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This Issue in Brief

The decline in manufacturing employment since October, 1929, has affected individual plants very differently. Thus, an analysis of the employment experience of 1,240 plants in six manufacturing industries over the period October, 1929, to October, 1930, shows that while there was a decrease of 22.2 per cent in total employment, an actual increase in employment occurred in a considerable number of plants. Page 1.

Plans for moderating the effects of adverse employment conditions have been put into effect, in the absence of unemployment-insurance legislation in this country, in a number of instances through the initiation of trade-unions or individual firms. These insurance plans have been established through collective agreements between employers and the unions, which provide generally for guaranteed employment for a specified period in the year, or by employers, in which case the plans are usually linked up with a definite policy for stabilization of employment in the plant or industry. Several trade-unions pay out-of-work benefits to their members. Page 3.

Advance planning of public works as a means of stabilizing industry and affording unemployment relief is provided for in the Federal employment stabilization act recently signed by President Hoover. The act establishes a board, composed of the Secretaries of the Treasury, Commerce, Agriculture, and Labor, charged with the duty of keeping a constant outlook upon economic conditions and trends in the United States. An analysis of the provisions of this act is given on page 62.

Governmental agencies engaged in the promotion of the welfare of American workers, and in the administration and enforcement of labor legislation, are steadily increasing in number and in scope. Every State now has at least one agency which is serving some phase of industrial betterment, and in three-fourths of the States departments of labor or industrial commissions are carrying on extensive activities in the interests of labor. In the Federal Government, certain bureaus and establishments are active in the interests of special groups of workers, such as railroad employees, Federal employees, seamen, and miners, while other branches are concerned with the health and progress of labor in general. The organization and functions of these various governmental labor agencies are treated in an article on page 8.

Sugar cane is reported as being harvested by machinery on a commercial basis in Florida for the first time in history. Each machine will do the work of 200 men cutting with machetes. The machines are equipped not only to cut sugar-cane stalks close to the ground, but to rip off leaves and useless portions before depositing the cane in tractor-drawn wagons. Page 84.

A decrease in average earnings and an increase in average full-time working hours per week took place in the men's clothing industry between 1928 and 1930, according to a study of hours and earnings in that

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industry in 1930 recently completed by the United States Bureau of Labor Statistics. Hourly earnings decreased from 73.1 to 70.1 cents, or 4.1 per cent, and full-time weekly earnings, from $32.16 to $31.05, or 3.5 per cent. Average full-time working hours per week increased from 44.0 to 44.3, or 0.7 per cent. For males, hourly earnings decreased from 92.4 to 88.5 cents and weekly earnings from $40.75 to $39.21, while the full-time working hours per week increased from 44.1 to 44.3. For females, the decrease in hourly earnings was from 53.4 to 50.4 cents and in weekly earnings from $23.44 to $22.28, but full-time working hours per week increased from 43.9 to 44.2. Page 162.

Labor legislation was enacted during 1930 in the nine States meeting in regular session (Kentucky, Louisiana, Massachusetts, Mississippi, New Jersey, New York, Rhode Island, South Carolina and Virginia), and in the special session held in Texas. The Congress of the United States and the insular possession of Porto Rico also passed laws affecting labor. A topical outline of the labor legislation of 1930, with the exception of legislative action regarding workmen's compensation, is presented in the article on page 108.

The total number of fatal industrial accidents in 1929 is placed at 20,000 in a recent estimate of the National Safety Council. This is about 3,000 less than the average annual total according to other estimates. Page 93.

Wages of seamen are much higher on American than on foreign vessels. Data on wages of the different classes of seamen, published in Merchant Marine Statistics, 1930, by the Bureau of Navigation of the United States Department of Commerce, show, that in 1930 the wages of able seamen ranged from $22 per month on French vessels to $62 on vessels of the United States Shipping Board; of carpenters, from $24 on French vessels to $80 on vessels of the United States Shipping Board; of chief engineers, from $90 on Italian vessels to $278 on privately owned American vessels; and of firemen, from $26 on French and Spanish ships to $66 on vessels of the United States Shipping Board. Page 172.

An employee's insurance and pension plan embodying some new features was adopted recently by the Standard Oil Co. of New York. The insurance is in the form of a group policy, each employee receiving a certificate from the insurance company which is to administer the plan. The company will pay three-fourths of the premium and the employees one-fourth, participation in the plan being optional on the part of employees after six months' service. Page 81.

In 1929–30 approximately $29,900,000 was expended from Federal, State, and local funds for vocational education, an increase of about $2,400,000 over the preceding year. The enrollment in public vocational schools organized according to State plans approved by the Federal Board for Vocational Education totaled 1,064,303, an increase of 16,327 as compared with the previous year. The Federal Board believes that vocational education offers a permanently effective remedy in some degree for unemployment resulting from the displacement of men by machinery, new industries, and new processes calling for new skill. Page 113.

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"Spotty" Character of Employment Changes in Manufacturing Industries

VARIOUS recent investigations have shown that the sharp decrease in employment occurring since the beginning of the present depression has been by no means uniform as between communities and industries. Some have suffered much more acutely than others, but with very few exceptions all communities and industries have been adversely affected in some degree. Carrying this analysis a step farther—to the individual plants—a compilation just completed by the Bureau of Labor Statistics indicates that the lack of uniformity among the plants is even more striking, and that while the average employment in an industry may have declined markedly, individual plants within the industry may have actually increased the number of their employees during the period of general depression.

The bureau's compilation covers six major manufacturing industries—iron and steel, automobile, cotton goods, woolen and worsted goods, boots and shoes, and slaughtering and meat packing—and for each of these industries classifies the various plants according to the percentage change in employment between October, 1929, just prior to the beginning of the depression, and October, 1930. The month of October, 1930, was taken in preference to a later month, in order to avoid the possibility of seasonal influence. The detailed results are presented in the accompanying table.

From this table it appears that while, for the total of 1,240 plants with 884,010 employees, in the six industries combined, there was a decrease of 22.2 per cent in employment, an actual increase in employment occurred in 228 plants (the increase running as high as 100 per cent or more in 11 plants) and no change occurred in 42 plants. In other words, in about 20 per cent of the plants, with about 16 per cent of the total employees represented, employment was either as good or better in October, 1930, than in October, 1929. The experiences of the separate industries are similarly striking.

The number of plants shown in this table for the several industries differs slightly from the number given in the monthly reports of the bureau on volume of employment, owing to the fact that in some cases two or more factories of a single company had to be treated as a single plant for the purposes of the present tabulation.

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CHANGES IN EMPLOYMENT IN 6 MANUFACTURING INDUSTRIES, BY ESTABLISHMENTS, OCTOBER, 1929, TO OCTOBER, 1930

Per cent of change, October, 1929, to October, 1930	Iron and steel			Automobiles			Cotton goods		
		Employees			Employees			Employees	
	Number of plants reporting	Number reported October, 1930	Per cent of total	Number of plants reporting	Number reported October, 1930	Per cent of total	Number of plants reporting	Number reported October, 1930	Per cent of total
Increases:									
Over 100	1	327	(1)	1	315	(1)	5	1,940	1
76 to 100	1	628	(1)						
51 to 75	1	1,209	1	4	7,982	3	2	1,334	1
26 to 50	1	405	(1)	1	2,334	1	9	3,460	2
11 to 25	4	15,459	7	6	6,645	2	7	4,602	3
1 to 10	8	16,202	7	3	4,207	2	34	15,193	9
No change	4	9,964	4	6	352	(1)	14	4,530	3
Decreases:									
1 to 5	17	29,384	13	2	3,056	1	41	21,376	13
6 to 10	23	32,820	14	7	8,482	3	46	25,990	16
11 to 20	35	70,015	30	14	100,323	38	71	37,398	23
21 to 30	19	34,944	15	16	25,689	10	40	19,500	12
31 to 40	15	9,619	4	23	46,686	18	29	14,949	9
41 to 50	6	6,272	3	23	26,691	10	26	9,819	6
51 to 75	9	5,245	2	28	32,499	12	11	2,247	1
76 to 99	3	180	(1)	8	692	(1)	4	220	(1)
Idle	[2] 5						[3] 16		
Total	152	232,673	100	142	265,953	100	355	162,558	100
Decrease Oct., 1929, to Oct., 1930		−16.6			−31.3			−21.4	

Per cent of change, October, 1929, to October, 1930	Woolen and worsted goods			Boots and shoes			Slaughtering and meat packing			Total		
		Employees			Employees			Employees			Employees	
	Number of plants reporting	Number reported October, 1930	Per cent of total	Number of plants reporting	Number reported October, 1930	Per cent of total	Number of plants reporting	Number reported October, 1930	Per cent of total	Number of plants reporting	Number reported October, 1930	Per cent of total
Increases:												
Over 100	1	158	(1)	3	348	(1)				11	3,088	(1)
76 to 100	1	143	(1)	1	47	(1)				3	818	(1)
51 to 75				3	505	1				10	11,030	1
26 to 50	2	647	1	6	1,190	1	5	3,353	4	24	11,389	1
11 to 25	5	2,980	6	24	6,900	7	21	9,129	11	67	45,715	5
1 to 10	8	3,065	6	19	7,279	7	41	15,020	19	113	60,966	7
No change	5	1,557	3	3	389	(1)	10	2,847	4	42	19,639	2
Decreases:												
1 to 5	9	3,284	7	24	19,422	20	29	13,080	16	122	89,602	10
6 to 10	14	5,089	11	21	15,686	16	36	13,378	17	147	101,445	11
11 to 20	31	12,634	27	54	17,594	18	24	18,370	23	229	256,334	29
21 to 30	22	9,116	19	47	13,436	14	11	2,622	3	155	105,307	12
31 to 40	19	5,872	12	21	8,360	9	5	1,472	2	112	86,958	10
41 to 50	9	1,353	3	13	2,023	2	1	970	1	78	47,128	5
51 to 75	12	1,091	2	12	1,694	2				72	42,776	5
76 to 99	7	421	1	2	302	(1)				24	1,815	(1)
Idle	[4] 7			[5] 3						31		
Total	152	47,410	100	256	95,175	100	183	80,241	100	1,240	884,010	100
Decrease Oct., 1929, to Oct., 1930		−24.8			−16.9			−7.2			−22.2	

[1] Less than one-half of 1 per cent.
[2] These 5 idle plants employed 1,033 people in October, 1929.
[3] These 16 idle plants employed 5,919 people in October, 1929.
[4] These 7 idle plants employed 991 people in October, 1929.
[5] These 3 idle plants employed 779 people in October, 1929.

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Unemployment Benefits and Stabilization Policies in the United States

THE present unemployment situation has focused attention upon the various plans to ameliorate the condition of workers forced out of employment by economic changes beyond their control and upon measures taken to forestall unemployment.

In this country unemployment insurance has not been the subject of legislation, although in some of the States such legislation has been proposed. In isolated instances, however, employers have put unemployment insurance plans into effect, usually in conjunction with a definite policy for stabilization in the plant or industry, and the trade-unions have in some cases paid out-of-work benefits to their members and in other cases—notably the men's clothing industry—have been successful in the establishment of unemployment insurance plans through collective agreements.

This article is based on accounts of the various plans given in more detail in various issues of the Labor Review. The information is supplemented, also, by facts from the comprehensive report on Unemployment Benefits in the United States, by Bryce M. Stewart, of the Industrial Relations Counselors (Inc.), which in some instances contained later information regarding the plans than that in the possession of the bureau.

Trade-Union Plans

ALTHOUGH unemployment benefits have been paid by a number of national and international unions at various periods, only four such plans appear to be in existence at the present time. Of the abandoned plans several were in trades in which through changing work processes or for other causes the union became so weakened that the organization was dissolved; in other cases opposition to the payment of unemployment benefits developed within the trade-union itself, and the practice was, therefore, given up. The plans which continue in existence are those of the Diamond Protective Workers' Union of America, the Deutsche Amerikanische Typographia, the International Association of Siderographers, and the print cutters' section of the United Wall Paper Crafts of America. Two of these unions—the diamond workers and siderographers employ altogether not more than a few hundred men. The Deutsche Amerikanische Typographia was the first trade-union in this country to pay unemployment benefits on an international scale. The total membership in 1928 was reported to be 636, and the print cutters' section of the wall-paper workers covered by the benefit plan includes less than 250 workers. Thus it is seen that although the principle of a union unemployment benefit has been successfully put in practice, the number actually protected by these benefits is so small as to be almost negligible.

The locals of certain of the national and international unions also pay out-of-work benefits to their members. These include the Bakery and Confectionery Workers' Union of America, the International Typographical Union, Amalgamated Lithographers of America, International Photo-Engravers' Union of North America, International Brotherhood of Bookbinders, International Stereotypers'

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and Electrotypers' Union of North America, International Printing Pressmen and Assistants' Union of North America, and Amalgamated Lace Operatives of America.

In addition to the unions which pay a direct unemployment benefit, an indirect form of benefit through the exemption of unemployed members from the payment of dues is practiced by many unions. While this form of benefit does not relieve the lack of earnings, it has the advantage of keeping workers in good standing so that they are eligible for other union benefits.

Insurance Through Collective Agreements

VARIOUS industries have instituted unemployment insurance schemes through collective agreements between employers and the unions. The underlying principle in these plans is the responsibility of the industry for the employment of its regular workers, and the plans are based frequently, therefore, upon a guaranty of employment for a specified number of weeks in the year.

There are nine industries in which unemployment relief has been provided for by joint agreement. These include several branches of the clothing industry, namely, the ladies' garment industry; men's clothing industry; cloth hat, cap and millinery industry, and straw hat industry; the lace industry; wall paper industry; the hosiery industry; the cleaning and dyeing industry; and the shop employees of one railroad. These agreements are at present operative for one or more of the industries in eight or nine of the larger industrial centers of the country.

The women's garment industry was among the first to set up a system of guaranteed employment and unemployment benefits. This system was established in Cleveland by a decision of the board of referees in 1921. It was followed by a similar agreement in the New York market in 1924, and later in Chicago. Factional differences in the union resulting in its disorganization, however, led to the loss of the plan in New York City and in Chicago.

The Amalgamated Clothing Workers and the employers in the Chicago market signed an agreement early in 1923 providing for the creation of an unemployment insurance fund supported by the payment of equal contributions of 1½ per cent of the pay roll by the employers and the employees. By a later agreement (1928) the employers' share was doubled, the employees' part remaining the same. Large amounts have been paid out to workers involuntarily unemployed for lack of work, but although the fund has been very successful in alleviating the effects of unemployment on the workers, in the opinion of the chairman of the fund the scheme has had no tendency to decrease unemployment. Similar agreements were concluded in Rochester, N. Y., and in New York City in 1928, although with different rates of contribution. In Rochester the employers and workers contribute equal amounts—1½ per cent of the pay roll—while in New York City the employers pay the entire amount, or 1½ per cent of the total pay roll. The unemployment benefit plan of the wall paper industry dates back to 1894 when the machine printers and color mixers secured an agreement with the employers covering a guaranty of work and payment for lost time. This is probably the

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earliest plan on a national scale dealing with the unemployment problem. The latest agreement signed in 1929 provides for a guaranty of 40 weeks' continuous employment, so that within this limit the costs of any unemployment fall upon the employer. No liability for unemployment is assumed by the employer, however, for the remaining 12 weeks of the year.

An unemployment insurance plan was secured in St. Paul in 1923 by the cap branch of the Cloth Hat, Cap, and Millinery Workers' International Union by a collective agreement with one firm; subsequently agreements were made with other firms of the city. A similar fund was established in the New York, Chicago, and Philadelphia markets in 1924, and in Boston, Baltimore, Scranton, and Milwaukee in 1925. This fund was formed by a payment by the employers of 3 per cent of the weekly pay roll.

In the straw-hat industry a plan similar to that of the cap industry was obtained in 1925 by two locals of the United Hatters of North America in New York City. This plan also provides for the payment of 3 per cent of the weekly pay roll by the employers. Members of the union employed in shops where there is no agreement in effect may pay 3 per cent of their wages into this fund if they wish, but such payment is not compulsory.

Two locals of the cleaning and dyeing industry have a joint plan for the payment of unemployment benefits. One in Chicago was concluded in 1925 and one in St. Louis in 1927. In both plans the fund is supported entirely by contributions by the employers, but in Chicago this amounts to 1½ per cent of each weekly pay roll and in St. Louis to 4 per cent. Benefits are paid only in certain specified months which form the dull season in the trade.

A national agreement was concluded between the Full-Fashioned Hosiery Manufacturers of America and the American Federation of Full-Fashioned Hosiery Workers which became effective August 1, 1930. By the terms of the agreement each member of the association contributes to the fund a sum equal to 1 per cent of the weekly wages paid in the factory, these contributions beginning August 1, 1930; while the workers pay one-half of this amount, their contributions beginning September 1, 1931. The agreement provides for restricting membership in the union to the actual number of jobs, as a check upon the payment of unemployment benefits. The agreement is effective until August 31, 1931, and will be renewed automatically unless either party desires to terminate it.

The Seaboard Air Line Railway entered into an agreement with the Shop Craft Federation in 1927 to guarantee steady employment to a specified number of shopmen for one year. The agreement which granted the company the privilege of increasing its forces above the specified minimum at any time has been renewed each year.

Establishment Insurance and Guaranty Plans

THE practice of providing some insurance against forced unemployment among their workers has not gained any widespread acceptance among employers, although here and there a firm with perhaps a keener sense of social responsibility, or moved by the desire to retain a skilled force intact, has acted to provide some security for its employees in times of falling markets and lessened industrial activity.

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There are approximately a dozen companies known to have established systems of unemployment insurance for their employees. In most of these plans emphasis is laid upon measures for stabilizing employment, such as manufacturing for stock to avoid seasonal fluctuations, avoidance of unnecessary hiring when business is active in order to avoid lay-offs and to maintain the normal pay roll in times of depression, deferring maintenance and repair work as far as possible in times of increased industrial activity, shortening or lengthening the work periods in accordance with production requirements, and the application of extra sales energy when sales are most needed. By the use of these and other methods applicable to the conditions of a particular industry, all available means are taken to keep the men employed rather than to subsidize unemployment by the payment of benefits. When these means fail, however, to insure employment, provision for the payment of benefits is made.

An unemployment fund was established by the Dennison Manufacturing Co. in 1916. The fund, which is maintained by the company, is administered by a small committee composed of an equal number of representatives of the management and the general works committee. Employees who have more than six months' service are eligible for benefits if temporarily laid off, and if discharged because of lack of work are given either two weeks' notice or two weeks' pay from the unemployment fund.

The Leeds & Northrup Co. set up an emergency fund as a result of the depression of 1920 in which the company was obliged to lay off men without being able to make any provision which would help the workers to meet the emergency. The fund, which is maintained entirely by the company, represents an attempt to build up a reserve sufficient to meet any major industrial depression. In the case of lay-off there is no waiting period before the payment of benefits.

The unemployment insurance plan of the Dutchess Bleachery (Inc.), which provides for the establishment of a sinking fund from which benefits should be paid in times of unemployment, was established in 1920. A worker is considered unemployed when the plant or any department of the plant is closed temporarily on account of business depression or other cause over which the operatives have no control. Employees who have worked for the company on either a piece-work or time-work basis for 12 months are eligible for benefits, at least 24 hours' pay per week being guaranteed under the plan unless the fund becomes exhausted.

The plan of the John A. Manning Paper Co. was originally a union agreement with an employment guaranty of 52 weeks' employment for all employees having a year's service with the firm. Misunderstandings arising from its application, however, caused its abandonment after a trial of one year. The organization of the Manning Welfare Association in 1922, for the purpose of providing various benefits for production employees, included as one of the benefits unemployment insurance entirely paid for by the company. This plan guaranteed payment for unemployment on account of lack of work up to a fixed maximum payment. The company states, however, that unemployment insurance has only rarely been resorted to and that the firm desires rather to stress its stabilization policies, which are necessarily dictated by conditions peculiar to the industry. At the present time

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the development of a contributory unemployment insurance plan is being considered "in order to add an element of certainty to the protective measures adopted by the company from purely humanitarian motives."

The S. C. Johnson & Son Co., Racine, Wis., has a plan of unemployment benefits administered by the employees' mutual benefit association, but financed by the company. The plan was inaugurated in 1922, but much attention has been given by the company to the stabilization of the industry so that the out-of-work benefits are a comparatively unimportant part of the policy of the company to provide regular and stable employment for their workers.

The plan of the Columbia Conserve Co. was established in 1917 as part of the general plan of democratization by which employees were given a voice in the management of working conditions generally. In line with this policy of the company, every effort has been made to stabilize a highly seasonal industry with a view to eliminating unemployment as completely as possible. The regular workers are hired, after a probationary period, on a salary basis, and workers whose status is purely temporary on a wage basis. The salaried workers are given a guaranty of a full year's employment, while the wage earners are guaranteed 50 hours' employment a week at a fixed hourly rate during the period they are employed.

The Procter & Gamble Co. has maintained guaranteed employment in the different plants and offices of the company since 1923 for employees who participate in the profit-sharing plan of the company. The employment guaranty insures 48 weeks' employment at full pay in the year. This is exclusive of periods when it is necessary to close the plants for cleaning and repairs. No unemployment fund has been established by the company.

The United Diamond Works (Inc.) has a plan of unemployment benefits which was adopted in 1921. This is one of the largest diamond-cutting establishments in the United States, and the peculiar necessities of the trade made it essential to provide for maintaining the force because of the skill and training involved in diamond polishing. No special fund was set aside, but employees are usually paid 25 per cent of their average full-time earnings.

Among the plans recently established is that of the Brown & Bailey Co., Philadelphia, which established a trust fund from which benefits are paid to workers on weekly wages, both skilled and unskilled. There are no service requirements, and the compensation for total or partial unemployment is sufficient to bring the income up to 80 per cent of the employee's weekly wage.

The General Electric Co. established a new unemployment pension plan in the summer of 1930 for all the plants of the company in which a majority of the eligible employees were in favor of it. The plan provides that employees with service of one year or more are eligible for participation. Employees contribute approximately 1 per cent of their earnings as long as they amount to 50 per cent of the average full-time earnings, and the company contributes an amount equal to that paid in by employees. Benefits are not paid for the first two weeks of unemployment but may be made for a maximum of 10 weeks in any 12 consecutive months. The plan is part of the definite stabilization program of the company.

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The Consolidated Water Power & Paper Co. established an unemployment compensation plan in February, 1929, which provides for remuneration to permanent workers unemployed because of curtailed operations. Maximum benefits were fixed for common labor at $20 to $30 per month, according to length of service, and at $75 for the highly skilled workers. Although no benefits have been paid for more than a year, the company still regards the plan as effective in the event of protracted shutdowns.

A novel cooperative plan for guaranteeing employment and paying unemployment benefits financed entirely by the companies was entered into by three manufacturing firms of Fond du Lac, Wis., in 1930. The employing organizations are the Sanitary Refrigerator Co., Northern Casket Co., and Demountable Typewriter Co., including two subsidiary enterprises of the latter company, the Standard Refrigerator Co., and the American Lock & Hinge Co. The companies agree to provide "steady employment" so far as possible, to assist employees for whom jobs can not be provided to secure other suitable employment, and in case this is impossible to pay a cash benefit after the first 15 days of unemployment, equal to 65 per cent of the average earnings during the year preceding unemployment.

Two plans have been discontinued. The plan of the Rockland Finishing Co. became inoperative in 1923 because of lack of funds, and the American Cast Iron Pipe Co. gave up the plan in 1926 because of changes in manufacturing methods which required plant reorganization.

Since this article was written an account has been received of a joint unemployment benefit plan entered into by 14 companies of Rochester, N. Y. These companies, with the exception of one public utility, are engaged in manufacturing, the companies all being under separate management and control. The plan provides that the companies will bear the entire cost of the plan except in the case of prolonged unemployment, in which case they may require contributions of 1 per cent of earnings from all employees who are not receiving benefits, including officials. No benefits will be paid until 1933, the intervening period being devoted to the accumulation of reserve funds which it is estimated will at that time be sufficient to meet ordinary requirements.

Organization and Functions of Governmental Labor Agencies

LABOR legislation, both Federal and State, has resulted in the creation of administering and enforcing agencies which are steadily increasing in scope and effectiveness. Three-fourths of the States have departments of labor or industrial commissions which are active agents in the promotion of industrial welfare, and in all States some agency is serving at least some phase of industrial betterment, although its efforts may be confined to child labor or workmen's compensation. In the Federal Government many agencies in addition to the Department of Labor are active either in the promotion of improved working conditions and industrial betterment generally, or in the administration and enforcement of labor laws coming within the jurisdiction of the Federal Government.

This article presents broadly the structure and functions of the various governmental agencies dealing with labor activities generally

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and specifically. The administration of workmen's compensation legislation and of mining laws is often in the hands of agencies other than the departments of labor and industrial commissions. These separate agencies are merely referred to in the article, but are not treated in detail. The agencies dealing specifically with public employment offices were described in an article in the January, 1931, issue of the Labor Review.

State Agencies

THE functions of State departments of labor and industrial commissions have been tersely said, by an official of one of those agencies, to include "everything that nobody else wants to do." Considering the scope of their activities, ranging all the way from general administration and enforcement of State labor laws to measuring the length of the sheets on hotel beds and licensing the retail delivery of coal, the remark is really not far from the truth.

The form of organization of these State agencies, the extent of their personnel, and the amount of money available for their use differ widely. Between the extremes of a single office, in which a commissioner and one stenographer, with an appropriation of a few thousand dollars, represent the State's activity in the interest of labor, and a vast organization which spends over $2,500,000 a year lies the story of governmental promotion of the industrial welfare of American workers.

Governmental activity in the interest of the workers is now found in some degree in each of the 48 States. In three of them, however, it has not developed to the point of operating through an organized bureau. In Florida and in Mississippi the work is limited to factory inspection, with only one inspector employed in each State, and in Florida supervision is concerned only with children. New Mexico has only a coal-mine inspector.

Alabama confines its activities to child labor, but operates through a commission which employs a staff of inspectors. Delaware is similarly organized, but includes women as well as children in its jurisdiction. In addition, Alabama has a State board of mine inspection and a workmen's compensation commission which is part of the State insurance bureau. In Delaware the industrial accident board is an independent organization. Idaho has an industrial accident board and a State mine inspector, but its department of immigration, labor and statistics, creation of which is required by the State constitution, has not functioned for several years, apparently for lack of appropriation. The industrial commissioner of South Dakota is concerned only with the administration of the workman's compensation act.

Labor activities are combined with other interests in six States. The State departments in Kentucky, Montana, and North Dakota cover agriculture as well as labor, and in South Carolina the labor division is a subordinate bureau within the department of agriculture, commerce, and industries. Georgia combines commerce and labor in one department, while the department in North Carolina deals with labor and printing.

In 21 States and in the Federal Government administration of workmen's compensation laws is independent of the department

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of labor, and in 16 States and the Federal Government mine regulations are also outside the jurisdiction of the labor department.

Inspection of mines, tunnels and quarries is included in the duties of the department of labor or the industrial commission in the following States: Kansas, Maryland, Montana, New Jersey, New York, Ohio, Tennessee, Utah, Virginia, Washington, and Wisconsin. In other mining States inspection is carried on by separate bodies, usually an organization composed of the chief mine inspector and his staff; and in the most important mining States—Alabama, Colorado, Illinois, Kentucky, Pennsylvania, and West Virginia—State departments of mines have entire jurisdiction over all matters pertaining to mining. Colorado has two organizations, the coal-mine inspection department and the bureau of mines, the latter dealing with metal mining.

Thirty-five States have independent organizations dealing with some aspect of labor, but there is no one activity that is common to all of them. Factory inspection, for example, which one would expect to find in any program of labor administration, and which is a basic function of most State departments of labor, is nevertheless outside the jurisdiction of some of them. To illustrate, in Nebraska reports of inspectors employed by the insurance companies are supposed to be filed with the State department of labor and to constitute official information on factory conditions, and the State as such has no authority to enter factories for purposes of inspection.

Not all State departments are charged directly with the enforcement of labor laws. In some cases the department merely reports violations and has to depend upon the district or county court to initiate and carry out prosecutions.

Organization in Small and Nonindustrial States

THE labor departments of the less industrial States are small as a rule, with limited funds and generally an inadequate staff. Their functions, however, cover most of the normal industrial activities of the State and not infrequently wholly unrelated activities as well.

Omitting workmen's compensation from this discussion, certain duties devolve upon nearly all of these State agencies. With some exceptions, these duties are: Factory, boiler, and elevator inspection, the enforcement of special labor laws concerning women and minors, the maintenance of free employment offices, the compilation and publication of labor statistics, and the study of industrial conditions. These, broadly, are the duties of the departments of labor of Connecticut, Iowa, Louisiana, Maine, Maryland, Missouri, Montana, New Hampshire, Oklahoma, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wyoming. In addition, licensing and supervising of private employment agencies are carried on by several of them, and mine inspection is part of the duties of the department in Maryland, Tennessee, Utah, Virginia, and Washington.

Factory inspection and the enforcement of child-labor laws are independent of the department of labor in Rhode Island, and child-labor supervision and enforcement are functions of a separate board in Oregon.

These agencies are all organized as departments under the direction of a commissioner. The commissioner is appointed by the

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governor in all but four States (Georgia, North Carolina, Oklahoma, and Oregon), where he is elected. The make-up of these departments is comparatively simple, although the extent of their personnel and the amount of work they are equipped to do differ materially.

Colorado has three forms of organization in the industrial field, the functions of which overlap somewhat. Its bureau of labor statistics is a fact-finding agency with explicit duties as to the collection and presentation of industrial information, but it is specifically charged as well with the enforcement of "all laws enacted for the protection of wage workers." The secretary of state is ex officio commissioner of labor, but the active official is a deputy commissioner whom the secretary of state appoints. There is a "separate and distinct department known as the department of factory inspection" with specific statutory duties, but the head of the bureau of labor statistics is also head of the department of factory inspection under the title of "chief factory inspector."

Then there is also the Colorado Industrial Commission composed of three members appointed by the governor. This body administers the workmen's compensation act and the industrial disputes investigation act and is charged with enforcing the labor laws and with supervision and direction of employment offices, both public and private. The public employment offices have been discontinued for lack of appropriations for their maintenance.

In Michigan and Nevada the labor agency is primarily an industrial accident board, one member of which is designated the labor commissioner and is charged with the enforcement of the labor laws and the gathering of industrial statistics.

Departmental Machinery in Principal Industrial States

THE leading industrial States—New York, Pennsylvania, New Jersey, Massachusetts, Illinois, and Ohio—have departments of labor under various titles, the organization of which is similar with respect to the important points, although details differ somewhat. The California Department of Industrial Relations is also included in this group because of its similarity in make-up.

New York

The New York Department of Labor is much the most highly organized of all and represents practically all the phases of governmental activity in the interests of the workers which are found in the United States. It functions in the threefold capacity of an executive, a judicial, and a legislative body. Its judicial function is of course concerned with determination of claims under the workmen's compensation law. Its legislative work is the formulation of an industrial code complementary to the statutory labor regulations, which has the same force and authority as the labor laws. Both judicial and legislative functions are separate from the administrative duties, and are carried on by the industrial board. The industrial board is composed of five members, appointed by the governor, "at least one of whom shall be an attorney." In its connection with workmen's compensation the industrial board is entirely independent of the industrial commissioner, who is the head of the department of labor. Administrative, investi-

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gative, and clerical work involved in administering the compensation act, however, is carried on by a bureau of the department, under the direction of the commissioner.

The industrial board acts independently of the industrial commissioner in its legislative capacity also, but its rules are not effective until approved by that official.

The administration of the department of labor, under the direction of the industrial commissioner appointed by the governor, is carried on through 10 bureaus and divisions, with a director at the head of each. The department is also organized geographically, with a general office in each of the five districts into which the State is divided, and practically all of the activities of the department are carried out by each district organization.

The functions of each of the 10 bureaus and divisions are suggested in their titles. They are:

Bureau of inspection.
Division of industrial codes.
Division of engineering.
Bureau of industrial hygiene.
Bureau of statistics and information.
Bureau of women in industry.
Bureau of workmen's compensation.
State insurance fund.
Division of self-insurance.
Bureau of industrial relations.

Three of these, the bureau of workmen's compensation, the State insurance fund, and the division of self-insurance, can be dismissed with the statement that they are concerned solely with workmen's compensation and industrial insurance.

The bureau of inspection is responsible in large measure for the enforcement of labor laws and codes and the prosecution of violations. In addition to routine inspection of factories and mercantile establishments to insure compliance with laws and regulations, the bureau of inspection is concerned with accident prevention, removal of dust, gases, and fumes, the sanitary condition of labor camps, and the hygienic manufacture of mattresses and pillows. Technical inspection of boilers, of buildings under construction and repair, and of mines, tunnels, and quarries is part of the inspection work of the bureau. That office is also charged with enforcing the fire regulations covering places of public assembly in cities, towns, and villages which have no building code or no enforcing authority.

The division of industrial codes is the medium through which preparatory investigations and hearings are held, which form the foundation of new codes established by the industrial board.

The work of the engineering division consists in the examination and approval of plans for the construction and alteration of places of public assembly; buildings in which factories or mercantile establishments are located, and elevators and hoistways placed in such buildings. The division also maintains an information service in connection with its work for the benefit of builders, architects, and engineers.

The bureau of industrial hygiene is a scientific body which operates through four sections: Expert inspection, which includes medical factory inspection; special research, which involves investigation of industrial diseases and disease hazards; accident prevention, and education. Its educational work is carried on by means of traveling industrial-hygiene exhibits, moving pictures, lectures, and publications.

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The bureau of statistics and information is the fact-gathering agency which furnishes needed information to the other bureaus of the department and compiles and publishes their statistical data.

The bureau of women in industry is primarily a research organization which makes studies and reports of divers phases of the problem of women in industry. It has a special inspection division covering home work, and maintains an information service for the assistance of working women, particularly in relation to laws affecting them.

The bureau of industrial relations consists of three unrelated divisions. The division of mediation and arbitration handles industrial disputes. The division of aliens is devoted to the interests of immigrants in relation to their working and living conditions, and particularly to protecting them from exploitation. Three special investigators are assigned to the alien division. The division of employment is the medium through which the 11 public employment offices throughout the State are operated.

Pennsylvania

Structurally and functionally the Pennsylvania Department of Labor and Industry is nearly identical to the New York Department of Labor, but there are important differences.

The members of the industrial board in New York are salaried full-time officials. In Pennsylvania, the head of the department, the secretary of labor and industry, is chairman of the industrial board, and of the four additional members who comprise the board "one shall be an employer of labor, one a wage earner, and one a woman." They are paid only for the time actually spent on the work of the department. With relation to the formulation and adoption of industrial standards and codes they act in the same capacity as does the New York industrial board. The industrial board in Pennsylvania is also an appeal board, it is authorized to instigate and direct industrial investigations, and it exercises general supervision over the work of the department. It has, however, no jurisdiction over workmen's compensation. That function is exercised by the workmen's compensation board, of which the secretary of the department is ex officio a member. Two additional members are appointed by the governor. As in New York, the administrative and investigative work connected with workmen's compensation and industrial insurance is carried on by bureaus within the department—the bureau of workmen's compensation and the State workmen's insurance fund.

The Pennsylvania department has one bureau exercising a function not covered by the New York Department of Labor. That is the bureau of rehabilitation, which endeavors to make the physically disabled worker capable of doing some productive work. It advises on artificial appliances and in some cases furnishes them.

A minor difference in the two organizations is that the inspection of bedding and upholstery has recently been removed from the bureau of inspection in Pennsylvania, because of the character of the work involved, and made a separate bureau.

In other respects the organization and functions of the departments of labor in the two foremost industrial States are entirely comparable. Bureaus comprising the Pennsylvania Department of Labor and Industry are the executive bureau (administers general departmental

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procedure and edits Labor and Industry, the official monthly bulletin), the bureau of inspection, the bureau of workmen's compensation, the bureau of rehabilitation, the bureau of employment (maintains 13 State free employment offices and licenses and supervises private agencies), the bureau of industrial standards (operating through two sections—research and sanitation and hygiene), the bureau of industrial relations (for settlement of industrial disturbances), the bureau of statistics, the bureau of women and children, the bureau of bedding and upholstery, the workmen's compensation board, and the State workmen's insurance fund.

Branch offices of the department are maintained in 27 cities and towns. The Pennsylvania Department of Mines is a separate organization.

Illinois

The Illinois Department of Labor is composed of two apparently distinct divisions, with divided authority. The department of labor as such, with a director at its head, operates through three divisions: The division of factory inspection, which enforces the general labor laws; the division of free employment offices which, under the direction of a State superintendent, maintains and controls 20 subsidiary offices; and the division of private employment agencies, which licenses and supervises those organizations. There is also a nonsalaried general advisory board of five members which assists the free employment system in a coordinating and advisory capacity.

Functioning within the department of labor, but entirely outside the activities just outlined, is the industrial commission, composed of five members, two of whom represent employers and two employees, and a chairman. This commission administers the workmen's compensation act. In addition, it has jurisdiction over the State mediators and the bureau of statistics and research, which is the fact-gathering and statistical division and which publishes the Labor Bulletin.

New Jersey

New Jersey has the departmental form of organization, under the direction of a commissioner appointed by the governor. The New Jersey Department of Labor is divided into eight bureaus, one of which is the bureau of workmen's compensation. The commissioner is the chairman of that bureau and receives payment, in addition to his salary as commissioner of labor, for his services under the workmen's compensation act.

Of the seven departmental bureaus, four are concerned with some aspect of inspection. These are the bureau of general and structural inspection and explosives, which inspects factories, mercantile establishments, elevators, fire escapes and fire apparatus, etc., and approves plans for construction and remodeling of industrial plants; the bureau of hygiene, sanitation and mine inspection, which covers occupational diseases, ventilation, and industrial safety; the bureau of electrical and mechanical equipment, which is concerned with machinery safeguards and the like; and the bureau of engineers' license, steam boiler, and refrigerating plant inspection, which is an inspection and licensing agency.

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Other bureaus are the bureau for women and children, which administers special laws applying to women and minors and conducts investigations in those fields; the bureau of employment, which maintains free employment offices in seven cities and licenses and regulates private agencies; and the bureau of statistics and records, which compiles data on industrial accidents and compensation costs, volume of employment, monthly pay rolls, and building permits. The department issues monthly an organ called the Industrial Bulletin.

Massachusetts

In Massachusetts the department of labor and industries and the department of industrial accidents are wholly distinct organizations.

