....do.....	Culinary workers.	New agreement.....	Pending.
Gershitz Contract Shop, Bayonne, N. J.....	.....do.....	Shirt makers...	Ask closed shop and former wage.	Do.
Royal & Pinkington, Mt. Holly, N. J.....	.....do.....	Tapestry weavers.	Ask closed shop.....	Do.
Shirt makers, Corona, N. Y.....	.....do.....	Shirt makers...	44 hours, minimum wage.	Do.
70 firms, hat-frame workers, New York City.	.....do.....	Ladies' hat-frame makers.	.....do.....	Do.
Western Iron Works, New York City..	Controversy.	Inside iron and bronze.	Compulsory affiliation with union.	Do.
Cigar makers, Cincinnati, Ohio.....	.....do.....	Cigar makers...	Agreement and shop practice.	Adjusted.

LABOR DISPUTES HANDLED BY THE UNITED STATES DEPARTMENT OF LABOR THROUGH ITS DIVISION OF CONCILIATION, JULY, 1922—Concluded.

Company or industry and location.	Terms of settlement.	Date of—		Workmen affected.	
		Begin-ning.	Ending.	Direct-ly.	Indi-rectly.
Cork cutters, Kansas City, Mo.....	Carpenters waived claim..	1922. June 26	1922. June 29	100	600
Pile drivers, Bremerton, Wash.....	.....	June 8	.....	26	.....
Barbers, New York City.....	Agreement concluded.....	June 23	July 1	600	400
Millinery workers, New York City.....	On employees' terms.....	.....do.....	June 27	23	7
Cork cutters, Pittsburg, Pa.....	.....	June 26	.....	.....	.....
Carpenters, Baltimore, Md.....	Increase of 10 cents granted, but hours lengthened.	July 1	July 14	475	.....
Carpet weavers, Hardwick & McGee, Philadelphia, Pa.....	.....	.....	.....	.....	.....
40 clothing firms, Philadelphia, Pa....	2,500 have returned.....	.....	.....	8,000	.....
Galvanizers, De Kalb, Ill.....	Settled before commissioner arrived.	.....	.....	.....	.....
Traction companies, Chicago, Ill.....	8 hours; 10 cents cut accepted.	July 1	Aug. 4	.....	.....
4 restaurants, Fresno, Calif.....	.....	June 1	.....	60	.....
Gershitz Contract Shop, Bayonne, N. J.....	.....	July 17	.....	170	.....
Royal & Pinkington, Mt. Holly, N. J.....	.....	July 9	.....	60	.....
Shirt makers, Corona, N. Y.....	All return except 55.....	July 19	.....	300	350
70 firms, hat-frame workers, New York City.	42 shops settled.....	July 26	.....	650	900
Western Iron Works, New York City..	.....	July 22	.....	47	.....
Cigar makers, Cincinnati, Ohio.....	Interpretation of arbitration clause arranged satisfactorily.	July 20	July 26	1,000	.....
Total.....	.....	.....	.....	11,511	2,257

IMMIGRATION.

Statistics of Immigration for the Fiscal Year Ended June 30, 1922.

BY W. W. HUSBAND, COMMISSIONER GENERAL OF IMMIGRATION.

THE following tables show the total number of immigrant aliens admitted into the United States and emigrant aliens departed from the United States during the fiscal year 1921-22. The tabulations are presented according to the countries of last permanent or future permanent residence, races or peoples, occupations, and States of future permanent or last permanent residence. The last table (Table 6) shows the number of aliens admitted under the per centum limit act of May 19, 1921, from June 30 to August 9.

TABLE 1.—INWARD AND OUTWARD PASSENGER MOVEMENT DURING THE FISCAL YEAR ENDING JUNE 30, 1922, AND DURING THE SIX MONTHS ENDING DECEMBER 31, 1921.

Period.	Arrivals.					Departures.			
	Immigrant aliens admitted.	Non-immigrant aliens admitted.	United States citizens arrived.	Aliens debarred.	Total.	Emigrant aliens departed.	Non-emigrant aliens departed.	United States citizens departed.	Total.
1921.									
July to December....	200,121	65,287	133,111	6,678	405,197	137,878	86,749	162,735	387,362
1922.									
January.....	15,928	6,705	12,057	892	35,582	7,708	7,877	15,519	31,104
February.....	10,792	6,851	17,573	991	36,207	7,063	7,360	19,061	33,484
March.....	14,803	9,736	21,884	1,069	47,492	8,269	7,427	20,993	36,689
April.....	18,967	10,199	19,889	1,436	50,491	13,232	11,736	26,197	51,159
May.....	24,169	12,711	19,837	1,183	57,900	12,025	11,122	29,643	52,790
June.....	24,776	11,460	19,212	1,482	56,930	12,537	14,407	35,329	62,273
Total.....	309,556	122,949	243,563	13,731	689,799	198,712	146,672	309,477	654,861

TABLE 2.—LAST PERMANENT RESIDENCE OF IMMIGRANT ALIENS ADMITTED AND FUTURE PERMANENT RESIDENCE OF EMIGRANT ALIENS DEPARTED, DURING SPECIFIED PERIODS, BY COUNTRIES.

Countries.	Immigrant.		Emigrant.	
	June 1-30, 1922.	July 1, 1921, to June 30, 1922.	June 1-30, 1922.	July 1, 1921, to June 30, 1922.
Austria.....	547	5,019	44	579
Hungary.....	11	5,756	153	4,307
Belgium.....	20	1,541	103	1,203
Bulgaria.....		297	12	660
Czechoslovakia.....	84	12,541	371	7,846
Denmark.....	187	2,709	70	690
Finland.....	168	2,767	105	1,179
France, including Corsica.....	195	4,220	292	2,557
Germany.....	1,914	17,931	298	4,362
Greece.....	16	3,457	533	7,506
Italy, including Sicily and Sardinia.....	164	40,319	3,661	53,651
Netherlands.....	191	1,990	80	860
Norway.....	463	5,292	83	1,427
Poland.....	666	28,635	1,077	33,581
Portugal, including Cape Verde and Azores Islands.....	93	1,950	171	5,877
Rumania.....	774	10,287	142	3,795
Russia.....	2,721	17,143	435	6,407
Spain.....	62	665	283	6,793
Sweden.....	303	6,624	362	1,903
Switzerland.....	130	3,398	78	886
Turkey in Europe.....	58	1,660	6	201
United Kingdom:				
England.....	1,406	15,249	856	6,434
Ireland.....	1,318	10,579	388	2,182
Scotland.....	921	9,018	81	915
Wales.....	91	886	7	60
Yugoslavia.....	16	6,047	446	9,733
Other Europe.....	21	405	17	703
Total Europe.....	12,540	216,385	10,154	166,297
China.....	612	4,406	373	6,362
Japan.....	1,108	6,716	351	4,368
India.....	30	360	8	267
Turkey in Asia.....	9	1,998	87	1,731
Other Asia.....	39	783	10	86
Total Asia.....	1,798	14,263	829	12,814
Africa.....	18	520	10	133
Australia, Tasmania, and New Zealand.....	18	855	59	645
Pacific Islands, not specified.....	4	60	2	34
British North America.....	5,050	46,810	427	4,480
Central America.....	159	970	108	955
Mexico.....	4,098	19,551	278	6,285
South America.....	213	2,668	129	1,787
West Indies.....	878	7,449	541	5,252
Other countries.....		25		30
Grand total.....	24,776	309,556	12,537	198,712
Males.....	13,085	149,741	7,755	143,223
Females.....	11,691	159,815	4,782	55,489

TABLE 3.—IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES DURING PERIODS SPECIFIED, BY RACES OR PEOPLE.

Race or people.	Immigrant.		Emigrant.	
	June 1-30, 1922.	July 1, 1921, to June 30, 1922.	June 1-30, 1922.	July 1, 1921, to June 30, 1922.
African (black).....	617	5,248	278	2,183
Armenian.....	11	2,249	22	253
Bohemian and Moravian (Czech).....	37	3,086	118	4,246
Bulgarian, Serbian, and Montenegrin.....	12	1,370	318	5,877
Chinese.....	599	4,465	291	6,146
Croatian and Slovenian.....	28	3,783	83	3,997
Cuban.....	58	698	117	909
Dalmatian, Bosnian, and Herzegovinian.....	23	307	39	549
Dutch and Flemish.....	246	3,749	176	2,157
East Indian.....	9	223	2	218
English.....	3,234	30,429	1,261	9,668
Finnish.....	205	2,506	137	1,254
French.....	1,150	13,617	365	3,464
German.....	2,756	31,218	404	5,715
Greek.....	27	3,821	532	7,649
Hebrew.....	4,136	53,524	67	830
Irish.....	2,064	17,191	381	2,485
Italian (north).....	65	6,098	599	7,448
Italian (south).....	213	35,056	3,087	46,562
Japanese.....	1,097	6,361	348	4,353
Korean.....	26	88	7	50
Lithuanian.....	177	1,602	211	4,606
Magyar.....	44	6,037	179	4,758
Mexican.....	4,023	18,246	229	5,770
Pacific Islander.....		7	2	5
Polish.....	148	6,357	1,018	31,004
Portuguese.....	92	1,867	222	6,052
Rumanian.....	19	1,520	125	4,219
Russian.....	249	2,486	224	2,891
Ruthenian (Russniak).....	25	698	12	448
Scandinavian (Norwegians, Danes, and Swedes).....	1,108	16,678	549	4,417
Scotch.....	1,623	15,596	140	1,659
Slovak.....	54	6,001	248	3,451
Spanish.....	178	1,879	382	7,838
Spanish-American.....	189	1,446	188	1,791
Syrian.....	26	1,334	52	1,396
Turkish.....	2	40	22	272
Welsh.....	84	956	18	154
West Indian (other than Cuban).....	91	976	51	820
Other peoples.....	31	743	33	1,148
Total.....	24,776	309,556	12,537	198,712

TABLE 4.—IMMIGRANT ALIENS ADMITTED AND EMIGRANT ALIENS DEPARTED DURING THE FISCAL YEAR ENDED JUNE 30, 1922, BY OCCUPATIONS.

Occupation.	Immi- grant.	Emi- grant.	Occupation.	Immi- grant.	Emi- grant.
<i>Professional.</i>			<i>Skilled.—Concluded.</i>		
Actors.....	704	158	Miners.....	2,227	3,257
Architects.....	127	63	Painters and glaziers.....	881	346
Clergy.....	1,204	526	Pattern makers.....	54	12
Editors.....	66	23	Photographers.....	198	54
Electricians.....	713	131	Plasterers.....	170	39
Engineers (professional).....	1,103	379	Plumbers.....	219	65
Lawyers.....	131	57	Printers.....	409	77
Literary and scientific persons...	392	154	Saddlers and harness makers...	96	21
Musicians.....	714	229	Seamstresses.....	1,972	134
Officials (Government).....	744	258	Shoemakers.....	2,287	826
Physicians.....	458	157	Stokers.....	348	195
Sculptors.....	164	111	Stonecutters.....	162	93
Teachers.....	2,118	456	Tailors.....	4,331	981
Other professional.....	2,317	611	Tanners and curriers.....	99	28
Total.....	10,955	3,313	Textile workers (not specified)...	131	67
<i>Skilled.</i>			Tinners.....	176	40
Bakers.....	1,629	547	Tobacco workers.....	20	1
Barbers and hairdressers.....	1,168	375	Upholsterers.....	78	19
Blacksmiths.....	890	302	Watch and clock makers.....	290	34
Bookbinders.....	97	18	Weavers and spinners.....	1,262	532
Brewers.....	35	21	Wheelwrights.....	7	8
Butchers.....	1,059	373	Woodworkers (not specified)...	89	28
Cabinetmakers.....	160	146	Other skilled.....	2,472	1,250
Carpenters and joiners.....	3,930	1,184	Total.....	51,588	17,958
Cigarette makers.....	39	5	<i>Miscellaneous.</i>		
Cigar makers.....	147	215	Agents.....	611	207
Cigar packers.....	7	7	Bankers.....	125	136
Clerks and accountants.....	9,444	2,027	Draymen, hackmen, and team- sters.....	308	84
Dressmakers.....	3,726	387	Farm laborers.....	10,529	2,690
Engineers (locomotive, marine, and stationary).....	931	215	Farmers.....	7,676	5,036
Furriers and fur workers.....	131	38	Fishermen.....	640	154
Gardeners.....	431	221	Hotel keepers.....	165	97
Hat and cap makers.....	165	20	Laborers.....	32,726	100,058
Iron and steel workers.....	751	195	Manufacturers.....	202	152
Jewelers.....	146	86	Merchants and dealers.....	7,278	4,328
Locksmiths.....	540	40	Servants.....	44,531	5,212
Machinists.....	1,291	948	Other miscellaneous.....	11,172	4,343
Mariners.....	2,845	1,224	Total.....	115,963	122,497
Masons.....	1,411	359	No occupation (including wom- en and children).....	131,050	54,944
Mechanics (not specified).....	1,683	709	Grand total.....	309,556	198,712
Metal workers (other than iron, steel, and tin).....	187	58			
Millers.....	177	79			
Milliners.....	600	52			

TABLE 5.—FUTURE PERMANENT RESIDENCE OF IMMIGRANT ALIENS ADMITTED AND LAST PERMANENT RESIDENCE OF EMIGRANT ALIENS DEPARTED DURING SPECIFIED PERIODS, BY STATES AND TERRITORIES.