The Massachusetts Department of Labor and Industries consists of a commissioner, an assistant commissioner "who shall be a woman," and three associate commissioners, "one of whom shall be a representative of labor and one a representative of employers of labor." These are full-time salaried officials appointed by the governor.

The associate commissioners constitute the board of conciliation and arbitration and the minimum wage commission. The assistant commissioner is the administrative head in all matters pertaining specifically to women and minors, including the minimum wage law. In the administration of that law, the associate commissioners serve as an advisory and consultative board with the assistant commissioner.

Under the immediate direction of the commissioner are the divisions of industrial safety, standards, and statistics.

The division of industrial safety is charged with enforcement of labor legislation covering safety and health, the maintenance of labor standards fixed by law, and the enforcement of rules and regulations adopted by the department for the prevention of accidents and industrial disease. Regular inspection work is carried on through this division.

The division of standards is related to industry and commerce rather than to labor, and deals with weights, measures, official seals, and the like.

The division of statistics exercises two functions, the maintenance and operation of the State employment offices, and the collection and publication of statistics of labor and manufactures. It is also an information, research and investigation bureau.

Ohio

In 1913 the Ohio Legislature created an industrial commission to administer its workmen's compensation act, and incorporated within the new commission other agencies dealing with labor which existed independently. These included the commissioner of labor statistics, the inspector of workshops, factories, and public buildings, the inspector of mines, the examiner of steam engineers, the board of boiler rules, and the board of arbitration and conciliation.

Under a reorganization effected in 1921 a department of industrial relations, with a director at its head, was established, which took over all the powers and duties previously vested in the industrial commission except the hearing of claims under the compensation law, the arbitration of labor disputes, the supervision and appointment of

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the board of boiler rules, and the prescribing of standards, safety devices, etc., in workshops and factories. These excluded activities are still under the direction of the industrial commission, of which the director of the department of industrial relations is ex officio secretary. However, the administrative work connected with the duties assigned to the industrial commission, including investigations and clerical work involved in workmen's compensation, is under the direction of the department and is carried on by the division of workmen's compensation.

The other divisions of the department of industrial relations are the division of factory inspection, an inspection and enforcement agency which includes the special field of women and children in its activities; the division of mines, whose functions cover the inspection of mines and the examination of mine foremen and fire bosses; the division of labor statistics and employment offices, to which, in addition to compilation of industrial statistics, is assigned the administration of the State-city employment service, the supervision and licensing of private employment agencies, and the mediation of labor disputes; the division of boiler inspection, and the division of examiners of steam engineers.

California

Prior to 1921 California had a number of unrelated official bodies dealing with various aspects of labor and industry, all of which in 1921 were grouped into a single department of labor and industrial relations. In 1927 another reorganization took place which created the California Department of Industrial Relations, under a director appointed by the governor. Administrative and executive divisions of the department are established by the organic act, each under the direction of a chief appointed by the governor. These divisions cover, respectively, industrial accidents and safety, housing and sanitation, the State employment agencies, labor statistics and law enforcement, and industrial welfare.

Within the division of industrial accidents and safety is the industrial accident commission of three members, which adjudicates claims under the workmen's compensation act. Other sections of the division enforce the safety provisions and regulations which are part of the compensation legislation.

The division of housing and sanitation is an outgrowth of the former commission on immigration and housing, which the act of 1927 abolished. The division, however, carries on the powers and duties of the commission in the administration and enforcement of the State housing act.

The division of industrial welfare is concerned with special problems affecting the employment of women and minors. It is an investigating body as well as a medium for the enforcement of special laws applying to women and children, including the minimum wage law. A component part of the division is the industrial welfare commission, which is a group of five, "one of whom shall be a woman." The woman member is chief of the division, on salary; the other members serve without pay, chiefly in the capacity of a minimum wage board, with authority to make extensive investigations into the working conditions of women and children.

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The bureau of labor statistics and law enforcement serves in the dual capacity suggested by its title, and carries on the regular inspection work necessary to the enforcement of the general labor laws.

States with Industrial Commissions

AT THE beginning of the movement for the organization of industrial commissions patterned after the first of those bodies, the Industrial Commission of Wisconsin, there was more difference between an industrial commission and a department of labor, structurally and functionally, than there is now. The commission idea involved a comprehensive organization embracing all the State's activities in industrial welfare and progress. While these activities were at that time distributed among various independent bureaus and boards, they are gradually being absorbed, as has already been pointed out, into a unified department.

A definite distinction between the commission form and the department form remains, however. The department operates under a single head, who is the responsible authority; the commission is under the combined authority of three or five members equally responsible.

While some States—Illinois and Ohio, for example—have experimented with the commission form and have afterward returned to the department plan, there is a tendency for reorganization to take the form of an industrial commission. Arizona, Indiana, Kansas, Minnesota, Utah, and Wisconsin are now operating under the commission system. That system, however, is scarcely more uniform than is the department system.

Wisconsin

The Industrial Commission of Wisconsin was established in 1911, and superseded the bureau of labor and industrial statistics. It is composed of three members appointed by the governor. The law does not fix qualifications for membership on the commission.

The industrial commission is the medium through which all labor legislation is administered and enforced. It functions through eight departments, i. e., those of general administration, safety and sanitation, workmen's compensation, employment, apprenticeship, woman and child labor, statistics, and mediation and arbitration.

The safety and sanitation department is the chief enforcement agency and includes all of the general inspection divisions. Moreover, it promulgates and enforces safety and sanitary codes and regulations which have the force and authority of law.

The employment department maintains 10 free employment offices throughout the State, with a special junior placement bureau in its Milwaukee office, and licenses and regulates private employment agencies.

The woman and child labor department is charged with the enforcement of the child labor law, the minimum wage law, the women's hours of labor law, the home work law, and the law providing for one rest day in seven, and with the special application of the safety and sanitary regulations to women and minors. The department is also a research agency for investigation of matters pertaining to working conditions and special problems of women and children, and it

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issues work permits to children. The headquarters of this department are in Milwaukee instead of in the capital.

The apprenticeship department administers the State apprentice law, designed to promote and supervise trade training, and cooperates with the State board of vocational education in securing vocational education for apprentices.

The statistical department issues monthly the Wisconsin Labor Market, giving volume of employment and pay-roll data, and Wisconsin Labor Statistics, covering the commission's activities other than those dealing with employment. It also publishes the reports of special investigations, and compiles compensation and accident statistics.

Minnesota

The Minnesota Industrial Commission is similar in make-up and functions to that of Wisconsin. It is composed of three members, not more than two of whom may belong to the same political party, and "inasmuch as the duties to be performed by such commission vitally concern employers and employees as well as the whole people of the State," it is declared to be the intent of the act "that persons be appointed as commissioners who shall fairly represent the interests of all concerned in its administration."

Differences between the Wisconsin and the Minnesota commissions lie chiefly in the organization of their inspection service, which in Minnesota is in three divisions, those of accident prevention, boiler inspection, and standards, instead of in one department as in Wisconsin; in the absence of anything in Minnesota corresponding to the apprenticeship department in Wisconsin (which, as a State agency, is in fact peculiar to Wisconsin); and in a similarly unique division in Minnesota dealing with the rehabilitation and placement of the deaf.[1] In Wisconsin the division of mediation and arbitration is not active, and in Minnesota its organization was provided for but never formed.

Kansas

Kansas within the past 10 years has experimented with several kinds of governmental agencies regulating industry, the most recent of which is a commission.

When the court of industrial relations was created in 1921 it supplanted a department of labor and industry. The court was abolished in 1925 and its executive powers pertaining to labor regulation were vested in the labor department of the newly created public service commission. In 1929 the public service commission as then constituted was abolished and all its powers and duties in the labor field were conferred upon a new body, the Kansas Commission of Labor and Industry.

This commission is composed of three members appointed by the governor. No qualifications of any kind are stipulated in the act. The member chosen by the governor to be chairman of the commission "shall have active charge of the administration of the workmen's compensation act," with authority to call upon either of the other two in connection therewith. One member of the commission "shall be designated as commissioner of labor" and shall have "active charge of factory inspection, State mine inspection, State bureaus of

[1] North Carolina has a similar agency in its department of labor and printing.

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free employment, and supervision of laws pertaining to women and children in industry."

There is thus established within the commission a department of labor, the duties of which are general labor inspection and labor law enforcement. These duties devolve upon the divisions of factory inspection, women and children, free employment service, mine inspection and mine rescue.

Other States

The Industrial Commissions of Indiana, Utah, and Arizona are primarily workmen's compensation commissions to which have been delegated the enforcement of the rest of the State labor laws. The Indiana body, known as the Indiana Industrial Board, consists of five members appointed by the governor, "two of whom shall be attorneys and not more than three of whom shall be of the same political party." In addition to administering the workmen's compensation act, the board has taken over the powers and duties formerly exercised by the State bureau of inspection and labor statistics. Departments actually functioning at present are those dealing respectively with inspection (factory, boiler, and mine), women and children, free employment service, and statistics.

Both the organic act establishing the industrial commission and the organization are practically identical in Arizona and Utah. Both commissions are composed of three members appointed by the governor, and not more than two in either may belong to the same political party. Their principal function is to handle workmen's compensation cases, but the enforcement of such other labor laws as exist has also been assigned to the commissions. Factory, boiler and mine inspection, and special inspections covering employment of women and children, are regularly made in Utah, and the Utah commission is also responsible for the administration of the firemen's pension law.

Extraneous Activities of Labor Departments

Most State departments of labor are called upon to perform duties which seem far afield from their main purpose and activities. This is as true of the highly organized industrial States with their specialized labor machinery as it is of the smaller and poorer States.

One unrelated activity which is part of the work of the departments of labor in many States is really a public health function. That is the work of inspecting and stamping mattresses, bedding, upholstered furniture, and the like. Laws governing the manufacture of these articles require the use of a certain percentage of new material and the sterilization and special treatment of any old material used in the composition. Enforcement of these laws, which are really health and hygiene measures, has been assigned to State labor departments. Since the type of inspection needed was not particularly technical, this practice has probably developed because factory inspectors covered these manufacturing plants anyway, in the routine of labor law enforcement, and they were considered the logical medium to enforce the laws applying to the product of a factory as well as to its operation.

In other instances the fact that the State labor department maintains men in the field has resulted in the assignment of those specialized representatives to tasks which certainly have slight bearing on

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their main activities. In Rhode Island, for example, licensing and regulating the wholesale and retail delivery of coal and coke, and the maintenance of standard weights and measures, are performed by the office of the commissioner of labor.

Probably the most interesting of these "omnibus" organizations is the Tennessee Department of Labor. That body exercises all the normal functions of such an agency. In addition to his work in the interest of the workers, the commissioner of labor is State fire marshal as well, and with a staff of fire wardens, investigators and inspectors he carries out the State's fire-prevention and fire-control program. Moreover, the department has a division of hotels which inspects the hotels of the State not only as employers of labor, but as public-service organizations, and rates them as good, bad, and indifferent in the interest of the traveling public. All phases of operation of a hotel or an inn as a public utility—its equipment, sanitary condition, the preparation and serving of food, etc.—are inspected by State representatives and orders are issued to correct unsatisfactory conditions. The department issues certificates of approval to hotels and inns which meet and keep its standards.

Labor Activities of Other State Agencies

On the other hand, while State labor departments are performing duties which seem remote from their fields, other departments and official bodies within the State have functions which bear very closely upon the work of the labor departments.

Thus State departments of health are frequently in control of the regulation and study of occupational diseases; trade training, except in Wisconsin, is entirely outside the province of the departments of labor and in the hands of the school authorities; and work permits for children are generally issued by other agencies. The organizations through which these labor activities are carried on in other departments are as a rule extremely simple, consisting usually of a small office or a single individual.

Expenditures and Personnel of State Labor Departments

To afford a comparison of the amount of money and working force available to State labor agencies in the prosecution of their duties, except those in connection with workman's compensation, the following table is presented. In treating the working force, only the chief of the department and the field force actually engaged in inspection and enforcement are considered in detail. Other employees include the office force and in some instances statisticians and editors.

Some States have reported appropriations, others actual expenditures, for the latest completed fiscal year. Frequently official inspection is a source of revenue,[2] as a fee is charged by the State for different kinds of compulsory inspection. This is especially true of boiler and elevator inspection. In Tennessee, for example, the inspection fee charged against the hotels and inns produces sufficient revenue to meet the expenses of the hotel division of the department of labor. The Missouri Department of Labor and Industrial Inspection

[2] See Labor Review, April, 1930, p. 145: Revenue Receipts of State Labor Departments.

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is required to earn, through the collection of fees and fines, the entire amount of money appropriated for its use.

Another source of income is the fee paid for license to operate private employment agencies, and, occasionally, lodging houses for workers. Still another source is the fines assessed for violations of the labor laws.

The administration of workman's compensation is wholly self-supporting in some States and practically so in many. This is because the cost is assessed against the insurers as part of the total cost of compensation. In the table the cost of administering the workman's compensation act is disregarded entirely, and the figure showing annual appropriation or expenditure represents the amount used by the agency in carrying on other activities.

ANNUAL APPROPRIATION OR EXPENDITURES OF STATE LABOR AGENCIES, NUMBER OF EMPLOYEES, AND SALARIES PAID

State and organization	Annual appropriation or expenditure [1]	Salary of executive head	Inspectors and investigators		Total number of employees [1]
			Number	Salary range	
Alabama Child Labor Division	$8,170	$2,400	1	$1,680	3
Arizona Industrial Commission	[2] 15,000	3,000	1	3,000	4
Arkansas Bureau of Labor and Statistics	25,250	3,600	3	$2,400–3,000	10
California Department of Industrial Relations	353,692	6,000	43	1,500–3,060	121
Colorado Bureau of Labor Statistics	17,500	2,500	4	1,200	9
Connecticut Department of Labor and Factory Inspection	150,000	6,000	18	2,100–2,500	-------
Delaware Labor Commission	8,000	2,100	1	1,500	3
Florida Labor Inspector [3]	4,300	2,400	1	-------	1
Georgia Department of Commerce and Labor	10,600	3,600	1	1,200	4
Illinois Department of Labor	1,029,980	7,000	65	1,320–3,300	196
Indiana Industrial Board	86,000	4,000	11	1,500–2,500	-------
Iowa Bureau of Labor	21,900	3,000	3	1,800	10
Kansas Department of Labor	48,850	3,750	7	1,600–2,700	20
Kentucky Department of Agriculture, Labor, and Statistics	15,000	3,000	4	1,600	6
Louisiana Bureau of Labor and Industrial Statistics	10,900	3,000	1	1,800	4
Maine Department of Labor and Industry	11,150	4,000	2	1,248–1,976	6
Maryland Board of Labor and Statistics	57,576	3,000	15	[4] 1,500–5,000	30
Massachusetts Department of Labor and Industries	373,425	7,500	54	1,680–3,180	157
Michigan Department of Labor and Industry	86,880	5,000	19	1,800–2,100	48
Minnesota Industrial Commission	110,000	4,500	30	1,080–3,000	58
Mississippi Bureau of Industrial Hygiene and Factory Inspection	5,800	3,000	1	3,000	2
Missouri Department of Labor and Industrial Inspection	51,776	3,500	10	1,800	21
Montana Bureau of Safety Inspection	17,400	3,000	6	2,700–3,000	8
Nebraska Department of Labor	17,500	5,000	2	1,800	7
Nevada Labor Commissioner	6,155	1,500	-------	-------	4
New Hampshire Bureau of Labor	21,600	3,000	3	1,800–2,200	7
New Jersey Department of Labor	230,175	6,000	25	1,800–3,000	80
New York Department of Labor	1,145,064	12,000	214	1,680–3,750	421
North Carolina Department of Labor and Printing	38,961	4,500	-------	-------	20
North Dakota Department of Agriculture and Labor	16,000	3,000	-------	-------	10
Ohio Department of Industrial Relations	609,413	6,500	93	1,600–3,000	188
Oklahoma Department of Labor	38,774	2,000	6	1,500–1,800	16
Oregon Bureau of Labor	8,350	3,000	9	1,500–2,400	17
Oregon Board of Inspectors of Child Labor	4,047	2,700	1	1,620	-------
Oregon Industrial Welfare Commission	4,050	-------	1	1,620	3
Pennsylvania Department of Labor and Industry	1,180,000	10,000	103	1,800–2,400	331
Rhode Island Department of Labor	22,980	5,000	-------	-------	8
Rhode Island Office of Factory Inspectors	19,620	3,200	5	2,300–2,500	7
South Carolina Department of Agriculture, Commerce and Industries	96,165	4,000	2	2,400	3
Tennessee Department of Labor	110,000	4,500	24	[4] 1,800–3,600	33
Texas Bureau of Labor Statistics	44,230	3,000	8	1,800	11
Utah Industrial Commission	106,310	4,000	5	1,620–3,600	-------
Vermont Commissioner of Industries	12,000	3,000	1	1,800	-------
Virginia Department of Labor and Industry	43,864	5,000	8	1,800–3,000	18
Washington Department of Labor and Industries	75,000	6,000	27	1,800–2,100	29
West Virginia Bureau of Labor	35,100	4,000	7	2,400	11
Wisconsin Industrial Commission	252,640	5,000	32	1,800–4,800	101
Wyoming Department of Labor and Statistics	6,775	3,000	1	2,000	2

[1] Exclusive of workmen's compensation administration.
[2] For labor division.
[3] Child labor only.
[4] Highest salary in range is paid to mine inspectors.

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Federal Agencies

THE wide interest of the Federal Government in the welfare of the country's workers is promoted through various channels. While only one unit of the National Government, the United States Department of Labor, functions solely "to foster, promote, and develop the welfare of the wage earners of the United States," divisions and bureaus of other departments, and independent boards and commissions in the Federal organization carry on many activities bearing directly upon the safety, health, and well-being of specific classes of workers and of labor as a whole. Moreover, in its capacity as the employer of a huge organization of workers, the United States Government maintains a number of agencies to deal with its employment relations and working conditions.

Unlike the State agencies, however, Federal bodies interested in labor and labor conditions have jurisdiction and actual authority in only a very few specific cases. These cases include interstate rail and water transportation, immigration and naturalization, and of course the Federal service, over which the authority of the Government is absolute. Elsewhere in its relation to the worker, the function of the National Government is chiefly that of offering leadership and service in creating and upholding standards for the realization of which the State agencies are immediately responsible.

United States Department of Labor

THE organic act establishing the United States Department of Labor as the tenth executive department of the Government declares that—

> The purpose of the Department of Labor shall be to foster, promote, and develop the welfare of the wage earners of the United States, to improve their working conditions and to advance their opportunities for profitable employment.

For administrative purposes the department is organized into eight major units: Office of the Secretary; Bureau of Labor Statistics; Bureau of Immigration; Bureau of Naturalization; Children's Bureau; Women's Bureau; Employment Service; and Conciliation Service. The last-mentioned services are organically a part of the Secretary's office. The bureaus, on the other hand, have been created at different times by acts of Congress, and with the exception of the Women's Bureau and the Bureau of Naturalization, they are older than the department itself.

Of these eight divisions, four are concerned with special groups of persons. Two of the four deal with the alien, first, through the Bureau of Immigration, with his entrance into the country; second, through the Bureau of Naturalization, with his assimilation and citizenship. Both of these activities are concerned with the immigrant in his status as an alien and not as a worker, but since immigrants are, with few exceptions, workers and wage earners, efforts in their behalf become essentially labor activities. Moreover, the political theory underlying legislative and administrative regulation of immigration is that of affording protection to the American worker, his job, his wages, and his working and living conditions, by restricting the intake of foreign labor.

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The other two groups which are given special attention through separate bureaus are wage-earning women, with whom exclusively the Women's Bureau is concerned; and working children, whose welfare is a primary interest of the Children's Bureau.

Activities of the other divisions of the department cover all wage workers, limited only by the jurisdiction of other governmental agencies, such as those dealing with railroad workers, seamen, miners, Federal employees, and so on.

The appropriation for the Department of Labor for the fiscal year ended June 30, 1930, was $11,321,930, and on that day the number of officials and employees was 4,908. Of this number, 428 were commissioned to represent the department at a nominal salary of $1 a year, and 190 were delegated to the work of the department from other branches of the Federal service. Appropriations and personnel are distributed among the different bureaus thus:

APPROPRIATIONS AND PERSONNEL OF UNITED STATES DEPARTMENT OF LABOR, 1929–30

Bureau or office	Appropriation for fiscal year ended June 30, 1930	Number of permanent employees
Bureau of Labor Statistics	$395,980	155
Women's Bureau	108,500	44
Children's Bureau	320,200	143
Immigration Bureau	8,477,960	3,196
Naturalization Bureau	1,018,030	457
Conciliation Service	205,000	40
Employment Service	240,000	[1] 533
Office of the Secretary	209,760	94

[1] Includes 276 persons representing the Employment Service at $1 per annum.

In the case of the Children's Bureau, only a part of the appropriation and staff can be regarded as engaged in labor activities, since much of the work of that bureau deals with child welfare, child health, and child psychology, and only one division is concerned with child labor and related problems.

United States Department of Commerce

THREE divisions of the Department of Commerce have duties which concern two groups of workers—miners and seamen. One of the chief activities of the Bureau of Mines deals with the safety and health of all persons engaged in the mining industry. The qualifications and certification of able seamen, as well as their safety, come within the province of the Steamboat Inspection Service, and the conditions of their employment and the enforcement of the law covering payment of wages to seamen are handled by the shipping commissioners of the Bureau of Navigation.

Bureau of Mines

The Bureau of Mines was created by act of Congress in 1910 as a bureau of the Department of the Interior. It was transferred to the Department of Commerce by executive order on July 1, 1925.

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The work of the bureau is in the charge of the director, who is appointed by the President. The bureau is organized under four main branches, technologic, health and safety, economic, and administrative, which in turn are divided into divisions and sections. Each branch is under the direction of a chief, while the directing heads of divisions are given the title of chief engineer. Supervising engineers direct the work of the subordinate sections. The full-time personnel of the bureau numbered 775 on June 30, 1930.

The health and safety branch, which is organized into the health division and the safety division, and three divisions of the technologic branch, mining, experiment stations, and explosives, are concerned solely or primarily with some phase of working conditions and the welfare of the workers in the industry.

The explosives and mining divisions, in their relation to safety, function largely in the field of research and experimentation. The explosives division, through laboratory methods, determines the suitability and comparative safety of various kinds of high explosives used in mining. It then issues a list of "permissible explosives" and prescribes the manner in which they are to be used.

Among the duties of the mining division are research and experiments in the prevention of accidents, and special studies of mine ventilation and ventilating devices.

The experiment stations division directs and coordinates the work of the 11 experiment stations throughout the country. These stations give special attention to the mining problems of the districts in which they are located, but are also the laboratories through which most of the investigative and experimental work of the bureau is carried on. The largest of the stations is at Pittsburgh, Pa. It has supervision over the bureau's experimental mine at Bruceton, which is operated exclusively for research purposes.

The health division of the health and safety branch is also a research organization, divided into a laboratory section and a field section. The laboratory section conducts researches dealing with mine gases, gas masks, and respirators, and extends assistance in mine explosions and fires. The field section conducts sanitary surveys and studies occupational diseases in the industry. This work is done in cooperation with the United States Public Health Service, which details its doctors to the Bureau of Mines staff to promote health work in the mining communities.

The safety division is a service agency engaged in active mine rescue work, operating 10 cars and 11 stations for this purpose, and in teaching mine rescue methods and first aid to the men in the industry. It also makes investigations of mine accidents and critical estimates of recovery methods employed during mine disasters.

Recent appropriations for the regular work of the bureau are approximately two and a quarter million dollars a year. Of the $2,684,386 appropriated for the fiscal year ended June 30, 1930, the work dealing with health, mine accidents, and rescue cars and stations received $748,130.

Steamboat Inspection Service

The Steamboat Inspection Service, one of the oldest service organizations in the Federal Government, was established by act of Congress in 1838, as a means toward "the better security of the lives of pas-

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sengers on board of vessels propelled in whole or in part by steam." Later legislation enlarged the scope of the service and brought it under the direction of the Secretary of the Treasury without, however, actually placing it within the jurisdiction of the Treasury Department. A reorganization effected in 1871 established the service essentially as it is now.

When the Department of Commerce and Labor was created in 1903 the Steamboat Inspection Service was transferred to the new department, and it remained in the Department of Commerce when the division of the Department of Commerce and Labor into two departments took place in 1913.

The relation of the service to the workers is quite limited even in its application to those engaged in marine transportation, but it is important in its field. A provision in the law of 1871 introduced a labor aspect which had not existed before by extending to the officers and crews of vessels the legal protection which had previously applied only to passengers, thus making the safety of those employed aboard ship the concern of the Government. It also provided for the compulsory licensing of masters, chief mates, engineers and pilots.

The seamen's act of 1915 added materially to the duties of the Inspection Service with regard to the crew, by introducing the element of concern for the physical comfort and well-being of the men. A law of 1897 (29 Stat. 697) made it the duty of inspectors to see that vessels subject to inspection were provided with "suitable accommodations for passengers and the crew" before granting a certificate of inspection, without which the vessel could not sail. The act of 1915 amplified that provision by specifiying in detail the kind of accommodations required for sleeping, bathing, and hospital purposes. By judicial interpretation that section was made to apply only to vessels built after the passage of the seamen's act of 1915. Another provision of that law directs the service to examine and certify able seamen and lifeboat men.

Specifically, then, the functions of the Steamboat Inspection Service dealing with the employed personnel on board ship are: (1) To examine and license marine officers; (2) to examine and certify able seamen and lifeboat men; (3) to determine the necessary complement of officers and crew; and (4) to inspect and approve forecastle accommodations. Examination of seaworthiness and of safety provisions—life-saving and fire-fighting equipment, etc.—of course, affects the crews, but not so explicitly as do the other functions.

The machinery through which the Steamboat Inspection Service operates is unusual in some respects. The directing head of the service is the supervising inspector-general, who is appointed by the President and serves under the Secretary of Commerce. For the purposes of the work the country is divided into 11 districts, each in the charge of a supervising inspector who also is appointed by the President. Subordinate to the supervising inspectors are the local inspectors, of whom there are 2 in each of the 22 customs collection districts and 26 ports of the United States. One inspector is designated as inspector of boilers, the other as inspector of hulls. Where the volume of work requires a larger force, each inspector has an assistant. These local inspectors are under the Federal civil service.

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The local inspectors of each district and port constitute a board of local inspectors which has specific duties distinct from the inspection activities which the inspectors prosecute in their individual official capacities. Acting as a board, the local inspectors conduct the examinations of officers and seamen, and issue licenses to officers and certificates to able seamen and lifeboat men. The board also has judicial power to hold hearings on charges of misconduct or negligence of a licensed officer, and to suspend or revoke his license. The action of the local board serving in its judicial capacity is subject to appeal to the supervising inspector and from him to the supervising inspector-general, whose decision when approved by the Secretary of Commerce is final. Incidentally, this power of the local boards to make inquiries dealing with the conduct of licensed officers involves investigation of marine disasters and is, in fact, the only legal authority for such investigation.

The supervising inspectors have the usual administrative and directory authority connected with a supervisory position, and their duties are quite definitely outlined in the law. When need arises, they do the work ordinarily devolving upon local inspectors. Under the law they are required to meet with the inspector general in Washington once a year. Sitting as a board of supervising inspectors, this body makes rules and decisions governing the conduct and administration of the service, and formulates rules and regulations relating to the operation of steam vessels which have the full force of law.

The supervising inspector general is the responsible administrative head of the entire service. To maintain supervision over the work in the field, he has the immediate direction of six traveling inspectors whose chief function is to establish and maintain uniform administration of the inspection laws and standard practices on the part of the supervising and local inspectors.

On June 30, 1930, the staff of the Steamboat Inspection Service consisted of 368 persons, all but 22 of whom are employed in the field. Total expenditures for the fiscal year 1930 were $1,176,935.

Enforcement of the rulings of the Steamboat Inspection Service dealing with navigation and the obligation of seeing that vessels before sailing have complied with all the laws and regulations governing them, as well as the orders of the inspectors, rest not upon the Inspection Service, but upon the patrolling arm of the United States Customs Service and the United States Coast Guard, both of which are under the Treasury Department.

Bureau of Navigation

The work of the Bureau of Navigation, like that of the Steamboat Inspection Service, was begun early in the history of the Federal Government as part of the American maritime policy. The bureau has followed the same course as the Inspection Service so far as its place in the organization of the Government is concerned. It functioned independently at first; later it was reorganized under the Treasury Department, and then transferred successively to the Department of Commerce and Labor and the Department of Commerce. It is the agency through which the navigation laws are administered.

The navigation act of 1872 created a new office in the important ports, that of shipping commissioner, to deal with the employment

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of merchant seamen in the foreign trade. Seamen in the Great Lakes and coastwise trade are not covered by the law, but shipping commissioners may, at the request of masters or owners of vessels, extend their services to include them. At first the shipping commissioners were appointed by and subordinate to the Federal district courts, but were later brought within the executive service and placed in the Bureau of Navigation.

Among the duties of the shipping commissioners as defined by law are: (1) To afford facilities for engaging seamen, by keeping a register of their names and characters; (2) to superintend their engagement and discharge in the manner prescribed by law; (3) to provide means for securing the presence on board at the proper time of men so engaged; (4) to facilitate apprenticeship for sea service; (5) to arbitrate disputes between masters and men when called upon by both parties to do so.

Of the need for this service the Commissioner of Navigation says:

> The nature of the seaman's calling distinguishes it in most respects from occupations on land, for during the practice of his calling the seaman is remote from the courts to which the landsman may always appeal in case of real or fancied injury. Opportunity for injustice is greater and for redress is less. Governments accordingly, to forestall injustice, scrutinize closely the making of seamen's contracts and the method of their performance, as land contracts are not scrutinized.[3]

The law stipulates in detail what these employment contracts, or articles, as they are called in seafaring terms, shall contain, and it is the duty of the shipping commissioners to insure the observance of the law. Items which, under the law, shipping articles must cover explicitly include the capacity in which each seaman is to serve; the amount of wages each is to receive; the quarters to be provided and the food to be served; treatment in case of illness or accident; and to some extent the hours of labor. These agreements are signed first by the master of the vessel and then by each individual seaman shipping under him for the specified voyage.

The chief of the bureau points out that, in supervising the employment and discharge of seamen, "the shipping commissioners must go to the crew, the crew does not come to the commissioner's office," since this work, "for obvious reasons, can be better performed on board ship where the employment begins and ends, than at an office ashore."

All merchant seamen must be discharged and receive their wages in the presence of a shipping commissioner. In ports not provided with that official, the collector of customs acts as such. Upon discharging his crew the master is required to issue and sign a certificate of discharge to each seaman, giving the length of service, time and place of discharge, and a report on his conduct, character, and qualifications. The shipping commissioner makes a record of these certificates in his register.

Among the duties in connection with seamen's wages which devolve upon shipping commissioners, supervising the issuance of allotment notes is of chief importance. The law forbids paying wages to seamen in American or foreign ports before the amount paid has been earned. To provide for the support of dependents, however, arrangement is made for the issue of allotment notes payable from the sea-

[3] United States Department of Commerce. Bureau of Navigation. Annual Report of the Commissioner of Navigation for 1920. Washington, 1920, p. 46.

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man's wage as earned to grandparents, parents, wife, sister, or children. These notes are countersigned by the shipping commissioner, and "any other order, note, or evidence of indebtedness from such wages is void." Customs officers are required to satisfy themselves of the validity of the allotment of wages, as noted in the shipping articles, before granting clearance to the vessel. The shipping commissioner is also responsible for the recovery of the wages and disposition of the personal effects of a seaman sailing from his port who dies on duty or abroad.

The most important branch of the service, in the opinion of the Commissioner of Navigation, is that of arbitration. When both parties to a dispute agree in writing to submit the case, the shipping commissioner hears evidence and arguments and makes an award, which is binding upon both sides, and conclusive as to their rights in the question at issue.

Shipping commissioners are appointed by the Secretary of Commerce and are under the civil service. A clerical force is provided and deputy commissioners are assigned to the principal ports. The usual practice is to appoint a shipping commissioner to ports having as many as 1,000 merchant seamen a year. In ports having less than that number the collectors of customs add the duties of shipping commissioner to their regular work. Consular agents act in the capacity of shipping commissioners in supervising the engagement and discharge of seamen in foreign ports on ships of American registry.

United States Public Health Service

THE United States Public Health Service grew out of the Marine Hospital Service created in 1798 to give medical treatment to merchant seamen. It is now a bureau of the Treasury Department, with duties touching all phases of national health, but with some functions definitely directed toward guarding and improving the health of the worker. These functions affect specific classes of workers through the hospital and dispensary work done by the hospital division of the Public Health Service, and labor in general through the occupational disease and industrial hygiene activities of the division of scientific research. The specific classes of workers who benefit by the operation of hospitals and dispensaries are merchant seamen and officers in the foreign and coastwise trade; seamen on Army and Navy vessels who are not enlisted in the military service; officers and crews of Government vessels other than those of the Army and Navy; crews of vessels engaged in deep-sea fishing; and civil employees of the United States who are injured in the performance of their duties.

Medical inspection of incoming aliens is also a duty of the Public Health Service. This duty is discharged by the Division of Foreign and Insular Quarantine and Immigration.

Division of Marine Hospitals and Relief

The function of the service now discharged by the hospital division was the nucleus out of which the Public Health Service has developed. As early as 1798 Congress passed a law (1 Stat. 605–606) providing that after September 1 of that year the master of every American ship arriving from a foreign port should pay to the collector of customs 20

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cents a month for each seaman, deducted from the seaman's wages. Coastwise vessels were required to pay the same amount for each seaman employed, before licenses could be renewed. The President of the United States was given the direction of the funds so raised, which were to be used for the relief and maintenance in existing hospitals of sick and disabled seamen. Later, in 1800, the Government began the operation of a marine hospital at Norfolk, Va., and by 1802 other hospitals were opened at Boston, Newport, and Charleston. New hospitals continued to be built during the next 50 years, with the result that in 1861 the Secretary of the Treasury reported that the number of marine hospitals had increased "far beyond necessity or utility."

In 1870 the marine hospital service for the first time was brought under central authority and control. It was placed under the jurisdiction of the Secretary of the Treasury, who appointed a former Army surgeon to direct the entire service. He reorganized the whole system on what was practically a military basis. With modifications and adjustments made necessary by changed conditions since then, the organization of the Public Health Service remains essentially as he established it in 1870. The head of the service has the title of Surgeon General. The medical personnel is commissioned, and all start at the lowest grade and advance to the next higher grade by examination after a certain number of years of service. An applicant for original appointment in the medical service must be a graduate of a reputable medical college, have had two years' professional practice or one year's hospital experience, and pass an examination in medicine, hygiene, and surgery. Medical officers of the service constitute the examining board.

The hospital division is under the direction of an assistant surgeon general. Twenty-five marine hospitals and many out-patient stations and dispensaries serve those entitled to treatment, all of which is free to the patient.

Another activity of the hospital division related directly to labor is the instruction in first-aid and ship sanitation given to ship's officers.

As of June 30, 1930, the personnel engaged in hospital and relief work, including nurses, dietitians, Röntgenologists, dentists, and clerks, as well as the medical staff, numbered 3,074. The amount appropriated for 1929–30, for salaries and maintenance of the Public Health Service hospitals was $6,423,898. The service is reimbursed for the hospital care of officers and enlisted men in the Army and Navy, of patients for whom the Veterans' Bureau is responsible, and of foreign seamen. In the last case the cost of treatment is charged to vessels on which the seamen are employed. The Army, the Navy, and the Veterans' Bureau reimburse the Public Health Service from their own appropriations for expenses incurred in caring for their charges.

Division of Foreign and Insular Quarantine and Immigration

Medical inspection of immigrants became a duty of the marine hospital service through an act passed on March 3, 1891 (26 Stat. 1084), although the work had in fact been carried on by the marine hospital staff at the port of New York for some time before the law was enacted. The immigration law of 1917 (39 Stat. 875–885) increased and made more specific the classes of aliens who were to be

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refused admission and assigned medical officers of the Public Health Service "to conduct physical and mental examination of all arriving aliens, including alien seamen." This work is now done through the division of foreign and insular quarantine and immigration, under the direction of an assistant surgeon general, by commissioned public health doctors attached to the various immigration stations. If the volume of work done at a port of entry or a border point is not sufficient to call for the full-time services of a medical officer, or if for any reason a public health doctor can not be assigned, a local doctor in private practice may be designated to act for the service in the examination of aliens.

Medical inspection of intending immigrants is also made in the country of origin by medical officers of the United States Public Health Service attached to foreign stations. The practice of conducting such examinations before the consular visa is granted is now "in effect in England, Scotland, Northern Ireland, Irish Free State, Belgium, Denmark, Holland, Germany, Czechoslovakia, Italy, Poland, Norway, and Sweden."[4]

The division of foreign and insular quarantine and immigration is also responsible for the fumigation of forecastles of American ships as required by the seamen's act of 1915.

Division of Scientific Research

Under authority conferred by an act of Congress in 1912 (37 Stat. 309), broadening the scope of public health activities and providing for the study and investigation of "diseases of man and conditions influencing the propagation and spread thereof," the division of scientific research of the Public Health Service has gone into the field of occupational diseases and industrial hygiene. The work is handled by the office of industrial hygiene and sanitation which, under the direction of the surgeon in charge of the office, conducts field investigations of health hazards and occupational diseases, working conditions in relation to fatigue, ventilation, lighting, etc., occupational morbidity and mortality, and other aspects of the health of the industrial worker.

The office cooperates with other agencies—State departments of labor and of health, Federal departments and bureaus, and semipublic organizations—in making investigations and inspections of health hazards, sanitation, and industrial hygiene. It also renders service to private industrial plants upon request, making health surveys and preparing reports and recommendations bearing upon industrial health.

The staff of the office of industrial hygiene and sanitation consists of 77 persons, 39 of whom are physicians and scientists.

Agencies Dealing with Railroad Workers

THE welfare of workers in rail transportation is a major concern of two Federal agencies—the Interstate Commerce Commission, which regulates working conditions in so far as they affect safety in railroad operation, and the Board of Mediation, which exercises

[4] United States. Public Health Service. Annual report of the Surgeon General for 1929. Washington, 1929, p. 163.

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jurisdiction over the employment relations between carriers and their employees. Both are independent bodies, the members of which are appointed by the President for a definite term of years.

Interstate Commerce Commission

THE Interstate Commerce Commission is composed of 11 members, not more than 6 of whom may belong to the same political party. They are appointed for a term of seven years, and during that period may engage in no "other business, vocation, or employment." The general function of the commission is to administer and enforce the interstate commerce act of 1887 (24 Stat. 379) and subsequent legislation regulating interstate transportation. The interstate commerce act of 1887, one of the first legislative enactments to embody the principle of governmental control of public utilities, created the commission as the enforcing medium. The jurisdiction of the commission is limited to interstate commerce.