State and Territory.	Immigrant.		Emigrant.	
	June 1-30, 1922.	July 1, 1921, to June 30, 1922.	June 1-30, 1922.	July 1, 1921, to June 30, 1922.
Alabama.....	19	419	2	121
Alaska.....	21	163	3	99
Arizona.....	260	2,034	29	1,080
Arkansas.....	9	180	5	51
California.....	2,021	23,624	635	13,375
Colorado.....	86	1,193	41	592
Connecticut.....	317	5,719	249	5,701
Delaware.....	21	398	10	343
District of Columbia.....	99	1,446	57	411
Florida.....	164	2,399	315	1,976
Georgia.....	20	373	8	124
Hawaii.....	652	2,800	390	1,342
Idaho.....	42	529	4	177
Illinois.....	1,415	22,410	702	14,039
Indiana.....	125	2,487	79	1,841
Iowa.....	140	2,174	57	742
Kansas.....	69	976	22	318
Kentucky.....	40	361	6	95
Louisiana.....	49	964	89	824
Maine.....	540	4,557	28	418
Maryland.....	144	1,790	46	986
Massachusetts.....	1,712	21,715	1,356	16,798
Michigan.....	1,250	12,187	221	6,998
Minnesota.....	462	5,152	78	1,850
Mississippi.....	17	258	6	88
Missouri.....	157	2,774	81	1,211
Montana.....	97	1,007	24	405
Nebraska.....	145	1,469	26	501
Nevada.....	27	207	2	180
New Hampshire.....	180	1,926	42	447
New Jersey.....	1,010	15,327	448	9,736
New Mexico.....	70	601	12	240
New York.....	5,694	91,543	5,110	65,886
North Carolina.....	21	236	3	85
North Dakota.....	95	1,009	12	238
Ohio.....	639	11,606	428	10,203
Oklahoma.....	45	504	18	191
Oregon.....	266	2,320	66	852
Pennsylvania.....	1,631	27,539	1,183	25,634
Philippine Islands.....		9		
Porto Rico.....	12	316	33	303
Rhode Island.....	182	3,208	71	1,824
South Carolina.....	3	163	2	47
South Dakota.....	41	618	8	152
Tennessee.....	31	365	6	90
Texas.....	3,368	14,421	126	2,602
Utah.....	88	837	38	369
Vermont.....	80	1,479	6	157
Virginia.....	85	1,264	11	243
Virgin Islands.....	4	15		9
Washington.....	660	6,109	145	2,551
West Virginia.....	33	1,460	79	1,778
Wisconsin.....	379	4,374	83	2,145
Wyoming.....	39	542	36	244
Total.....	24,776	309,556	12,537	198,712

TABLE 6.—STATUS OF THE IMMIGRATION OF ALIENS INTO THE UNITED STATES UNDER THE PER CENTUM LIMIT ACT OF MAY 19, 1921, AS EXTENDED BY PUBLIC RESOLUTION NO. 55, SIXTY-SEVENTH CONGRESS, APPROVED MAY 11, 1922.

To August 9, 1922.

Country or region of birth.	Number admitted from Aug. 1 to 9, 1922, inclusive.	Number admitted from July 1 to Aug. 9, 1922, inclusive.	Number admissible annually.	Number admissible during remainder of current fiscal year.
Albania.....	55	110	288	178
Armenia (Russian).....	19	62	230	168
Austria.....	185	732	7,451	6,719
Belgium.....	135	427	1,563	1,136
Bulgaria.....	16	57	302	245
Czechoslovakia.....	956	3,440	14,357	10,917
Danzig, Free City of.....	5	32	301	269
Denmark.....	77	398	5,619	5,221
Finland.....	82	540	3,921	3,381
Fiume, Free State of.....	.....	1	71	70
France.....	215	554	5,729	5,175
Germany.....	483	2,602	67,607	65,005
Greece.....	543	1,196	3,294	2,098
Hungary.....	274	1,144	5,638	4,494
Iceland.....	10	22	75	53
Italy.....	1,922	9,833	42,057	32,224
Luxembourg.....	8	25	92	67
Memel region.....	.....	5	150	145
Netherlands.....	48	276	3,607	3,331
Norway.....	260	761	12,202	11,441
Poland.....	533	1,710	21,076	19,366
Eastern Galicia.....	38	92	5,786	5,694
Pinsk region.....	24	85	4,284	4,199
Portugal (including Azores and Madeira islands).....	494	977	2,465	1,488
Rumania.....	424	1,439	7,419	5,980
Bessarabian region.....	6	62	2,732	2,730
Russia (European and Asiatic).....	501	2,358	21,613	19,255
Esthonian region.....	4	21	1,348	1,327
Latvian region.....	29	109	1,540	1,431
Lithuanian region.....	205	596	2,310	1,714
Spain (including Canary Islands).....	91	271	912	641
Sweden.....	117	1,332	20,042	18,710
Switzerland.....	52	433	3,752	3,319
United Kingdom.....	1,011	5,817	77,342	71,525
Yugoslavia.....	256	1,116	6,426	5,310
Other Europe (including Andorra, Gibraltar, Liechtenstein, Malta, Monaco, and San Marino).....	10	25	86	61
Palestine.....	11	24	57	33
Syria.....	55	189	928	739
Turkey (European and Asiatic, including Smyrna region and Turkish-Armenian region).....	256	526	2,388	1,862
Other Asia (including Cyprus, Hedjaz, Iraq (Mesopotamia), Persia, Rhodes, and any other Asiatic territory not included in the barred zone. Persons born in Asiatic Russia are included in the Russia quota.).....	13	31	81	50
Africa.....	17	42	122	80
Atlantic islands (other than Azores, Canary Islands, Madeira, and islands adjacent to the American continents).....	.....	5	121	116
Australia.....	36	91	279	188
New Zealand and Pacific islands.....	2	18	80	62
Total.....	9,478	39,586	357,803	318,217

Canada's New Immigration Regulations.

THE Canadian Labor Gazette of June, 1922, states that in the new immigration regulations an occupational test has been substituted for the money qualification stipulated by the order-in-council of December, 1919.

The new provisions favor immigrants from Great Britain and autonomous British Dominions and agricultural and domestic

workers. The regulations will not allow any immigrant to land in Canada except—

1. A bona fide agriculturalist entering Canada to farm and with sufficient means to begin farming in Canada.
2. A bona fide farm laborer entering Canada to follow that occupation and with reasonable assurance of employment.
3. A female domestic servant entering Canada to follow that occupation and with reasonable assurance of employment.

Immigration officers, however, are authorized to admit—

1. The wife and family of any person legally admitted to and resident in Canada who is in a position to receive and care for his dependents.
2. The national of any country in regard to which there is in operation a special treaty or agreement or convention regulating immigration.
3. Any British subject entering Canada directly or indirectly from Great Britain or Ireland, the United States of America or any self-governing British Dominion or Newfoundland, who shall satisfy the immigration officer in charge at the port of entry that he has sufficient means to maintain himself until employment is secured.
4. Any American citizen entering Canada from the United States, provided it is shown to the satisfaction of the minister of immigration and colonization that his labor and service is required in Canada.

The passports of immigrants from Europe, except those from Great Britain or any of its autonomous dominions or from the United States, must be examined and viséd in Europe by a Canadian Government immigration official stationed in that country. All other immigrants must have their passports approved by a British consular officer. "A fee of \$5 is chargeable for Canadian examination and visé of passport."

Asiatic immigrants, with the exception of those from a country with which some special treaty agreement exists, must have \$250 in their possession when they land.

In order to relieve the farm labor shortage in Saskatchewan, the Provincial Government has arranged to bring over immigrants directly from the dairy farms and small holdings of The Netherlands. It is thought that with some little training these men will develop into very capable agriculturists. Reports have already been received that a considerable number of Dutch and Norwegian agricultural workers were arriving in Canada.

A central Canadian Government immigration office has recently been opened in Antwerp, Belgium, which is assisting in securing the desired class of immigrants.

WHAT STATE LABOR BUREAUS ARE DOING.

Georgia.

THERE was a very considerable reduction in manufactured products and in total wages paid in Georgia during the calendar year 1921, according to the tenth annual report of the commissioner of commerce and labor of that State.

Industrial conditions in Georgia reflected those experienced in all parts of the country. The depression began in the latter part of 1920 and lasted all through 1921.

The report contains statistics regarding textile mills and allied industries; cotton oil mills; fertilizer factories and mixing plants; foundry, machine, and general repair shops; brick, tile, and sewer piping; cement and clay products; marble and granite quarries and marble yards; bottling works and manufacturers of soft drinks; buggies, carriages, carts, wagons, and materials; and electric power and light plants. Weekly ranges of wages are shown for different occupations in various industries.

The following statement summarizes some of the more important data concerning textile mills for the calendar years 1920 and 1921, the earlier figures being taken from the ninth annual report of the commissioner of commerce and labor:

	1920.	1921
Number of mills.....	184	190
Total capital.....	\$102,778,238.15	\$102,758,621.21
Total cost of raw material.....	\$134,589,558.20	\$58,640,922.78
Total value of manufactured product.....	\$238,519,782.27	\$127,758,977.66
Total amount paid in salaries to officers and clerks.....	\$3,775,526.48	\$2,975,575.65
Total amount paid to wage earners.....	\$32,651,267.06	\$17,081,264.95
Total amount paid for repairs to machinery.....	\$5,186,186.41	¹ \$9,942,096.44
Total number of white operatives.....	39,559	34,631
Total number of negro employees.....	3,209	2,172

Of the 34,631 white operatives in the textile mills in 1921, 33,401 were over 16 years of age, and of these 19,577 were male and 13,824 females. Of the 2,172 negro employees, 1,613 were males and 559 females.

There was considerable unemployment in the State in 1921. During that year six free limited employment offices were conducted in Georgia under the supervision of the Department of Commerce and Labor, the expenses of these offices being carried by municipalities in Atlanta and Savannah, by chambers of commerce in Macon, Waycross, and Columbus, and by cooperation in Augusta between the municipality and the Y. M. C. A. According to the records, employment was secured by these offices for only 2,604 persons in 1921. Many other persons, however, were referred to positions, and may have obtained employment, but in regard to

¹ Includes amount paid for new machinery.

these no reports were received. Of the 16 paid employment offices operating in the State during the year covered, 6 were especially for teachers, 3 were for negroes only, and 7 conducted miscellaneous business. These paid offices furnished positions to 2,934 persons. Out of the 4,355 who registered, 1,421 failed to secure employment although they had paid for registration. The registration fees, as in 1920, ranged from \$2 to \$5. An additional fee of from \$3 to 20 per cent of the first month's salary is also collected. Some of the offices furnishing positions for teachers ask no registration fee but collect as much as half of the first month's salary.

The commissioner recommends an amendment to the law stipulating that such offices shall return the registration fee to the applicant unless a job is furnished within 30 days. The passage of legislation to promote industrial sanitation and to establish industrial schools is also recommended by the commissioner.

Maryland.¹

THE State board of labor and statistics is reorganizing its department for the enforcement of the child labor law and the 10-hour law for women, and is planning a campaign against the illegal employment of minors.

The work of the board is being redistricted and will include the recently annexed portion of the city, which means that an additional 48.58 square miles will have to be covered by the inspectors. The board is also organizing an industrial clinic, and in future industrial hygiene will constitute a part of the work of the medical department

New York.²

THE New York industrial code requires factory building owners to furnish safety devices for windows cleaned from the outside. The men who do this hazardous work are also required to use such devices. The neglect of the owner to provide these safety attachments is a misdemeanor. The failure of window cleaners to use these attachments when they are furnished is regarded as equally criminal. Carelessness on the part of workers in this occupation has resulted in raising the compensation insurance rate for employers engaged in the window-cleaning business higher than any other compensation rate. The State department of labor's bureau of inspection has been active in bringing about the enforcement of the law, and only recently a window cleaner was jailed for neglecting to use the safety device while cleaning a window on the outside of a high building.

Under a new plan inaugurated by the State industrial commissioner in New York City, persons against whom the Department of Labor has issued orders for less important violations of law, instead

¹ Letter, under date of Aug. 11, 1922, from the chairman of the Maryland Board of Labor and Statistics.

² New York (State). Department of Labor. *The Industrial Bulletin*. Albany, May, 1922.

of being summoned to court will be given the opportunity of a hearing before the commissioner. Orders will still be issued and ample time accorded to comply with them. When the inspector finds, however, that they have not been complied with, the offenders will be haled before the commissioner to show why they have not carried out the orders.

It was formerly the department's practice to send inspectors over and over again to mercantile establishments and factories to urge compliance with the law's requirements. The guilty party was not prosecuted until all other methods had been exhausted. The department found that when these cases of minor violations were taken into the courts they were dealt with very leniently and sentences were often suspended. The new system of handling these violations was immediately successful, resulting in an immense increase in the number of compliances with the labor law. In the New York City district the records show that complete compliance was secured in nearly all of the 1,500 cases in which summonses had been issued and which had been considered by the commissioner. In less than 50 of these cases was there recourse to the courts for criminal prosecution. The industrial commissioner has also successfully tried out the same plan in Buffalo, Rochester, Syracuse, and Albany. This method not only brings about compliance with orders, but also has done away with a great deal of irritation arising from criminal prosecutions. A short time ago the New York City tenement house department adopted the same system.

Industrial Conference.

The New York State industrial conference will be held at Buffalo November 22 and 23, 1922, under the auspices of the New York State Department of Labor, according to a press release of that department dated July 28, 1922. While this conference will cover the same subjects as the former Industrial Safety Congress of New York State, it will also take up other industrial matters of general interest.

The underlying theme of the conference will be "elimination of waste in industry." It is planned to have some one of the New York State industrial leaders preside at each session of the conference and to have the discussions led by experts of national reputation.

North Carolina.¹

EARLY in August, 1922, there appeared to be a surplus of labor in practically all lines of work in North Carolina, which was attributed to a shortage of construction materials. Unemployment conditions were more unfavorable than they were in the preceding month. The situation might be considerably relieved if freight were delivered more promptly, but few new projects are pending that promise an increased demand for labor in the near future.

¹ From a letter dated Aug. 2, 1922, inclosing typewritten report from the commissioner of the State department of labor and printing.

The department has recently been largely engaged in securing positions for the unemployed. The following is a report relative to this activity for the week ending July 29, 1922:

	Men.	Women.	Total
Registrations.....	424	122	546
Requests for help.....	373	87	460
Referred.....	458	107	565
Placed.....	407	77	484

Oklahoma—Progress in Safety Work.