The primary duty of the Interstate Commerce Commission is the regulation and maintenance of "just and reasonable rates," adequate facilities, and standard practices in railroad operation. In the discharge of its varied duties the commission acts in a quasi-legislative and quasi-judicial as well as an administrative capacity. While regulation of operations to insure safety to workers and passengers is only one phase of the work of the commission, it is an important one, and one which has been emphasized and strengthened from time to time by specific legislation in the interest of the workers.

The organizations within the Interstate Commerce Commission related directly to railroad workers are the Bureau of Safety and the Bureau of Locomotive Inspection.

Bureau of Safety

The Bureau of Safety, under the direction of a chief, carries on all of the safety activities assigned to the commission except the inspection of locomotives and the transportation of explosives. These activities cover enforcement of the hours-of-service law and the safety-appliance laws, investigations of accidents, and the examination and approval of plans for signal and automatic train-control devices.

Each of these functions is handled by a separate section within the bureau. The hours-of-service act limits the number of hours which the different classes of railroad employees may work without relief. For the purpose of administering this law the country has been divided geographically into nine sections, in each of which a special agent acts for the bureau. The safety appliances section operates through 20 geographic divisions, with two inspectors in each division. The inspection personnel may be called upon at any time to investigate accidents.

Regulation of the safe transportation of explosives and other dangerous material is assigned to the Bureau of Service.

Bureau of Locomotive Inspection

The Bureau of Locomotive Inspection administers the Federal laws dealing with the safe condition of locomotives and enforces them through a field force of inspectors. The inspection service

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operates through a chief inspector and two assistant chiefs appointed by the President, and district inspectors not to exceed 65 in number appointed by the Interstate Commerce Commission. District inspectors are under the classified civil service and qualify for their positions by examination.

Rules and regulations governing locomotive inspection are drawn up by the carrier or the chief inspector and are approved by the commission. Any subsequent changes or modifications must also be approved by the commission. Decisions and orders of a district inspector condemning a locomotive may be appealed to the chief inspector and from him to the commission.

Appropriations for the fiscal year 1929–30 for the safety work of the Interstate Commerce Commission amounted to $573,064. The Bureau of Locomotive Inspection was allotted $486,370.

The Bureau of Statistics of the commission compiles quarterly and annual reports of railroad accident statistics, and monthly reports of railroad wages.

United States Board of Mediation

THE railway labor act of May 20, 1926, created the United States Board of Mediation to act upon grievances, disputes, and interpretation of agreements between carriers and their employees, where such controversies can not be settled between the parties themselves.

The board consists of five members appointed by the President, each of whom serves for a term of five years. No person who is employed by or is pecuniarily or otherwise interested in a railroad or an organization of railroad workers may become a member of the board. Except for that provision, no restrictions are placed upon the selection of persons to serve as board members.

Either party to a dispute may refer the case to the board, or the board may offer its services. When a case reaches it, the duty devolves upon the members of the board to act as mediators in bringing about an adjustment. If adjustment can not be reached through mediation, the members of the board then undertake to induce the parties to submit the case to arbitration.

Agreement to arbitrate must be forwarded to the board in writing. Each party to the dispute selects its own arbitrator, and these two, in turn, select the third member. If the arbitrators fail to make this selection, the third arbitrator is named by the Board of Mediation.

If mediation fails and arbitration is refused, and the case becomes so acute as, in the judgment of the board, "to interrupt interstate commerce to a degree such as to deprive any section of the country of essential transportation service," it becomes the duty of the board to notify the President of the United States to that effect. The President then may, in his discretion, create an emergency board to investigate the matter and report to him.

In addition to the five members appointed by the President, and their secretaries, the organization of the Board of Mediation consists of an executive secretary, who has general direction of administrative affairs, and three advisory divisions which deal with technical matters.

These technical divisions were established because of the specialized character of agreements between carriers and the different classes of

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their employees, and reflect that differentiation. One division deals with problems affecting the clerical, dispatching, supervisory, and station employees; the second handles maintenance forces; and the third covers train and engine service employees.

The total staff of the Board of Mediation at present, including members, is 28. The appropriation for the fiscal year ended June 30, 1930, was $348,270. Members of the board receive a salary of $12,000 a year and traveling expenses.

Federal Board for Vocational Education

THE Federal Board for Vocational Education exists to administer several separate but similar laws governing Federal aid to States in the promotion of (1) vocational education in public schools of less than college grade; (2) vocational reeducation of crippled and disabled persons of any age.

The basic duty of the Federal board is to supervise the expenditure of the grants made by the United States Government to the cooperating States for the development of vocational education and civilian rehabilitation. Federal aid under the law is conditioned upon its formal acceptance by the State; the appropriation by the State, the local community, or both, of money equal in amount to that allotted from Federal funds; and the approval by the Federal board of the plan and program adopted by the State to carry out the work.

The Federal vocational education law (39 Stat. 929), known generally as the Smith-Hughes Act, provides for the distribution to the cooperating States of $7,000,000 annually, divided thus: $3,000,000, "to be allotted to the States in the proportion which their rural population bears to the total rural population in the United States," is to be used "in paying the salaries of teachers, supervisors, or directors of agricultural subjects"; an equal amount, allotted in the proportion which the urban population of the State bears to the entire urban population of the country, is to be used "in paying the salaries of teachers of trade, home economics, and industrial subjects"; and $1,000,000, to be prorated on the basis of total population, is to be used to aid in preparing teachers for vocational work. The minimum allotment for each service was set at $5,000 annually up to June 30, 1923, and $10,000 a year thereafter. An additional sum of $200,000 a year was appropriated for the administration of the law.

The civilian rehabilitation act (41 Stat. 735) outlines the procedure which States must take to benefit under the act and provides $1,000,000 annually, to be allotted to cooperating States on the basis of population. The objective of the movement is to "return to civil employment," by means of vocational training, any person who is incapacitated for remunerative occupation because of physical defect. Requirements as to formal acceptance and the submission of a plan and administering organization which meet the approval of the Federal board are the same as those applying under the Smith-Hughes Act. The sum of $75,000 annually is appropriated for administrative purposes.

The Federal Board for Vocational Education is an independent Government body consisting of the Secretaries of Agriculture, Labor, and Commerce, and the United States Commissioner of Education, as members ex officio, and three citizens of the United States appointed

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by the President, one of whom represents agricultural interests; one, labor; and one, manufacturing and commercial interests. The board acting as a whole is the policy-forming medium. The members, exclusive of the three cabinet officers, form a standing committee which has general direction and supervision of the work of the staff in carrying out the duties and policies of the board.

The actual work is done through three divisions, those of administration, vocational education, and civilian rehabilitation, under the administrative authority of the director, who is responsible to the standing committee and through it to the board as a whole.

The vocational education division is subdivided into four services, each of which acts in a supervisory capacity with regard to the work done by the States in its field. These services are those of trade and industrial education, agricultural education, home economics education, and commercial education. Each service is under the direction of a chief.

For administrative and supervisory purposes the country is divided into four regions—North Atlantic, Southern, Central, and Pacific.

In the trade and industrial education service one agent is assigned to each region. Additional special agents serve in a functional capacity and cover the entire country. One of these agents is a woman who supervises the training of women and girls; another specializes in teacher and foreman training.

One agent in each region is responsible for the work in the agricultural schools, and a special agent covers the colored schools in the South. The home economics education service is handled by four woman agents, one in each region. Specialized groups in home economics throughout the country are supervised by a special agent.

Regional agents representing the vocational rehabilitation division also have functional duties as well, as each of them specializes in some particular phase of rehabilitation work and may be called out of his region as a consultant in problems connected with his special field.

From the standpoint of leadership, the research work of the Federal board is as important as the direct service it gives. Research and experiment as conducted by and through the Federal agency are for the purpose of assisting the States in the development of their programs by placing at their disposal interpretative analyses of experience and results in the movement. Another form of research which was greatly needed in planning courses of study was the job analysis series which the Federal board issued.

Research and investigations are made both by the agents in the field and by experts assigned especially to research activities. Results are published in bulletin and mimeograph form and widely distributed.

Exclusive of the clerical and office forces, the staff of the Federal Board for Vocational Education consists of 36 persons, all of whom, with the exception of the director, the editor, the chief clerk, and the five service chiefs, are employed in the field.

Agencies Dealing with Federal Employees

THE United States Government is often referred to as "the largest single employer of labor in the world." As an employer "Uncle Sam" has set up a number of agencies for meeting and dealing with his own employment problems. Some of these agencies are administrative,

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while others are service and research organizations which give essentially the same sort of advisory service and assistance to "Uncle Sam, employer," as other Federal agencies discussed—the Bureau of Mines and the industrial hygiene section of the Public Health Service, for example—offer to private industry. These agencies are the Civil Service Commission, Bureau of Efficiency, Personnel Classification Board, Employees' Compensation Commission, certain divisions of the Public Health Service, and the retirement division of the Bureau of Pensions.

Broadly, this group of agencies may be said to reach from the recruiting for workers for the classified executive service of the United States Government and their placement therein, through the Civil Service Commission, to their retirement for superannuation through the Bureau of Pensions. During their tenure of office the degree of their success, as indicated by progress and promotion, is studied and evaluated by the Bureau of Efficiency and the Personnel Classification Board, while in case of injury or occupational disease in line of duty the Public Health Service and the Employees' Compensation Commission give medical care and financial help.

Within some of the departments there is also internal adjustment machinery for handling grievances and wage rates. Examples of this are the wage boards of the War Department and the Navy Department, which have jurisdiction over the mechanics employed in arsenals and navy yards.

United States Civil Service Commission

THE merit system of employee selection was applied to employment in the executive branch of the Federal Government in 1883. The passage of the civil service act (22 Stat. 403), which became law on January 16 of that year, was the final step in a long struggle against the political doctrine that positions in the Federal service were "spoils" which belonged to the victor, and the result of 20 years of effort to institute a substantial reform in methods not only of filling positions but of doing the administrative work of government. The act, which was entitled simply "An act to regulate and improve the civil service of the United States," has since 1883 "remained essentially unchanged, a tribute to its soundness and to the careful manner in which it was drafted."[5]

The law provided that positions within the classified executive civil service should be filled "by selections according to grade from among those graded highest" in the "open competitive examination" which the law required should be held "to test the fitness of applicants for the public service." Provision was made for noncompetitive examinations also "in proper cases." Other positive requirements were the apportionment of appointments to the departmental service in Washington among the States and Territories on the basis of population and a probationary period before final acceptance and permanent appointment.

In the interest of the employee, the law declared that "no person in the public service is for that reason under any obligations to contribute to any political fund or to render any political service," and

[5] Institute for Government Research. Service Monograph No. 49: The U. S. Civil Service Commission, by Darrell H. Smith. Washington, 1928, p. 13.

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undertook to guarantee "that he will not be removed or otherwise prejudiced for refusing to do so."

In 1883 fewer than 14,000 positions were included in the "classified civil service," which the law was designed to control. "To-day more than 430,000 positions, or 77 per cent of all those in the Federal executive civil service, are filled through open competitive examinations held by the Civil Service Commission." [6]

Administration of the law devolves upon a body created by the law "to aid the President" in carrying out the purposes of the measure. This body is the United States Civil Service Commission, an independent agency directly responsible to the President.

In general usage the term "civil service commission" is somewhat elastic, as it is applied both to the administrative organization and to the commission as such. The commission proper consists of three persons, not more than two of whom may belong to the same political party, who are appointed by the President, with the consent of the Senate, and serve at his pleasure.

The Civil Service Commission as an administrative agency contains two other presidential appointees, the secretary and the chief examiner. These two officials, responsible to the commissioners, are the directing heads of the main functions of the commission.

The primary statutory function of the Civil Service Commission is the examination of applicants for employment in the classified civil service and the certification for appointment of those candidates who successfully pass the examinations. The commission has no appointing power except in filling positions within its own organization.

Examination involves three separate but coordinate duties: (1) Recruiting applicants; (2) holding examinations; and (3) rating and grading.

Recruiting is carried on by the application division, which is one of the technical units under the direction of the chief examiner. It is under the immediate supervision of a chief of division. The purpose of the recruiting activities of the division is to afford all eligibles an equal opportunity to compete and to obtain applicants not only in sufficient numbers but of the best available qualifications.

Publicity is of course necessary in making adequate contacts. Announcements of forthcoming examinations, whether to fill specific vacancies or to replenish active registers, are spread over the entire country. Posters and display advertisements are issued and sent to post offices and other Government buildings, public libraries, schools and colleges, railroad stations, and numerous other points where people congregate in numbers. Notices are often published in newspapers, trade journals, and the like. The commission also maintains a mailing list of individuals to whom notices of examinations, particularly in technical and scientific fields, are sent.

Usually the response to the general announcement of examinations for routine positions such as departmental and postal clerks, stenographers, etc., supplies a sufficient number of eligibles. In the case of higher-grade positions requiring specialized training in professional, technical, and scientific fields, more intensive work is often necessary to secure applications in sufficient numbers from the type of person

[6] United States Civil Service Commission. A brief history of the United States Civil Service. Washington, 1929, p. 24.

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desired. In these circumstances contact is made with professional, technical, or scientific schools, associations, and publications, chambers of commerce, and public agencies. Occasionally radio addresses are made, setting forth the need and the qualifications necessary to meet it.

The application submitted by the candidate for examination determines his eligibility, to a considerable degree. For this reason applications are closely analyzed by the clerical staff of the applications division. Citizenship, residence, age, education, and other qualifications are prescribed by law and civil-service regulations, and care must be taken by the application division to insure that applicants meet all the requirements before being admitted to examination. The Civil Service Commission has the right to institute inquiry to verify statements made in applications for examination.

When the application is properly filled out and approved the candidate is notified of the time and place for taking the next step in the process of becoming a Federal employee, the examination itself.

Competitive examinations are of two kinds, assembled and nonassembled. Those in which groups of applicants are brought together in specified places and given the same tests are called assembled examinations. Nonassembled examinations are given to two different types of applicants, mechanical tradesmen, and specialized professional and scientific workers and technicians. For the latter group the examination is based upon education, training, and experience, and sometimes the submission of a thesis or published writings is required. Nonassembled examinations for tradesmen determine physical fitness as well as trade training. The preponderance of examinations are of the assembled type.

One of the principal units of the office of the chief examiner is the division of research. This division, under the director of personnel research, is continuously engaged in studies looking toward revising and improving examination methods and procedure and in developing objective tests of aptitude, intelligence, adaptability, and so on, which are definitely related to the requirements of the specific job.

The examining division is under the chief examiner and the immediate direction of a chief of division. It is divided into the administrative staff and four sections—the professional-scientific-technical, the legal, the clerical, and the prohibition service examining sections. These sections are responsible within their respective fields for the making up of examinations and for the rating of examination papers, in which work a staff of examiners is engaged.

Protested ratings may be appealed to the division of investigation and review, where they are acted upon by the reviewer or assistant reviewer. If the appeal is sustained, revised ratings are given.

This division is also responsible, under its chief, for the various investigative activities which the commission is obliged to pursue. These include investigations of fraud or irregularities in the conduct of examinations on the part of either examiners or competitors, charges of political activity on the part of civil servants, and personal investigations, where advisable, of the character and suitability of applicants. This last-mentioned activity is concerned chiefly with character investigations of applicants for positions in the various law-enforcing agencies, such as the prohibition service, narcotic service,

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and the police force of the District of Columbia. The division also conducts examinations for secret-service operatives and other positions of a detective nature.

An average of 70 in all subjects in an examination is required for certification. Disabled veterans, widows of veterans, and "wives of veterans who themselves are physically unqualified for Government employment," are given 10 points in addition to the earned ratings on examinations; veterans who are not disabled are given 5 points. Hence an average of 65 will permit the certification for appointment of a veteran who is not disabled, while disabled veterans, widows, and wives need earn an average of only 60 to be eligible to appointment.

Given a passing grade, the next step is certification and placing on the active register. Position on the register is governed by the rating attained in the examination, those passing highest being entitled to places at the head of the list, which means early certification for appointment. For appointment to the departmental service in Washington, position on the register is governed primarily by residence—that is, under the apportionment rule, applicants from States with low quotas take precedence over those from States whose quotas have been exceeded or are full or nearly full. That rule does not apply in filling vacancies in the field service.

The appointment division in the Civil Service Commission is charged with the duty of establishing and maintaining the necessary active registers and of certifying for appointment under civil service law and regulations the persons whose names appear thereon. This division is under the direction of the secretary of the commission and the immediate supervision of the chief of division. When the number of names of any register falls below a working minimum, the appointment division requests the examining division to arrange for an examination to replenish it.

While the Civil Service Commission, as already noted, has no appointing power except in connection with its own staff, it has specific duties with regard to appointments which are devised to uphold the merit system in making selection to fill vacancies. Appointments to vacancies in the offices of the Federal departments and independent establishments are made by the officials of those agencies. Generally, each bureau in a department has the power to select and appoint its own employees. Hence, in actual practice, the appointing power is distributed among a large number of officials of varying rank. The appointing official applies to the appointment division of the Civil Service Commission for a candidate to fill the vacancy in question. The request may call for certification from any one of the various registers, as for example, from the subprofessional, the clerical, or the custodial.

The appointment division then "certifies" the three names standing highest on the particular register. Sex is disregarded unless the request states a preference in this respect. The certification includes the data necessary to enable the appointing officer to make his choice—i. e., education, experience, examination ratings, etc.

The appointing officer makes his own selection from the three records submitted and notifies the commission and the person selected of his choice. If he rejects all three names, he must give reasons

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acceptable to the commission for so doing before another list of three is submitted to him.

When the decision is made, the bureau chief, not the commission, sends for the successful applicant, and the appointment is made through the appointment machinery of the department or independent office concerned.

Appointment is probationary, and under the rules of the Civil Service Commission the appointee is subject to physical examination before entering on duty.

> * * * Under the executive orders of May 29 and June 18, 1923, and September 4, 1924, all full-time medical officers in the military and civil services are required to make these examinations as a part of their official duties. There are 450 places at which these officials are available, usually at or near centers of population and convenient of access for most of those appointed. The rest of the country is covered by medical officers who are on a part-time or a fee basis and whose charge for examination must be paid by the appointee.[7]

The probationary period is usually six months, although in extreme cases it may be as long as a year. This period is regarded by the commission as part of the examination and as constituting a practical test of fitness. For that reason an employee who proves unsatisfactory on the job may be dropped at any time within the six months. If at the end of the six months an adverse decision is reached with regard to his retention, "he must be so notified in writing, with a full statement of reasons, and such notice terminates his services." His retention in the service beyond the probationary period establishes his absolute appointment.

After appointment has been made permanent "no person in the classified civil service of the United States shall be removed therefrom except for such cause as will promote the efficiency of said service and for reasons given in writing." [8] If charges are preferred against a dismissed employee he must be given a copy of them and be allowed sufficient time to file an answer and submit affidavits in defense if he chooses to do so, "but no examination of witnesses nor any trial or hearing shall be required except in the discretion of the officer making the removal." Copies of all the records in such a case are to be furnished to and filed with the Civil Service Commission. The commission, however, has no jurisdiction or power of review in a dismissal case "unless it is alleged, with offer of proof, that the removal was made for political or religious reasons," or that the procedure required by law and regulations was not followed.

In fact, after the probationary period is ended and the employee is established as a permanent worker in the service, the jurisdiction of the Civil Service Commission is quite limited. It is required to keep a record of each person in the classified civil service, showing appointments, changes in grade, transfers, separations from the service, loss of pay, "and such other information concerning individual service as may be deemed essential to a proper determination of rights" under the retirement act. In addition, the commission is now required to keep similar personnel records of all Government employees outside the classified service who are beneficiaries under the retirement act. This includes employees of the Library of Congress, the municipal government of the District of Columbia, and postmasters of

[7] U. S. Civil Service Commission. Forty-sixth annual report. Washington, 1929, pp. 32, 33.
[8] 37 Stat. 555, sec. 6.

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the first, second, and third class who have been promoted, appointed, or transferred from the classified civil service. The service record section is part of the appointment division. It also compiles the statistical data of personnel presented in the annual reports of the commission.

While the efficiency records and ratings of Federal employees come within the jurisdiction of another agency, the United States Bureau of Efficiency, the Civil Service Commission has a degree of authority over promotions. The authority is limited, however, to promotions which involve going from a lower to a higher classification, when the entrance requirements for the higher classification are essentially different from those of the lower. In such cases the person seeking promotion must take a noncompetitive examination applicable to the higher-grade work, and the procedure is practically the same as in original appointments. Promotions within a grade do not require further examination and are outside the jurisdiction of the Civil Service Commission.

The commission, however, by the use of personnel research methods through its division of research, is doing considerable work in the way of emphasizing opportunities for advancement in the service by disseminating among the present employees information dealing with lines of promotion, possibilities of transfer, and requirements which must be met in order to secure the desired promotion or transfer. A job analysis is under way, complemented with an analysis of the qualifications which each job calls for, and from these data is being developed "a guidance card which will enable the applicant to analyze opportunities in relation to his qualifications."

The relation of the Civil Service Commission to the retirement of a Federal employee under the retirement act (44 Stat. 904) is limited. The law calls for retirement at the age of 70 in most branches of the service. If, however, an employee is willing to remain and his superior officer certifies to the Civil Service Commission that by reason of his efficiency the continuance in the service of such employee would be a positive advantage, the Civil Service Commission may approve the extension and certify the employee for an additional two years of service. This certification, under the same procedure, may be renewed for another 2-year period. Originally the law limited extensions by a provision which read: "After August 30, 1930, no employee shall be continued in the civil service of the United States beyond the age of retirement for more than four years." Before retirement became absolutely mandatory under that provision, the law was amended (May 29, 1930) to permit further extensions when the head of the office certified and the commission agreed that by reason of expert knowledge and special qualifications the continuance of the employee concerned would be advantageous to the public service.

In no case, however, may a Federal employee covered by the retirement act be retained in the service beyond retirement age as fixed by law except upon approval and certification by the Civil Service Commission.

Much of the work of the Civil Service Commission is carried on through field offices located in various cities throughout the country. For civil service purposes, continental United States is divided into 13 districts, each district under the direction of a district secretary.

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The entire field organization is under the supervision of the superintendent of field force, who is part of the office of the chief examiner.

Field offices exist for the purpose of facilitating contact between the commission and the widespread activities of the Government throughout the country, known as the Government field service. They also afford convenience and better opportunities to citizens desiring to take civil service examinations.

Under the decentralized system of supplying the needs of the Government field service which has been adopted, each district office functions in its district in essentially the same capacity as that filled by the Civil Service Commission. It announces and holds examinations, which are, however, supplied from the main office in Washington; and it receives and reviews applications and maintains registers of eligibles. By keeping in touch with the personnel needs of the Government establishments within the district, and keeping the eligible registers full and active, the district office can fill positions with a minimum of delay.

Functioning under the district secretary, as part of the district system of decentralized operation, are the local boards of examiners, of which there are about 5,000. These boards are composed of Government employees working in the various local branches of the Federal service who are detailed by their chiefs to represent the Civil Service Commission for such time and such service as may be required. The duties of the local boards are similar to those of the district office, in that they announce examinations, receive, review, and rate applications for minor positions in the branches of the service for which they act, maintain registers for those positions and certify eligibles to fill them when vacancies occur.

District offices are located in the post office, customhouse, or other Government building in the cities in which they maintain headquarters. Executives in charge of these buildings are required, by application of a phrase in the civil-service act, to facilitate the holding of examinations and other work of the commission by providing suitable rooms and furnishing heat and light.

The number of employees in the Federal executive civil service on June 30, 1930, was 608,915. Of these, 540,405 were employed in the field and 68,510 were in the various offices of the United States Government in Washington. All of these employees, with negligible exceptions, come under the operation of the civil service act.

To keep the number of employees at the minimum required for efficient service and to take care of changes produced by death, resignation, removal, retirement, and expansion, the Civil Service Commission has to fill about 40,000 positions a year.

The employed personnel of the commission on June 30, 1930, was 561, of whom 395 are in the Washington office and 166 are in the field. The appropriation for the fiscal year ended June 30, 1930, was $1,262,509; that for the current year was increased to $1,527,082.

United States Bureau of Efficiency

THE United States Bureau of Efficiency is an independent Government establishment organized under an act of Congress (39 Stat. 14, 15) approved February 28, 1916. The bureau grew out of the

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division of efficiency instituted in the United States Civil Service Commission in compliance with a law passed in 1912 (37 Stat. 360, 413), which required the commission to "establish a system of efficiency ratings for the classified service in the several executive departments in the District of Columbia based upon records kept in each department and independent establishment."

The division had been functioning in a very limited way for nearly three years when it was made a separate agency under a chief appointed by the President, and the officers, employees, records, and duties of the division of efficiency of the Civil Service Commission were transferred by Executive order to the new independent Bureau of Efficiency. The duties and powers of the bureau with reference to investigations were later extended to the municipal government of the District of Columbia.

The functions of the bureau are to investigate the methods of business in the Government service; to investigate the duplication of statistical and other work; to investigate the needs of the executive departments and independent establishments with respect to personnel; and to establish and maintain a standard system of efficiency ratings for employees of the classified civil service employed in Washington.

The initial step in establishing individual efficiency ratings was to prescribe a uniform procedure for arriving at standards and then to apply the system adopted. Descriptions of work, in the nature of job analyses, were made for all classes and types of work performed in the offices to which the law applied. Salary standards were fixed for each of the various grades and kinds of work, and employees were classified according to the kind of work performed.

The efficiency rating system finally adopted involves the rating of each employee on certain selected "service elements," weighted according to their relative importance. These service elements on the whole deal with such subjective aspects as "knowledge," "judgment," "initiative and resourcefulness," "executive" and "organizing ability," "leadership," "cooperativeness," and so on. Measurable factors of speed and accuracy are considered, but quantity of work is taken into consideration only when the operation involved permits the use of definite records of output. Attendance is reported upon separately.

Promotion and demotion are to be determined by efficiency ratings according to rules prescribed by the Bureau of Efficiency. The bureau also fixes for the various grades ratings below which no employee in that grade "may fall without being dismissed for inefficiency."

Efficiency ratings for the departmental service are determined once a year, as of May 15, the purpose being to have current ratings available in connection with salary adjustments and other personnel changes on July 1. Each bureau or office rates its own employees, on uniform rating sheets supplied by the Bureau of Efficiency. In large organizations operated on a sectional and division basis, section chiefs and other supervisory employees are designated as rating officers for the group under their immediate direction, and as such they are required to report upon the efficiency of their subordinates. Chiefs of divisions then review, and if necessary, revise, the ratings submitted

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by the rating officers within each division and prepare a combined efficiency report which includes all the workers in the division. Division reports are then referred for final judgment to the board of review, composed of the bureau chief and his immediate associates and advisers. In smaller offices, where the organization is more fluid and assignment to work is less rigid, an employee may be rated by more than one rating officer. These ratings are similarly reviewed by superiors before the final grade is arrived at.

While the actual rating and determination of standing are thus done by the individual offices, reports are all submitted to the Bureau of Efficiency where they are again subject to review. The bureau also "renders consultation service to departmental employees and rating officers on questions relative to efficiency ratings and procedure." [9]

The work of the bureau in relation to personnel is largely administrative and advisory. Its more active functions are concerned with the investigative duties assigned it under the law. In this field "the work of the bureau divides itself into two classes: First, it studies problems specifically assigned to it either formally by statute or informally by committees of Congress or individual Members of Congress; second, it assists the heads of departments and bureaus, at their request, by studying the existing methods of procedure in handling Government work with a view to effecting improvements." [10]

Reports on these studies are submitted to the person or organization making the request, but are not published by the bureau. Recommendations are sometimes briefly summarized in annual reports of the bureau.

The appropriation for the Bureau of Efficiency for the fiscal year ended June 30, 1930, was $231,450. For the current year it is $199,330. The permanent staff consisted on October 31, 1930, of the chief, the assistant chief, 22 investigators, 2 scientists, 1 assistant scientific aide, 12 clerks, and 3 messengers, a total of 42 employees.

Personnel Classification Board

THE Personnel Classification Board was created on March 4, 1923, through the enactment of the classification act of 1923. (42 Stat. 1488.) It is an ex-officio board, which consists of the director of the Bureau of the Budget, or an alternate from that bureau designated by the director; a member of the Civil Service Commission, or an alternate from that commission designated by the commission; and the chief of the United States Bureau of Efficiency, or an alternate from that bureau designated by the chief of the bureau. The director of the Bureau of the Budget, or his alternate, is named in the statute as chairman of the board.

The board has no specific appropriation of its own, but its staff is composed of persons employed by the various other governmental departments and establishments and detailed to the board for service. For the fiscal year ended June 30, 1929, it received an appropriation of $75,000 for the conduct of a classification and compensation survey of some 106,000 positions in the field service.

[9] United States Bureau of Efficiency. Annual report for period from Nov. 1, 1929, to Oct. 31, 1930. Washington, 1930, p. 13.
[10] Idem, p. 2.

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The activities of the board are:

1. The classification of governmental positions in the District of Columbia according to their duties and responsibilities, and the allocation of these positions to salary grades contained in compensation schedules enacted by Congress.

2. The review and revision of efficiency or service rating systems prepared by the Bureau of Efficiency, and certain phases of the administration of these efficiency rating systems in cases of proposed dismissals or reductions for inefficiency and in cases of proposed reductions in force because of cessation or diminution of activities.

3. The study of rates of compensation provided in the act with a view to reporting conclusions and recommendations to Congress as to readjustments deemed just and reasonable.

4. The preparation of class specifications showing the title of each class of positions, the duties and responsibilities involved, and the minimum qualifications required for the satisfactory performance of such duties and the discharge of such responsibilities.

The act of May 28, 1928 (45 Stat. 776, sec. 2) authorized the Personnel Classification Board to make a survey of Government employment in the field with a view to extending the application of the classification act and the jurisdiction of the Bureau of Efficiency to the field service.

United States Employees' Compensation Commission

COMPENSATION for disability or death from injury on duty was provided for civil employees of the United States Government by act of Congress dated September 7, 1916 (39 Stat. 742). Previous legislation had given a measure of protection to workers in specific branches of the Government service, such as the Life Saving Service and the Railway Mail Service, and an act of 1908 (35 Stat. 556) had extended relief to a limited degree to employees in any branch engaged in work regarded as "hazardous."

The present act, however, is all inclusive, providing compensation for all persons employed by the Federal Government, both within and without the classified service, and for their dependents and beneficiaries. In 1919 the act was extended to include civil employees of the District of Columbia except members of the police and fire departments, who are covered by a special law. Still later, officers and enlisted men in the Naval Reserve were brought within the jurisdiction of the compensation law, with the proviso that "sickness or disease shall in no case be considered an injury."

The law as enacted grants compensation "for the disability or death of an employee resulting from a personal injury sustained while in the performance of his duty." An amendment approved June 5, 1924, amplifies the definition of "injury" to include "any disease proximately caused by the employment."

An administrative agency is created by the law called the United States Employees' Compensation Commission. It is an independent body composed of three members appointed by the President for a term of six years. One commissioner is designated by the President to serve as chairman. The commission as an administrative agency consists, in addition to the commissioners, of an executive secretary who is responsible for the general administrative work, and eight

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functional divisions: Claims, medical, legal, statistical, law and insurance, accident prevention, rehabilitation, and disbursing office.

All work in connection with the adjustment of claims for compensation to injured Federal employees, except necessary investigations in the field, is performed under the direction of the commission in the Washington office. In view of the fact that Federal employees are stationed throughout the United States and its possessions, and in foreign countries, it follows that claim adjustments are handled by the central office almost wholly by correspondence.

Officials of the Government service in the field offices everywhere are delegated by the compensation commission to act as its agents in the administration of the compensation act. They report injuries, arrange for proper medical treatment, and give all necessary advice and assistance. Printed regulations of the commission concerning the duties of employees, official supervisors, medical officers, and others have been given wide distribution, and the procedure under this law is familiar to practically all supervisory officials in the Government service.

The report of an injury goes first to the medical division to determine whether disability is due to injury received in the performance of duty, whether claim was filed within one year of date of injury, as required by law, the sufficiency of the evidence, and whether proper and adequate medical treatment was provided and medical reports submitted. The medical division consists of a medical director and two assistants detailed from the United States Public Health Service.

After the medical division has passed favorably upon a case it goes to the claims division, which determines whether compensation is payable, computes the amount to which the claimant is entitled, and prepares the pay roll therefor. The claims division is also responsible, through its investigation section, for all research and investigation necessary in checking up information, proving or disproving claims, and investigating cases of prolonged disability.

The legal division, under the attorney of the commission, has supervision over suits brought against third parties by employees or other beneficiaries of the Federal employee's compensation act in cases where injury or death of the employee has been caused by the negligent acts or omissions of such third party.

Three of the divisions in the organization, those dealing with law and insurance, accident prevention, and rehabilitation, are concerned almost wholly with the administration of two other compensation acts within the jurisdiction of the United States Employees' Compensation Commission. These are the longshoremen and harbor workers' compensation act, and the District of Columbia workmen's compensation act. In connection with the Federal service the commission reports that "only a few of the government establishments have adopted a program for organized accident-prevention work." [11]

The statistical division of the commission receives and codifies all reports of injuries, and compiles all statistical information used and issued by the commission.

The disbursing office is responsible for the payment of compensation awards to injured employees of the United States Government and the

[11] United States Employees' Compensation Commission. Fourteenth annual report. Washington, 1930, p. 52.

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government of the District of Columbia, from pay rolls made up in accordance with regulations and decisions of the commission. The District government is given an appropriation for that purpose separate from that of the Federal Government. Salaries and expenses of the commission are met out of a third fund disbursed by the disbursing office.

All doubtful and disputed cases, such as questions of dependency in death cases, the determination of causes in occupational diseases, the granting of lump-sum awards, the discontinuance of compensation in long-standing cases, and the like, are referred to the three commissioners for decision. There is no appeal from their decision.

The duty of the injured employee, as beneficiary under the act, is to report his injury immediately to his superior who, acting as the employer, makes formal report to the commission. The injured worker must then present himself for treatment at one of the agencies designated by the United States Employees' Compensation Commission for that purpose. These agencies are, first, a United States public health service or marine hospital, dispensary, first-aid station. or (for male employees) Naval hospital; second, where no government hospital or dispensary is available, treatment is to be secured from the local physician delegated by the commission to treat injury cases; third, if neither service is available, any reputable physician may be selected. The commission publishes and distributes current lists of the hospitals and physicians throughout the country delegated to act for it in the emergency treatment and care of injured Government workers.

The staff of the United States Employees' Compensation Commission, on June 30, 1930, consisted of 174 employees and the three commissioners. Of the employees, 113 were in the Washington office and 61 were in the field. It must be emphasized, however, that the work of the staff is concerned with the administration and enforcement of two acts covering workers in private employ as well as the two covering public employees of the Federal and District governments.

Bureau of Pensions

ADMINISTRATION of the civil service retirement act (41 Stat. 620) lies with the retirement division of the Bureau of Pensions. That bureau was transferred from the Department of the Interior, where it had always been, to the Veterans' Bureau, on July 1, 1930.

This act as construed and amended covers all employees in the classified civil service and, in addition, employees of the Library of Congress, the National Botanic Gardens, the office of the Architect of the Capitol, superintendents of national cemeteries, and employees of the government of the District of Columbia not otherwise provided for.

After 15 years of service, railway postal clerks are eligible to retirement at 62 years of age, post-office clerks, letter carriers, and mechanics at 65, and all other employees at 70 years of age. Retirement after 30 years of service is optional two years earlier for all three groups. The plan is contributory, employees contributing 3½ per cent of their basic salary to the retirement and disability fund. The amount of the annuity depends upon the length of service and the average annual salary in the last 10 years of service, up to a

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maximum allowance of $1,200 per annum. A disability benefit may be paid after 15 years' service regardless of age.

All persons retired for disability must be given a physical examination by a surgeon or board of physicians and surgeons designated by the Commissioner of Pensions. If the disability is temporary, the beneficiary must be examined annually until he reaches retirement age, or until the disability decreases sufficiently to permit him again to earn his living.

The Bureau of Pensions is the agency named in the retirement act for the adjudication of claims and the payment of annuities, refunds, and disability allowances. The retirement division, under the direction of a chief of division, was created for the purpose of discharging that duty. As the elements of a claim for retirement are simple, its validity is determined by the retirement division, with the approval of the Commissioner of Pensions.

The work of the retirement division consists of dating, recording, numbering and jacketing claims; examining claims and all pertinent papers and data bearing upon their validity; conducting all correspondence dealing with retirement and disability; determining the basic salaries for and fixing the amount of the annuity; issuing certificates to annuitants when the claim is granted; placing annuitants' names on the retirement pay roll; and issuing and mailing the monthly check to annuitants and beneficiaries of disability allowances.

The bureau also handles claims for refunds in cases which never reach retirement; for example, those of employees who die in the service, separate from the service, or transfer to positions not covered by the retirement act. In all such cases the amount contributed by the employee, plus interest at 4 per cent, is refunded.

The Board of Actuaries provided for in the retirement act is an advisory board of three members, one of whom is the Government actuary, appointed by the Commissioner of Pensions. The duty of this board is to report annually upon the operation of the retirement act, and to make an actuarial valuation of the civil service retirement and disability fund at intervals of five years. The board is authorized, in submitting its annual reports, to recommend such changes in legislation and procedure "as in its judgment may be deemed necessary to protect the public interest and maintain the system upon a sound financial basis."

Current personnel records of persons in the Government service, such as those dealing with salary ratings, length of service, etc., are kept not by the retirement division but by the Civil Service Commission, which furnishes the necessary information to the retirement division. Requests for extension of employment beyond retirement age are also handled by the Civil Service Commission.[12]

[12] See pp. 39, 40.

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EMPLOYMENT CONDITIONS

Unemployment Survey of Metropolitan Life Insurance Co.

AT THE request of the President's Emergency Committee for Employment, the Metropolitan Life Insurance Co., in December, 1930, made a survey of employment conditions among a group of its industrial policyholders. The full text of the report, together with the accompanying correspondence, is given below:

METROPOLITAN LIFE INSURANCE CO.,
New York City, January 22, 1931.

Col. ARTHUR WOODS,
Chairman President's Emergency Committee for Employment,
Washington, D. C.

DEAR COLONEL WOODS: I am inclosing herewith copies of the series of tables showing the results of the employment survey recently made by our agents, including the more recently completed additional tabulations covering the size of the family and the number of wage earners per family which you requested.

I would call your attention to the fact that our survey was limited to 46 of the larger cities of the country. They were selected with due regard to their geographical location and to their industrial character. We covered in all a total of 213,787 families, which embraced close to 900,000 people. In these families there were approximately 350,000 wage or salary earners of all kinds. We believe that the per cent of unemployment, as shown in the accompanying tables, is a susbtantially correct indication of the state of affairs as of the week of December 8 among the wage-earning groups represented by our industrial policyholders. It is our belief that the other workers not represented by the industrial policyholders would show a smaller rate of unemployment.

1 would also call your attention to the fact that there is considerable variation in the amount of unemployment among the wage earners in the families canvassed in the 46 cities. Generally speaking, the lowest percentage of unemployment among our industrial policyholders is found in the smaller cities. For example, Oklahoma City had 11.8 per cent and Wilkes-Barre 12.5 per cent. On the other hand, in the larger cities, including Philadelphia, Pittsburgh, and certain boroughs of New York and Los Angeles, the rates ran from 20 to 25 per cent. In 10 cities the rates ranged from 25 to 30 per cent. Two cities, Detroit and Fall River, had over 30 per cent of the industrial wage earners canvassed unemployed.

We have made no attempt to interpret these figures in terms of the unemployment throughout the country. In the first place, we realize that these surveys were made in thel arger cities of the country, where industry is more concentrated and where unemployment is usually most severe. The rural and small-town populations which were not covered in this survey are generally assumed to experience better conditions. It is particularly true in any year that the first week of December is a period when, because of inventory taking and other seasonal factors, unemployment is higher than in other periods of the year. Probably most important is the generally accepted view that our industrial policyholders show higher unemployment rates than the community as a whole. Finally, our definition of unemployment had of necessity to be so general as to include a small number of persons who were not strictly employable. For this reason a small number of sick persons, and others who were not actively seeking employment, were included in our total of unemployed. We do not believe that this source of error is a serious one.

I know that the Government experts have been in close touch with the unemployment situation throughout the year and throughout the country and will know best how to relate these figures of ours to the general situation.

Sincerely yours,

F. H. ECKER, *President.*

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Analysis of Results of Metropolitan Survey [1]

THE survey made by the Metropolitan Life Insurance Co. shows employment conditions among 355,759 workers in 213,787 families of industrial policyholders of the company in 46 of the larger cities of the United States in the first week of December, 1930. It must be remembered that the total of unemployed includes not only persons who were jobless and looking for work, but also those on temporary furlough or on lay-off from their regular jobs as well as some workers unemployed because of sickness and those voluntarily idle and not looking for work or on vacation. Inasmuch as no distinction was made among the various classes of unemployed, and since the survey was confined to the industrial wage-earning classes in the larger cities, where unemployment is most severe, the results are not quite comparable with those of the Federal Census of Unemployment taken in April, 1930.

It will be noted that the survey covered a total of 213,787 families, in which there were a total of 355,759 wage or salary earners, or an average of 1.7 workers per family. In the 213,787 families 271,132 workers were employed, and of this number 195,309 were employed full time and 75,823 part time, while 84,627 were unemployed. Analyzing these returns, it appears that, on the average, for every 1,000 families there are 1,700 wage or salary earners, of whom 933 were employed full time, 362 were employed part time, and 405 were wholly unemployed in the first week of December. It is apparent that a large proportion of the families canvassed have more than one wage earner and therefore that the proportion of families entirely without wage income is much smaller than the proportion of workers wholly unemployed. Detailed information as to the incidence of unemployment in 10,839 of the families canvassed, as related to the number of persons, and as to the number of wage earners in these families, is given in five attached tables prepared by the Metropolitan Life Insurance Co.

The results of the latest Census of Occupations are not yet available, so that we do not know the exact number of industrial workers in these cities for whom this survey might be considered representative. However, by making certain reasonable assumptions, it is possible to arrive at a rough approximation of the probable number of unemployed workers in these cities. The number of persons in the families canvassed by the Metropolitan Life Insurance Co. was 886,929, or 3.1 per cent of the total population of these 46 cities, which was shown by the census to be 28,296,849. It is estimated that between 5,500,000 and 6,000,000, nearly half of the total number of gainfully occupied persons in these cities, are of the industrial wage-earning class, of which the policyholders of this company may be considered representative. The survey showed that, in the 46 cities as a whole, 84,627 out of the total of 355,759 workers in all families canvassed by the company, or 23.8 per cent, were unemployed in the first week of December. It should be remembered that this percentage is an average or composite of many diverse conditions in the various cities covered and is therefore not a measure of conditions in the country as a whole or in any specific locality. Assuming that this percentage is representative of the estimated total of five and one-half to six

[1] The following analysis was prepared for the President's Emergency Committee for Employment by Government statisticians.

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million industrial workers, this would indicate that between 1,310,000 and 1,430,000 of the industrial workers in these cities were unemployed for various reasons at the time of the survey.

In addition to this total there is, of course, some unemployment existing among the higher-grade salaried workers not generally represented among the families of industrial policyholders, although we know, as Mr. Ecker has indicated in his letter, that unemployment has been more prevalent among industrial wage earners than among salaried and executive workers. It is estimated that the number of executives, salaried workers, and other classes of employed persons (excluding, of course, the independent, professional, and other self-employed groups) who might be subject to unemployment, is about half as large as the number of industrial workers in these cities, or between 2,750,000 and 3,000,000. We do not know the extent of unemployment among this group, but we have every reason to believe that it is less severe than among industrial workers. However, even on the assumption that unemployment among the salaried groups not represented in the Metropolitan survey was as extensive as among industrial workers, i. e., that 23.8 per cent, or between 650,000 and 710,000, were not employed, the total number of unemployed for all causes would amount to between 1,960,000 and 2,140,000 persons.

This total includes, in addition to able-bodied jobless persons and those on lay-off without pay, a small number of persons not working on account of sickness or voluntarily idle and not looking for work. A recent report of the census shows that in April, 225,000 persons out of a total population of 42,858,000 in 25 States and 4 large cities, or 0.53 per cent of the population, were idle because of these latter causes, i. e., either were not able to work or were not actively seeking work. If this same proportion of the 28,296,849 persons residing in the 46 cities covered in the survey were idle for similar reasons, the total estimated unemployment would be reduced by about 150,000, giving an estimated maximum of 1,810,000 to 1,990,000 persons able and willing to work, but jobless or on lay-off without pay during the first week of December, 1930.

The April census showed the same tendency, noted in Mr. Ecker's letter, for unemployment to be concentrated in the large cities. The number of jobless in these 46 cities amounted to 3.49 per cent of their population, while only 1.61 per cent of the population of the remainder of the country were reported as jobless. Thus, of the total number of 2,508,000 jobless persons enumerated by the census, 986,997, or 39 per cent, were located in these 46 cities, the total population of which is only 23 per cent of that of the entire country.

If the same relation between the number of unemployed in these cities to the number in the country as a whole now exists, it would appear that the estimated unemployment of 1,810,000 to 1,990,000 in these cities is between 39 and 40 per cent of the total unemployment in the entire United States. Figured on this basis, total unemployment in the first week of December was between 4,600,000 and 5,060,000, but in view of the liberal estimate of unemployment among the higher-grade salaried workers (who were not included in the Metropolitan survey) it seems probable that the total number of wholly unemployed persons in the United States in the first week of Decem-

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ber, 1930, was between 4,500,000 and 5,000,000 or about 10 per cent of the total number of persons with gainful occupations. It must be remembered that such a figure is only a very rough approximation, being based upon a number of assumptions that unfortunately can not be verified at the present time.

TABLE 1.—ANALYSIS OF 10,839 FAMILIES OF INDUSTRIAL POLICYHOLDERS—EMPLOYMENT SURVEY OF METROPOLITAN LIFE INSURANCE CO., DECEMBER 8, 1930

Number of wage earners	Number of families with specified number in family										Total families
	1	2	3	4	5	6	7	8	9	10 and over	
1	432	1,343	1,492	1,319	731	408	199	94	36	12	6,066
2	-------	620	779	589	386	259	121	75	36	33	2,898
3	-------	-------	158	320	214	182	111	78	34	42	1,139
4	-------	-------	-------	69	114	100	88	56	36	34	497
5	-------	-------	-------	-------	22	48	35	16	17	25	163
6	-------	-------	-------	-------	-------	7	11	8	7	15	48
7	-------	-------	-------	-------	-------	-------	6	2	3	8	19
8	-------	-------	-------	-------	-------	-------	-------	-------	2	5	7
9	-------	-------	-------	-------	-------	-------	-------	-------	1	1	2
Total	432	1,963	2,429	2,297	1,467	1,004	571	329	172	175	10,839

1 wage earner

Number in family	Families with 1 wage earner			Total families
	Employed full time	Employed part time	Unemployed	
1	280	85	67	432
2	793	301	249	1,343
3	934	354	204	1,492
4	829	328	162	1,319
5	441	212	78	731
6	218	127	63	408
7	93	69	37	199
8	53	27	14	94
9	21	9	6	36
10 and over	6	6	-------	12
Total	3,668	1,518	880	6,066

2 wage earners

Number in family	Families with 2 wage earners whose employment status was as specified						Total families
	2 full time	1 full and 1 part time	2 part time	1 full time, 1 unemployed	1 part time, 1 unemployed	2 unemployed	
2	218	108	49	116	76	53	620
3	268	135	64	160	90	62	779
4	195	100	58	120	73	43	589
5	121	70	37	82	51	25	386
6	71	55	25	46	45	17	259
7	38	16	22	23	18	4	121
8	20	9	16	11	11	8	75
9	7	7	4	6	10	2	36
10 and over	9	7	7	6	4	-------	33
Total	947	507	282	570	378	214	2,898

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TABLE 1.—ANALYSIS OF 10,839 FAMILIES OF INDUSTRIAL POLICYHOLDERS—EMPLOYMENT SURVEY OF METROPOLITAN LIFE INSURANCE CO., DECEMBER 8, 1930—Continued

3 wage earners

Number in family	Families with 3 wage earners whose employment status was as specified										Total families
	3 full time	3 part time	3 unemployed	2 full and 1 part time	1 full and 1 part time, 1 unemployed	2 part time, 1 unemployed	1 part time, 2 unemployed	1 full and 2 part time	1 full time, 2 unemployed	2 full time, 1 unemployed	
3	42	5	6	21	17	10	12	7	17	21	158
4	79	15	18	31	26	16	22	21	39	53	320
5	38	13	14	31	21	15	10	17	24	31	214
6	37	4	15	22	11	13	12	22	21	25	182
7	20	6	5	13	16	5	11	13	6	16	111
8	15	6	5	3	7	4	9	6	11	12	78
9	6	1	3	6	2	1	3	3	5	4	34
10 and over	5	1	2	4	3	5	7	6	6	3	42
Total	242	51	68	131	103	69	86	95	129	165	1,139

4 or more wage earners

Number in family	Number of wage earners—				Total families with 4 or more wage earners
	Employed full time	Employed part time	Unemployed	Total	
4	151	45	80	276	69
5	273	122	171	566	136
6	291	162	229	682	155
7	313	125	197	635	140
8	159	79	128	366	82
9	152	69	96	317	66
10 and over	202	81	173	456	88
Total	1,541	683	1,074	3,298	736

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TABLE 2.—EMPLOYMENT AND UNEMPLOYMENT IN FAMILIES CANVASSED BY AGENTS OF THE METROPOLITAN LIFE INSURANCE CO. IN 46 CITIES, DECEMBER 8-9, 1930

City	Number of families	Number of persons	Number of wage or salary earners	Wage or salary earners—			Per cent of wage or salary earners [1]—			Number of persons per family	Number of wage or salary earners per family
				Employed full time	Employed part time	Wholly unemployed	Employed full time	Employed part time	Wholly unemployed		
Akron	1,152	4,636	1,649	722	568	359	43.8	34.4	21.8	4.0	1.4
Atlanta	1,809	7,025	3,320	2,062	607	651	62.1	18.3	19.6	3.9	1.8
Baltimore	6,714	29,576	12,421	7,266	2,766	2,389	58.5	22.3	19.2	4.4	1.9
Birmingham	1,177	4,998	1,886	802	604	480	42.5	32.0	25.5	4.2	1.6
Boston	7,783	34,370	13,254	8,045	2,230	2,979	*72.5* 60.7	*17.3* 16.8	*10.2* 22.5	4.4	1.7
Bridgeport	1,475	6,592	2,453	1,089	789	575	*75.8* 44.4	*19.9* 32.2	*4.3* 23.4	4.5	1.7
Buffalo	5,014	21,042	7,925	3,954	1,963	2,008	49.9	24.8	25.3	4.2	1.6
Butte	425	1,622	662	342	215	105	*80.3* 51.6	*12.7* 32.5	*7.0* 15.9	3.8	1.6
Chicago	26,363	106,957	44,110	23,394	9,130	11,586	*76.2* 53.0	*10.5* 20.7	*13.3* 26.3	4.1	1.7
North Chicago	11,429	46,515	18,824	10,192	3,976	4,656	54.2	21.1	24.7	4.1	1.6
East Chicago	4,899	17,838	8,608	4,604	1,583	2,421	53.5	18.4	28.1	3.6	1.8
West and South Chicago	10,035	42,604	16,678	8,598	3,571	4,509	51.6	21.4	27.0	4.2	1.7
Cincinnati	4,768	18,252	7,729	4,036	2,019	1,674	52.2	26.1	21.7	3.8	1.6
Cleveland	6,492	25,265	10,109	4,786	2,851	2,472	*78.3* 47.3	*12.3* 28.2	*9.4* 24.5	3.9	1.6
Columbus, Ohio	1,629	6,231	2,605	1,425	700	480	54.7	26.9	18.4	3.8	1.6
Denver, Colo	1,283	4,667	1,967	1,441	242	284	73.3	12.3	14.4	3.6	1.5
Des Moines	770	2,969	1,091	659	227	205	60.4	20.8	18.8	3.9	1.4
Detroit	9,738	42,585	14,988	5,012	5,455	4,521	33.4	36.4	30.2	4.4	1.5
Fall River	1,483	6,490	2,941	1,331	697	913	45.3	23.7	31.0	4.4	2.0
Grand Rapids	1,170	4,823	1,676	767	503	406	45.8	30.0	24.2	4.1	1.4
Indianapolis	1,752	6,849	3,115	1,389	808	918	44.6	25.9	29.5	3.9	1.8
Jacksonville	544	2,035	883	605	120	158	68.5	13.6	17.9	3.7	1.6
Kansas City, Mo	2,799	9,688	4,482	2,779	841	862	*78.7* 62.0	*8.8* 18.8	*12.5* 19.2	3.5	1.6
Los Angeles	5,036	18,904	7,637	4,828	1,192	1,617	*64.5* 63.2	*24.1* 15.6	*11.4* 21.2	3.8	1.5
Louisville	1,873	7,261	3,402	1,560	953	889	*59.2* 45.9	*27.7* 28.0	*13.1* 26.1	3.9	1.8

[1] Percentages in italic are for Metropolitan survey, 1915.

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TABLE 2.—EMPLOYMENT AND UNEMPLOYMENT IN FAMILIES CANVASSED BY AGENTS OF THE METROPOLITAN LIFE INSURANCE CO. IN 46 CITIES, DECEMBER 8-9, 1930—Continued

City	Number of families	Number of persons	Number of wage or salary earners	Wage or salary earners			Per cent of wage or salary earners—			Number of persons per family	Number of wage or salary earners per family
				Employed full time	Employed part time	Wholly unemployed	Employed full time	Employed part time	Wholly unemployed		
Manchester, N. H.	562	2,552	1,044	461	308	275	44.2	29.5	26.3	4.5	1.9
Memphis	2,125	7,478	3,702	1,838	772	1,092	49.6	20.9	29.5	3.5	1.7
Milwaukee	3,377	14,009	5,129	2,387	1,578	1,164	*63.2*	*28.9*	*7.9*	4.1	1.5
							46.5	30.8	22.7		
New Orleans	3,743	16,186	7,117	4,316	1,205	1,596	60.7	16.9	22.4	4.3	1.9
New York City	59,725	254,875	98,493	60,802	14,791	22,900	61.7	15.0	*18.0*	4.3	1.6
									23.3		
Bronx	9,028	37,914	14,178	9,336	1,706	3,136	65.9	12.0	22.1	4.2	1.6
Brooklyn	23,574	104,250	38,820	23,006	6,284	9,530	59.3	16.2	24.5	4.4	1.6
Manhattan	14,984	62,691	26,222	15,152	4,097	6,973	57.8	15.6	26.6	4.2	1.8
Queens	9,500	38,727	15,076	10,310	2,131	2,635	68.4	14.1	17.5	4.1	1.6
Richmond	2,639	11,293	4,197	2,998	573	626	71.4	13.7	14.9	4.3	1.6
Oakland, Calif.	1,728	6,958	2,554	1,512	414	628	*61.1*	*26.9*	*12.0*	4.0	1.5
							59.2	16.2	24.6		
Oklahoma City	498	1,770	701	515	103	83	73.5	14.7	11.8	3.6	1.4
Omaha	925	3,519	1,399	1,001	193	205	71.5	13.8	14.7	3.8	1.5
Philadelphia	15,073	65,935	27,656	14,131	6,629	6,896	*70.1*	*19.6*	*10.3*	4.4	1.8
							51.1	24.0	24.9		
North Philadelphia	5,715	23,767	9,996	5,476	2,325	2,195	54.7	23.3	22.0	4.2	1.7
West Philadelphia	2,739	12,235	4,924	2,982	876	1,066	60.6	17.8	21.6	4.5	1.8
South Philadelphia	3,764	17,355	7,361	3,213	1,915	2,233	43.7	26.0	30.3	4.6	2.0
Frankford-Kensington	2,855	12,578	5,375	2,460	1,513	1,402	45.8	28.1	26.1	4.4	1.9
Pittsburgh, Pa.	5,536	23,475	8,905	4,525	2,196	2,184	*59.9*	*29.0*	*11.1*	4.2	1.6
							50.8	24.7	24.5		
Portland, Me.	752	3,364	1,148	680	302	166	59.2	26.3	14.5	4.5	1.5
Portland, Oreg.	981	3,948	1,544	903	273	368	*62.7*	*17.3*	*20.0*	4.0	1.6
							58.5	17.7	23.8		
Providence, R. I.	3,282	14,485	5,906	2,414	1,926	1,566	40.9	32.6	26.5	4.4	1.8
Richmond, Va.	1,547	6,602	2,846	1,701	538	607	59.8	18.9	21.3	4.3	1.8
Rochester, N. Y.	2,912	11,914	4,795	2,173	1,502	1,120	45.3	31.3	23.4	4.1	1.6
Salt Lake City	535	2,323	789	565	96	128	*71.9*	*17.7*	*10.4*	4.3	1.5
							71.6	12.2	16.2		
San Francisco, Calif.	2,220	8,674	3,500	2,317	568	615	*59.0*	*25.4*	*15.6*	3.9	1.6
							66.2	16.2	17.6		
Seattle	1,476	5,613	2,110	1,319	337	454	*72.5*	*14.8*	*12.7*	3.8	1.4
							62.5	16.0	21.5		
St. Louis	10,890	40,738	18,370	9,794	4,249	4,327	*72.7*	*13.7*	*13.6*	3.7	1.7
							53.3	23.1	23.6		

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Colored districts	1,251	4,133	2,238	1,015	594	629	45.4	26.5	28.1	3.3	1.8
Other districts	9,639	36,605	16,132	8,779	3,655	3,698	54.4	22.7	22.9	3.8	1.7
Toledo	1,659	7,120	2,630	1,136	735	759	*71.8* 43.2	*17.5* 27.9	*10.7* 28.9	4.3	1.6
Wichita, Kans	393	1,539	618	327	164	127	52.9	26.5	20.6	3.9	1.6
Wilkes-Barre	882	3,830	1,382	693	516	173	*61.3* 50.2	*32.3* 37.3	*6.4* 12.5	4.3	1.6
Wilmington, Del	1,233	5,228	2,212	1,081	624	507	48.9	28.2	22.9	4.2	1.8
Winston-Salem, N. C	484	1,957	904	424	324	156	46.9	35.8	17.3	4.0	1.9
All cities	213,787	886,929	355,759	195,309	75,823	84,627	54.9	21.3	*13.3* 23.8	4.1	1.7

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Unemployment in Foreign Countries

THE accompanying table shows detailed monthly statistics of unemployment in foreign countries, as reproduced from official sources, from May, 1929, to the latest available date:

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES [1]

Date (end of month)	Australia		Austria	Belgium				Canada	
	Trade-unionists unemployed		Compulsory insurance, number unemployed in receipt of benefit	Unemployment insurance societies				Trade-unionists unemployed	
				Wholly unemployed		Partially unemployed			
	Number	Per cent		Number	Per cent	Number	Per cent	Number	Per cent
1929									
May	(2)		130,469	2,382	0.4	8,686	1.4	7,750	4.0
June	40,996	10.0	110,266	2,559	.4	11,194	1.8	5,723	2.9
July	(2)		104,399	4,037	.6	16,452	2.6	6,003	3.0
August	(2)		101,845	3,200	.5	15,614	2.5	7,159	3.5
September	52,480	12.1	104,947	3,492	.5	16,714	2.6	7,654	3.7
October	(2)		125,850	3,261	.5	13,930	2.2	12,716	6.0
November	(2)		167,487	6,895	1.1	13,176	2.1	19,832	9.3
December	56,801	13.1	226,567	15,761	2.4	29,309	4.6	24,289	11.4
1930									
January	(2)		273,197	22,542	3.5	25,782	4.0	22,795	10.8
February	(2)		284,543	16,085	2.6	31,222	4.9	24,175	11.5
March	63,144	14.6	239,094	14,030	2.2	28,469	4.5	22,912	10.8
April	(2)		192,477	13,715	2.2	36,605	5.8	18,581	9.0
May	(2)		162,678	12,119	1.9	38,761	6.1	20,424	10.3
June	80,595	18.5	150,075	12,226	1.9	41,336	6.5	21,380	10.6
July	(2)		153,188	15,302	2.4	48,580	7.7	18,473	9.2
August	(2)		156,145	17,747	2.8	51,649	8.2	[3] 18,232	9.3
September	90,379	20.5	163,894	23,693	3.8	61,623	9.9	[3] 19,356	9.4
October	(2)		192,778	27,322	4.3	54,804	8.5	[3] 22,403	10.8
November	(2)		237,745	36,000	5.6	74,000	11.6	[3] 28,408	13.8
December			294,845	(2)		(2)		[3] 37,339	17.0

[1] Sources: League of Nations—Monthly Bulletin of Statistics; International Labor Office—International Labor Review; Canada—Labor Gazette; Great Britain—Ministry of Labor Gazette; Austria—Statistische Nachrichten; Australia—Quarterly Summary of Australian Statistics; Germany—Reichsarbeitsblatt, Reichs Arbeitsmarkt Anzeiger; Switzerland—Wirt. u. Social. Mitteilungen, La Vie Economique; Poland—Wiedomosci Statystlyczne; Norway—Statistiske Meddelelser; Netherlands—Maandschrift; Sweden—Sociala Meddelanden; Denmark—Statistiske Efterretninger; Finland—Bank of Finland Monthly Bulletin; France—Bulletin du Marché du Travail; Hungary—Magyar Statisztikai Szemle; Belgium—Revue du Travail; New Zealand—Monthly Abstract of Statistics; U. S. Department of Commerce—Commerce Reports; and U. S. Consular Reports.

[2] Not reported.

[3] Figures computed in the Bureau of Labor Statistics from official report covering membership of unions reporting and per cent of unemployment.

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STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Czechoslovakia		Danzig (Free City of)	Denmark		Estonia	Finland	France	Germany
	Trade-union insurance funds—unemployed in receipt of benefit		Number of unemployed registered	Trade-union unemployment funds—unemployed		Number unemployed remaining on live register	Number of unemployed registered	Number of unemployed in receipt of benefit	Number of unemployed registered
	Number	Per cent		Number	Per cent				
1929									
May	21,866	1.9	11,135	29,671	10.8	2,169	1,624	570	1,349,833
June	19,436	1.9	8,876	27,398	10.0	1,110	1,157	394	1,260,044
July	16,859	1.6	9,007	26,621	9.6	780	1,188	399	1,251,452
August	18,674	1.8	8,958	25,164	9.1	609	1,859	403	1,271,990
September	19,468	1.9	9,296	24,175	8.7	902	2,710	385	1,323,603
October	16,248	1.5	10,664	28,194	10.1	3,065	4,997	396	1,557,146
November	17,108	1.6	13,146	36,302	13.0	5,288	9,495	577	2,035,667
December	30,170	2.8	16,198	62,563	22.4	6,116	8,716	817	2,850,849
1930									
January	39,199	3.6	19,282	55,876	20.3	5,608	12,696	1,484	3,217,608
February	40,550	3.6	21,153	59,363	21.0	4,580	11,545	1,683	3,365,811
March	45,567	4.0	20,376	47,109	15.6	3,575	10,062	1,630	3,040,797
April	42,664	3.7	18,371	33,471	11.8	2,227	7,274	1,203	2,786,912
May	41,098	3.8	16,232	27,966	9.4	2,065	4,666	859	2,634,718
June	37,853	3.4	14,975	24,807	8.7	910	3,553	1,019	2,640,681
July	46,800	4.1	15,330	26,200	9.3	762	4,026	856	2,765,258
August	52,694	4.7	15,687	26,232	9.0	1,039	5,288	964	2,883,000
September	57,542	5.3	16,073	27,700	9.0	1,414	7,157	988	3,004,000
October	61,213	5.5	17,307	32,880	11.4	3,282	10,279	1,663	3,252,000
November	[2]	------	20,272	44,200	15.3	5,675	10,740	4,893	3,683,000
December	[2]	------	[2]	[2]	24.6	[2]	[2]	11,952	4,384,000

Date (end of month)	Germany					Great Britain and Northern Ireland			
	Trade-unionists					Compulsory insurance			
	Wholly unemployed		Partially unemployed		Number unemployed in receipt of benefit	Wholly unemployed		Temporary stoppages	
	Number	Per cent	Number	Per cent		Number	Per cent	Number	Per cent
1929									
May	419,373	9.1	315,191	6.8	1,010,781	900,562	7.6	276,922	2.3
June	393,749	8.5	308,699	6.7	929,579	884,549	7.4	279,108	2.4
July	395,202	8.6	315,739	6.9	863,594	881,189	7.4	296,318	2.5
August	410,481	8.9	322,824	7.0	883,002	918,550	7.7	280,332	2.4
September	442,312	9.6	315,150	6.8	910,245	937,795	7.9	265,627	2.2
October	498,604	10.9	319,489	7.0	1,061,134	992,769	8.2	261,711	2.2
November	634,790	13.7	351,947	7.6	1,387,079	1,061,618	8.8	263,987	2.2
December	922,681	20.1	389,278	8.5	1,984,811	1,071,849	8.9	272,371	2.2
1930									
January	1,004,787	22.0	501,950	11.0	2,482,648	1,183,974	9.8	336,474	2.8
February	1,076,441	23.5	593,380	13.0	2,655,723	1,211,262	10.0	371,840	3.1
March	995,972	21.7	576,153	12.6	2,347,102	1,284,231	10.6	409,785	3.4
April	926,831	20.3	553,098	12.1	2,081,068	1,309,014	10.8	451,506	3.8
May	895,542	19.5	552,318	12.0	1,889,240	1,339,595	11.1	516,303	4.2
June	896,465	19.6	578,116	12.6	1,834,662	1,341,818	11.1	569,931	4.7
July	930,777	20.5	631,903	13.9	1,900,961	1,405,981	11.6	664,107	5.5
August	984,384	21.7	670,466	14.8	1,947,811	1,500,990	12.4	618,658	5.1
September	1,011,820	22.5	677,627	15.1	1,965,348	1,579,708	13.1	608,692	5.0
October	1,061,570	23.6	693,379	15.4	2,071,730	1,725,731	13.9	593,223	4.8
November	1,167,930	26.0	721,658	16.1	2,353,980	1,836,280	14.8	532,518	4.3
December	[2]	------	[2]	------	2,832,738	1,853,575	14.9	646,205	5.3

[2] Not reported.

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STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Great Britain	Hungary			Irish Free State		Italy		Latvia
	Number of persons registered with employment exchanges	Trade-unionists unemployed			Compulsory insurance—unemployed		Number of unemployed registered		Number unemployed remaining on live register
		Christian (Budapest)	Social-Democratic		Number	Per cent	Wholly unemployed	Partially unemployed	
			Number	Per cent					
1929									
May	1,123,216	787	13,266	8.8	24,256	8.6	227,682	8,713	1,433
June	1,117,807	787	13,921	9.5	(2)		193,325	10,970	1,236
July	1,154,129	801	13,964	9.3	(2)		201,868	13,503	1,205
August	1,155,803	833	14,007	9.5	21,834	7.8	216,666	19,650	1,008
September	1,181,862	783	13,922	9.5	(2)		228,831	16,835	1,582
October	1,234,388	967	14,215	9.7	(2)		297,382	17,793	4,204
November	1,285,458	1,033	15,910	10.3	26,186	9.2	332,833	19,694	8,479
December	1,510,231	1,107	19,181	13.0	(2)		408,748	21,349	8,134
1930									
January	1,491,519	1,161	21,533	14.5	31,592	11.1	466,231	23,185	9,263
February	1,539,265	1,120	21,309	14.8	(2)		456,628	26,674	8,825
March	1,677,473	983	21,016	14.6	(2)		385,432	28,026	6,494
April	1,698,386	906	20,139	13.7	26,027	9.2	372,236	24,305	3,683
May	1,770,051	875	19,875	13.6	(2)		367,183	22,825	1,421
June	1,890,575	829	18,960	13.0	(2)		322,291	21,887	779
July	2,011,467	920	19,081	13.2	23,393	8.2	342,061	24,209	607
August	2,039,702	847	21,013	14.5	(2)		375,548	24,056	573
September	2,114,955	874	22,252	16.0	(2)		394,630	22,734	1,470
October	2,200,413	999	22,914	16.7	20,775	(2)	446,496	19,081	6,058
November	2,274,338	975	23,333				534,356	22,125	8,608
December	2,392,738						642,169	21,788	10,076

Date (end of month)	Netherlands		New Zealand		Norway			Poland
	Unemployment insurance societies—unemployed		Trade-unionists unemployed		Trade-unionists (10 unions) unemployed		Number unemployed remaining on live register	Number unemployed registered with employment offices
	Number	Per cent	Number	Per cent	Number	Per cent		
1929								
May	10,820	3.0	5,276	9.3	4,694	12.5	18,000	119,877
June	9,987	2.6	(2)		4,337	11.3	14,547	105,065
July	12,030	3.1	(2)		3,999	10.2	12,417	97,297
August	12,701	3.3	5,226	9.4	4,245	10.7	12,493	90,094
September	12,517	3.2	(2)		4,854	12.1	15,525	81,848
October	13,639	3.5	(2)		5,682	14.0	18,420	91,035
November	20,941	5.3	3,018	5.6	6,256	15.4	20,546	125,066
December	48,609	12.3	(2)		7,693	18.9	22,092	185,314
1930								
January	56,535	13.9	(2)		7,786	19.0	22,549	241,974
February	50,957	12.5	4,348	8.5	7,851	18.9	22,974	274,708
March	34,996	8.6	(2)		7,503	17.8	22,533	289,469
April	28,421	6.9	(2)		6,701	15.8	19,829	271,225
May	26,211	6.3	5,884	10.9	5,239	12.2	16,376	224,914
June	23,678	5.5	(2)		4,700	10.8	13,939	204,982
July	29,075	6.7	(2)		4,723	10.8	11,997	193,687
August	32,755	7.6	7,197	13.5	5,897	13.4	12,923	173,627
September	[4] 32,769	[4] 8.4	(2)		7,010	15.7	17,053	170,467
October	[4] 37,533	[4] 9.4	(2)		8,031	18.0	20,363	165,154
November	[4] 46,807	[4] 11.8	(2)		(2)		24,544	209,912
December	(2)		(2)		(2)		27,157	[5] 287,265

[2] Not reported. [4] Provisional figure. [5] December 27, 1930.

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STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Poland				Rumania	Saar Territory	Sweden	
	Industrial workers							
	Extractive and manufacturing industries—wholly unemployed		Manufacturing industries—partially unemployed		Number unemployed remaining on live register	Number unemployed registered	Trade-unionists unemployed	
	Number	Per cent	Number	Per cent			Number	Per cent
1929								
May	104,200	11.6	135,608	25.1	6,819	(2)	24,452	8.1
June	91,000	10.2	98,708	18.6	5,849	3,762	21,764	7.4
July	84,300	9.7	89,639	17.7	3,909	3,238	20,048	6.5
August	77,500	9.0	82,297	15.7	3,714	3,398	19,914	6.3
September	68,700	8.0	70,055	13.2	5,171	3,990	22,271	7.2
October	76,818	8.9	84,060	15.3	5,481	5,025	27,529	8.6
November	108,200	12.5	94,890	17.5	6,958	6,408	33,581	10.4
December	166,240	19.5	94,601	18.5	6,866	10,515	53,977	16.6
1930								
January	219,333	24.3	108,812	24.8	12,622	11,307	45,636	14.2
February	251,627	27.5	120,058	28.4	15,588	11,949	45,460	13.2
March	265,135	28.7	120,844	28.9	13,045	8,882	42,278	12.5
April	246,670	27.0	113,594	26.9	13,412	7,522	38,347	11.1
May	201,116	23.0	104,469	24.2	25,096	7,362	28,112	8.3
June	182,600	21.6	94,375	22.2	22,960	6,330	28,956	8.1
July	170,665	20.5	70,597	17.0	23,236	7,095	27,170	7.8
August	150,650	18.3	74,289	17.1	24,209	7,099	28,539	8.1
September	146,642	17.8	74,285	16.5	39,110	7,527	32,800	9.4
October	(2)		(2)		36,147	9,013	43,927	12.2
November	(2)		(2)		(2)	12,110	(2)	

Date (end of month)	Switzerland				Yugoslavia
	Unemployment funds				
	Wholly unemployed		Partially unemployed		Number of unemployed registered
	Number	Per cent	Number	Per cent	
1929					
May	(2)	(2)	(2)	(2)	10,583
June	(2)	0.7	(2)	1.0	9,017
July	(2)	(2)	(2)	(2)	7,652
August	(2)	(2)	(2)	(2)	5,790
September	(2)	.8	(2)	.9	6,755
October	(2)	(2)	(2)	(2)	4,739
November	(2)	(2)	(2)	(2)	5,026
December	12,309	4.2	9,805	3.3	5,663
1930					
January	10,523	4.4	10,710	4.4	8,508
February	9,971	4.1	11,445	4.7	9,437
March	7,882	2.6	12,642	4.2	9,739
April	5,203	2.1	12,755	5.3	12,052
May	5,356	2.2	13,129	5.4	8,704
June	5,368	1.7	17,688	5.7	6,991
July	4,751	1.9	15,112	6.2	7,236
August	5,703	2.3	19,441	7.9	6,111
September	7,792	2.5	26,111	8.3	5,973
October	7,399	3.0	23,309	9.4	6,609
November	11,666	4.7	25,793	10.5	7,219

[2] Not reported.

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Unemployment in Queensland, 1929–30

IN A report upon the work of the Queensland Labor Department in administering various labor acts, the head of the department points out that Queensland is probably better equipped than any other Australian State to furnish trustworthy statistics of unemployment on a basis which permits comparison from year to year. The State has a network of labor exchanges, so that an unemployed person is able to register practically anywhere. Registration is not compulsory, but those entitled to benefits under the unemployment insurance plan must register in order to secure them, and so must those seeking the special relief provided for the destitute unemployed. Also, registration is a prerequisite for obtaining work under the relief schemes inaugurated during the year covered. "It will thus be seen that the reasons which prompt the unemployed to register are threefold, viz: (a) To become entitled to sustenance rights; (b) to obtain relief rations; (c) to become eligible for relief work."

A summary of the work of the labor exchanges for seven years past shows that in 1929–30 the number registering as unemployed was 107,552, an increase of 16,684 over the number registered during the preceding year. The number of applications for employees was 11,706, and the number of persons sent to employment was 11,652, of whom 5,344 found work with the Government and 6,308 with private employers. Those for whom employment was secured formed 10.8 per cent of those applying for work, while 99.5 per cent of the employers applying for workers secured them.

Another table shows for each month the number by which those registered at the exchanges exceeded the demand for employees. The peak was reached in January, when the excess of supply over demand reached 20,138. The following month it fell to 18,620, but it was not till June that it passed below 18,000. Attention is called to the fact that the worst months in the year are January, February, and March. This is ascribed largely to the fact that the principal seasonal industries—sugar, wool, and wheat—are slack during these months; also, the rainy season prevailing in these months is held partly responsible.

If unemployed workers can secure employment at a distance, either through the exchanges or by other means, the Government will, if necessary, advance their railroad fares to the place as a loan, expecting repayment after the work begins. Fares are also sometimes advanced when there is a good prospect of employment, even though the worker has no definite engagement. During the year covered, 2,378 railroad fares were thus advanced, amounting in value to £3,648 9s. ($17,755). Of this amount 70 per cent had been refunded by the end of the year, 9 per cent was classed as "dishonored," and 21 per cent remained outstanding.

During the year unemployment became so acute that in April, 1930, it was considered desirable to set up relief work for the destitute unemployed. Funds were provided temporarily from the Treasury so that the plan might be launched at once, and when the legislature assembled in July, it passed an unemployment relief tax act, under which the work has since been carried on. (See Labor Review, November, 1930, p. 45.) Before the end of June approximately 6,000 workers had been employed, mainly in work of a general laboring character, conducted by local authorities and Government departments.

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STABILIZATION OF INDUSTRY, AND UNEMPLOYMENT RELIEF

Pittsburgh Plan for Unemployment and Relief Funds[1]

THE Pittsburgh plan divides the unemployed into two classes, the unemployable, and the involuntarily unemployed. The first class comprises the mentally and physically unfit, the aged, and other dependents normally with us. These are the special care of the regularly established social agencies, and their care will be provided for through the usual channels.

The second class is the group of able-bodied people willing to work who have over a period of years been employed in the community in one or more positions and have morally earned credit standing by their working records. The duty for providing employment for this second class is primarily the obligation of the industrialists, the commercial organizations, banking institutions, and all other employers of labor who originally employed these folks. It is socially and economically unwise to meet the needs of such earners solely by relief funds, which are in the last analysis a dole, whether coming from public or private agencies. The effect in either case is to break down morale, and put a premium upon loafing.