AMONG the most decided forward steps in safety work in Oklahoma during the past year are the following, according to a communication received early in August, 1922, from the commissioner of labor of that State:

1. The making of a detailed first-hand study by the factory inspectors of all important accidents, with a view to the prevention of such accidents. Each factory inspector is furnished with a list of all accidents that have occurred during the month and is directed to investigate personally those which have happened in the district he is assigned to visit, to issue orders, if necessary, to correct the defective conditions from which the accidents resulted, and to report in detail on the matter when the circumstances warrant.

2. The furthering of the idea of group meetings of employees and employers in certain industries for the purpose of getting them actively interested in the various phases of safety work.

3. Efforts to improve the department's detailed suggestions and safety standards in order to overcome the prejudices of employees and employers. Frequently superintendents, managers, and the workers have the idea that the only way to comply with safety orders is by following strictly the detailed specifications, when, as a matter of fact, they may have considerable choice in the selection of methods and guards. During the past year a great deal has been done by the State's factory inspectors through cooperation rather than through the spirit of legal compulsion. These inspectors have all the necessary safety arguments to convince the management, after which there is little difficulty in reaching superintendents, foremen, and the operatives themselves. The department's orders for guarding transmission machinery conform as far as practicable with the industrial compensation schedule of the National Workmen's Compensation Service Bureau so that the expense of putting the establishment in proper physical condition "becomes an investment for the employer." The inspectors discourage the removal of guards already installed.

4. The adoption of the safety code of the American Society of Mechanical Engineers for the governing of the manufacture, installation, and operation of steam boilers, and for regulation of the manufacture, installation, and operation of passenger and freight elevators, and the lighting code of the Illuminating Engineering Society for mercantile establishments and factories.

5. The extension of the idea of safety education in a number of the Oklahoma schools. It is thought that this work holds the largest promise for the safety movement.

Pennsylvania.

A VIRTUAL State-wide shortage in skilled, semiskilled, and common labor in Pennsylvania is reported by the July, 1922, issue of "Labor and Industry" of the Pennsylvania Department of Labor and Industry. The demand for workers is greatest in agriculture, building, and steel industries and textile manufacturing. "The shortage is found specifically in farming and building operations." A marked demand for labor is being created in the metal trades. The common labor shortage has resulted in increasing wages from 25 to 35 and 40 cents per hour. Plasterers, bricklayers, and mechanics are scarce. In many places the shortage is being relieved by unemployed miners. On June 1, 1922, there were 301,140 miners voluntarily unemployed; on June 15, 1922, 275,498 a decrease of 25,642. In the second week in June, 1921, only 1,286 persons were placed out of 10,723 applicants; in the same period in 1922 there were 2,700 placements to 4,778 applications.

Fund for public works.—The legislature's appropriation of \$40,000 for an emergency fund for public works is to be spent in improvements around the capitol in Harrisburg. The use of the money was made contingent upon a period of unusual unemployment, the industrial board to determine the time for such expenditure. The use of the fund was authorized in the fall of 1921, but a number of technicalities delayed action in the matter. The main advantage of this fund is not in the number of persons it keeps employed at present, but in the State's recognition of cyclical industrial depressions.

University course on Pennsylvania's rehabilitation work.—Pennsylvania was selected as the State whose work in rehabilitating and returning disabled persons to productive employment should be described in detail in the summer lecture course scheduled for the week of July 17, 1922, on "Technique of vocational rehabilitation" at Columbia University, given through the cooperation of the Pennsylvania Bureau of Rehabilitation and the Federal Board for Vocational Education.

Exhibits of bureau of rehabilitation.—Lantern slides made from photographs of disabled persons suitably employed or in training for employment in the State, under the direction of the Pennsylvania bureau of rehabilitation, will form a part of the United States Government's exhibit at the International Centennial Exposition in Rio de Janeiro, beginning September 7, 1922, in commemoration of the one-hundredth anniversary of Brazil's independence.

Numerous photographs showing what Pennsylvania has done in the way of returning disabled persons to remunerative jobs have been sent by request to other States, and the first illustrated report of the bureau of rehabilitation has been forwarded to authorities in other States in which the legislatures have been considering the institution of industrial rehabilitation.

Time and money losses resulting from recent suspension of mining in Pennsylvania.—The losses in wages in April, May, and June, 1922, of the 322,286 men involved in the suspension of work by the anthracite and bituminous miners of the State is estimated at \$113,789,115. As

the number of possible working days in these three months was 76½, the daily wage loss was \$1,614,030. It is reported that in the anthracite region for this period 143,520 men lost about \$59,590,800 in wages and 10,118,160 days of work. In the bituminous districts the loss was approximately \$63,198,315 in wages and 12,639,663 days.

Neglect of safety work.—The Bureau of Inspection reports that a number of establishments in the State have been neglecting their safety work and that there seems to be a nation-wide tendency to reduce costs in industrial plants by eliminating first-aid equipment and safety men. In efforts to retrench in the face of business depression, safety work is said to be the first to suffer, employers failing to realize that such work costs less than accidents. The expense of breaking in a new man must also be added to the compensation cost.

Carelessness was a direct cause of 36 out of 64 industrial accidents investigated in April and May, 1922.

Survey of industrial dental dispensaries.—In 1921 the Division of Hygiene and Engineering sent out a questionnaire to various industrial establishments with reference to dental dispensary work. A large proportion of the firms to whom the inquiry was addressed did not have such dispensaries. Of the 59 filled-in returned schedules some were completed only in part. These replies came from 19 States and 1 Canadian Province—Ontario. Of the 59 firms reporting on their dental service, 12 were in Pennsylvania, 11 in Ohio, 8 in New York, 6 in Massachusetts, 4 in Illinois, and 2 each in Michigan, Minnesota, and New Hampshire, the other States and the Province of Ontario being represented by only 1 establishment each.

The number of employees in 56 firms ranged from 42 to 45,000, the total number being 282,503 and the average per plant, 5,045. The percentage of persons making use of dental service in 33 plants was 59.7. The average number of units in each dental dispensary, based on replies from 52 firms, was 1.1, the number of employees per unit, 1,807, and the number of employees using dental service per unit, 1,098.

The following data were given relative to the number of employees per dentist:

Number of employees served by 58 full-time dentists.....	116, 983
Average number of employees served by 1 full-time dentist.....	2, 017
Number of employees served by 37 full-time dentists without assistance from part-time dentists.....	77, 302
Average number of employees served by 1 full-time dentist without assistance from part-time dentists.....	2, 089
Number of employees served by 42 part-time dentists without assistance from full-time dentists.....	165, 520
Average number of employees served by 1 part-time dentist without assistance from full-time dentists.....	3, 941

Replies on cost of original equipment were received from 53 firms, the average cost for one plant per year being \$1,958.03. The least cost of equipment in one plant was \$329.29, the greatest, \$8,000. Only 27 firms submitted figures on cost of dental operation per patient per year. The average cost is reported as \$3.38. Some of the figures on division of cost, based on replies from 57 firms, are given below:

Percentage of plants in which employer bears entire cost.....	56.1
Percentage of plants in which cost is shared by employer and employee.....	43.9
Percentage of plants in which employers pay 75 per cent or more of the cost...	57.9
Percentage of plants in which employers pay between 50 and 74 per cent, inclusive, of the cost.....	17.5
Percentage of plants in which employers pay less than 25 per cent of the cost..	1.8
Percentage of plants in which proportion of cost shared by employer and employees is not indicated.....	22.8

Of the dental services of 56 firms, 100 per cent make examinations, 96.4 per cent do cleaning, 89.3 per cent give emergency treatment, 64.3 per cent do operative work which is not emergency, and 44.6 per cent, radiographic work.