A fund is being raised in Allegheny County, to be administered by a group of industrialists, economists, and bankers, who will organize themselves into an employing agency. To raise this fund all employers of labor are asked to contribute an amount equal to one average day's pay roll in 1929. This should amount to more than a million dollars. When this fund is exhausted a second levy will be made and, if need be, others. All capable unemployed shall apply for work through this agency, giving their full records in detail, and information as to their dependents and needs. These applications will be filed according to trades and rated according to necessity.

Then city and county governments having work to do, but which are unable to do it because of lack of funds, will submit a formal application to this central bureau for certain types of employees and from such lists work will be provided. Semipublic enterprises, such as schools, churches, hospitals, playgrounds, etc., may draw the necessary labor next in order of importance.

The 3,000 employers backing this plan may make application for certain types of labor not provided for in their 1931 budget and these requests will be given to a separate committee, which will decide the importance of the work that is applied for and the rate of pay, and will allot the order in which such work should be performed. In this way, city and county work, industrial improvements, clean-ups, paint-ups, etc., can be put into motion at once. Industry will receive

[1] This description of the Pittsburgh plan was furnished the Bureau of Labor Statistics by Clyde L. King, chairman, Pennsylvania Unemployment Committee.

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a return for its contribution to the unemployment situation. Every regular Pittsburgh employee will be assured work at the rates prevailing in their respective crafts. No breakdown of wage scales is contemplated. The money thus put into circulation will tend to bring about a recurrence of normal conditions.

All individuals, including full-time employees whose salaries or wages have not been reduced, are also invited to participate, the latter by contributing one day's pay each. The plan accomplishes the following results:

(1) Those who are the regular wards of public and private charity will get their support through these organizations as in times of prosperity.

(2) Those who are accustomed to supporting themselves and their families will secure work through a separate fund that in no sense pauperizes or lowers self-respect.

(3) The morale and skill of the regular employees in the Pittsburgh district will be kept up for the greater future of a greater Pittsburgh.

(4) Employers and employees alike accept responsibility for regular full-time employment at going wage rates for all the regular employees in Allegheny County.

(5) No encouragement is given to floaters, loafers, nor ne'er-do-wells.

Federal Law on Advance Planning of Public Works for Stabilization of Industry

PRESIDENT HOOVER on February 10, 1931, signed a bill (S. 5776)—Public Bill No. 616—called the "Federal Employment Stabilization Act," which is intended to aid in preventing the evils of unemployment during periods of business depression.

The law creates a governmental board which will be charged with the duty of keeping a constant outlook upon economic conditions and trends in the United States in order that when a period of depression is imminent and a stimulant of economic activity is demanded, the Federal Government may immediately undertake the acceleration of public works construction, so as to check any curtailment of production and thereby lessen the period of business inactivity.

The principle of so-called advance planning in the construction of public works has long been recognized, but it has probably only been during the past ten years that the subject has been given careful and serious consideration in the United States. In 1920 a report of the second industrial conference recommended the advance planning of public works as "one of the most useful approaches to the general problem of unemployment." Numerous other reports were subsequently presented by sundry committees and conferences, all of which adopted the general principle that the expansion of public works during periods of business inactivity was one means of stabilizing prosperity. In 1928, at a conference of governors held at New Orleans, Governor Brewster, of Maine, advocated the establishment of a three-billion-dollar reserve fund to form a prosperity reserve.

The board established under the new Federal act is composed of the Secretaries of the Treasury, Commerce, Agriculture, and Labor.

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President Hoover, upon his approval of the law, placed the organization under the jurisdiction of the Secretary of Commerce.

Analysis of Act

Object.—The proper timing of Federal public construction, so as to aid in stabilizing private employment when private demands for labor are slack.

Federal agency created.—A board to be known as the Federal Employment Stabilization Board is established, to be composed of the Secretaries of the Treasury, Commerce, Agriculture, and Labor.

The board is authorized to appoint a director, experts, and clerical assistants, selected under the civil service laws, and their compensation fixed under the classification act.

Duties of board.—(*a*) To advise the President of the trend of employment and business activity; (*b*) to cooperate with the construction agencies in formulating methods of advance planning; (*c*) to make progress reports; and (*d*) to perform other functions required by the act, such as collecting information concerning advance construction plans of other public and private agencies.

Construction agencies.—The following are listed as "construction agencies": Department of Agriculture (Bureau of Public Roads, Bureau of Plant Industry, Forest Service, Bureau of Dairy Industry, Bureau of Animal Industry); Department of Commerce (Aeronautics Branch, Coast and Geodetic Survey, Bureau of Fisheries, Bureau of Lighthouses); Department of Interior (Bureau of Indian Affairs, Bureau of Reclamation, National Park Service); Department of the Treasury (Coast Guard, Public Health Service, Office of Supervising Architect); Department of War (Office of the Quartermaster General, Office of the Chief of Engineers); Department of Justice (Bureau of Prisons); Department of the Navy (Bureau of Yards and Docks); Department of Labor; Post Office Department; Independent Government agencies (Veterans' Administration, Office of Public Buildings and Public Parks of the National Capital, the District of Columbia, Architect of the Capitol, and the Panama Canal).

Basis of board's action.—The board is to base its action upon the volume of construction contracts (based upon value) awarded during any three-month period in comparison with the corresponding three-month period of three previous calendar years. It may also take into consideration in this connection the index of employment and other information concerning employment furnished by the Department of Labor or any other public or private agency, and also any facts considered pertinent.

Procedure.—The President is authorized to direct the several governmental departments to advance and prosecute all construction projects within their control during the depression period.

Detailed construction plans are to be prepared by the various governmental agencies for a 6-year period, with estimates showing projects allotted each year, and these will then be submitted to the board and to the Director of the Bureau of the Budget. The plans are to be revised each year.

The law provides that before a recommendation for appropriations is made for the next fiscal year the President is to consider the volume

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of construction and the state of employment and the activity of general business throughout the United States. Whenever he finds that an emergency exists or is likely to exist within the next six months, he is to advise the Congress by a special message of such supplemental estimates as he deems advisable for emergency appropriations. Such appropriations, however, may be expended only for highways, rivers and harbor works, flood-control projects, public buildings, or other projects authorized by Congress and included in the 6-year advance plans.

Governors' Conference on Unemployment

A CONFERENCE of the governors or representatives of seven industrial States was held in Albany, N. Y., on January 23–25, 1931, at the invitation of the Governor of New York.[1] The Governors of Connecticut, Massachusetts, New Jersey, New York, Ohio, and Rhode Island attended in person. The Governor of Pennsylvania was represented by the Commissioner of Internal Affairs. At the opening meeting the Governor of New York announced that the purpose of the sessions was not to discuss relief measures but to build machinery for use in a similar depression in the future. After pointing out that the seven States represented held 32 per cent of the population of the country and 49 per cent of its wage earners, who receive 52 per cent of all wages paid in the United States, Mr. Roosevelt said that "under the circumstances there was justification for looking at the seven States as presenting the front line in the fight on unemployment and unstabilized industry."

The preliminary session was open to the public. Among the economic experts who spoke on the first day was Leo Wolman, member of the President's Committee on Recent Economic Changes. He emphasized the lack of authoritative central statistics for presenting a prompt picture of public construction work throughout the United States. The speaker favored the spreading of construction programs by the Federal Government and States so as to stimulate industry in general during business slumps. He stated that the $3,500,000,000 expended in the country in 1928 and 1929 for Federal, State, and municipal construction gave direct employment to over 800,000 persons.

Henry Bruere, chairman of the New York Commission on Unemployment, proposed to establish "a plan of warfare against unemployment depression in exactly the same manner Governments prepare in advance plans of war against various countries."

Prof. William Leiserson, of Antioch College, a member of the Ohio State Unemployment Commission, pointed out the analogy between unemployment insurance and workmen's compensation legislation. He also expressed the opinion that public utilities should be required to make provision for idle or worn-out workers in the same way that such undertakings are obliged to provide for the obsolescence of machinery. Since arrangements are made in order

[1] Data are from New York Times, Jan. 24 and 26, 1931, and United States Daily, Washington, D. C., Jan. 24 and 26, 1931.

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that dividends may be paid in times of depression, so consideration should also be given to measures to provide for labor in such periods.

There is no reason why the public should support industrial workers in times of unemployment. This should justly be a charge on industry. Workers who have spent a life of devotion in certain industries are essential to those industries when industrial activity is resumed. Why should industry, under the circumstances, be in a position to say to the Red Cross or to public charity: "You take care of them until I need them again." It amounts to subsidizing industries, and so far as I am concerned I regard it as the most pernicious of all doles, the dole handed out to industry in this way.

Prof. Joseph R. Chamberlin, of Columbia University, expressed himself as "fairly confident" that unemployment insurance acts would pass the legal tests if justification for the declaration that an obligation rested upon employers in this regard could be shown; if the scheme worked out promised substantial benefit to the community; if those who were not willing to work were not allowed to share the benefits with deserving workers; and if the costs were not excessive to employers.

Referring to the inadequacy of the workers' savings and public charity for protection in periods of unemployment, Prof. Paul H. Douglas, economist of the Swarthmore College unemployment study, stated that unskilled workers who average only $26 per week when they are steadily employed would not be able, if they had dependents, to save any money to tide themselves over when they had no jobs. He strongly advocated unemployment insurance and stated that a fund for such insurance could be established through the payment of 3 per cent of pay rolls, which would make it possible, he thought, to pay benefits equal to 40 per cent of wages. He was in favor of the administrative costs being met by the Government and estimated that they would amount to from 8 to 10 per cent of the money handled.

The actuary of the Metropolitan Life Insurance Co. reported that insurance for seasonal unemployment could be placed on a sound actuarial basis, but that it was questionable whether insurance for technological unemployment could be so placed.

In reviewing the experiences of other countries with unemployment insurance, Leo Wolman reported that the British Unemployment and Relief Fund had been obliged to borrow $300,000,000 from the Government in order to continue solvent.

John Fahey, of the Massachusetts Unemployment Commission, suggested that at this time business might become "perilously apprehensive if threatened with new and heavy burdens." He urged, however, "a deep and cautious study of what has been accomplished so far, so that we may devise a method superior to any that has been applied."

The necessity of an expanded network of State employment agencies and of a substantial improvement of such agencies was stressed by Bryce M. Stewart.

On the third and closing day of the conference, January 25, the following statement was issued by the governors:

Three major divisions of the unemployment problem from the point of view of government were covered at the governors' conference held in Albany during the past three days.

The first of these, a comparative study of labor and corporation tax laws in the seven States represented, will, as announced yesterday (January 24) be reported

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on by a conference of industrial and tax department officials to meet shortly at the invitation of Governor Pinchot, of Pennsylvania.

Yesterday the governors determined on the procedure for the study of the other topics. First it was clearly brought out at the conference that much can be done by cooperation between the States to improve the existing facilities offered by public and private employment agencies.

In some States the public employment offices seem to be operating fairly successfully and in some States there is at least partial supervision over private employment agencies. Much can be done, however, to improve the whole system.

With this goes hand in hand the necessity for the public collecting and interchanging of information and statistics regarding unemployment. The objective is to create, at least temporarily, a central clearing house for the seven States. Obviously, no one State can officially do this for the other six, nor does it seem feasible to create a joint official office representing all seven States.

Governor Cross of Connecticut has consented, therefore, to find out whether this clearing house can be set up by the Yale School of Human Relations. If this proves a success during an experimental period, some way can undoubtedly be found to make a clearing house permanent. In this way it is hoped that unnecessary migration of labor can be checked and concentration of unemployment in any one locality greatly lessened in future years.

Furthermore, this clearing house will give to each State constant information in regard to the success and the needs of public and private employment bureau development.

The final topic, and one which seemed to many of those present at the conference the most vital of all subjects discussed, related to a possible American plan or plans for the creation of unemployment reserves, sometimes referred to as unemployment insurance.

The governors present or represented at the conference made it entirely clear that no action was taken committing either them or their respective States to any program of unemployment insurance. Nevertheless, it was unanimously felt that the subject deserves further immediate study, and Governor Roosevelt of New York, will shortly call a meeting of representatives of the governors of the seven States, the first meeting to be held in New York City. It will be the object of this and subsequent conferences of these representatives to examine unemployment reserves or insurance as a preventive or relief for unemployment, setting forth in their report the following information:

(*a*) The experience of European nations with compulsory and voluntary unemployment insurance.

(*b*) American experience with voluntary unemployment reserves or insurance.

(*c*) Possible or proposed American variations, corrections, and improvements if a general system by States should be adopted. This would cover safeguards against the dole, coverage by private insurance companies, group insurance, private industrial companies' insurance, and governmental supervision.

It would cover also both voluntary and compulsory forms.

The report of this committee will be in the nature of fact finding, together with a listing of proposed methods. The committee will not make recommendations as a committee. Recommendations can, of course, be made by any individual member of the committee to the governor of his own State, should the latter so desire.

Conference on Permanent Preventives of Unemployment

A CONFERENCE on permanent preventives of unemployment was held in Washington on January 26–27, 1931, under the auspices of the social action department of the National Catholic Welfare Conference, the social justice commission of the Central Conference of American Rabbis, and the social service commission of the Federal Council of the Churches of Christ in America. The purpose of the conference was to focus the conscience of the Nation on the present situation, with a view to preventing its recurrence, and it was decided beforehand that the conference should pass no resolutions and make no recommendations.

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At the first meeting on Monday afternoon, Mr. Edwin S. Smith, of the A. Lincoln Filene firm, of Boston, pointed out that while business earnestly desires to prevent unemployment and to sustain buying power the individual employer can do little. Paying a dismissal wage and helping the discharged employee to get another job are desirable steps. Something can be done by planning ahead, so as to make changes involving dismissals in good times when the workers can be readily absorbed. The chief field for the efforts of private employers, however, is in the campaign against seasonal unemployment. Here they have accomplished a good deal by such devices as intensifying their sales and advertising efforts in the dull season, creating new uses for their products in order to stimulate out-of-season sales, manufacturing for stock ahead of orders, adding side lines to the staple products, and offering inducements to retailers to place their orders earlier so as to prolong the manufacturing season. While these plans are not universally applicable, it is probable that they will be developed and intensified as the importance of preventing unemployment becomes more generally appreciated.

Mr. Fred Hoehler, director of public welfare, Cincinnati, gave an outline of the plan for municipal efforts toward stabilizing employment which the city adopted in 1929. The plan involves a widely representative central committee, with subcommittees on continuous employment, temporary employment, the State and city employment exchange, cooperation of social agencies, budget and finance, State and National cooperation, public works, fact finding, publicity and education. [1] Mr. Hoehler urged that municipalities should do more in the way of using public works as stabilizing forces, pointing out the possibilities of such use when a city is organized against unemployment, and also stressed the importance of strengthening the State and municipal employment bureaus. Employers should make a point of securing their employees through these, and should give advance notice when they find that they are going to be obliged to discharge workers. The busy season of one industry often coincides with the slack season of another, and normally the bureaus can find a place for the workers if there is proper cooperation.

Leifur Magnusson, director of the Washington branch of the International Labor Office, spoke on the international aspects of the situation, pointing out that the present distress is world-wide, and that consequently it is not easy to place the responsibility for it on any one condition or set of conditions. The situation may demand, as the only way out, a clear recognition of the international effect of national conditions and attitudes and a closer cooperation on an international basis.

Causes of Present Unemployment Situation

TURNING to a discussion of the present situation, while the effects of both seasonal and technological unemployment were recognized, three main causes were advanced by different speakers: Too restricted bank credit, an uneconomic division of the national income between capital and labor, and a faulty organization, or, rather, lack of organization of the business and social order. The first theory was upheld by William Trufant Foster, of Cincinnati, who pointed out that since

[1] The plan was given in detail in the Labor Review, May, 1930, p. 31.

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we live in a monetary economy, the volume of bank credit determines the volume of business possible. In 1929 the volume of bank credit was reduced by several billion dollars, and inevitably business and employment slumped. At the present moment, business in the United States needs nothing but money spent by consumers. Consumers are eager to buy, but they can not do so until there is more money in circulation. The necessary money must go into circulation through bank credit, now potentially ample, or it will not go at all.

Uneconomic Division of Profits

SPEAKING on the relation of wages and hours to unemployment, John P. Frey, secretary-treasurer of the metal trades department, American Federation of Labor, maintained that the effect of modern machinery and improved methods of production has been to decrease the proportion of the national income going to labor, thereby diminishing the purchasing power of the general public and causing such crises as the present. This process has been especially rapid in recent years. Quoting from the Census of Manufactures, he showed that in 1927 wages in all manufacturing industries, exclusive of salaries, amounted to $10,848,802,532, and in 1929 to $11,421,631,054, an increase of $572,828,522. In 1927 the value of manufactured products was $62,718,347,289, and in 1929 it was $69,417,515,929, an increase of $6,699,168,640. In other words, while the purchasing power of the wage earners had increased by not far from $600,000,000, the value of manufactured products had increased by something over $6,500,000,000. Obviously, the increase in productive capacity far outran the increase in capacity for consumption. The gap between the two is no new thing, but it has widened rapidly since 1923, and especially since 1927.

Another evidence of the changing proportion in which the national income is divided is found in Federal figures which give the proportion wages form of the value added by manufacture. In 1849 the wage earner received in wages 23.3 per cent of the value of the finished product and 51.1 per cent of the value added to the raw material through manufacture; in 1929 he received 16.5 per cent of the value of the finished product and but 36.2 per cent of the value added by manufacture.

As the home market is the principal outlet for manufactured goods, the great increase in the value of products as compared with the increase in the volume of wages paid resulted in a collapse of the consumers' market, and this, more than any other cause, is responsible for the present industrial and commercial stagnation.

Shortening hours will not meet the needs of the situation. The increasing productivity of labor makes a reduction of hours possible and desirable, but such a reduction, by itself, would merely result in spreading work more widely without any increase in the general purchasing power. What is needed is a readjustment of wages, and until this has been made it is difficult to see how unemployment can be prevented. It is not only a question of what labor may be entitled to; it is largely a question of the volume of wages which must be paid unless industry and commerce are to suffer.

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Unemployment as a Result of Lack of Organization

SPEAKING on the topic "Are business cycles avoidable?" George Soule, of the New Republic, advanced the view that depressions are a natural result of the lack of organization of the business body, which, indeed, can hardly be spoken of as a body at all; it is rather an aggregation of separate cells or units, loosely held together, each acting in response to the stimulus of its own environment without common plan or purpose. Industry staggers along without plan and without conscious direction, and depressions are a natural accompaniment of its chaotic condition. If they are to be avoided, the business body must supply itself with a brain and act under its direction. As a means toward this end Mr. Soule suggested four steps:

First, we need an economic general council, composed of delegates from both management and labor groups in the important industries and occupations, with representatives of public administrative bodies, and experts in the various lines covered, whose function should be to give continuous consideration to economic policy and to make recommendations to both Government and industry.

Second, there should be an economic general staff, which should consist of a permanent body of independent professional experts. This should function as an agency for presenting information and proposals to the national economic council. It should correlate current statistical information and try to fill the gaps in existing statistics. It should follow the changes in our economic conditions, think out problems, foresee changes, formulate plans, and present proposals for action.

Third, there should be a national planning board concerned chiefly with planning national development on the basis of economic geography. This should carry out on a national scale the sort of thing done by the city and regional planners. Such a body would be of inestimable value in preparing the way for any large program of public works to relieve depression.

And, fourth, there should be a national board of investment, which should have oversight over the saving and investment of capital, both by private concerns and by government, much in the same way as the Federal reserve system is now supposed to regulate commercial banking.

Unemployment Reserves and Unemployment Insurance

OPENING the discussion on these topics, Dr. John R. Commons pointed out that since business is conducted for the sake of profits, if the profit incentive can be enlisted on the side of preventing unemployment, an important advance will have been made. This, he believes, can be done by means of the unemployment reserve plan, which differs essentially from the unemployment insurance system as exemplified in Great Britain. Under the latter an employer who maintains 52 weeks of employment pays into a common fund 52 premiums for each of his employees, and from this fund benefits may be paid to the employees of a possible competitor who gives only 26 weeks of employment and pays only 26 premiums. The employer who maintains continuous employment is penalized for the benefit of the employer who does not. Precisely the opposite situation should be sought.

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Taking the Grove bill, recently introduced in the Wisconsin Legislature, as typical of the unemployment reserve plan, Doctor Commons explained that according to its terms a reserve fund is created under State control to which each employer of six or more workers must contribute a specified percentage of his pay roll. Each employer's account is kept separately, and to it is added a pro rata share of any earnings of the fund. When he lays off employees, their unemployment benefits come from his account in this fund. If he can keep the calls upon it so moderate that the amount to his credit rises to the equivalent of $80 for each employee, he is exempt from further contributions until the amount sinks below this figure, when he must resume the payments. Any employer or group of employers may be exempted from contributions to this fund upon adopting a plan for unemployment benefits which will be at least as advantageous for the employee as the system embodied in the bill.

Under proper safeguards, benefits are to be paid to unemployed workers after a week's waiting period at the rate of $10 a week or 50 per cent of the weekly wages, whichever is the smaller sum, except that the benefit shall not be less than $5 a week. Benefits shall not be paid for more than 13 weeks in any period of 52 weeks. If an employer's account is insufficient to pay his unemployed workers the full benefit provided for in the act, the commission is to reduce the benefit period so as to deal equitably with the various claimants.

The special advantage of this plan is that it makes it directly to the employer's interest to maintain continuous employment, or, if he can not do that, to reduce the unemployment of his own force to the minimum. If he can make employment so continuous that his account reaches the required sum, he is released from contributions, and while the amount he thus saves may in itself be small, it may form a considerable fraction of his margin of profit, for the average business operates on a very small margin of profit, and a contribution of, say, 2 per cent of the pay roll may amount to 10, 20, or 30 per cent of the margin of profit, and the prospect of saving it may be a very considerable incentive to an employer to seek to stabilize his force.

Doctor Commons was followed by Mr. John E. Edgerton, president of the National Association of Manufacturers, who presented the case against unemployment insurance, attacking it as un-American, socialistic, impracticable, and demoralizing alike to the workers and the Nation, since it would tend to lessen the incentives to thrift, initiative, energy, and self-reliance. Also he pointed out that there can not be any such thing as real insurance against unemployment, since no sufficient body of data exists for calculating the actuarial risk and fixing the premiums.

Public Works Programs as Preventives of Unemployment

SENATOR Robert E. Wagner, first calling attention to the bill he has recently introduced providing for the establishment of a system of unemployment reserves and urging the importance of adopting some scheme of the kind, went on to speak of the desirability of planning public works in advance, so that when a depression begins work may be undertaken at once. This, however, should be only part of a much larger program; there should be cooperation between industries, employment exchanges, the adoption of measures of

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stabilization and of protection for those who suffer through its lack, in brief, a concerted and nation-wide effort to make employment sure for the worker. Even this would not wholly do away with unemployment; it will be necessary to strive to bring under control the world-wide forces which have in the past caused economic upheavals.

Mr. E. E. Hunt, of the President's Emergency Committee on Unemployment, spoke of the uses of public works as a means of stabilization in times of depression, but pointed out the inevitable difficulties and delays of getting such works under way. Long-range planning and budgeting of means are essential if a program of public works is to be really helpful. Mr. Darwin J. Messerole, president of the National Unemployment League, advocated two measures for preventing such wasteful functioning of industry as is seen in crises like the present—first, concerted action on the part of the great industries to increase employment and purchasing power by reducing hours and increasing wages to approximate the increase in productive power, and, second, wide expansion of Federal, State, and municipal public works in order to absorb the unemployed. There is urgent need to-day for such public works as roads, reforestation, reclamation of waste lands, improvement in canal and river transport, river and harbor improvements, elimination of grade crossings, and other activities which do not compete with private industry, and which would add to the production of commodities. Some of these, the elimination of grade crossings for instance, do not require any elaborate advance planning and could be undertaken with a minimum of delay.

The concluding meeting, held on Tuesday evening, laid special emphasis on the moral aspect of the situation. Dr. Harry F. Ward, discussing the profit motive, pointed out that the "Siamese twins" of overproduction and underconsumption spring inevitably from the way in which the national income is divided, and that until the basic inequality of this division is corrected there can be no prevention of unemployment. It is not merely a matter of injustice between individuals or classes, it is a fundamental maladjustment between the forces of production and consumption. Behind it lies the method of competitive profit seeking, the motive of hope of financial gain or fear of financial loss, and the principle of the right of the strong to rule. All these are ethically deficient according to the standards of the three great religions in whose name the conference was called. Yet modern industrialism has insisted on proclaiming and practicing them as the basis of economic efficiency; it now appears that they are the source of economic disaster. Therefore the basic challenge of religion to the conscience of this Nation is also a challenge to its intelligence. Without a change in moral habits and attitudes, no economic planning can permanently prevent unemployment.

Dr. John A. Ryan, discussing the demands of justice, held that it is the obligation of the community to furnish the means of food, clothing, shelter, and other necessaries of life to the unemployed, and when private sources prove inadequate to the need the Government should take up the task. A bond issue is desirable as a means of raising the money for putting into operation at once a program of public works and otherwise meeting the immediate situation. He approved of compulsory unemployment insurance, public employment agencies, higher wages, and shorter hours as methods of prevent-

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ing unemployment. In the meanwhile, need is urgent, and relief should be speedy and generous.

Rabbi Edward L. Israel, in closing, dwelt on the necessity for adopting, now, measures which may prevent such unemployment emergencies in the future, and warned against the easy forgetfulness with which, when prosperity returns, we ignore the whole subject of depressions. Permanent commissions should be set up at once, while public interest in the matter is keen. The primary demand is for employment, rather than for compensation for unemployment. Human values must be recognized, and the economic order must be made more flexible in order that these values may be given due weight.

Number of Workers Insured Against Unemployment in Foreign Countries

THE number of workers covered by unemployment insurance has grown rapidly in recent years through the enactment of compulsory insurance laws in many countries. Industrial and Labor Information, January 12, 1931, published by the International Labor Office, contains a tabular statement of the number of insured persons in the countries having compulsory or voluntary insurance systems. In 1919 the First International Labor Conference adopted a resolution favoring insurance against unemployment. At that time the number of workers insured was estimated to be from 4,500,000 to 5,000,000, about 3,700,000 of whom were in Great Britain, the only country then having compulsory insurance against unemployment. At the present time approximately 47,500,000 workers in the 17 countries listed in the following table are insured under either compulsory or voluntary systems.

NUMBER OF PERSONS INSURED UNDER COMPULSORY OR VOLUNTARY INSURANCE SYSTEMS OF SPECIFIED COUNTRIES

Country	Insured persons	Country	Insured persons
Compulsory insurance		*Voluntary insurance*	
Australia: Queensland	[1] 137,000	Belgium	628,000
Austria	[1] 1,300,000	Czechoslovakia	1,129,000
Bulgaria	287,000	Denmark	288,000
Germany	16,738,000	Finland	[3]
Great Britain and Northern Ireland	12,100,000	France	200,000
Irish Free State	284,000	Netherlands	388,000
Italy	[1] 2,600,000	Norway	43,000
Poland	1,033,000	Switzerland (14 Cantons)	[1] 165,000
Switzerland (9 Cantons)	[1] 150,000	Total	2,841,000
Union of Socialist Soviet Republics (Russia)	[2] 10,000,000		
Total	44,629,000		

[1] Estimate.
[2] Estimate. Since Oct. 9, 1930, the authorities have suspended all insurance benefits until further notice, owing to the situation of the labor market.
[3] No estimate available.

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Creation of California Unemployment Commission

JANUARY 23, 1931, a law was passed, and signed by Gov. James Rolph, jr., of California, creating a State unemployment commission. According to the bill as introduced in the State legislature, the commission is composed of five members appointed by the governor. The commission is authorized and directed to make surveys, studies, and investigations of all problems relating to the subject of unemployment. In addition such plans are to be formulated and recommendations made by the commission "as will enable the State to take the proper steps toward the solution of any such problems."

The act was declared to be an emergency measure and to take effect immediately. An appropriation of $50,000 was authorized by the law.

California Program for Counties or Municipalities for Combating Unemployment

THE State Unemployment Committee of California in cooperation with the Department of Industrial Relations has drawn up a program designed to aid counties and municipalities in organizing local machinery for combating unemployment.[1] Those responsible for this program believe that success in relieving the present situation depends in large part on the energy and efficiency of the various county and municipal committees. Careful selection of the people to serve on local committees is recommended, taking into consideration their affiliation with representative groups, such as governmental, industrial, social, civic, and philanthropic, and the amount of time that they may be able to devote to the work at hand. No definite statement is made regarding size of committee, as it is thought the size and character of the county or municipality and the seriousness of a given situation will be sufficient guides in determining personnel needs.

The functions of a county or municipal committee are outlined, as follows:

1. To see to it that families in immediate need are provided with food, clothing, shelter, and where necessary, medical attention.
2. To ascertain the extent of unemployment in the county or city and to find work for as many of the unemployed as possible.
3. To stimulate public works within the county or municipality.
4. To study all phases of the unemployment problem in the county or municipality.

Division of Committee Work

IT IS suggested that the best results can be obtained by dividing the work at hand among a number of subcommittees, each charged with a particular task and providing at the same time for the appointment of some capable person as administrative head and general supervisor of the work of the various subcommittees. While it is stated that the number of subcommittees may vary from place to place, a set-up providing for six subcommittees is outlined which is said to have proved

[1] California. State Unemployment Committee, in cooperation with Department of Industrial Relations. A county or municipal program for combating unemployment in California. San Francisco, January, 1931.

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effective in certain localities in California and elsewhere. These subcommittees are: (1) Statistics and information; (2) coordination and relief; (3) employment; (4) public works; (5) legal aid; and (6) publicity.

Subcommittee on statistics and information.—Important among the subcommittees listed is that one charged with collection of statistics and information. For unless accurate information can be made available as to the extent of unemployment and the amount of relief needed the other subcommittees will be handicapped by not knowing the nature of the problem with which they are to deal. At least one person with knowledge and experience in collecting and analyzing statistics should be included in the personnel of this committee and should act as chairman or secretary.

Registration of the unemployed is advocated. This may be accomplished either by asking the unemployed to register, at points chosen for convenient location, or by making a house-to-house canvass. Whatever the method of registration, wide publicity is essential to reach a large percentage of the unemployed and the attempt should be made to secure complete returns. A sample questionnaire for use in registering the unemployed provides for securing information with regard to residence, age, marital status, dependents, race, trade or occupation, experience, wages, work desired, and cause and length of unemployment.

Subcommittee on coordination and relief.—No need is seen for a county committee to await completion of registration before undertaking relief of those in need. Such work should be started when the need arises and extended as rapidly as information regarding needs is obtained. Where relief agencies, both public and private, are already in operation, the committee should avoid duplication of effort and so coordinate the work of these agencies that the prospective relief program may be carried out by making use of the existing agencies. For that part of relief for which the committee itself is responsible, the subcommittee should provide the necessary materials, such as food, clothing, and medical supplies, and should take responsibility for raising the necessary funds.

Subcommittee on employment.—As other measures to alleviate suffering are developed, a subcommittee on employment should be working to find as many jobs as possible for the unemployed. It is for this group to make a drive to create employment. Four major methods for creating work are especially recommended: (1) Urging individuals, householders, and business and industrial firms to come forward with offers of odd jobs; (2) inducing employers to stagger employment within their establishments by dividing a week's normal employment among two or more persons instead of giving it to one; (3) designating a "clean-up week"; and (4) making a drive for a "buy now" campaign.

Subcommittee on public works.—A subcommittee on public works, composed of the county or city engineer, members of boards of supervisors, and influential citizens, can do much to stimulate public building, which has come to be recognized as one of the chief sources of relief in times of unemployment. The duties of a subcommittee on public works should include making a survey of work contemplated and doing everything possible to get such work under way.

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In addition to hastening public works the subcommittee should make an analysis of future needs and work out a long-time program of public works.

Subcommittee on legal aid.—A subcommittee on legal aid is desirable in looking after the interests of unemployed persons and their families. The work of such a subcommittee would consist of representing families when they are threatened with eviction because of failure to pay rent, or with loss of furniture, cars, radios, and other property bought on the installment plan.

In selecting a subcommittee on legal aid, counties or municipalities are urged to include a good attorney who is willing to give a considerable amount of time to the work.

Subcommittee on publicity.—The importance of a subcommittee on publicity is especially stressed, as this group has it within its power to gain the support of the general public. Wide publicity is urged through newspaper articles and editorials, public addresses, radio broadcasts, motion-picture slides, and other advertising mediums that may be available.

This subcommittee should be charged with keeping in touch with the activities and needs of the other five subcommittees and giving the work of each the needed publicity. To accomplish this end with greatest effectiveness it is suggested that the subcommittee have among its membership trained newspaper men and advertising experts.

Report of Pennsylvania Committee on Unemployment

THE Committee on Unemployment appointed by Governor-Elect Pinchot[1] of Pennsylvania has issued a report in three parts covering (1) the problem of unemployment in general, (2) proposed legislation, and (3) reports of certain subcommittees. Unemployment, in the committee's view, involves two main sets of problems: How to reduce its scope to the greatest possible extent; and how to care for those who are unemployed, in such a way that suffering may be minimized without impairing the self-respect of those aided. The committee points out specific ways in which the State of Pennsylvania can help to meet each of these two main problems. The causes of unemployment are classified as major and minor, the two major causes being seasonal and cyclical fluctuations in demand and production, and the two minor causes, faulty organization of the labor market and technological and market changes. Part I of the committee's report is here summarized.

Seasonal Fluctuations and Unemployment

THE problem of meeting seasonal fluctuations is regarded by the committee as one that business must solve, but it is believed that the Department of Labor and Industry might aid by appointing a competent staff to consult with business men on their particular problems.

Seasonal fluctuations, springing as they do from the irregular buying habits of the public, will doubtless continue for a long time. However, under good management seasonal unemployment has been

[1] The report of the committee was submitted on Jan. 17, 1931, after Governor Pinchot had taken office.

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appreciably reduced in many industries. This has been accomplished by (1) developing demand in off-seasons by price reductions or by advertising; (2) drawing up a sales budget for the coming year and apportioning the yearly quota to be produced into 12 equal monthly fractions or 52 weekly fractions; (3) developing side lines and fillers which can be sold during off-seasons by making use of practically the same equipment, factory, and sales force; and (4) extending the use of the flexible work week in such a way that the length of the actual working week may vary within limits in busy and slack seasons but providing, at the same time, a given number of hours for each worker within the year.

To use such methods is believed to be beneficial to both the worker and employer. In discussing the advantages to the employer the committee suggests that there is a gain in (1) having a steady force, thus doing away with the necessity of hiring and training large numbers of new men to meet seasonal peaks; (2) making it possible to pay lower hourly wage rates to the workers while at the same time giving these workers a higher yearly return because of the steadiness of employment; (3) reducing the tendency of workers to slow down on a given job in the hope of prolonging employment; and (4) reducing the amount of fixed capital necessary to turn out a given quantity of goods.

As regards the increase in costs resulting from the seasonal stabilization of business, the committee states that the larger storage charges and interest payments necessary to hold goods until the busy season have been offset by the gains. This has been found true by several hundred firms which have used such methods in producing standardized goods. In the production of goods affected by style changes, however, it is almost impossible to employ such methods.

Additional methods of stabilization that have been indorsed for meeting the present emergency are the fostering of plant extensions and betterment and the creation of as much employment as possible by shortening shifts of work and eliminating overtime.

Cyclical Fluctuation and Unemployment

To MEET cyclical fluctuations, the second great cause of unemployment, the committee believes that it is necessary for the nations of the world to cooperate in matters of money, credit, discount rates, etc. The committee believes that in this way the general price level could be stabilized and profit margins much more generally maintained, a condition which it is thought would be effective in lessening the severity of business depression and would thus alleviate unemployment. While the State of Pennsylvania is not in a position to bring about international action toward this end, the committee believes the State should urge upon the Federal Government some action toward this end.

A Planned Program of Public Works

REGARDING the stimulation of public works as the chief course open to governmental agencies in coping with business depressions, a planned program is presented for Pennsylvania. In this connection the subcommittee on public works has gathered data from local governments as to the amount of building they plan to initiate.

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It is recommended that the State make preparation for a building program involving the expenditure of approximately $10,000,000 and that the appropriation of this sum should not be delayed until the biennial budget is passed in the spring; that the legislature authorize the transfer of $10,000,000 from the general fund to the highway fund at once; and that contractors and subcontractors be required, with a penalty for failure, to pay the "going" rate of wages on public construction and employ residents of Pennsylvania.

The committee also favors amendment to the constitution of the State which would authorize a board, composed of the Governor, the secretary of internal affairs, and the State treasurer, to declare the existence of an unemployment emergency when such a condition is felt to exist. The local authorities would then be free to increase their bonding capacity without authorization of the voters from 2 to 2½ per cent of the assessed valuation and with the vote of the people from 7 to 8 per cent,[2] the money thus raised to be spent for purposes approved by a long-range planning board for public works. Other suggested legislation provides that the State be allowed to borrow $100,000,000 in addition to the sum now allowed for highways, this provision to be so guarded that such emergency bonds should not exceed the amount of $100,000,000 at any one time and should not be issued for more than 20 years.

It is also recommended that a long-range planning board for public works be set up, with a competent executive officer in charge, which would prepare a 6-year plan of projected public construction, the plan to be revised every two years and projected six years into the future. The plan should cover specific pieces of work to be undertaken, time schedule to be followed, and should hold a considerable proportion of the work to be launched during periods of depression.

Better Organization of the Labor Market

ATTENTION is called to the defective organization of the labor market. For the purposes of improvement it is suggested that (1) the system of public employment offices be improved and extended, and (2) the private employment offices be more strictly regulated. To establish the public offices on a firm foundation would make for a greatly improved general situation by (1) lessening the time lost by workers between jobs; (2) making it possible for employers to call upon the system for aid in meeting peak loads; (3) furnishing the oncoming generation with more correct information about vocational opportunities; (4) furnishing special services for the young, the old, and women, when the public offices are well established; and (5) helping to stimulate private offices to give good service by pressure of competition.

The main avenues open for improving public employment offices in Pennsylvania are listed and discussed. The points covered provide for purging the service of all those unfitted for their work, creating committees to cooperate with the offices in the respective localities where offices are maintained, housing the offices in respectable and convenient quarters, soliciting employers for jobs, promoting workers in the offices on the basis of efficiency, improving statistical records,

[2] Where, as in the case of Philadelphia, the limit is 10 per cent this can be raised to 11 per cent.

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holding periodic conferences of staff members, establishing an adequate system of clearance between offices of the State, studying the situation with a view to increasing the number of offices, interesting foundations and individuals in establishing experimental employment offices, and increasing State appropriations for this type of work.

Better regulation of private employment offices in Pennsylvania is regarded as dependent upon closer State supervision. It is suggested that private offices should be licensed; that the definition of private agencies be enlarged so as to cover those soliciting jobs by mail; that the license fee be raised and all licenses expire on a given date; that the power of revocation of license be less subject to delay and the reason for revocation be made more explicit; that the imposition of a service or registration fee when no service is rendered be prohibited; and that monthly reports be required by the State from each private office.

Rôle of Education

THE committee, realizing that education can not immediately reduce unemployment, nevertheless feels that it can contribute toward making the labor supply more flexible. It is therefore urged by the committee, on the basis of a report by its subcommittee on education and training, that certain changes be made in the general educational set-up. The committee recommends: (1) A stricter regulation of the conditions under which employment certificates are issued to children between 14 and 16 years of age; (2) greater flexibility in high school and vocational training, making it possible for students to prepare for a greater variety of occupations; (3) development of more foreman-training classes and appointment of at least six district directors of industrial education; (4) extension of continuation schools and vocational education facilities; (5) establishment of special schools in mining districts where a surplus of labor exists to prepare miners and juveniles for greater efficiency in mining and for other industries; (6) establishment of extension classes for the unemployed, to give them general as well as vocational education; (7) general development of adult education for both the employed and unemployed; (8) distribution of a State equalization fund of about $2,000,000, more than half of which is to aid rural schools, the remainder to be used for extension classes in mining and industrial centers and for distressed district schools; (9) limitation of students graduated from teacher-training courses so that there may be no overcrowding in certain branches of the teaching profession; and (10) further investigation of educational needs.

Organization of Relief

THE committee states that need for local committees to coordinate the giving of relief was immediately recognized when the present unemployment emergency arose and that such bodies have now been set up in virtually every county in the State. The raising of more funds for relief and distribution of these funds through local charitable institutions are now the most important tasks in this field. The steps suggested by the subcommittee on relief include: (1) Listing the unemployed and ascertaining which persons are in need of relief; (2) aiding in raising funds; (3) granting relief through accredited

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agencies, but with the provision that those aided render service in return for aid; and (4) cooperating with local agencies to develop a program of home visits so that the medical, vocational, and other needs of families may be ascertained.

Reserves and Insurance Against Unemployment

On the subject of providing reserves for workers in periods of depression, it is brought out that a very considerable amount of unemployment can be expected to continue in the future and that reserves must be set up in good times to provide for the needs of workers deprived of work, just as reserves are set up in industrial establishments to carry costs in bad times. Beneficial as are the unemployment insurance systems established by individual business organizations, it is thought by a majority of the committee that the problem calls for the stimulus and encouragement of legislation so that like benefits may be had by all workers and with reasonable promptness. The report goes on to state that reserve funds against unemployment should be made mandatory, in the same fashion that workmen's compensation was made mandatory.

Anticipating the objections that may be brought against any form of public unemployment insurance, the committee brings forward evidence designed to overrule such objections. For example, to the suggestion that payment of benefits to the unemployed will encourage idleness, the committee answers that this danger may be avoided by making payment only to those workers who have been laid off because of lack of work and not to those discharged or who voluntarily leave their jobs, by requiring a 2-week waiting period before paying benefit, by discontinuing payment of benefit to those who refuse to take work, by keeping the amount of benefit well below what the person could earn if employed, and by paying benefit for only a limited number of weeks in a given year according to the amount the worker has paid in insurance premiums.

Unemployment Insurance in Belgium [1]

A ROYAL decree issued in Belgium, October 25, 1930, amends the several previous decrees relating to insurance against unemployment, the first of which was issued December 30, 1920. Under the voluntary insurance system in force in Belgium, the local and regional unemployment insurance funds, which are under the supervision of the Minister of Industry, Labor, and Social Welfare, receive a subsidy from the State, this subsidy being paid by the ministry to the National Crisis Fund, which pays it out to the local funds as it is needed. The National Crisis Fund is maintained by contributions of the State and by subscriptions and other voluntary contributions.

By the terms of the present decree the amount of the State subsidy paid to the national fund is increased from one-half to two-thirds of the fees paid by the members of the various funds.

[1] Data are from Belgium, Ministère de l'Industrie, du Travail et de la Prévoyance Sociale, Revue du Travail, Brussels, November, 1930, pp. 2016–2025.

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The two questions which have been the subject of dispute in the unemployment insurance system have been the waiting period required before benefits are paid and pay for holidays. The waiting period has accordingly been reduced from one day a week to one day a month, the month starting from the first Monday and ending on the last Saturday, but the provisions relating to holidays have been maintained, no unemployment payments being made for Sundays, legal holidays, or certain local holidays.

The total of the principal allowances remains unchanged. It may not exceed 9 francs (25 cents) per day for unemployed persons who are heads of families. The same rate of benefit is paid to the unmarried, widowed, or divorced persons who have no children and are more than 25 years of age, while for those of these classes who are less than 25 years of age and for married persons who are not heads of families the benefit is 7 francs (19 cents). For heads of families with children an allowance of 3.50 francs (9.7 cents) is allowed for the wife and 3 francs (8.3 cents) for each child under 14 years of age, and for children between the ages of 14 and 16 who are in school or who are physically incapable of working. Allowances for the full-time unemployed are paid for 4, 5, and 6 days of unemployment in the week, but for 3 days two payments are made, for 2 days one payment, and for 1 day of unemployment there is no benefit.

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SOCIAL INSURANCE AND BENEFIT PLANS

Insurance and Pension Plan of Standard Oil Co. of New York [1]

AN INSURANCE and pension system covering approximately 45,000 employees of the Standard Oil Co. of New York and its subsidiaries was announced recently by the company. The plan, which is retroactive to January 1, 1931, provides for a pension allowance and for death and disability benefits in addition to the pension.

The insurance is in the form of a group policy, each employee receiving a certificate from the Metropolitan Life Insurance Co., which is to administer the plan. The company will pay three-fourths of the premium and the employees one-fourth. Participation in the plan is optional on the part of employees after six months of continuous service with the company.

The normal retirement age is 65 for men and 55 for women in the domestic service, and in the foreign service of the company 55 and 50 years, respectively. Optional or discretionary retirement is allowed for men upon the anniversary of participation in the plan nearest the 55th birthday after 30 years of continuous service and for 20 years' service at the 60th birthday, while women and foreign-service employees may retire at the completion of 20 years' service on the anniversary date nearest the 50th birthday.

The amount of the annuities is equal to 2 per cent of the actual pay in the year preceding retirement, multiplied by the number of years of service. The amount paid for foreign service is one and one-half times that of domestic service, but in no case may an annuity exceed 75 per cent of the wages or salary prior to retirement. The amount of the death benefits payable to beneficiaries of active subscribing employees or annuitants will be equal to one year's salary or pay. In case of total and permanent disability before the age of 60 the amount of the death benefit is paid in monthly installments over a period ranging from 32 to 60 months according to the amount of benefit.

If an employee leaves the service of the company before the completion of 25 years of service he is entitled to a cash payment equal to five-sixths of his contributions, or he may continue his contributions to the insurance company and at retirement age receive the annuity based upon his contributions, or he may discontinue further payments and receive a proportionate pension when he reaches retirement age. After completion of 25 years of service he has the same options, and in addition he retains the right to receive the annuity accruing to him from the company's contributions.

As is usual in such plans, the company reserves the right to discontinue the plan at some future time, but any change or discontinuance does not affect the retirement annuities purchased by the employees, and the company's contributions which were made prior to such change or discontinuance. Employees who served in the World War may claim continuous service, provided they reentered the employ of the company within six months after their discharge from any branch of the service.

[1] Standard Oil Co. of New York. Revised plan for annuities and insurance, Jan. 1, 1931.

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Provision is made for employees now eligible for retirement who were insured under the insurance system previously in force, so that increases in salaries during the 5-year period prior to retirement will be considered in fixing the amount of the pension.

Cost of Social Services in Great Britain

THE British Government has recently issued a report showing the amounts expended on social services during a series of years, and the figures for the years ending March 31, 1929, and March 31, 1930, are given in the Ministry of Labor Gazette for January, 1931. Only an estimate of the amount spent in 1930 could be given, and for some services the figures were too incomplete for publication. The terms used are thus defined:

> The term "expenditure" as used in the return is restricted to expenditure from (1) local rates [taxes], (2) parliamentary votes and grants, and (3) other receipts (not being receipts from loans for capital purposes) accounted for by, or to, Government departments and local authorities. The "other receipts" include, for example, in the case of education, revenue from endowments, voluntary contributions, etc.; in the case of health insurance, unemployment insurance, and widows', orphans', and old-age contributory pensions, the contributions of employers and employed, which provide the major part of the expenditure on those services; in the case of housing, rents; and so forth.

The following table gives, in United States currency, the total expenditure under the specified services during the year ending March 31, 1929 (or the latest year available), and an estimate for the year ending March 31, 1930, where that was available:

EXPENDITURES FOR PUBLIC SOCIAL SERVICES IN ENGLAND AND WALES AND IN SCOTLAND, YEARS ENDING MARCH 31, 1929 AND 1930

[Conversions into United States currency on basis of £=$4.8665]

Acts under which expenditure was made	England and Wales		Scotland	
	1928–29	1929–30	1928–29	1929–30
Unemployment insurance acts	$231,095,486	$227,358,014	$30,955,807	$31,895,041
National health insurance acts	175,033,406	171,300,800	19,115,612	18,492,700
Widows', orphans', and old-age contributory pensions acts	103,267,130	114,791,002	12,686,966	13,918,190
Old-age pensions acts	150,632,775	154,637,904	19,276,207	19,636,328
War pensions acts and Ministry of Pensions acts	235,898,721	224,910,164	26,687,886	25,203,604
Education acts	408,513,476	422,889,117	63,673,286	65,999,473
Acts relating to reformatory and industrial schools	2,773,905	2,720,374	817,572	734,842
Public health acts relating to—				
Hospitals and treatment of disease	34,708,878		6,511,377	6,583,375
Maternity and child welfare	10,706,300	11,577,404	1,450,217	1,435,618
Housing of the working classes	133,741,153		20,244,640	22,707,089
Acts relating to relief of the poor	193,423,909	191,384,846	20,390,635	20,882,152
Unemployed workmen act	189,794		43,799	19,466
Lunacy acts	11,509,273		6,156,123	6,131,790
Mental deficiency act	6,574,642			
Total	1,698,067,845		228,010,125	

It will be seen that for both years the largest single item is the amount spent for education, and that next in importance are the expenditures for unemployment insurance and war pensions, these two items having changed places in 1930 as compared with 1929. Fourth in magnitude are the expenditures for the relief of the poor, which showed a slight decrease in the later year.

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Prolongation of English Insurance Act [1]

UNDER the English system of contributory insurance, as at first planned, the benefits of the health insurance act were conditional upon the regular payment of certain contributions by the worker; later, the old-age pensions scheme and the plan for widows' pensions and orphans' allowances were linked with health insurance, and a failure to keep up the combined contributions meant that the right to sickness benefit would lapse, that the delinquent would lose his claim to an old-age pension, and that in case of his death while still out of benefit, his dependents would lose the protection of the widows' pension act. In 1921, when unemployment assumed threatening proportions, the Government made some relaxations in the rules, to meet the case of those who, being wholly unemployed, could not make the necessary contributions, and such relaxations were continued from year to year until the act of 1928 was passed, when the Government tried to put a definite limit to such a condition of affairs.

The position after the passage of that act is thus summarized:

> Under section 3 (1) of the national health insurance act, 1924, as amended by the national health insurance act, 1928, every insured person who ceases to be employed is given a period of free insurance of between 18 months and two years (21 months on the average). Under section 3 (3) such persons, subject to certain conditions respecting length of membership, are allowed a further period of free insurance of one year at reduced benefits (one-half sickness and disablement benefit), providing they can prove they are available for but unable to obtain employment.

As the end of 1930 drew near it became apparent that a number of those who had been protected under the above provisions were due to pass out of benefit early in 1931, and others at the middle of the year, with a consequent loss of even the reduced benefit provided under the extension clauses. To prevent this, a money resolution was introduced in Parliament on December 16, 1930, authorizing the payment by the Government to the insurance fund of 36 contributions in respect of every person who, under designated provisions of the health insurance act, would otherwise pass out of insurance. As soon as this had been adopted, the Government brought in a bill providing that the persons in whose behalf these contributions were paid should retain their rights to the benefits of the funds as if they had themselves paid the contributions. In discussing the bill, the minister of health said that while there were no exact data as to how many would be affected by this legislation, the cost could not be very large:

> Remember that you are dealing only with people who have not had a single day's work for 2½ years or more and that therefore the number is limited. We have allowed pretty wide limits, somewhere between 60,000 and 100,000. * * * If we pay their contributions as has been suggested, the cost will be between £80,000 and £130,000, say, roughly, £100,000. In addition to that we shall continue to pay the State contributions for these persons, as would be paid by the State if the persons were paying their own contributions. The cost of that, we imagine, will be between £14,000 and £24,000, on the highest figures.

The bill was passed on December 17, and on the 19th, having received the royal assent, became law.

[1] The data in this article are from Great Britain, Parliamentary Debates, Dec. 17, 1930, c. 1371, and Man and Metal, January, 1931, p. 61.

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INDUSTRIAL AND LABOR CONDITIONS

Mechanical Harvester Perfected for Sugar-Cane Cutting

ACCORDING to a press statement, sugar-cane in Florida is being harvested by machinery on a commercial basis for the first time in history.[1] Fifteen machines are being placed in service to cut a crop valued at $4,000,000 and covering 20,000 acres of land. It is said that each of these 15 machines will cut as much cane in one day as 200 cane cutters could cut by the old method, that is, by using machetes.

The cane-cutting machine, which it is predicted will revolutionize the cane-sugar industry, was invented by Ralph S. Falkiner of Australia. Under an arrangement with the inventor the first American-built machine of this type was completed last summer and after a successful try-out 14 additional machines were ordered, all of which are now in use for harvesting the crop of the Southern Sugar Co. in Florida.

The big machines resemble no agricultural implement ever before invented. Mounted on endless treads like those of World War tanks, they plunge irresistibly through the fields of tall cane, cutting the juicy stalks close to the ground, ripping off the leaves and useless portions and then pouring the cleaned cane in an endless stream into accompanying tractor-drawn cane wagons.

Taking Over of Factories by Japanese Workers

IN THE present economic depression in Japan, factory workers in increasing numbers are taking over plants which have been closed because of the nonpayment of wages, the Home Ministry's Bureau of Social Affairs reports.[2] In such cases, the workers, to keep themselves employed, make a contract with the owners to carry on the enterprise and pay the rent. Their control of the factory is for the most part limited to industries with comparatively simple procedure. A factory management commission is organized by the workers and is placed in control. This body submits reports to the workers and distributes the profits among them. In general, the results have been good. Nearly 30 factories have thus been taken over, located in Tokyo, Kanagawa, Saitama, Aichi, Osaka, and Hyogo districts.

In the Keihin district the workers control several sawmills, and recently similar arrangements have been made in factories manufacturing cast iron at Kawaguchi in Saitama district and in porcelain establishments in Aichi district. Other enterprises taken over include printing, iron, glass making, and plated-ware factories.

At Kawaguchi in Saitama Prefecture, where factories have many debts, the joint control situation is unsatisfactory but in sawmilling, printing, plated ware, and other industries more efficiency and profit have resulted.

For instance, the Yoshino sawmill at Tsurumi in Yokohama has been placed under workmen's control. These workmen number 35. The average per capita production per day has increased to nine koku from seven since the enforcement of the control. Profit promises to gain. Total monthly business expenses used to reach ¥1,200 or so when the factory was managed by the owner but now the expenses have been reduced to ¥300 without the dismissal of any workmen.

According to the article under review, the best results are obtained from joint factory control when such control is applied to small establishments employing fewer than 50 workers.

[1] The Pittsburgh Press, Jan. 26, 1931, p. 27. [2] Trans-Pacific, Tokyo, Oct. 2, 1930, p. 19.

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WOMEN IN INDUSTRY

Women in Florida Industries

IN THE fall of 1928 the United States Women's Bureau, at the invitation of the governor of Florida and the Florida League of Women Voters, undertook a study of women industrially employed in the State, the results of which have recently been issued as Bulletin No. 80. The study covered 163 establishments in 18 cities and towns, employing 5,956 white and 1,888 colored women, whose industrial distribution was as follows:

INDUSTRIAL DISTRIBUTION OF WHITE AND COLORED WOMEN STUDIED IN FLORIDA

Industry	White women		Colored women	
	Number	Per cent	Number	Per cent
Manufacturing:				
Cigars and tobacco	2,680	45.0	155	8.2
Other manufacturing	463	7.8	554	29.3
General mercantile	1,104	18.5	----	----
5-and-10-cent stores	516	8.7	----	----
Laundries	247	4.1	713	37.8
Hotels and restaurants	946	15.9	466	24.7
Total	5,956	100.0	1,888	100.0

A large proportion of the women of both races, it will be noticed, were employed either in the manufacture of cigars and tobacco or in laundries, hotels, and restaurants, 65 per cent of the white and 70.7 per cent of the colored women being found in these pursuits. A striking feature of all these occupations is their seasonality, the laundries, hotels, and restaurants depending largely on the tourist trade, and the tobacco work being inherently seasonal. This affects both hours and earnings.

The age distribution of the women studied is shown in the following table:

AGE DISTRIBUTION OF WOMEN IN FLORIDA INDUSTRIES

Age group	White		Colored	
	Number	Per cent	Number	Per cent
16 and under 18 years	242	7.3	66	5.9
18 and under 20 years	575	17.3	130	11.6
20 and under 25 years	847	25.5	300	26.8
25 and under 30 years	475	14.3	231	20.6
30 and under 40 years	726	21.8	265	23.7
40 and under 50 years	346	10.4	108	9.6
50 and under 60 years	94	2.8	16	1.4
60 years and over	20	.6	4	.4
Total	3,325	100.0	1,120	100.0

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The popular belief that most working women are young and in industry for only a short period is not supported by the findings of this investigation. It is true that almost one in four of the white women studied in Florida were under 20 years of age, but more than one in five were between 30 and 40, and about one in seven were 40 or more. * * *

More than 70 per cent of the white girls under 20 were in cigar manufacturing and 5-and-10-cent stores, and more than 60 per cent of the white women of 50 and over were in cigar manufacturing and general mercantile. * * *

The age distribution of the Negro women was only slightly different from that of the white women, though smaller proportions were under 20 and as much as 40, and a much larger proportion gave their ages as 25 and under 30. In hotels and restaurants, the predominant age group of Negro women was 30 and under 40 years, with more than 30 per cent of those reported. A much smaller proportion than among the white women were girls under 20. In laundries, women of 20 and under 25 years comprised the largest group—27 per cent of the total—but considerable numbers were in the two groups that together comprised 25 and under 40 years.

As to marital status, the 3,290 white and 1,107 colored women for whom this fact was ascertained, showed the following distribution:

MARITAL STATUS OF FLORIDA WORKING WOMEN

Marital status	White women	Negro women
	Per cent	*Per cent*
Single	41.1	25.8
Married	36.8	41.1
Widowed, separated, or divorced	22.1	33.1

Very nearly three-fifths (58.9 per cent) of the white women were or had been married, a larger proportion than was found in any one of 16 other States in which the Women's Bureau has made studies of this kind. The proportion among the colored women was larger (74.2 per cent).

Hours and Earnings

FLORIDA is one of five States that have no laws limiting the number of hours a woman may work, a situation which is explained as probably due to the fact that until recently it was almost entirely a tourist and agricultural State, the tourist season lasting for only three or four months each year. As there was no law requiring a record of hours worked, such records were kept in only a few establishments, and in general only the number of days on which work was done was obtainable. The scheduled hours were long; only 16.3 per cent of the white and none of the colored women had a day of 8 hours or less, while 15.3 per cent of the white and 69.1 per cent of the colored women had a scheduled day of 10 hours or more. This difference is accounted for in part, but only in part, by the fact that none of the Negro women were employed in the stores, where hours were shortest, and that the proportion engaged in manufacturing was smaller than among the white women. Even when the two races were employed in the same industries, however, the colored women had the longer day.

A large majority of the Negro women (82.9 per cent) were found in laundries and in the manufacture of certain food products in which the daily schedule was long for the women of both races; nevertheless, a larger proportion of Negro than of white women in these two industries had a day as long as 10 hours. In laundries the day was a long one for more Negro women than white, 75.3 per cent of the former, compared to 61.1 per cent of the latter, having a schedule of at

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least 10 hours. In the manufacture of certain food products 10 hours was the longest schedule reported. The difference between the two races was even greater here than in laundries, a day of 10 hours being reported for all the Negro women in the group, though less than 18 per cent of the white women had such a schedule.

The above figures do not include the hours of those employed in hotels and restaurants, these being tabulated separately. It will be remembered that 15.9 per cent of the white and 24.7 per cent of the colored women were employed in these establishments, so that the number affected is considerable. There was much variation in the daily hours, but the weekly hours were frequently long.

Of 1,371 women, the largest group (38.2 per cent) had a schedule of 48 hours or less; a long week of 60 hours and over was reported for nearly one-fifth of the women, and more than two-thirds of the kitchen workers had a weekly schedule of such length. A 7-day week was the schedule for more than nine-tenths of the women.

The amount of a week's earnings was learned for 4,425 white and 1,266 colored women, employed elsewhere than in hotels and restaurants. For the white women the median was $15, the range of medians being from $10.05 in the 5-and-10-cent stores to $18.10 in general mercantile stores. For the colored women the median for all industries was $6.65, the range being from $3.60 in "other food establishments" to $7.85 in laundries.

In the hotels and restaurants there was so much variation as to tips and other perquisites that only wage rates were considered. For white women the median rates were, for counter girls, $5.75; for maids, $7.95; for kitchen workers, $15.90; for laundry workers, $11.50; and for all occupations combined, $7.05. For Negro women the median rates were, for maids, $8; for kitchen workers, $10.65; for laundry workers, $8.30; for elevator girls, $9.75; and for all occupations combined, $8.80. The higher general median for the colored than for the white women is attributed partly to the fact that proportionately far more of the colored than of the white were employed as kitchen workers, whose wage is usually high, that a large number of the white women and none of the colored were employed as waitresses and counter girls, whose wage is very low, and that comparatively few of the colored women, as compared with the white, received additions in the form of lodging and meals, and that this usually affects the wage rate.

Working Conditions

An investigation of the establishments covered showed that working conditions were fairly satisfactory in the majority of cases, though, naturally, there was much variation in regard to different items. In regard to hazard and strain the showing was good.

In all industries, laundries included, there were but 25 cases of conditions that might constitute a hazard. Wet floors comprised two-fifths of these, and there were a few cases of poorly guarded elevators and of stairs in bad repair. In the shrimp-canning industry shuckers complained that sometimes they were poisoned slightly by pinching off the heads of the shrimps.

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HEALTH AND INDUSTRIAL HYGIENE

Health Conditions Among American and Canadian Industrial Populations in 1930[1]

THE mortality record for the many million industrial policyholders of the Metropolitan Life Insurance Co. for 1930 shows that the people of the United States and Canada enjoyed better health last year than ever before. The death rate of insured persons one year old and over was only 8.3 per thousand, or 6.6 per cent less than in 1929 and 1.1 per cent less than in 1927, the year in which the previous minimum death rate was established. Practically all diseases, with only a few minor exceptions, showed an appreciable decline during the year, and for a considerable number of diseases a new minimum for all time was registered. In all but two months a lower death rate was shown than for the corresponding month of the preceding year and in six, namely, January, March, May, June, November, and December, a new minimum was recorded.

The low death rate for the year 1930 was all the more remarkable, the report states, considering the unfavorable business conditions which prevailed, since unemployment is not conducive to low mortality rates. The fact that the depression followed closely upon a period of employment at high wages, it is thought, may account in a measure for the delayed effect upon the public health, as it was possible for many families to avoid distress by having recourse to their savings. Well-organized relief work has also resulted in retarding the effects of unemployment upon the health of families, and the favorable weather conditions of the year, together with the lack of serious epidemics, were also factors in the good showing for 1930.

The extent of the improvement is shown by the fact that if the 1911 death rate of 12.5 per 1,000 had prevailed in 1930, 227,835 of the policyholders of the company would have died during the year instead of only 151,510. The saving in lives, therefore, amounted to 76,325. Reduction in the deaths from tuberculosis accounted for more than one-third of this saving, decline in deaths from pneumonia for one-eighth, and the four principal diseases of childhood, measles, scarlet fever, whooping cough, and diphtheria, for one-ninth. In addition, there were 3,708 fewer deaths from typhoid fever than would have occurred if the 1911 death rate for that disease had prevailed, and 3,642 and 2,759 fewer deaths from diarrheal conditions and accidents, respectively. Three-fourths of the saving in lives, therefore, is due to the reduction in the death rate from preventable diseases, which have been the object of the most intensive health work by the different public and private agencies.

The reduction in the tuberculosis death rate, which was the most outstanding improvement in the year, amounted to 7.3 per cent over that for the previous year and was 64.0 per cent below that for 1911.

[1] Metropolitan Life Insurance Co. Statistical Bulletin, January, 1931.

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The improvement was most marked in cases of tuberculosis of the respiratory system, which causes almost nine-tenths of the deaths due to all forms of tuberculous disease. This improvement was shown in all parts of the country, in city and rural districts, among both white and colored people, and probably, it is stated, in every occupation and industry, but the greatest improvement was found among the wage-earning population of the cities where the situation has always been the most serious. The improvement in economic and social conditions resulting from the decrease in tuberculosis deaths is shown by the fact that the highest mortality rate has shifted within two decades from age 39 in 1911 to nearly 54 years in 1929, or an age when the children of the breadwinner are usually capable of self-support.

There was no serious outbreak of influenza during 1930, and the death rate for this disease, which was 13.1 per 100,000, was lower than for any year, with a single exception, since the widespread epidemic of 1918–19. The combined improvement in the rates for influenza and pneumonia was a very important factor in the reduction in the general death rate of 1930.

Although there was a rise of four-tenths of 1 per cent in the rate for cancer, in general the rate of increase has been retarded in the last two years. This is regarded as giving some grounds for satisfaction although the mortality rate shows an increase of 16.3 per cent over the figures for 1911 and it is estimated that 2,022 more deaths from malignant growths occurred than would have been recorded under the rate prevailing in 1911. An upward trend has been evident in diabetes for many years and the mortality rate of 18.6 per 100,000 which was identical with that for 1929 is the highest ever recorded. It is obvious, the report states, that the increasing use of insulin has failed to check the rise in the disease although there is no question that it has prolonged the lives of thousands of persons suffering from the disease. Although there was a slight decline in the mortality from heart disease and chronic nephritis, this was believed to be due to the lower incidence of influenza and pneumonia. Heart disease is still the principal cause of death in the industrial population and with the single exception of 1929 the rate, 146.4 per 100,000, was the highest the company has ever recorded. However, there are some encouraging aspects in the mortality from cardiac disease, the rate having dropped for children and for adults up to the age of 45. This improvement has been attained, it is believed, through the widespread preventive and therapeutic measures which have been taken against cardiac affections, including increased school medical inspections.

While the chronic nephritis rate has shown little variation for more than a decade, it nevertheless was 27.5 per cent lower in 1930 than in 1911. A new minimum was established for the third successive year for diseases of pregnancy and childbirth, although the mortality from puerperal conditions is said still to be needlessly high. A slight decline in the death rate from alcoholism was shown from the rate for 1929 but the rate from cirrhosis of the liver registered a slight increase. There was a marked increase in the suicide death rate from 8.7 per 100,000 in 1929 to 9.8 in 1930, or 12.6 per cent, but the rate is well below the level recorded for the years 1911 to 1916. An improvement was shown in the fatal accident rate, and for the first time in 20 years

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a decline was recorded in the mortality from automobile accidents. The drop was small, however, only 1.4 per cent, and is probably of small significance, since other estimates indicate that there was an increase for the population as a whole and also because there was a smaller increase than in previous years in the number of cars on the road.

The improvement in the death rate among Metropolitan industrial policyholders has continued to be much greater than in the general population. A comparison of the rates for 1929, the latest year for which the statistics of the registration States are available, shows that among the policyholders of the company the 1929 death rate was 28.8 per cent lower than in 1911 and for the general population only 11.9 per cent.

Medical Care for Trade-Unionists in Los Angeles

THE Union Labor Benefit League, a voluntary nonprofit organization to provide medical care for trade-unionists and their families was organized in Los Angeles in December, 1929, and has become, it is stated, "the largest single union labor organization in the State of California."

Membership in the league is open only to trade-unionists in good standing in a bona fide labor organization. Dues of $1.50 per month are payable at the same time that the union dues are paid. With the funds thus accumulated the league engages the services of physicians, surgeons, dentists, etc. No officials of the league itself receive any remuneration for their services; all of the funds go for the provision of benefits for members.

For the sum of $1.50 per month each member and the wholly dependent members of his family (wife, children, and parents) are entitled to physical examination and prescriptions at the central medical offices, medical service at home when the patient is too ill to go to the doctor's office (provided the patient lives not more than 12 miles from the central medical offices), minor surgical operations which can be performed at the medical offices, major operations (except for diseases of the brain and spinal cord) performed at the hospital, treatment of diseases of eye, ear, nose, and throat, obstetrical service (at hospital only), clinical laboratory service, any dental service ordered by the physician, hospital service for ailments starting 90 days after becoming a member of the league, and medico-legal service in case of "justifiable litigation." For X-ray service, eye glasses, physiotherapy, dentistry not ordered by the physician, artificial limbs, etc., a nominal charge is made.

The secretary of the league states that 151 local unions in Los Angeles and vicinity have affiliated with the league and that a branch chapter has been established in Santa Barbara, to which all of the local unions have affiliated. There are now, according to the secretary, more than 10,000 members in the league.

The report of the league for the first half of 1930 shows that 23,913 treatments were given and in 794 other cases surgical operations were performed. Of the patients treated, 10,053 were men, 5,385 were women, and 5,108 were children.

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The amount paid in dues was $29,644, while the league estimates that the services given would, at the regular minimum medical rates, have cost $104,434, representing a saving to members of $74,790 for the six months.

Occupational Diseases in France, 1929

A FRENCH decree of November 16, 1929, extended the list of occupational diseases for which reporting is compulsory, although compensation is still paid only in cases of poisoning from lead and mercury.[1] A decided increase in the number of cases of lead poisoning is shown in the report for 1929 over the number reported for the preceding year. This increase occurred mainly in two industries—the manufacture of storage batteries and metal enameling—and was accounted for by the generally increased industrial activity and by better reporting of cases, rather than by an increase in the hazards.

There was a total of 1,846 cases of lead poisoning reported as compared with 1,525 in 1928. The largest number of cases, 746, occurred in metal enameling while there were 658 in the manufacture and repair of storage batteries, 166 in the smelting and refining of lead, 62 in printing establishments, 25 in the manufacture of white and red lead, 37 in various kinds of painting, and the remainder were scattered among a variety of industries and occupations.

Lead colic was the symptom reported in 1,293 cases, lead colic with muscular involvement in 36 cases, lead colic with anemia in 34 cases, while the other cases involved a variety of symptoms. There were four deaths, four cases of permanent disability, and one of permanent partial disability. Among the cases involving temporary disability there were 4 reported in which there was no interruption of work, 59 resulted in incapacity of less than 8 days, 1,258 in disability of 8 to 15 days, 220 in disability of 16 to 30 days, and 7 in disability of more than one month, while the period of disability was not reported in 289 cases.

There were only 6 cases of mercury poisoning reported in 1929, 4 occurring in the chemical industries and 2 in the manufacture of storage batteries. Only one woman was affected. In five cases incapacity lasted from 8 to 15 days and in one case, 20 days.

Among the 139 cases of poisoning from other toxic products, 41 cases were due to the inhalation of the vapor of different acids, 32 to irritant or caustic products, 11 to aniline, 8 to cement, 6 to chlorine, 5 to sulphuretted hydrogen, and the remainder to various chemicals such as benzol and its compounds, methyl and ethyl chloride, tar, chromium, and tetrachlorethane.

Miner's Phthisis in South Africa

THE problem of miner's phthisis or silicosis in the gold mines of South Africa has been so serious that it has been the subject of numerous legislative enactments, the latest of which was the act of

[1] Bulletin du Ministère du Travail, Paris, July–September, 1930, pp. 309–317.

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1925 consolidating the previous legislation and making certain additional provisions for beneficiaries and their dependents.

According to the report on miner's phthisis in the 1930 issue of the Official Yearbook of South Africa,[1] there were 1,601 miners of an average age of 48.95 years receiving compensation for disability from miners' phthisis on March 31, 1929. The amount of the allowances during life averaged £12 7s. 8d. ($60.26) per month for the incapacitated miners, and additional allowances were paid for wives and dependent children. Allowances were also being paid to 1,920 dependents of deceased miners and 3,300 minor children. On March 31, 1928, a total of £9,967,229 ($48,505,520) had been paid for silicosis and tuberculosis cases under the miner's phthisis acts since 1911. During the period April 12, 1911, to March 31, 1929, a total of 14,767 persons had received awards for silicosis, tuberculosis, or silicosis and tuberculosis combined, 3,645 (or less than one-fourth) being in the ante-primary or earliest stage of silicosis.

The following table shows the number of cases and percentage of deaths of miners who had received compensation for secondary silicosis or tuberculosis and silicosis, from August 1, 1912, to March 31, 1928:

NUMBER OF CASES, PER CENT OF DEATHS, AND AVERAGE AGE AT DEATH OF MINERS SUFFERING FROM SECONDARY SILICOSIS OR SILICOSIS AND TUBERCULOSIS IN SOUTH AFRICA FROM AUGUST 1, 1912, TO MARCH 31, 1929

Year	Born in South Africa				Born elsewhere			
	Number of beneficiaries	Number of deaths	Per cent of deaths	Average age at death	Number of beneficiaries	Number of deaths	Per cent of deaths	Average age at death
1912–13	419	224	53.46	43.47	1,213	832	68.59	46.67
1913–14	214	113	52.80	42.83	923	619	67.06	45.76
1914–15	102	56	54.90	42.11	409	304	74.33	44.87
1915–16	132	78	59.09	42.43	350	243	69.43	43.65
1916–17	57	55	96.49	40.14	260	229	88.08	45.91
1917–18	104	87	83.65	42.61	304	254	83.55	46.09
1918–19	107	64	59.81	43.64	304	234	76.97	47.03
1919–20	54	54	100.00	44.57	145	145	100.00	46.77
1920–21	43	38	88.37	43.74	93	82	88.17	45.48
1921–22	62	56	90.32	42.48	113	87	76.99	45.95
1922–23	70	64	91.43	43.26	109	90	82.66	45.95
1923–24	81	55	67.90	44.22	111	86	77.48	43.50
1924–25	137	73	53.28	44.47	165	112	67.88	46.45
1925–26	151	77	50.99	44.40	156	86	55.13	46.43
1926–27	195	52	26.67	41.67	188	61	32.45	50.64
1927–28	167	26	15.57	44.81	163	31	19.02	51.29
1928–29	141	5	3.55	52.00	134	11	8.21	52.36
Total	2,236	1,177	52.64	43.10	5,140	3,506	68.21	45.78

[1] Union of South Africa. Office of Census and Statistics. Official Yearbook, 1928–29. Pretoria, 1930, pp. 220–226.

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INDUSTRIAL ACCIDENTS

National Safety Council Estimate of Accidental Deaths in the United States

ACCORDING to an article by R. L. Forney, statistician, and Alvin D. Battey, assistant statistician of the National Safety Council, in the National Safety News for February, 1931, it is estimated that the number of industrial fatalities in the United States during 1929 totaled 20,000 or about 3,000 less than the annual figure commonly accepted heretofore.

This estimate is the result of an exhaustive survey by the council, and is based on the total accidental deaths for the year, reported by the United States Bureau of the Census as 98,258. These fatalities were divided as follows:

Motor-vehicle accidents (including 3,000 industrial accidents)	31, 000
Public accidents (not due to motor vehicles)	20, 000
Home accidents	30, 000
Industrial accidents (including 3,000 due to motor vehicles)	20, 000
Total (eliminating duplication)	98, 000

It was necessary to estimate three of the groups, as the figures for motor-vehicle accidents were the only ones for which separate figures were ascertainable from the records of the Bureau of the Census. These included 3,000 deaths to persons gainfully employed, which consequently are also classified as industrial, so that they appear under both groups in the table, but the duplication is eliminated in the total.

Industrial fatalities, which are broadly defined to include all deaths arising out of or in the course of gainful employment, were obtained by collecting data and computing rates on all industries where information was available, and using such data to estimate deaths in other industries where little or no information could be secured.

The original tabulations for this group covered the year 1928, with the following result:

	Number of accidents
Manufacturing	3, 080
Mines and quarries	2, 584
Building and construction	2, 600
Public utilities (gas and electric)	358
Steam and electric railways	1, 587
Seamen and stevedores	313
Agricultural and other rural workers	3, 558
All others, including trade, domestic, and professional	4, 778
Total	18, 858

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The estimate of approximately 19,000 deaths for 1928 was raised to 20,000 for 1929, because an increase of about 9 per cent in industrial deaths was indicated by the records of the workmen's compensation bureaus in New York, Ohio, and Pennsylvania, and the records of the Bureau of the Census showed a decrease of almost 1,000 in deaths by drowning but no change for total nonmotor-vehicle deaths.

The separation of the remaining 50,000 deaths was accomplished by using data on public and home accidents from States and cities following the standard accident reporting system, showing 30 per cent for home and 21 per cent for public, a total of 51 per cent of all accidental deaths.

It is pointed out that a comparison of present figures with past figures for motor-vehicle deaths shows a tremendous increase. In 1910 fewer than 2,000 deaths occurred, and in 1919 the total was only one-third of the present figures. Industrial fatalities, it is declared, have seemingly decreased. The average death rate per 1,000 workers in manufacturing in Pennsylvania was 0.50 during the period 1916–1920 but only 0.36 in 1928. National Safety Council members reported a rate of only 0.33 in 1928. Ten years ago more than 2,500 deaths occurred annually among employees in railroad operations, but in 1928 the number was only 1,327. Mining has experienced a 15 per cent reduction in the past 10 years. These facts, it is stated, indicate that the figure of 20,000 industrial deaths is not simply a correction of higher figures previously quoted, but that a real reduction has been made. Absence of available data prevented any comparison over a period of years for either public or home deaths.