All but one of 56 establishments stated that they regarded the operation of an industrial dental dispensary a success. One firm reported its dispensary as only a partial success.

Virginia.

THE commissioner of labor of Virginia reported, under date of August 7, 1922, that a women's and children's division had just been established in the State bureau of labor and industrial statistics.

The new child-labor law of Virginia is in many ways "a radical departure" from the previous act, and the women's and children's division has been concentrating its activities in endeavoring to secure the employers' cooperation and to make this new legislation really effective. Much has been done along this line as the result of a conference held at the house of delegates, which was attended by large employers of child workers, the Children's Code Commission, the State Federation of Labor, the attorney general, the superintendent of public instruction, the commissioner of labor, and welfare and social workers.

The principal efforts of the bureau of labor and industrial statistics, the commissioner stated, were being directed toward the maintenance of peace during the crisis brought about by the coal and railroad strikes. Although the Virginia miners are not organized, coal production had at the above-mentioned date practically ceased as a result of the railroad strike. When the strike conditions seemed in the judgment of the Bureau of Labor and Industrial Statistics to be growing acute at any point a representative of the office went to that particular place, thoroughly investigated the situation, and reported the facts to the governor. This was the procedure on several occasions when there was an urgent call for troops. Upon investigation, however, and after the striking railroad workers had been advised against any manifestations of disorder, it was found that there was no need of ordering out troops.

OFFICIAL PUBLICATIONS RELATING TO LABOR.

United States.

ALASKA.—*Territorial Mine Inspector. Annual report, 1921. Juneau, 1922. 96 pp.*

Extracts from this report are published on pages 66, 115, 116, 194, and 195 of this issue of the MONTHLY LABOR REVIEW.

GEORGIA.—*Department of Commerce and Labor. Tenth annual report, for the fiscal year ending December 31, 1921. Atlanta, 1922. 83 pp.*

This report is summarized on pages 219 and 220 of this issue of the MONTHLY LABOR REVIEW.

ILLINOIS.—*Industrial Commission. Annual report for fiscal year ending June 30, 1921, and statistical report for calendar year 1920. Springfield, 1922. 32 pp.*

A summary of this report appears on pages 197 and 198 of this issue of the MONTHLY LABOR REVIEW.

KANSAS.—*Court of Industrial Relations. Second annual report for the year ending December 31, 1921. Topeka, 1922. 107 pp.*

The section of the report relating to the industrial division is summarized on pages 12 and 13, that on the minimum wage on page 131, and that on workmen's compensation on pages 198 and 199 of this issue of the MONTHLY LABOR REVIEW.

MASSACHUSETTS.—*Department of Labor and Industries. Board of Conciliation and Arbitration. Report, together with the decisions rendered by the board for the year ending November 30, 1921. Boston, 1922. 122 pp.*

A brief summary of this report appears in the MONTHLY LABOR REVIEW for June, 1922, page 213.

— *Department of Public Welfare. Division of housing and town planning. Report for the year ending November 30, 1921. Boston [1922]. 47 pp.*

Contains reports of the town planning boards of the State and proceedings of the eighth annual conference of Massachusetts planning boards.

NEW YORK.—*Joint Legislative Committee on Housing. Intermediate report. Albany, 1922. vi, 257 pp. Legislative document (1922), No. 60.*

This report is summarized on pages 165 to 168 of this issue of the MONTHLY LABOR REVIEW.

— *Department of Labor. Economic value of maintaining clean windows and lighting fixtures. Albany, 1922. 15 pp. Special bulletin No. 112.*

PENNSYLVANIA.—*Department of Labor and Industry. Proceedings of the Industrial Relations Conference, October 24-27, 1921. [Harrisburg] 1922. 252 pp. Vol. IX, Series of 1922, No. 2.*

The addresses made at the various sessions of this conference dealt with the following nine leading topics: (1) Industrial cooperation; (2) the foreign outlook; (3) women and children in industry; (4) stabilizing industry and employment; (5) industrial waste; (6) industrial education; (7) industrial publicity; (8) medical supervision in industry, and (9) workmen's compensation.

The addresses at the meeting of approved boiler inspectors of Pennsylvania on October 24, 1922, take up 25 pages of the publication.

— *Department of Public Instruction. Mothers' Assistance Fund. Report, 1920. Harrisburg, 1922. 133 pp.*

WEST VIRGINIA.—*Bureau of Labor. Directory of industries. Charleston, 1922. 63 pp.*

UNITED STATES.—*Department of Commerce. Bureau of Foreign and Domestic Commerce. Venezuela: A commercial and industrial handbook, with a chapter on the Dutch West Indies. Washington, 1922. xvi, 472 pp. Special agents series, No. 212.*

A summary of the sections dealing with economic and labor conditions is given on page — of this issue of the MONTHLY LABOR REVIEW.

— — — *Bureau of Standards. National electrical safety code. Third edition. Washington, 1921. 366 pp. Handbook series, No. 3.*

— *Department of Labor. Bureau of Labor Statistics. Comparison of workmen's compensation insurance and administration. Washington, 1922. 194 pp. Bulletin No. 301. Workmen's insurance and compensation series.*

A résumé of this report appears on pages 196 and 197 of this issue of the MONTHLY LABOR REVIEW.

— — — *Occupation hazards and diagnostic signs. A guide to impairments to be looked for in hazardous occupations. Washington, 1922. 31 pp. Bulletin No. 306. Industrial accidents and hygiene series.*

A revised and enlarged edition of a pamphlet reproduced in the MONTHLY LABOR REVIEW for March, 1921, pp. 159-167. Both the groups of hazards and the number of hazardous occupations have been materially increased and a considerable amount of text matter has been added.

— — — *The problem of dust phthisis in the granite-stone industry. Washington, 1922. 178 pp. Bulletin No. 293. Industrial accidents and hygiene series.*

This report is reviewed on pages 178 and 179 of this issue of the MONTHLY LABOR REVIEW.

— — — *Bureau of Naturalization. Federal citizenship textbook. A course of instruction for use in the public schools by the candidate for citizenship. Part III Washington, 1921. 104 pp.*

— — — *Children's Bureau. Industrial home work of children. A study made in Providence, Pawtucket, and Central Falls, R. I. Washington, 1922. 80 pp. Bureau publication No. 100.*

A summary of this report is given on pages 146 to 148 of this issue of the MONTHLY LABOR REVIEW.

— — — *Women's Bureau. Women in Georgia industries: A study of hours, wages and working conditions. Washington, 1922. 89 pp. Bulletin No. 22.*

The main findings of this study were contained in a preliminary report issued in 1921 for the use of interested parties, which was summarized in the MONTHLY LABOR REVIEW for October, 1921, pp. 165-169.