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WORKMEN'S COMPENSATION

Report on Nomenclature in Occupational Disease

THE report of a special committee of the American Public Health Association on nomenclature in occupational disease as affecting standard practices in workmen's compensation is reviewed by Dr. Emery R. Hayhurst in the American Journal of Public Health, January, 1931 (pp. 78, 79).

The essential factor in the compensation for occupational diseases is said to lie in a definite and acceptable terminology for these diseases. Workmen's compensation boards have awarded compensation for a great variety of definite occupational diseases; decisions made in New York State from May, 1923, to August, 1929, show a list of 76 medical afflictions for which compensation was allowed.

While departments of labor, upheld by the courts, have permitted compensation for disease aggravated, accelerated, or developed as the result of an accident, it is obvious that legislation is far behind the compensation boards and courts,[1] and it is considered that the inability to agree on the definition of occupational diseases is a chief difficulty, no uniformity of opinion being found among experts, national committees of the various countries, and in the material in standard textbooks.

The most satisfactory definition of occupational diseases from the medical point of view is said to be "all diseases which occur with unusual frequency in a determined occupation." But as the medical viewpoint may differ from the legal point of view, the committee recommends the following definition: "Occupational diseases shall be defined as those disease conditions in which the employment is the proximate cause." The definition, however, needs to be clarified by a classification such as the following:

1. Diseases caused by the inhalation of dust from—
   (*a*) Mechanical obstruction of air passages.
   (*b*) Laceration of mucous epithelium.
   (*c*) Conveyance of soluble toxic material.
   (*d*) Conveyance of germs in dust.
2. Diseases caused by industrial poisons such as—
   (*a*) Poisons which act superficially, as irritant or corrosive (chlorine).
   (*b*) Blood poisons (as carbon monoxide, or aniline).
   (*c*) Poisons with definite internal or specific effect (lead, arsenic).
3. Diseases caused by fumes, gases, and vapors (poisonous and nonpoisonous)—phosgene, metal fume, carbon dioxide.
4. Diseases caused by extremes of temperature (heat stroke and exhaustion).
5. Diseases caused by harmful bacterial and microorganisms (anthrax).
6. Diseases caused by compressed or rarified atmospheres (caisson disease).
7. Diseases caused by improper lighting (miner's nystagmus).

From the medico-legal standpoint the important consideration is to establish the occupation as the proximate cause of disease suffered

[1] According to an article in the Labor Review, February, 1930, 17 jurisdictions, including Hawaii, Porto Rico, Philippines, and the United States, compensate for occupational diseases.

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by the worker. This causal relationship should be determined by medical opinion, and present abuses, it is said, will not be remedied if nonprofessional persons arbitrate medical questions. In view of the difficulty of naming a given occupational disease by naming the agent which caused it, the committee has listed 25 of the more common occupational diseases, with definitions and explanatory notes.

Physician not Bound by Medical-Fee Provisions of Compensation Act of Kansas

ACCORDING to a decision of the Supreme Court of Kansas, physicians making reasonable charges for services to injured employees are not bound by the medical-fee provisions of the workmen's compensation act. (Ross et al. *v.* Austin Drilling Co., 293 Pac. 757.)

One Earl Armstrong was an employee of the Austin Drilling Co., and while so engaged sustained injuries which were compensable under the Kansas workmen's compensation act. Armstrong was taken to a hospital and Doctor Ross was called to treat him. The employer notified the insurance carrier and it was agreed that Doctor Ross was to take charge of the injured employee, and to call in any other doctor to assist him if it was necessary, and to render all medical attention possible. The physicians treated Armstrong in the hospital for five or six weeks, and their bill, including the hospital bill, was $968. Upon presenting an itemized bill to the insurance carrier and to the Austin Co., the physicians were advised by the company that it would not be responsible for more than $200—the maximum amount provided in the Kansas workmen's compensation act for hospital and surgical attention.

An action was brought in the district court of Sedgwick County, by the physician to recover for the medical services. A judgment in favor of the company was rendered by the court on the ground that the physicians were bound to know the limitations under the workmen's compensation act and, notwithstanding the language used, there could be no liability in excess of the maximum provided by the compensation act. The case was appealed to the Supreme Court of Kansas, where the judgment of the lower court was reversed. The court said:

> Physicians are not within the class of persons who can elect to come under the provisions of the act. The compensation act, therefore, does not represent a contract either between the physician and the injured workman or between the physician and the employer of the workman. There is nothing in the compensation act which prevents either an employer or employee from making a contract with the physician for services, as such contracts are usually made, and a contract when so made with the physician is free from the terms of the compensation act, unless, of course, that act is specifically made a part thereof. [Cases cited.] * * *
>
> The trial court took the further view that in the absence of an express contract, and in view of the fact that defendants were obligated by the workmen's compensation act to the injured employee to furnish him medical attention to the amount of $200, the implied contract, as disclosed by the record, should not be held to obligate defendants further to plaintiffs than they were obligated to the injured workman. This view is erroneous for the reason that the plaintiff physicians were in no way concerned with the workmen's compensation act. They were entitled to reasonable compensation for their services from some one, irre-

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spective of the amount which defendants were obligated by the terms of the compensation act to pay for medical services in the way of compensation to the injured employee or his dependents. If defendants decided to limit their liability to the terms of the compensation act, they should have so informed plaintiffs. They might well have known that the services being rendered at their request were of the value much in excess of $200.

Release Does Not Bar Subsequent Recovery Under Compensation Act in Massachusetts

THE Massachusetts Supreme Court on January 13, 1931, rendered a decision of importance involving a question of conflict of laws in workmen's compensation cases.

One Guy McLaughlin, a resident of Boston, was hired by the E. A. Abbott Co., at its place of business in Boston, to work as a carpenter at Cornish, N. H. The company paid the railroad fare of the employee to the place of employment in New Hampshire. While so engaged on April 22, 1929, McLaughlin was injured and incapacitated for approximately three weeks. A claim adjuster of the insurer interviewed the employee after his return to work and paid him $42.50 for his lost time, and $14 additional for medical attendance incurred by the employee.

The employee thereupon signed a common-law release. A recurrence of the injury subsequently followed and the employee went to a Boston hospital, and later applied for compensation under the Massachusetts workmen's compensation act. The Industrial Accident Board of Massachusetts made an award of $359.15 in his favor. The award was later affirmed by the State superior court. The insurer thereupon carried the case to the Massachusetts Supreme Court, contending that the employee was bound by the release and could not recover under the Massachusetts compensation statute. It was the contention of the employee that he could collect under the compensation laws of both States, and deduct under the Massachusetts law the $42.50 paid in New Hampshire.

The Massachusetts statute (Gen. Laws, ch. 152, sec. 24, as amended by Acts of 1927, ch. 309, sec. 2) provided that an employee who had not given notice to his employer at the time of hiring that he claimed the right of action at common law was deemed to have waived his right, and likewise, section 26 of the above law (section 3 of the amending act) provided that—

> If an employee who has not given notice of his claim of common law rights of action, under section 24, or who has given such notice and has waived the same, receives a personal injury arising out of and in the course of his employment * * * whether within or without the Commonwealth, he shall be paid compensation by the insurer, as hereinafter provided, if his employer is an insured person at the time of the injury: *Provided*, That as to an injury occurring without the Commonwealth he has not given notice of his claim of rights of action under the laws of the jurisdiction wherein such injury occurs or has given such notice and has waived it.

The important question therefore in the case was whether the receipt of money in New Hampshire from the insurer and the giving of the release barred the employee from proceeding under the Massachusetts workmen's compensation act.

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Mr. Justice Carroll, in construing section 3, of chapter 309, of the Acts of 1927, said that—

> An employee working under a contract such as is here shown, who is injured outside the State, retains his rights under the workmen's compensation act, unless he has given notice under the statute that he claims his right under the jurisdiction wherein the injury happens, and he does not forfeit this right to proceed here to recover compensation because he received money from the insurer and gave it a release of "all claims and demands, actions and causes of action * * * and compensation on account of" the accident. There is nothing in the statute which prevents the employee from recovering compensation here, although he accepted the money and gave the release. The money received should be deducted from the amount he is permitted to recover, but he retains the protection of the Massachusetts act, although he has given the release.

The intent of the statute, Mr. Justice Carroll stated, was that—

> If rights under the act were to be waived, the waiver must be in accordance with the statute; that is, by written notice at the time of contract.

"The purpose of the statute" evidently, the court said, "was to protect the injured employee and to safeguard him from any attempt to deprive him of the benefits of the act, unless this was fully understood and was done in the manner provided."

Other sections of the statute were quoted by the court showing the protection which the law gave to the employee "to the same extent in New Hampshire as here." These sections "apply equally to an injury outside as well as within the Commonwealth" the court continued.

In the opinion of Judge Carroll, "the Massachusetts contract should be enforced in accordance with the terms of the Massachusetts statute. We do not think it necessary to consider whether, in any event, the employee came within the class of employees entitled to compensation under the New Hampshire compensation act. The board found that he gave no notice of 'his claim of rights of action under the laws of New Hampshire,' and from the nature of the injury it is difficult to understand how he could have any right of action at common law."

The construction which the court placed on the statute did not render it in conflict with the full faith and credit clause of the Federal Constitution since—

> The matter never came before the courts of New Hampshire. "* * * no principle of law is defeated by attaching to such contracts (under the workmen's compensation act) the same duties and rights as incidents to acts abroad that are lawfully imposed as incidents to the same acts occurring within the geographical limits of the State." (Quong Ham Wah Co. *v.* Industrial Accident Commission of California, 184 Calif. 26, 36; 255 U. S. 445.)

In answering the contention of the insurer that no time was stated in the statute for giving notice (written or otherwise) and that the release and receipt of money was notice of a claim of a right of action under the New Hampshire law, the court said that—

> Section 26 does not in so many words say that the notice is to be in writing, nor does it specify when it shall be given; but in so far as rights under our workmen's compensation act are concerned, it refers to section 24, and we must read both sections together, having in mind the purpose and scope of the act. Under section 24 the notice is to be in writing and is to be given at the time of the contract of hire. There is nothing in the statute to support the construction that the giving of the release and accepting the money amounts to the giving of notice of a claim under the laws of New Hampshire. To adopt such an interpretation of the statute would take away the protection intended by it.

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The amount of compensation which the employee was entitled to under the Massachusetts law was therefore awarded, minus the amount which was received in New Hampshire. (McLaughlin's Case, 174 N. E. 338.)

Disability from Inhaling Dust not Compensable in Oklahoma

THE Supreme Court of Oklahoma recently held that disability due to inhaling an excessive amount of gypsum dust, resulting in acute bronchitis, was not an "accidental injury" and therefore not compensable under the Oklahoma workmen's compensation law. (United States Gypsum Co. *v.* McMichael, 293 Pac. 773.)

On February 8, 1930, the Oklahoma Industrial Commission awarded one Dewey McMichael the sum of $539.50 and directed that additional payments at a rate of $17.31 per week be made by his employer, the United States Gypsum Co. The award was based upon a finding of an accidental personal injury sustained on June 27, 1929, when McMichael was employed in loading box cars with gypsum rock. He claimed that he inhaled an excessive amount of gypsum dust, which resulted in acute bronchitis and prevented him from returning to work. The physician's report diagnosed his case as pneumoconiosis.

The United States Gypsum Co. denied liability on the ground that the injury was due to an occupational condition and not an accidental injury, and appealed from the award of the industrial commission to the Oklahoma Supreme Court. The family physician testified that McMichael had complained of his lungs prior to June, 1929, and after an examination the doctor had diagnosed his condition as pneumoconiosis, an occupational disease. The employer contended that there was no evidence that the employee received an accidental personal injury within the meaning of the Oklahoma compensation law. The court upheld the contention made by the company, saying in part:

> The evidence before us does not show an accident at all. The legal result is the question as to whether a disease incident to the occupation of a workman is compensatable under our law. The compensation laws of the several States differ in this regard, but Oklahoma's law, as amended by chapter 61, S. L. 1923, makes an accidental personal injury a condition precedent for compensation of a workman engaged in hazardous employment. Such a condition excludes injuries arising exclusively from occupational diseases.

As to whether the breathing of dust necessarily caused by the very work in which the employee was engaged constituted an accident, the court quoted from the case of Meade-Fiber Co. *v.* Starnes (147 Tenn. 362, 247 S. W. 989) in which the court said:

> We can not conceive that the breathing of dust, caused to arise necessarily from the very work being performed, has in it any element of accident. The material being moved was in the form of dust. It was contained in sacks. The very nature of the material and its container, and the movement thereof, necessarily, and not accidentally, caused the dust to float in the air, and to be breathed by the workmen. There was no accident in the form of the material, its container, or method of movement. The escape of dust in its movement did not result from any fortuitous circumstance; it was necessarily incident thereto. It seems to us that the same reasons which exclude occupational diseases must apply here, and exclude an injury which is produced by the necessities of the occasion, in the absence of any accident entering into the cause of or as producing the particular occasion.

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The court concluded that under the law and the evidence there was nothing in the case to justify a finding of an accidental personal injury. The award was therefore reversed and the claim dismissed. A dissenting opinion was rendered by Mr. Justice Clark.

Recent Compensation Reports

Hawaii

THE annual report of the governor of Hawaii to the Secretary of the Interior for the fiscal year ending June 30, 1930, presents in summary form data on the activities of the four industrial accident boards in the Territory of Hawaii. The largest number of accidents is reported by the board for the city and county of Honolulu, as follows:

NUMBER OF ACCIDENTS AND ACCIDENT COSTS, CALENDAR YEAR 1929

Accidents resulting in—	Number of accidents	Compensation paid	Medical expense	Hospital expense	Burial expense	Total expense
Death	18	$30,603.99	$111.00	$36.50	$854.55	$31,606.04
Permanent disability	84	47,569.43	6,068.30	3,579.70	.....	57,217.43
Temporary disability	5,830	44,504.54	64,983.24	4,325.25	.....	113,813.03
Total	5,932	122,677.96	71,162.54	7,941.45	854.55	202,636.50

The figures for medical and hospital expense shown in the table are less than the actual amounts paid, as medical, surgical, and hospital service and supplies afforded employees of plantations and canneries are not included. The majority of the sugar and pineapple plantations and canneries maintain their own medical staffs and hospitals and do not report the cost for each individual case.

The board for Hawaii County reports 1,216 accidents for the year (with 6 fatal cases), as compared with 1,447 for the previous year (with 9 fatal cases). While 515 of these accidents were not compensable, compensation was paid voluntarily by the employer in many of them.

The compensation paid was $12,818.39; this, however, is only an approximate figure, as in many cases reports of compensation paid for permanent disabilities are not received until the last payment is made. The medical expenses totaled $20,367.25, but do not include the salaries of physicians who are engaged by certain plantations on a contract basis.

The board for Maui County reports 1,124 accidents including 3 fatal cases and 291 of more than 7 days' duration. Compensation paid to recovered employees totaled $9,703.37, and compensation paid as death benefits amounted to $2,464.19 per month. Medical and hospital expenses, not including those for plantations with their own hospitals, aggregated $6,599.75.

The board for Kauai County reports 244 accidents (including 12 fatal cases), of which 91 were compensable. The total amount of compensation paid was $3,915.81, and the medical and hospital

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expense reported by the insurance companies amounted to $2,399.50. The latter item is not reported by plantations.

New Jersey

THE September, 1930, issue of The Industrial Bulletin, the official publication of the New Jersey Department of Labor, contains a number of tables showing detailed statistics of compensated accidents for the calendar year 1929. A summary of the number of cases and costs is shown in Table 1 by industry and in Table 2 by cause.

TABLE 1.—NUMBER AND COST OF COMPENSATED CASES IN NEW JERSEY CLOSED DURING 1929, BY INDUSTRY

Industry	Death and permanent total disability		Permanent partial disability		Temporary disability		All cases	
	Number of cases	Total compensation	Number of cases	Total compensation	Number of cases	Total compensation	Number	Total compensation
Agriculture	6	$7,760	68	$60,691	350	$17,990	424	$86,441
Clerical and professional service, care and custody of buildings and grounds	7	23,302	228	144,887	683	40,781	918	208,970
Construction (including shipbuilding)	73	433,217	1,755	1,426,119	3,755	283,205	5,583	2,142,541
Manufacturing	83	394,655	4,177	2,371,370	9,031	454,254	13,291	3,220,279
Mining, metallurgy, and quarrying	20	137,488	239	149,401	364	22,362	623	309,251
Trade	8	32,259	460	250,946	1,436	76,136	1,904	359,341
Transportation and public utilities	65	360,616	886	617,245	2,882	198,593	3,833	1,176,454
Miscellaneous occupations	32	138,165	373	235,289	1,288	74,666	1,693	448,120
Total	294	1,527,462	8,186	5,255,948	19,789	1,167,987	28,269	7,951,397

TABLE 2.—NUMBER AND COST OF COMPENSATED CASES IN NEW JERSEY CLOSED DURING 1929, BY CAUSE

Cause	Number of cases				Total days' disability (weighted)	Total compensation	Cases involving medical aid	Total medical cost
	Death and permanent total disability	Permanent partial disability	Temporary disability	Total				
Machinery	39	2,026	2,036	4,101	1,128,581	$1,514,680	1,400	$95,546
Boilers and steam-pressure apparatus	1	7	18	26	9,851	18,897	10	782
Explosions, electricity, hot substances, and flames	43	178	1,151	1,372	400,370	517,863	463	31,284
Falls of persons	65	1,383	3,236	4,684	1,322,526	1,840,769	1,691	147,157
Falling objects not being handled by injured	20	756	1,341	2,117	452,502	666,474	757	46,165
Objects and tools being handled	23	2,366	7,154	9,543	1,003,576	1,559,890	3,224	159,734
Stepping on or striking against objects		255	1,591	1,846	109,442	178,372	622	26,437
Vehicles	70	710	1,742	2,522	859,569	1,074,135	945	80,808
Poisonous and corrosive substances and occupational diseases	14	119	465	598	186,196	232,830	211	13,057
Miscellaneous	19	386	1,055	1,460	297,861	347,487	471	29,102
Total	294	8,186	19,789	28,269	5,770,474	7,951,397	9,794	630,072

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New York

THE total number of accidents reported in the State of New York for 1929 and the number of compensation cases closed during the year showed a considerable increase over the respective numbers for the previous year, according to the annual report of the industrial commissioner for the calendar year 1929, issued recently. It is explained that the 1928 amendment to the workmen's compensation act, which eliminated "pecuniary gain" from the definition of employment whenever four or more workmen or operatives are employed, extended the coverage of the act to a number of enterprises and institutions which were previously excluded, and served to increase the voluntary coverage by employers in the so-called nonhazardous pursuits.

A total of 523,604 accidents was reported in 1929, as against 507,980 reported in 1928, and 197,970 compensation cases were closed in 1929, as against 171,704 closed in 1928. There was, however, a substantial reduction in the proportion of controverted cases to total cases. While 31.1 per cent of all compensation cases were disputed during the last three months of 1928, at least so far as filing notice of dispute was concerned, the number of disputed cases for the last three months of 1929 constituted only 27.6 per cent of the total cases filed.

Considerable attention was paid to familiarizing the public with the provisions of the workmen's compensation law, by means of radio talks, cooperation in several studies of the functioning of the workmen's compensation law by universities and industrial associations, and lectures given to various intellectual groups, such as medical associations, which were anxious to become familiar with their relationship to the law.

The report includes a section on the State insurance fund. It is pointed out that in 1928 the fund became the largest carrier of compensation insurance in the State, despite the competition of 66 private companies, and that it has continued to make substantial gains. Insurance is written at an advance discount of 15 per cent from the rates charged by other carriers, on account of the lower acquisition cost of the State fund. From June 30, 1921, to December 31, 1929, the fund also paid dividends at the rate of 15 per cent to employers in the general group, making the insurance cost to employers 27.75 per cent less than if insured in a stock company.[1]

Vermont

THE biennial report of the Commissioner of Industries of the State of Vermont for the period ending June 30, 1930, shows increases in both accidents and compensation costs, as compared with former periods.

During the year 1928–29 a total of 13,147 accidents was reported, an increase of 12.8 per cent over the number for the previous year. The total for the year 1929–30 was 12,828, a decrease of 2.4 per cent from the 1928–29 total. The amount of compensation paid under the act during the 2-year period was $652,291.90, an increase of 11 per

[1] No dividends were paid by the State fund in 1930, but on Jan. 1, 1931, a new discount rate of 21 per cent from the revised premium rates of other carriers became effective.

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cent over the previous biennium, while the amount paid for medical aid was $377,864.86, or 38 per cent more than in the 1926–28 period. The heavy increase in medical aid was principally caused by the change in 1927 of maximum medical benefits from $100 to $200.

Tabulations in the report show the number of lost-time accidents during each of the two years, classified by industry, by extent of disability, and by cause. A summary of the classifications by industry and by cause is presented in the following table.

NUMBER OF LOST-TIME ACCIDENTS REPORTED IN VERMONT, 1928–29 AND 1929–30, BY INDUSTRY AND BY CAUSE

Industry or cause	Number of accidents resulting in—						Total[2]	
	Death[1]		Permanent disability		Temporary disability			
	1928–29	1929–30	1928–29	1929–30	1928–29	1929–30	1928–29	1929–30
Industry:								
Agriculture			1	1	41	61	42	62
Quarrying	4	8	15	31	728	723	747	762
Logging		3	10	7	219	181	229	191
Manufacturing	2	4	68	83	1,609	1,626	1,719	1,713
Construction	4	5		18	608	673	619	696
Transportation	3	4		6	184	171	195	181
Public utilities	3	5		5	225	181	229	191
Commercial establishments	2	2		2	78	98	81	102
Clerical and professional service					16		16	
Total[2]	18	31	96	153	3,763	3,714	3,877	3,898
Cause:								
Machinery		4	71	78	357	385	428	467
Vehicles	5	5	2	5	86	110	93	120
Explosions, electricity, fires and hot substances	2	7	1	6	132	104	135	117
Poisonous and corrosive substances					22	24	22	24
Falls of persons	4	5	1		404	397	409	402
Stepping or striking against objects			1	3	272	287	273	290
Falling objects, not being handled by injured	2	4	1	10	239	172	242	186
Handling of objects	1	4	11	26	789	884	801	914
Hand tools, in hands of injured or fellow-worker	1	1	7	21	493	380	501	402
Animals		1			42	52	42	53
Miscellaneous causes	2		2	4	927	919	931	923
Total[2]	18	31	96	153	3,763	3,714	3,877	3,898

[1] Closed cases only.
[2] In some instances the totals are not the correct sum of the items, but are as given in the report.

United States and District of Columbia

THE fourteenth annual report of the United States Employees' Compensation Commission, for the fiscal year ending June 30, 1930, covers the operations of the three Federal workmen's compensation acts administered by the commission, each of which presents different administrative problems.

Federal Employees

THE Federal employees' compensation act, which replaced the original act of 1908 on September 7, 1916, is limited to employees of a single employer—the United States Government—and covers all of the civil employees regardless of civil service status, approximately

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600,000 workers. It is administered directly by the commission from its office in Washington. Officers in the various government establishments in the different States and foreign lands act as local agents in reporting injuries, arranging for medical treatment, and assisting the injured employees. Consequently the adjustment of claims, except for cases occurring in Washington, is effected through correspondence, and the decisions of the commission are final. Compensation is paid direct by the commission from Federal funds.

A total of 25,690 injuries was reported for the calendar year 1929, an increase of 15.8 per cent over the number reported for 1928. The number of cases disposed of during the year included 16,647 involving loss of time, 1,297 disapproved by the commission, and 7,096 with no loss of time, a total of 25,040 cases.

Table 1 shows the number of cases resulting in loss of time, the number compensated and the awards made, classified by extent of disability and by departments, for the calendar year 1929. The amounts of compensation given for fatal and permanent total disability cases are estimates of the total costs involved, based on the amounts paid and probable future payments.

TABLE 1.—INJURIES CAUSING LOSS OF TIME, AND COMPENSATION AWARDS UNDER FEDERAL EMPLOYEES' COMPENSATION ACT, BY EXTENT OF DISABILITY AND DEPARTMENT, CALENDAR YEAR 1929

Department	Total injuries with loss of time	Compensated cases									
		Fatalities		Permanent total disabilities		Permanent partial disabilities		Temporary total disabilities		Total	
		Number of cases	Estimated total cost[1]	Number of cases	Estimated total cost	Number of cases	Compensation	Number of cases	Compensation	Number of cases	Cost and valuation
Agriculture	2,033	19	$285,050	6	(2)	13	$9,633	1,200	$63,011	1,238	(3)
Commerce	275	7	73,315	2	(2)	4	366	92	8,420	105	(3)
Government Printing Office	34			1	(2)			22	2,565	23	(3)
Interior	538	10	167,302	1	(2)	26	9,772	298	26,921	335	(3)
Labor	75	3	78,988		(2)			10	1,521	13	(3)
Navy	1,950	20	405,003	8	(2)	57	39,774	1,075	105,247	1,160	(3)
Post Office	6,332	34	667,129	7	(2)	48	52,402	1,901	216,392	1,990	(3)
Treasury	718	20	394,378	2	(2)	6	10,810	143	25,185	171	(3)
War	3,768	77	809,731	14	(2)	86	74,715	2,170	165,868	2,347	(3)
Miscellaneous	925	18	191,738	5	(2)	9	7,764	398	41,601	430	(3)
Total	16,647	208	3,072,634	46	$996,719	249	205,236	7,309	656,731	7,812	$4,931,320

[1] Includes burial award and compensation paid before death, but not medical cost.
[2] Amount not stated.
[3] Data not complete.

Compensation was also paid during the year in cases continued from previous years. The number of awards in fatal cases each year is approximately twice the number of terminations, and the total number of active death cases on December 31, 1929, was 2,074. Specific awards are not provided for permanent disability, but compensation payments are continued during the entire period of disability, unless commuted to a lump sum. On December 31, 1929, there were 343 cases classed as permanent total disabilities, in which an average of $891 was paid annually to each injured worker, and

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950 cases of permanent partial disabilities (aside from the 249 cases listed in the table), in which compensation was being paid, some of which dated back to 1916.

Complete figures are not available for the cost of medical and surgical care and treatment, as part of this is furnished free of charge by the Public Health Service and other Federal agencies. The expenditures from the compensation fund for medical treatment and supplies during the fiscal year ending June 30, 1930, were $628,347.19, not including the free medical relief mentioned, which is estimated at about $800,000.

The average award per compensated case in 1929 was as follows: Fatalities, $14,772.28; permanent total disabilities, $21,667.80; permanent partial disabilities, $824.24; temporary total disabilities, $89.85.

It is recommended that the present law be amended to provide for payments of compensation to dependent parents as long as dependency exists, instead of terminating payments eight years after the death of the deceased employee, now stipulated in the law.

Longshoremen and Harbor Workers

THE longshoremen's and harbor workers' compensation act, which became effective July 1, 1927, covers selected classes of employment in maritime jurisdiction on the navigable waters of the United States. It is estimated that the number of employees subject to the benefits of this law is in excess of 300,000.

The act is administered locally by a deputy commissioner in each of the 14 districts established by the commission, which appoints the deputies, issues rules and regulations, and exercises general supervision. Appeal may be had from decisions of deputy commissioners, but only in Federal courts and on questions of law. Compensation is paid, as under State acts, by authorized insurance carriers or direct by self-insurers. On June 30, 1930, there were 168 insurance companies authorized by the commission to write insurance under the act, and 382 employers qualified to act as self-insurers.

A total of 39,850 injuries was reported for the fiscal year ending June 30, 1930, an increase of approximately 5 per cent over the number reported for the previous year. During the year 41,093 cases were disposed of, including 18,729 with no loss of time and 6,358 in which the duration of disability did not exceed seven days.

In Table 2 are presented the nonfatal cases involving loss of time in which final payments had been made, with amount of compensation, and the fatal cases granted compensation during the fiscal year 1930, with the total estimated cost, by degree of disability and by occupation. The table includes 5,773 cases in which the duration of disability was seven days or less.

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TABLE 2.—LOST-TIME INJURIES AND COMPENSATION AWARDS UNDER LONGSHOREMEN'S AND HARBOR WORKERS' ACT, BY EXTENT OF DISABILITY AND BY OCCUPATION, 1929–30

Occupation	Total injuries with loss of time	Compensated cases							
		Fatalities		Permanent partial disabilities		Temporary total disabilities		Total	
		Number of cases	Estimated total cost	Number of cases	Amount of compensation	Number of cases	Amount of compensation	Number of cases	Cost and valuation
Longshoremen	14,544	80	$423,846	777	$608,997	10,016	$1,073,963	10,873	$2,106,806
Repair men	4,172	41	252,088	230	188,086	2,077	238,078	2,348	678,252
Supply men	14					9	1,691	9	1,691
Inspectors	70			2	1,570	38	4,529	40	6,099
Miscellaneous	810	11	45,462	47	37,808	509	47,846	567	131,116
Total	19,610	132	721,396	1,056	836,461	12,649	1,366,107	13,837	2,923,964

On June 30, 1930, there were 306 fatal cases and 3,113 nonfatal cases carried on the dockets in the district offices, in which compensation had been paid in the amount of $1,719,184 and the estimated amount to be paid was $3,243,333.

The important work performed during the year by the safety engineer in connection with maritime employment is pointed out. The possibilities of scientific accident-prevention work in loading and unloading vessels were brought to the attention of both employers and workers, with the result that 23 port safety committees have been organized and 9 port or regional safety codes have been adopted. A comparison of safety codes for stevedoring operations, as adopted by the various ports, has been published by the commission to assist the movement for a uniform national safety code. Adoption of accident prevention has enabled some employers to reduce lost-time accidents from 25 to 50 per cent, and in one State the insurance premium has been lowered from $14.44 to $11.11 per $100 of pay roll, a reduction of 20 per cent.

District of Columbia Private Employees

THE District of Columbia workmen's compensation act, which became effective July 1, 1928, extended the provisions of the longshoremen's and harbor workers' act to cover all private employment in the District. It affects approximately 14,000 employers and from 75,000 to 100,000 workers. The act is administered, under the commission as a superior administrative body, by a deputy commissioner, whose decisions are final, except for review in Federal courts on questions of law only. The compensation is paid by authorized insurance carriers or direct by self-insurers. On June 30, 1930, there were 71 insurance companies authorized to write insurance under the act, 13,222 employers who had insured with these, and 68 employers qualified to act as self-insurers.

A total of 18,499 injuries was reported for the fiscal year ending June 30, 1930, an increase of 29.4 per cent over the previous year. During the year 19,252 cases were disposed of, including 9,653 with

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no loss of time and 4,583 in which the duration of disability did not exceed seven days.

In Table 3 are presented the nonfatal cases closed during the fiscal year, with amount of compensation, and the fatal cases in which an award was made prior to June 30, 1930, with estimated total cost, by degree of disability and by industry. The table includes 4,532 cases in which the duration of disability did not exceed seven days.

TABLE 3.—LOST-TIME INJURIES AND COMPENSATION AWARDS UNDER DISTRICT OF COLUMBIA WORKMEN'S COMPENSATION ACT, BY EXTENT OF DISABILITY AND BY INDUSTRY, 1929-30

Industry	Total injuries with loss of time	Compensated cases							
		Fatalities		Permanent partial disabilities		Temporary total disabilities		Total	
		Number of cases	Estimated total cost	Number of cases	Compensation	Number of cases	Compensation	Number of cases	Cost and valuation
Clerical and personal services	1,154	3	$13,609	19	$6,768	593	$27,203	615	$47,580
Construction	2,680	9	51,437	46	29,882	1,193	91,192	1,248	172,511
Manufacturing	904	------	--------	20	11,964	406	25,432	426	37,396
Quarrying and stone products	45	------	--------	2	760	14	409	16	1,169
Trade	2,687	3	19,145	34	18,401	1,127	58,536	1,164	96,082
Transportation and public utilities	991	4	19,337	8	3,269	448	24,427	460	47,033
Total	8,461	19	103,528	129	71,044	3,781	227,199	3,929	401,771

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LABOR LAWS

Labor Legislation of 1930

DURING the legislative year of 1930, nine States met in regular session (Kentucky, Louisiana, Massachusetts, Mississippi, New Jersey, New York, Rhode Island, South Carolina, and Virginia). Of the States holding regular sessions, two (Louisiana and New Jersey) held extra sessions. Special sessions were also held in ten States (Idaho, Illinois, Kansas, Maine, Maryland, Nebraska, New Hampshire, Texas, Utah, and West Virginia). The legislatures of two insular possessions (Philippine Islands and Porto Rico) were also in regular session. The Congress of the United States also convened during the year as the Seventy-first Congress, second and third sessions. Laws affecting labor in some aspect were passed by all of the legislative bodies—State, insular, or national—holding regular sessions during 1930. The public laws for the Philippine Islands, however, are not yet available.

The present article presents a topical outline of the labor legislation of 1930,[1] with the exception of legislative action regarding workmen's compensation, a résumé of which was given in the December, 1930, issue of the Labor Review.

Contract of Employment

IN NEW JERSEY (ch. 104) persons 40 years of age or over shall not be discriminated against, by reason of age, in applying for public employment. Such persons, however, are not eligible for a pension, and the act does not apply to police and fire departments or penal institution guards. For employment on public works in New York (ch. 689) preference must now be given to citizens of the State. Heretofore the law merely extended preference to "citizens," presumably classifying all citizens of the United States on the same basis. In Porto Rico an employee discharged without cause and without 15 days' notice is entitled to his salary and an additional sum corresponding to the basic term of service (Act No. 43), and an employee is protected in his right to vote by Act No. 47.

Employment Agencies

Private agencies.—Kentucky (ch. 169) enacted a new private employment agency law. The license fee is fixed at $25; inspection of such offices is under the jurisdiction of the Department of Labor; agencies are forbidden to split fees, misrepresent conditions, or send an applicant to a place where a strike or labor trouble exists, and must return the fee in case employment is not obtained within 30 days; penalties are also provided for violations of the law. Intelli-

[1] A more complete summary, and reproductions of many of the labor laws, will be given in the bulletin on labor legislation for 1930.

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gence offices for seamen are no longer exempt in Massachusetts (ch. 117) from the provisions of the law providing a penalty for keeping unlicensed intelligence offices.

Public agencies.—New York (ch. 425) enacted a law authorizing the industrial commissioner to make a scientific study of the State public employment offices and to cooperate with the Federal authorities in a long-term employment program. The Porto Rican law (Act No. 46) creating a bureau of commerce and industry in Porto Rico also provides for the organization of an employment service for persons of that nationality, in New York City. The Legislature of Rhode Island must hereafter annually appropriate necessary funds for the maintenance of public employment offices. (Ch. 1556.)

Group Life Insurance

BY CHAPTER 53, Mississippi authorized the State insurance commissioner to adopt regulations for the writing of optional group insurance for State employees.

Hours of Labor

Private employment, women and children.—In Louisiana (No. 71) the maximum hours of labor for woman employees was reduced to 9 per day and 54 per week. In New York (chs. 867, 868) the hours-of-labor law for women was amended by granting a half holiday, in addition to the day of rest already granted each week, to those employed in factories and mercantile establishments. Porto Rico, by Act No. 28, permits the employment of women over 16 in fruit or vegetable packing industries at night, limited to 8 hours or 48 hours a week, provided no daywork has been performed.

Public works.—New York passed a law (ch. 804) providing an 8-hour day on all work, in the elimination of railroad grade crossings, in which the State or a civil division has appropriated public funds.

Child Labor

MISSISSIPPI (ch. 46) strengthened the compulsory school attendance law for children by requiring a certificate from the district school authorities prior to employment in any mill, etc.

Safety and Health

Factory inspection.—New Jersey (ch. 42) enacted a law relative to the manufacture, storage, transportation, and sale of fireworks. Certificates of registration are issued by the State Department of Labor. By another act (ch. 185) New Jersey adopted a safety code for workers in the construction industry. New York passed several acts amending its labor law. Thus, chapter 293 permits the use of linoleum, cork, or rubber composition on floors in factories, etc., while by chapter 309 plans and specifications of buildings required to conform to the structural requirements of the labor law must be submitted and approved by the Department of Labor of New York. Other sections of the New York labor law amended were covered by chapter 512, relating to the storage and sale of explosives. Chapter 603 empowers the industrial board to make rules as to the demolition of buildings, and chapters 857 and 858 exempt from the definition of a "factory building" certain types of structures; while chapter 604 requires seats for operators in public passenger elevators, and chapter

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605 safety devices for window cleaners on public buildings. The law requiring the employment of a physician in factories, etc., in Porto Rico, (Act No. 53) exempts fruit-packing establishments. In Virginia the law providing for the installation of fire escapes was improved by the provisions of chapter 444.

Sanitation.—Rhode Island (ch. 1570) strengthened and enlarged the law regulating the inspection of bakeries, etc.

Miscellaneous.—New Jersey (ch. 26) enacted a new law governing industrial homework. A license must be obtained from the commissioner of labor, but before such a license is granted an inspection of the premises must be made. The number of persons employed in each room is regulated, premises must be well lighted and all contagious diseases reported. A register must be kept by persons contracting for homework, and such books must be open for inspection. Penalties for violations of the law are also provided. By an act (ch. 644) of Congress (46 Stat. 822) the salary of the chief inspector of locomotive boilers was increased from $6,000 to $7,500, and each assistant chief's salary from $5,000 to $6,000, while each district inspector's salary was increased from $3,600 to $4,000. By an act of Massachusetts (ch. 211) only such tools and safety devices are now required on railroad trains as the department of public utilities shall order in writing. Mississippi (ch. 219) extended the full-crew law to trains propelled by gasoline or electricity, exempting, however, certain logging trains.

Wages

THE New York "prevailing wage rate" law was made applicable to the work of eliminating railroad grade crossings. (Ch. 804.)

Cooperative Organizations

CREDIT unions received the attention of several of the State legislatures: Massachusetts (chs. 100, 180); New Jersey (ch. 153); New York (chs. 195, 198, 247, 360); and Virginia (ch. 16). New York passed two acts relative to cooperative associations, chapter 204 providing for the formation and incorporation of cooperative agency associations, and chapter 821 providing a penalty for the spreading of false reports concerning the finances or management of any cooperative association.