— *Department of the Interior. Bureau of Education. Salaries of teachers and of principals in certain cities. Washington, April, 1922. 14 pp.*

A report on the salaries paid elementary and junior high-school teachers and elementary and junior high school principals for 1921-22 in cities of 2,500 inhabitants and more. As about 60 per cent of the superintendents responded to the request made for information by the Commissioner of Education, the data given may be considered representative of the salaries paid these classes of teachers. The report calls attention to the fact that one-third of the teachers in cities whose populations range from 2,500 to 10,000 receive less than \$1,000 a year; while one-half of the elementary teachers in this group of cities are paid less than \$1,097 a year. In cities with a population of from 10,000 to 25,000, 15 per cent of the teachers receive less than \$1,000 a year, while in cities of 25,000 to 100,000 only 7 per cent of the teachers are still below the \$1,000 class.

— *Government Printing Office. The training of apprentices in the Government Printing Office. Washington, 1922. 24 pp.*

An outline of courses for the training of apprentices. An account of these courses is given on pages 163 and 164 of this issue of the MONTHLY LABOR REVIEW.

UNITED STATES.—*Railroad Labor Board. Proceedings. Brotherhood of Locomotive Engineers Brotherhood of Locomotive Firemen and Enginenen, Brotherhood of Railroad Trainmen, Order of Railway Conductors, Switchmen's Union of North America vs. Ann Arbor Railroad Company et al. (Docket No. 845, vol. 1). Chicago, Ill., October 26, 1921. Washington, 1921. 134 pp.*

This volume contains the testimony of the Brotherhood chiefs at the hearings ordered by the Railroad Labor Board to inquire into the reasons for and conditions of the threatened interruption of traffic in the fall of 1921.

Foreign Countries.

AUSTRALIA (NEW SOUTH WALES).—*Board of Trade. Apprenticeship in New South Wales. Sydney, 1922. xviii, 160 pp. Chart.*

A report of the determinations and directions concerning apprenticeship set out in the form of a scheme of regulations applicable to apprenticeship in the industries. The board of trade reached these conclusions as a result of public hearings and other investigations. The proposed regulations prescribe the industries, crafts, and occupations to which they shall apply, the form of contract, length of apprenticeship and probationary period, wages, hours, etc. Every apprentice who does not already have such training is required to attend or receive instruction from a State continuation or trade school or technical college or instructional factory or any institution for continued or trade or technical education or supplementary workshop training provided by public enterprise or by any master or group or association of masters and approved by the board, for not less than five hours per week over a period of not less than three years. Apprentices under 16 years of age make such attendance or receive such instruction during working hours. After reaching their sixteenth year apprentices are to be allowed three hours per week in the master's time. Wages were fixed on the principle that "wages payable to apprentices must enable the skilled industries to compete with the uneducative occupations for the services of the young."

— (VICTORIA).—*Department of Lands. Land settlement in Victoria. Melbourne, 1920. 64 pp. Illustrated.*

A handbook for soldiers and other prospective settlers, showing methods of acquiring land under the several land settlement acts, and containing information in regard to phases of agriculture and to agricultural processes successfully followed in Victoria.

— (WESTERN AUSTRALIA).—*Government Statistician. Pocket yearbook, 1922. Perth, 1922. 104 pp.*

Wages of adults in principal occupations are given on pages 44-47.

BELGIUM.—*Caisse Générale d'Épargne et de Retraite. Compte rendu présenté au conseil d'administration. Année 1920. Brussels, 1922. 90 pp.*

A report of the operations of the General Savings and Retirement Fund of Belgium for the year 1920. The report covers the general activities of the savings fund, including the loans made to farmers through the farm banks and the cooperative agricultural societies and the loans to societies for the erection of workingmen's houses, also the operation of the retirement fund and the insurance and accident insurance funds.

CANADA.—*Civil Service Commission. Annual report, 1921. Ottawa, 1922. xviii, 128 pp. No. 32, 1922.*

DENMARK (COPENHAGEN).—*Statistiske Kontor. Statistisk Aarvog for Kjøbenhavn og Frederiksberg 1921. Copenhagen, 1922. xvi, 158 pp.*

Statistical yearbook for Copenhagen and Frederiksberg for 1921.

FRANCE (DÉPARTEMENT DE LA SEINE).—*L'Office Public d'Habitations a Bon Marché. La crise du logement et l'intervention publique en matière d'habitation populaire dans l'agglomération parisienne. Volumes 1-4. Paris, 1921. 1,250 pp.*

This report on the housing crisis in Paris and its suburbs includes a historical summary and a discussion of economic conditions and of the establishment of public hous-

ing offices. The second volume is devoted to housing developments in other European countries, England, Canada, Australia, and the United States, and the third to the development of housing projects in Paris and the vicinity. The fourth volume contains the text of French housing legislation and reports of housing committees. There are pictures and plans of various housing developments.

GERMANY.—*Statistisches Reichsamt. Statistisches Jahrbuch für das Deutsche Reich. 41. Jahrgang, 1920. Berlin, 1921. xxxvi, 281, 46*, 33 pp. Charts.*

The forty-first issue of the official German statistical yearbook published by the German National Statistical Office and covering the year 1920. The present issue covers essentially the same subjects as the preceding issues. Of special interest to labor are the statistical data on labor disputes, production in mines, and the iron and steel industry, building activities and housing, the number of workers (by age and sex) employed in the various industry groups, prices, wages, social insurance, cooperative societies, the labor market, employment exchanges, and employers' and workers' organizations.

GREAT BRITAIN.—*Department of Scientific and Industrial Research. Experimental cottages: A report on the work of the department at Amesbury, Wiltshire. London, 1921. 77 pp. Illustrated.*

Deals with five cottages built according to designs and instructions prepared by the department, the purpose being to test various old methods of construction which had fallen into disuse and which it might prove desirable to revive, and also to test new methods of constructing floors, roofs, and the like. Full details are given of the methods used, with photographs, diagrams, and specifications.

— [Factory Department.] *Inspector of factories and workshops. Report, 1921. London, 1922. 131 pp. Cmd. 1705.*

The report states that 92,565 accidents, of which 951 were fatal, were reported during 1921, as compared with 138,773, of which 1,404 were fatal, in 1920. This remarkable decrease is believed to be largely due to the inactivity in industry and to unemployment in the coal fields. Welfare work has, on the whole, held its own in the face of adverse industrial conditions. Slackness in regard to precautions against industrial diseases has been more noticeable during the dull business period. The 48-hour week is now very general in British industry, and the one-break day is common everywhere. Overtime has been greatly reduced by the industrial depression. The employment of young people has perceptibly diminished.

— *Home Office. Departmental committee on lighting in factories and workshops. Third report. London, 1922. 38 pp. Cmd. 1686.*

The report deals principally with the classification of industrial processes according to the illumination required for carrying on the work, and with an investigation of the effects of mixed natural and artificial lighting.

— *Inspectors of explosives. Annual report, 1921. London, 1922. 30 pp. Cmd. 1632.*

The report shows that during the year there were 261 accidents due to explosives, causing 35 deaths and injuries to 235 persons. Because of the stoppage in the coal-mining industry from April to July and the consequent absence of blasting operations, there was a considerable decrease as compared with the previous year. Over 92.7 per cent of the accidents causing death or personal injury occurred in the use of explosives and under miscellaneous conditions not covered by the act, and these accidents caused 30 of the 35 deaths and 219 of the 235 cases of injury.

— *Imperial Mineral Resources Bureau. Laws and regulations relating to lead poisoning. Being an analysis with texts of the laws and regulations made in the chief industrial countries to prevent plumbism. London, 1922. 250 pp.*

GREAT BRITAIN.—*Industrial Fatigue Research Board. Report No. 18: Two investigations in potters' shops. London, 1922. 74 pp. Potteries series No. 1.*

This report relating to atmospheric conditions in potteries compares conditions in this industry with those in other industries for which similar data are available, and discusses the relative merits of different types of stoves.

— *Ministry of Labor. Interdepartmental committee on health and unemployment insurance. First and second interim reports. London, 1922. 10 pp. Cmd. 1644.*

— *Privy Council. Medical Research Council. First report of the miners' nystagmus committee. London, 1922. 64 pp. Illustrated. Special report series, No. 65.*

A summary of this report was given in the MONTHLY LABOR REVIEW for July, 1922, pp. 140, 141.

— (SCOTLAND).—*Board of Agriculture. Tenth report, for year ended December 31, 1921. Edinburgh, 1922. 126 pp. Cmd. 1692.*

Wages and hours of farm workers prevailing September 30, 1921, appear on pages 122-125.

— *Board of Health. Third annual report, 1921. Edinburgh, 1922. 365 pp. Cmd. 1697.*

In addition to strictly health data, the report discusses housing and town planning, national health insurance, poor relief, unemployment relief, and old-age pensions.

INDIA (AJMER-MERWARA).—[*Registrar of Cooperative Societies.*] *Report on the working of the cooperative societies in the district of Ajmer-Merwara for the year ending June 30, 1921. Ajmer, 1921. 32 pp.*

— (ASSAM).—[*Registrar of Cooperative Societies.*] *Report on the working of the cooperative societies in Assam for the year ending March 31, 1921. Shillong, 1921. 19 pp.*

— (BIHAR AND ORISSA).—[*Registrar of Cooperative Societies.*] *Report on the working of cooperative societies in Bihar and Orissa for the year 1920-21. Patna, 1921. 29, xvii, 3 pp.*

— (CENTRAL PROVINCES).—*Agriculture Department. Report on the working of the cooperative societies in the Central Provinces and Berar for the year 1920-21. Nagpur, 1922. 19, xxxix pp.*

— (PUNJAB).—[*Registrar of Cooperative Societies.*] *Report on the working of the cooperative societies in the Punjab for the year ending July 31, 1921. Lahore, 1921. 6, 43, xciii pp.*

— (UNITED PROVINCES).—[*Registrar of Cooperative Societies.*] *Annual report on the working of cooperative societies in the United Provinces of Agra and Oudh for the year 1920-21. Allahabad, 1921. 11, xxiii, 7a, 2 pp.*

These reports were summarized on pages 222 and 223 of the MONTHLY LABOR REVIEW for August, 1922.

NETHERLANDS.—*Bureau Central de Statistique des Pays-Bas. [The Hague, 1922?] [36 pp.] Illustrated.*

An illustrated brochure describing the organization and activities of the Central Bureau of Statistics of the Netherlands and containing several tables of comparative statistics on population, elections, State and municipal finances, employment exchanges, unemployment, unemployment insurance, trade-unions, collective agreements, miners' and metal workers' wages, wholesale prices, cost of living, consumption of food, housing, bank deposits, poor relief, and import and export trade.

— *Centraal Bureau voor de Statistiek. Statistiek der spaar- en leenbanken in Nederland, over het jaar 1919-1920. 's-Gravenhage, 1922. 22 pp. Bijdragen tot de statistiek van Nederland. Nieuwe volgrees. No. 339.*

Statistics of savings and loan banks in the Netherlands for the year 1919-20.

— *Verlag over het jaar 1921. 's-Gravenhage [1922]. 28 pp.*

— *Centrale Commissie voor de Statistiek. Jaarverslag over het jaar 1921. 's-Gravenhage [1922]. 100 pp.*

NETHERLANDS.—*Kamers van Arbeid. Overzicht van de verslagen over 1920. 's-Gravenhage, 1922. 50 pp.*

Summary of the annual reports for 1920 made by the Dutch labor councils to the National Department of Labor.

— *Woningraad. Jaaverlag ter voorlichting van de regeering bij de begharting van de belangen der volkshuisvesting over 1921. 's-Gravenhage, 1922. 62 pp.*

Annual report of the activities of the housing office of the Netherlands for 1921.

NORWAY.—*Hovedstyret for Statsbanene. Norges jernbaner. Beretning for året 1 Juli 1920–30 Juni 1921. Christiania, 1922. 65*, 266 pp. Norges Offisielle Statistikk. VII. 41.*

Report on Norwegian railroads for the period July 1, 1920, to June 30, 1921. Contains information relative to State railroad pension funds and accidents.

— *Riksforsikringsanstalten. Sjømannsforsikringen for året 1919. Ulykkesforsikring for Sjømenn. Fiskerforsikringen for året 1920. Ulykkesforsikring for Fiskere m. v. Christiania, 1922. 33, 12*, 29 pp. Norges Offisielle Statistikk, VII. 37.*

This volume contains reports of the State Seamen's Accident Insurance for the year 1919 and of the State Fishermen's Accident Insurance for 1920. A brief summary of the latter appears on page 201 of this issue of the MONTHLY LABOR REVIEW.

— *Ulykkesforsikringen for industriarbeidere m. v., 1919. Christiania, 1922. 19*, 99 pp. Norges Offisielle Statistikk, VII. 45.*

Report by the State insurance office for industrial workers in the year 1919. This report covers those establishments coming under the law of August 13, 1915, as to accident insurance in industries. Self-insurers are not included.

— *Statistiske Centralbyrå. Arbeidslønninger 1920 og 1921. Christiania, 1922. 9*, 66 pp. Norges Offisielle Statistikk, VII. 44.*

Report by the Central Statistical Bureau showing wages in Norway, in cities and country districts, in 1920 and 1921, and by five-year periods 1850–1920, etc.

SWEDEN.—*Kommerskollegium. Industri. Berättelse för år 1920. Stockholm, 1922. 157 pp. Sveriges Officiella Statistik. Industri och Bergshantering.*

Official report on Swedish industries for 1920. Contains a table showing the number of workers by industries, the total number of hours worked, and the average hours per worker in each industry in 1920. A new table has been added to the report classifying the industries by number of workers. The report shows that in 1920 there were 12,022 establishments with 463,066 employees.

— *Socialstyrelsen. Kooperativ verksamhet i Sverige åren 1917–1919. Stockholm, 1922. 167 pp. Sveriges Officiella Statistik. Socialstatistik.*

Report by the Swedish Labor Bureau (*Socialstyrelsen*) on the activities of Swedish cooperative societies during 1917–1919.