Holidays and Days of Rest

IN MASSACHUSETTS, pumping-station employees are included in the provisions of the weekly half-holiday law (ch. 421); while Sunday operation of bootblack stands is regulated by local option (ch. 143) and home garden work is permitted on Sunday by chapter 179. A weekly day of rest is provided for projectionists or operators of motion-picture machines in New York by chapter 748. The hours of rest law in Porto Rico (Act No. 54), exempts canning factories from its provisions. Rhode Island town councils are authorized by chapter 1566 to grant licenses for the sale of certain commodities on Sunday.

Pensions

Old-age pensions.—Two States, Massachusetts (ch. 402) [2] and New York (ch. 387), [3] established old-age pension systems.

[2] See analysis of act in Labor Review, August, 1930, p. 52.
[3] See analysis of act in Labor Review, June, 1930, p. 82.

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Mothers' pensions.—Mothers' pensions formed the subject of legislation in Louisiana (Act No. 46), Massachusetts (ch. 381), and New York (chs. 41, 799).

Public employees.—Massachusetts amended the public employees' retirement law by two acts, chapter 335 relating to refunds in the case of deceased employees, and chapter 413 extending the act to officers of certain county penal institutions. The New York State employees' retirement law was amended in various details by chapters 137–141, 143, 713, 714, and 734, while the New York City employees' retirement system was amended by chapters 354, 655–660, 720, 751–753, and 862. By Act No. 73 Porto Rico amended the retirement law so as to allow employees after 30 years' service to retire on 75 per cent of average salary received in the seven years prior to retirement date, with the amount limited to $2,000. By chapter 209 (46 Stat. 253) a uniform retirement date for Federal personnel was provided. Such retirement hereafter becomes effective on the first day of the month following that in which the employee is retired. The retirement act[4] of civil employees of the Federal Government was liberalized and extended under the provisions of chapter 349 (46 Stat. 468).

Private employees.—Virginia (ch. 185) has authorized corporations to grant pensions and disability benefits to certain officers and employees.

Labor Unions and Disputes

South Carolina (act No. 721) increased the filing and recording fee for labels of unions, etc., to $10; while Virginia (ch. 364) enacted a law providing for the registration of names, etc., of organizations, including labor unions.

Vocational Rehabilitation

By an act (ch. 414) of the Congress of the United States (46 Stat. 524) the Federal vocational rehabilitation act is continued, with increased amounts allotted to the several States.

Labor Departments

In Massachusetts (ch. 410) a division known as the "division on the necessaries of life" is established under the department of labor and industries. The salary of the clerk to the Mississippi State factory inspector is fixed at $1,500. (Ch. 86.) Employees of the New York Department of Labor are subjected to civil service law as affecting their transfer, removal, abolishment, or consolidation of positions. (Ch. 323.) By chapter 585 the maximum salary limitation of $7,000 for the deputy industrial commissioner of New York is abolished; however, the appropriation act (chs. 85, 832) provided a salary of $8,000 for this office. Porto Rico by Act No. 59 reorganized the department of agriculture and labor. In Rhode Island the appropriation for maintenance of the boiler inspector's office was increased slightly (ch. 1550), and a revision of grades and salaries of factory inspectors was accomplished (ch. 1553); while the law requiring city or town treasurers to furnish revenue or expense statements to the State commissioner of labor has been strengthened by providing a penalty for failure to file such statement (ch. 1606).

[4] See analysis of act in Labor Review, August, 1930, pp. 72–80.

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The duties of the United States Bureau of Labor Statistics are enlarged by chapter 873 (46 Stat. 1019). The bureau is directed to collect and publish complete statistics each month on the number of persons employed, aggregate wages paid, and hours of labor, in several enumerated groups of industries.

Investigative Commissions

THE legislatures of four States (Massachusetts, New Jersey, New York, and Virginia) provided for investigations on certain subjects affecting, directly or indirectly, labor. In Massachusetts six resolutions were adopted. Two resolutions (ch. 2, p. 575, and ch. 16, p. 582) provided for the continuance of the commission appointed in 1929 for the study of dependent children; chapter 30, Resolves, p. 589, for the investigation of the subject of stock purchases by employees in cooperative shoe shops; chapter 49, Resolves, p. 598, authorized the appointment of a commission to investigate the retirement allowances for State employees, while chapter 60, Resolves, p. 603, provided for an investigation of the causes of existing unemployment in general, and chapter 66, Resolves, p. 606, for a continued study of conditions affecting the textile industry. New Jersey has undertaken the general study of pensions (J. Res. No. 5, p. 1108) and the employment of migratory children (J. Res. No. 6, p. 1110). In New York (ch. 825) the subject of prison administration, including the expansion of prison industries, is under consideration. Virginia (ch. 190) appointed a commission to investigate the subject of retirement and pensions.

Miscellaneous

CONVICT labor received the attention of three States and the Federal Government. Kentucky (ch. 77) and South Carolina (No. 1187) authorized the manufacture of motor-vehicle license plates at the State prison. New York (ch. 136) has taken advantage of the Federal act divesting convict-made goods of their interstate character (effective January 19, 1934) by enacting a State act prohibiting the interstate shipment of such goods. Chapter 503, dealing with the subject of the earnings of prisoners, was also adopted. By chapter 340 (46 Stat. 391) the Congress of the United States provided for the diversification, etc., of employment of Federal prisoners. Section 307 of the tariff act of 1930 (46 Stat. 590) prohibits the importation of convict-made goods and the prohibition of goods produced by forced or indentured labor, effective January 1, 1932, is provided. New York, by chapter 409, enlarged the provisions of the law relative to the bribery of employees, especially as to the penalties and court procedure. By an act (No. 780) of South Carolina the State highway department is empowered to furnish first-aid service to all employees injured while engaged in the discharge of their duties. The mechanics' lien law of several States was amended—New York (ch. 859), New Jersey (chs. 164, 212), and Virginia (chs. 59, 443). Virginia also specified the State license tax required of small-loan companies. (Ch. 320.) The subject of the examination and regulation of barbers received attention in Mississippi (ch. 131, new act) and Texas (ch. 15, fifth called session).

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WORKERS' EDUCATION AND TRAINING

Work of Federal Board for Vocational Education, 1929–30

WHILE the vocational education program throughout this country has certain broad objectives, this program differs from State to State. As a matter of fact, according to the Fourteenth Annual Report of the Federal Board for Vocational Education, there are 49 different programs which have been developed respectively by the 48 States and the Territory of Hawaii. Each State is at liberty to formulate any kind of program which it regards as best adapted to its requirements. The approval of this program by the Federal board is necessary only in so far as the State proposes to avail itself of Federal funds under the plan.

Vocational education programs are financed from Federal funds, State funds, and funds provided by local communities. The contribution of State and local funds for each Federal dollar of expenditure was as follows in the years specified: For 1925–26, $2.54; 1926–27, $2.65; 1927–28, $2.77; 1928–29, $2.99; and 1929–30, $3.04. The expenditure from Federal funds for the fiscal year ending June 30, 1930, was $7,404,223, and from State and local funds, $22,505,072, making a total of $29,909,295, which was an increase of $2,434,990 over the preceding fiscal year.

Various items of the combined Federal, State, and local expenditures in 1929–30[1] are given below:

TABLE 1.—COMBINED FEDERAL, STATE, AND LOCAL EXPENDITURE IN 1929-30 FOR SPECIFIED KINDS OF EDUCATION

Kind of education	Amount	Increase as compared with preceding year
Vocational agricultural education	$8,749,072	$330,091
Vocational trade and industrial education, not including part-time general continuation schools	8,808,282	1,229,531
Trade and industrial part-time general continuation schools	5,464,431	296,472
Vocational home economics education	4,390,349	487,231
Vocational teacher training	2,447,160	50,589

[1] Provisional figures, subject to final audit of State accounts.

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The number of specified schools or reimbursement units federally aided in 1929–30 as compared with the number in the preceding year is shown in Table 2:

TABLE 2.—NUMBER OF SCHOOLS OR REIMBURSEMENT UNITS FEDERALLY AIDED FOR YEAR ENDING JUNE 30, 1930 [1]

Kind of school	Number	Increase or decrease compared with preceding year
Agricultural:		
Evening	2,116	+285
Part time	315	−22
All day	3,905	+117
Day unit course	582	+5
Trade and industrial:		
Evening	1,013	+67
Part time—		
Trade extension	335	+54
General continuation	573	−1
All day	431	+28
Home economics:		
Evening	1,184	+227
Part time	268	+165
All day	1,317	+306

[1] Figures for 1930 are provisional, subject to final audit by State. When a school is reimbursed out of Federal funds on account of more than one type of education, i. e., agricultural, trade, and industrial, home economics—it is included as a separate school or unit for each type.

In 1929–30 the enrollment in public vocational schools organized according to State plans approved by the Federal Board, both federally aided and not federally aided, totaled 1,064,303, an increase of 16,327 over the preceding year. The number of pupils enrolled in vocational courses in the federally aided schools, in the year ending June 30, 1930, are shown in Table 3.

TABLE 3.—PUPILS ENROLLED IN VOCATIONAL COURSES IN FEDERALLY AIDED SCHOOLS AND TEACHERS OF SUCH COURSES, 1929–30 [1]

Sex	Number	Increase as compared with preceding year
Pupils enrolled:		
Male	603,514	64,942
Female	378,135	29,877
Total	981,649	94,819
Teachers:		
Male	17,222	1,923
Female	7,654	809
Total	24,876	2,732

[1] Figures for 1929–30 are provisional, subject to final audit of State accounts.

Among the many subjects of publications issued by the Federal board during 1929–30 are: Agricultural education—organization and administration; analysis of the management of farm business; conference procedure in teaching vocational agriculture; master teachers of vocational agriculture; vocational training for airplane mechanics and aircraft engine mechanics; training of teachers for trade and industrial education; directory of trade schools; vocational education—labor's responsibility in cooperation with employers and the public

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schools; training supervisors for home economics education; training for leadership in commercial education—a report of the national committee on advanced courses in vocational education.

In discussing the rapid changes in industrial processes and employment conditions the board declares:

* * * it has been difficult if not impossible to adapt the program to the changing conditions, because the school has been already provided with equipment which authorities felt must be utilized. In more than one school in the country to-day boys and girls are being trained for occupations which have practically ceased to exist, for the simple reason that the school authorities have continued using equipment which they persuaded the community to purchase at a considerable expense some years ago. With increasing specialization and with the realization of the necessity for increasing spread in the character of vocational programs, it is obviously important that money shall not be expended for equipment, except as it is definitely determined that the equipment will be actually usable for a reasonable length of time.

The report emphasizes that courses should not be established nor public moneys expended in training for nonexistent jobs or for occupations oversupplied with labor. "Hence the question of correlating training to the absorbing power of occupation is becoming recognized as one requiring careful consideration."

To the extent that unemployment results from the displacement of labor by machinery, new industries, and new processes calling for new skill, and also to the extent that unemployment is caused by physical or other disabilities, vocational education appears to be a permanently effective remedy in some degree for unemployment. To forward an educational service in each State, which will endeavor to provide such remedy in the largest possible measure, may be commended, the Federal board states, as a practical objective in the program for vocational education, even though there are no directly available Federal funds for the particular part of the State program which includes such educational service.

Vocational Rehabilitation

THE Federal Government has participated in State programs of vocational rehabilitation of the civilian disabled for over a decade and has provided for such rehabilitation in the District of Columbia for part of the fiscal year 1929–30. Some statistical comparisons in connection with rehabilitation work are made in the accompanying table:

TABLE 4.—STATISTICS ON CIVILIAN REHABILITATION FOR THE YEAR 1929–30 AS COMPARED WITH THE PRECEDING YEAR

Item	Amount	Increase or decrease as compared with preceding year
Expenditures[1]—		
From Federal funds	$735,361.77	+$70,622.29
From State and local funds	956,559.79	+131,119.00
Total	1,691,921.56	+201,741.29
Number rehabilitated[2]	4,612	−33
Total live roll[2]	[3] 20,394	+3,607

[1] Figures for 1930 are provisional, subject to final audit of State accounts.

[2] Does not include District of Columbia, where 16 persons were completely rehabilitated after the passage of the act of Feb. 23, 1929, to provide for vocational rehabilitation in that district and where at the close of June, 1930, there were 167 persons in process of rehabilitation.

[3] Includes 96 pending applications.

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In 1929–30 more than 4,500 disabled persons were rehabilitated and placed in remunerative jobs, which included over 600 different occupations ranging from unskilled labor to wholly professional and technical employments. The average cost of rehabilitating a disabled person and rendering him self-supporting has been found to be, according to the Federal board, under $300, or less than the amount required to maintain such a person in idleness for one year.

Only four States have not yet passed rehabilitation legislation and in each of them it is expected that bills will be introduced this year.

Progress is reported for 1929–30 in a number of States which have expanded their rehabilitation service in order to provide for the needs of all sections of such States and of all groups of the disabled.

The industrial depression which marked the fiscal year of 1930 was reflected upon the rehabilitation services of the States. Naturally, in any period when it becomes increasingly difficult to secure employment for the able-bodied, State rehabilitation officers meet unusual obstacles in the placement of the disabled. When it is borne in mind that disabled persons are not reported to the Federal Government as rehabilitated until they have been placed in satisfactory remunerative employment, it is surprising that the States were able, with the facilities available and limited funds, to rehabilitate in 1930 [nearly] as many disabled persons as had been served in 1929 when business conditions were much more satisfactory.

The main accomplishment in 1929–30 in the field of research by the vocational rehabilitation division of the Federal board was, according to the report under review, the making of a study of vocational guidance. The results of this investigation are brought together in a bulletin which is essentially a handbook of procedure for rehabilitation workers with particular reference to the guidance phase of their service. Other important publications dealing with rehabilitation were also issued and a number of studies were listed as under way.

Report on Workers' Education Bureau, 1929–30

THE activities of the Workers' Education Bureau for 1929–30 are reviewed in the report of the Executive Council of the American Federation of Labor to the 1930 convention of the latter organization. Included in these activities was the holding in October, 1929, of an industrial congress in Worcester, Mass., in cooperation with the local central body and six State federations of labor. The object of the meeting was the consideration of the industrial future of New England.[1] The congress made provision for a continuation committee of representatives of the New England Federation of Labor, with the field representative of the Workers' Education Bureau in New England as secretary, to promote a series of industrial conferences in different trades in local sections. Under the leadership of this field representative, in cooperation with various local unions, conferences were held in the textile, railroad, and power industries. As a result of a power conference, provisions were made for the setting up of a joint advisory council for New England light and power utilities. After a textile conference a request was made by a local textile council for the preparation of a brief on the requirements of the industry to

[1] A report of this meeting was published in the Labor Review of December, 1929.

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be presented to the Massachusetts Industrial Commission. Week-end conferences were also held in industrial centers from Massachusetts to California, the subjects discussed ranging from labor to electric power and immigration.

In 1929 summer schools for workers were conducted in various States—Arkansas, California, New York, North Carolina, Pennsylvania, South Carolina, and Wisconsin. In some cases the sessions were held on school or college campuses and in other cases on special vacation grounds.

The facilities of the Chicago public schools were placed at the disposal of the federation of labor of that city and classes for men and women wage earners were conducted in the public-school buildings by instructors from the University of Chicago. Progress was reported under the plan of cooperation between tax-supported universities and State federations of labor, which was approved by the 1928 convention of the American Federation of Labor. The Texas State Federation of Labor has made arrangements for such cooperation with the University of Texas, and classes were scheduled for last fall in three centers. In Oklahoma, the State university and the State federation have formulated a similar scheme and classes have been carried on in two important industrial communities. In Wyoming some steps have already been taken toward such a cooperative scheme, and Rutgers University (New Jersey) has planned to have its plant utilized by the State federation of labor for a labor institute early next summer.

The bureau has under consideration the carrying on of correspondence courses, some preliminary conferences having already been held on the matter. At the time of the preparation of the report under review it was hoped to try the first experiment in such courses with two national unions within the year. The American Association for Adult Education has contributed $5,000 for this experiment.

The Workers' Education Bureau Press has proceeded with its publication program. Edward Eyre Hunt, secretary of the committee on recent economic changes, prepared a summary of the report of that organization under the title of "An Audit of America." This summary was published by the McGraw-Hill Book Co. with the cooperation of the bureau. The services of Dr. Wilson Gee, professor of rural sociology at the University of Virginia, were secured for the preparation of a column on "The place of agriculture in American life."

Industrial Education in Illinois, 1929–30

IN THE year ending June 30, 1930, the Illinois State staff on industrial education consisted of one supervisor, one assistant supervisor, and an assistant in teacher training, according to the annual report of the Illinois Board for Vocational Education for that period. During the year trade and industrial classes were conducted in 25 cities, the number of pupils enrolled being 25,201.

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The number of cities conducting specified classes and the number of pupils enrolled in such classes are given in the following table:

STATISTICS OF INDUSTRIAL EDUCATION IN ILLINOIS, 1929–30

Type of class or course	Number of cities conducting specified classes	Number of pupils enrolled	Number of teachers
Evening trade extension	17	6,135	183
Part-time trade extension for apprentices	7	3,212	43
Part-time trade preparatory	2	100	12
Full-time	14	1,877	94
Part-time general continuation schools	6	13,877	109
Teacher-training courses	6	611	[1] 2

[1] Instructors in charge.

The types of instruction offered in secondary industrial schools in the year ending June 30, 1930, are listed as follows:

Part-time schools (for persons at work who attend part-time schools four to eight hours a week during working hours).

(1) *Trade extension courses.*—Instruction was given in the shop work, the trade drawing, the trade science, and the trade mathematics which are related to the following trades: Baking, carpentry, electrical work, machine-shop practice, painting and paper hanging, metal lathing, welding, plumbing, railroad repair work, sheet-metal work, and steam fitting.

(2) *Commercial courses.*—Instruction was given in citizenship, English, and hygiene; and in accounting, office practice, retail selling, stenography, and commercial arithmetic.

(3) *General education courses.*—Instruction was given in citizenship, elementary science, English, geography, history, hygiene, mathematics, and home economics including cooking, sewing, millinery, and homecraft; and in manual training in sheet metal, auto repair, electrical work, forging, general woodwork, home mechanics, machine-shop practice, mechanical drawing, and printing.

Evening schools (for persons at work who attend evening schools two to eight hours a week outside of working hours).

Instruction was given in architectural drafting, auto repair, baking, blueprint reading and estimating, carpentry, coal mining, electrical construction, engineering mechanics, foremanship, forging, hoisting engineering, ignition, industrial chemistry, linotype, machine-shop practice, monotype, oxyacetylene welding, press feeding, printing, sheet-metal work, strength of materials, tailoring, radio technology, aero mechanics and theory of flight, salesmanship, movietone, metal lathing, painting and estimating, television, trade drawing and trade mathematics.

Full-time or all-day trade schools (for persons devoting their full time to school attendance, 30 clock hours a week for 36 to 40 weeks a year).

Trade courses were conducted for the following trades: Architectural drafting, auto repair, cabinetwork, carpentry, electrical, machine shop, mechanical drafting, pattern making, plumbing, printing, aero mechanics, and sheet metal. In each case, related trade subjects were offered.

Part-time continuation classes were discontinued in three districts—East Aurora, West Aurora, and Rockford—while Stanford and Woodstock have trade and industrial courses for the first time in 1929–30. Half-time cooperative courses at Granite City and the airplane mechanic classes at Cicero are included in the new work for the year under review.

The combined State and Federal funds disbursed for industrial courses in Illinois in 1929–30 totaled $334,421.

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Vocational Guidance in Canada

THE status of vocational guidance in Canada was briefly reported upon in an address before the commercial section of the Ontario Educational Association, Toronto, which is here reproduced in part from the December, 1930, issue of the Canadian Congress Journal (p. 18).

Some beginnings have been made in vocational guidance in the Dominion, and great progress has been made in diversifying educational opportunities through technical and commercial high schools and departments and through junior high schools and prevocational schools.

While junior high schools are almost unknown in Ontario, such institutions are becoming prominent in British Columbia and Manitoba. In Winnipeg alone there are at least 10 junior high schools. Such varied opportunities for training only accentuate the necessity for the vocational guidance of the young people.

Canadian occupational studies are few in number. Some studies of this kind have been made by the Department of Labor at Ottawa and Toronto but have not been made available for classroom work. "The study of educational and vocational opportunities in Montreal" is an innovation in this field and is reported as worthy of commendation. In approximately 75 schools surveyed it was found that no course in occupations was being given and, so far as the knowledge of the author goes, no course of this character was being given in any Dominion school.

Placements are being made quite effectively in numerous schools. Those in charge of this work are usually allowed the time to correlate this activity with the city shops and offices but the time given is so insufficient that it would seem nearly impossible in most cases to do the work effectively.

No Canadian community has a director of guidance whose function it is to coordinate and direct all guidance activities in the community, which, it is suggested in the address, may account for the haphazard method employed in the little guidance and placement work being done.

Only three schools were found by the investigator to have an official guidance counselor—the Kitsilano High and Junior High School in Vancouver, the Windsor-Walkerville Technical School and Pickering College at Newmarket, Ontario. In Kitsilano, a woman teacher gives five periods a day to the duties of counselor for the girls. The same institution will furnish a similar service for the boys next year. The Newmarket School has a director of a complete guidance program for boys. In several schools one or two men are allowed half a day a week to visit shops and offices to coordinate the work of the industry with school work and to look after placements. The technical schools of Toronto have one full-time coordinating official, who is greatly handicapped by inadequate assistance.

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COOPERATION

Loans Granted by Credit Unions in 1929

AN ACCOUNT of the development of the credit union movement in the United States was given in the November, 1930, issue of the Labor Review (pp. 1–11). Table 7 of that article showed the number of borrowers and the loans granted by the credit societies, State by State, in 1929, and the amounts outstanding at the end of the year. In the column showing loans made during the year an estimate was given for New York, the exact figures not being available at that time; they have, however, since been received. Also an error was made in the figure showing the average loan made, for all the States combined; this should have been $390 instead of $39 as shown. However, recomputation on the basis of the revised figure for New York brings the average loan for that State down to $439 and the average for all States to $350. The average loan is not the exact figure that would be obtained by dividing the total loans granted by the total number of borrowers given in the table, for the reason that some societies reported only as to borrowers, or only as to loans, while in the computation of the average loan only those societies were taken which reported on both points.

Since the table is an important one, and in order to correct the previous error, the table as corrected is reproduced below.

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LOANS GRANTED BY CREDIT UNIONS DURING 1929, AVERAGE AMOUNT OF LOAN, AND AMOUNT OUTSTANDING AT END OF YEAR

State	Number of societies reporting	Number of borrowers in 1929	Loans granted during year		Loans outstanding at end of year
			Amount	Average loan per borrower[1]	
Alabama	23	[2] 2,615	[2] $235,234	$90	$98,528
Arizona	1	146	6,831	45	6,533
Arkansas	1	35	4,049	45	1,578
California	16	1,774	208,520	118	115,827
Colorado	1	618	131,277	212	80,710
Connecticut	1	340	150,320	102	34,677
District of Columbia	1	873	30,252	14	12,630
Florida	1	180	40,000	172	32,000
Georgia	21	4,339	537,109	124	258,988
Illinois	32	5,555	863,306	155	435,592
Indiana	19	[3] 1,917	285,849	102	138,790
Iowa	36	1,406	[4] 170,755	133	93,781
Kansas	8	126	7,659	61	5,871
Kentucky	8	931	176,696	190	107,362
Louisiana	5	1,122	91,772	82	38,560
Maine	1	762	104,361	137	78,253
Maryland	3	350	27,888	80	21,644
Massachusetts	299	52,853	[5] 29,500,000	[5] 558	12,628,949
Michigan	20	[6]	372,392	----------	[6]
Minnesota	43	3,896	[6]	----------	472,570
Missouri	43	10,335	[6]	----------	[6]
Montana	1	23	7,500	326	3,500
Nebraska	5	463	66,252	143	35,906
New Hampshire	2	4,014	144,612	36	1,343,664
New Jersey	7	[7] 980	130,194	119	52,783
New York	125	41,792	18,365,000	439	11,532,531
North Carolina	21	1,159	[8] 129,395	116	115,710
Ohio	2	121	9,580	79	5,067
Oregon	3	1,981	107,073	54	47,654
Pennsylvania	1	10	175	18	150
Rhode Island	9	2,918	679,936	233	1,886,364
South Carolina	1	72	10,668	148	5,560
Tennessee	12	[9] 1,787	476,794	210	237,117
Texas	4	93	5,257	57	4,088
Utah	4	349	36,050	103	17,337
Virginia	17	5,498	510,348	93	263,275
Washington	6	766	51,488	67	62,603
West Virginia	6	855	[10] 107,442	139	63,370
Wisconsin	9	880	266,319	303	472,060
Total	818	[11] 153,934	[12] 54,048,353	350	30,811,582

[1] Based upon societies reporting both number of borrowers and loans granted.
[2] 22 societies.
[3] 18 societies.
[4] 27 societies.
[5] Estimated.
[6] No data.
[7] 6 societies.
[8] 20 societies.
[9] 11 societies.
[10] 5 societies.
[11] 794 societies.
[12] 720 societies.

Joint Recreational Activities of Cooperative Societies

JOINT recreational activities are becoming more and more a feature of the cooperative movement in certain parts of the United States. A number of the societies have held joint picnics, summer camps are being conducted for the children of cooperators, and summer courses and institutes are also being given jointly. An account was given in the December, 1929, issue of the Labor Review of the purchase of a park and recreation ground by the local cooperative societies in the vicinity of Marquette, Mich. The cooperative stores on the Mesaba Range in Minnesota have for the past several years held an annual

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picnic, arranged by the Mesaba Range Cooperative Federation, an informal organization formed for the purpose of promoting joint action in various lines.

Plans are now under way for the acquisition of a similar recreation center for the societies around Brule, Wis. An option has been obtained on 80 acres of wooded land on the Brule River, about three miles from the village of Brule. The property had been developed for club purposes and includes a clubhouse. The purchase price is $10,000.

The North Wisconsin Cooperative Park Association has been formed, through which the property will be owned and managed. Both local societies (of cooperative and labor groups) and individuals will be admitted to membership. Shares will be $5 each, with a limit of 100 shares to any individual or 200 shares to any organization.

In this park area the local societies will hold picnics, athletic events, children's camps, cooperative courses and institutes, concerts, dances, etc., and facilities will be available to the members for vacation purposes, week-ends, etc.[1]

Promotion of Cooperative Principles Among Young People

A DEFINITE attempt is being made in the organized cooperative movement in the United States, especially in the territory of the Cooperative Central Exchange, to arouse the interest of young people in cooperation. An account in the January, 1931, issue of the Cooperative Pyramid Builder, Superior, Wis., quotes from the Scottish Cooperator an article pointing out the unfortunate failure of the cooperative movement in that country also, heretofore, to enlist the interest of the young people, pointing out that: "There is no gainsaying the fact that the cooperative movement loses the benefit of a powerful driving force through lack of direct contact with youth. It loses in spirit and zest; it prefers caution to courage, and is apt to remain in deep and narrow ruts through the absence of a vigorous, jagging spirit from behind."

In the Cooperative Central Exchange territory the young people are being attracted into the cooperative movement through the medium of the Cooperative Youth League, an account of which is given in the article above noted. In the Exchange district, up to January, 1931, 34 local units of the league had been formed, which have an individual membership of 817 young people.

These units are going in for various activities. The most popular at present is stated to be basketball, a score of teams having already been formed in the district. It is planned to hold a basketball tournament this spring. Outdoor sports, such as skating, skiing, etc., are being carried on, and such indoor recreation as boxing, wrestling, calisthenics, etc. A district conference of all the labor sports groups is to be held, which it is hoped will result in the formation of a district sports organization to further the development along this line.

Cooperative educational courses will also be held next summer.

[1] Data are from Cooperative Pyramid Builder, Superior, Wis., January, 1931.

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Investigation of Cooperative Shoe Factories in Massachusetts

IN COMPLIANCE with a request from the Massachusetts Legislature (Resolves of 1930, ch. 30), the State Department of Labor and Industries conducted an investigation of the general question of the relation of employer and employee in cooperative shoe factories.[1] The scope of the investigation covered (1) the circumstances attending the purchase of stock by the employee as a condition precedent to his employment; (2) the nature and extent of the representations made by the employer to the employee; (3) the remedies open to the employee where the stock has no market value; and (4) the desirability of permitting this practice to continue.

The investigation was begun May 12, 1930, and covered 75 shoe manufacturing companies located in Boston, Lynn, Salem, Haverhill, Everett, Chelsea, Cambridge, and Brockton. In addition to the information concerning existing cooperative shoe shops, other pertinent information relative to shops which had sold stock but which were no longer operating was also obtained. There were apparently more than 25 such companies, whose failure probably involved a total loss of nearly $1,000,000 over a period of five years. Another part of the study considered the opinions of persons and organizations acquainted with the shoe manufacturing industry and the plan of selling stock to shoe workers.

The results of the investigation[2] showed that the selling of stock to employees in the shoe industry was not a new practice but it was not until 1924, when a large company in Lynn was organized, that the public became interested. Regarding the number of such companies the report says:

> Immediately following the shoe strike in Boston in April, 1929, several factories began to operate and to sell stock to employees. At the present time there are more than 35 corporations in Massachusetts which operate in accordance with this plan. The average number of employees working in these factories is about 7,000 when the factories are operating full time, and 80 per cent of that number are employed at present. Of those now employed, 70 to 80 per cent have purchased stock.

The cooperative or stock-selling corporations are of two types. The first includes those organized under chapter 157 of the General Laws of 1921—the cooperative corporations. In shoe shops of this type each employee is presumed to contribute an equal amount of capital, work and profits being also shared equally, while the officers are employees elected by the shop's crew. The investigation, however, disclosed that such conditions do not actually exist in fact, since a few men usually predominate as leaders. In most instances it is the shoe salesman who "promotes the idea and interests a group of workmen by making alluring promises, describing glowing prospects and assuring the operators of continuous work, which latter assurance is the feature above all others which appeals." However, it frequently happens that shortly after the factory begins to operate, prices are cut, work is not divided equally, wages are paid only in part, while sales commissions are paid in full. As a result the capital becomes

[1] See Labor Review, October, 1930, p. 107.
[2] Massachusetts House of Representatives. Doc. No. 301: Special report of the Department of Labor and Industries relative to the relation of employer and employee in cooperative shoe shops and to the purchase of stock by employees. Boston, 1930.

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depleted and it is necessary that more shares be sold, either with or without the consent of the employees.

The second type of corporation is organized under chapter 156 of the General Laws of 1921, and sells preferred stock or both preferred and common stock to its employees. The main reason given by the manufacturers for selling stock is that it tends to gain the cooperation and good will of the employees. By making the employees part owners of the corporation it is expected to make them do better work and be more loyal. The securing of additional capital is another reason for selling stock. While this was not generally admitted to be the primary reason, the investigation disclosed that in the majority of cases stock was sold "for the *sole* purpose of securing capital to carry on the business."

Various modifications of the stock-selling ideas are found. Under one plan described, the stock is not sold, but employees are required to deposit $100, for which a receipt is given. An initial deposit of $25 or $50 is required of the employee before he can be employed. The deposit is returned if the man is not employed within 30 days, but if given employment the balance of the $100 is deducted from his wages. The money paid in is returned to an employee one year after the date of his leaving or discharge. For breach of contract the money is forfeited.

The investigation as to the attitude of trade-unionists toward the cooperative plan shows that as a rule they are strongly opposed to stock selling to employees in the shoe industry. The feeling generally is "that they are forced to purchase stock; that if they do not do so their employment will be terminated, and that the plan operates to restrict their freedom." Few, if any, of the trade-unionists feel that the investment is "worth while," and many are of the opinion that "the capital is being obtained from them in order to bolster up an uncertain and risky venture." The general opinion among trade-unionists is that "they are 'buying jobs' that last for a time, and that eventually the company will fail with a consequent loss of their invested capital."

The attitude of representative shoe manufacturers who do not maintain employees' stock-purchasing plans is interesting. In general the feeling was expressed that the so-called cooperative shoe factories "do not have an injurious effect on the industry as a whole." From the manufacturer's viewpoint, "if competent management is maintained, as in any business, reasonable success is attained by companies of this kind." It is generally agreed, however, among the manufacturers "that at the present time there appears to be considerable danger of financial loss to stockholders; that is, to employees." As to the element of unfair competition, the manufacturers do not believe that any exists, since "the shoe-manufacturing business is a highly competitive one, and its problems are peculiar to itself. The problem of price cutting has always been one that this business has had to contend with. In effect, it is agreed that any concern to stay in business must obey the economic laws governing the business. If this is done the concern can find a place in the business, and competition from it need not be feared."

Summarizing the investigation, the commissioner of labor concludes that "the promoters of cooperative shoe shops claim that the purchase of stock by employees is not a condition precedent to employment,

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and point to the fact that some operatives who do not purchase stock are employed. Investigation shows, however, that many of these operatives were employed only temporarily or were newly hired, and soon after their employment began were requested to buy stock. The employees * * * are confident that if they do not do so they will shortly be dismissed." Since the stock of the corporations investigated is not listed on any stock exchange, there are only two classes of prospective purchasers to whom stock may be sold by an employee stockholder—another shoe worker and the corporation which issued the stock. The inquiry shows there is no market among shoe workers for stock owned by other shoe workers, and the concerns which originally sold the stock furnish an uncertain market, as there are usually provisions for deferred payment or the price is subject to arbitration.

As to the desirability of permitting the practice of selling stock to the employees to continue, the commissioner finds that—

It must not be inferred from this report that all cooperative shoe shops and other shoe manufacturing corporations that sell stock to their employees are not successful. Some operating under good management have paid and are paying dividends to their stockholders, and there are others that can justly claim that the business depression in the shoe industry is the reason for their poor financial condition.

It appears to this department that the practice should not be allowed to continue where the sale of such stock would result in fraud, and the department has been informed by the attorney general's office, and by the department of public utilities that the present law is sufficient to prevent such sale when there is fraud, or when such sale would result in fraud, and this appears to be as far as the Commonwealth can go in the matter. Chapter 56 of the Resolves of 1930 provides for a survey and study by the department of public utilities of the laws relating to the promotion and sale of securities. This department has placed at their disposal the report of our investigation on that subject.

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INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in January, 1931

DATA regarding industrial disputes in the United States for January, 1931, with comparable data for preceding months are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 shows the number of disputes beginning in 1927, 1928, and 1929, number of workers involved, and man-days lost for these years, the number of industrial disputes for each of the months—January, 1929, to January, 1931, inclusive—the number of disputes which began in these months, the number in effect at the end of each month, and the number of workers involved. It also shows, in the last column, the economic loss (in man-days) involved. The number of workdays lost is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working-days as normally worked by the industry or trade in question.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1929, TO JANUARY, 1931, AND TOTAL NUMBER OF DISPUTES, WORKERS, AND MAN-DAYS LOST IN THE YEARS 1927, 1928, AND 1929

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month or year
	Beginning in month or year	In effect at end of month	Beginning in month or year	In effect at end of month	
1927: Total	734	----------	349,434	----------	37,799,394
1928: Total	629	----------	357,145	----------	31,556,947
1929: Total	903	----------	230,463	----------	9,975,213
1929					
January	48	36	14,783	39,569	951,914
February	54	35	22,858	40,306	926,679
March	77	37	14,031	40,516	1,074,468
April	117	53	32,989	52,445	1,429,437
May	115	73	13,668	64,853	1,727,694
June	73	57	19,989	58,152	1,627,565
July	80	53	36,152	15,589	1,062,428
August	78	43	25,616	6,714	358,148
September	98	49	20,233	8,132	244,864
October	69	31	16,315	6,135	272,018
November	61	32	10,443	6,067	204,457
December	33	21	3,386	2,343	95,541
1930					
January	42	21	8,879	5,316	182,202
February	44	33	37,301	6,562	436,788
March	49	34	15,017	5,847	289,470
April	60	41	5,814	5,711	180,445
May	64	30	9,281	4,640	192,201
June	54	34	13,791	8,499	150,627
July	76	31	14,219	5,039	148,982
August	51	32	15,902	7,161	144,530
September	69	41	15,946	13,409	202,874
October	46	34	10,842	15,649	336,250
November	43	28	4,380	7,424	270,254
December [1]	26	10	5,573	6,117	198,029
1931					
January [1]	48	26	5,420	2,439	186,207

[1] Preliminary figures subject to change.

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Occurrence of Industrial Disputes, by Industries

TABLE 2 gives, by industry, the number of strikes beginning in November and December, 1930, and January, 1931, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN NOVEMBER AND DECEMBER, 1930 AND JANUARY, 1931

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	November	December	January	November	December	January
Bakers		1	3		50	168
Barbers			1			6
Building trades	8	5	13	839	280	867
Chauffeurs and teamsters	1	3	3	120	685	519
Clothing	21	3	6	812	730	903
Food workers	1		1	290		920
Furniture			3			78
Hotel and restaurant workers		1			30	
Metal trades		2	2		610	28
Miners	2	2	5	650	685	587
Motion picture operators, actors, and theatrical workers	2	3	1	40	435	6
Printing and publishing			1			21
Stone	1			11		
Municipal workers		1			50	
Textiles	6	4	8	1,545	1,078	1,207
Other occupations	1	1	1	73	940	110
Total	43	26	48	4,380	5,573	5,420

Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in January, 1931, classified by number of workers and by industries.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN JANUARY, 1931, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in January, 1931, involving—			
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers
Bakers	2		1	
Barbers	1			
Building trades	2	7	4	
Chauffeurs and teamsters			3	
Clothing	1	2	3	
Food workers				1
Furniture	2	1		
Metal trades	2			
Miners		2	3	
Motion picture operators, actors, and theatrical workers	1			
Printing and publishing		1		
Textiles	1	3	3	1
Other occupations			1	
Total	12	16	18	2

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Principal Strikes and Lockouts Beginning in January, 1931

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN JANUARY, 1931, BY INDUSTRIES AND CLASSIFIED DURATION

Industry	Classified duration of strikes ending in January, 1931				
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 months and less than 3 months	4 months and less than 5 months
Building trades	9	1			
Chauffeurs and teamsters	2				
Clothing	4	1			
Food workers	1				
Furniture		1			
Metal trades			1		
Miners	3				
Motion picture operators, actors, and theatrical workers	1				
Printing and publishing		1			
Textiles	3			2	1
Other occupations	1				
Total	24	4	1	2	1

In Table 4 are shown the number of industrial disputes ending in January, 1931, by industries and classified duration.

Fur workers, Connecticut.—A strike of 459 fur workers in Danbury against a wage reduction of 20 per cent began on January 2 and ended, it is understood, by January 21. Three fur companies were involved. The strike was successful as to two of the companies, but the third enforced a wage reduction of 10 per cent.

Kosher butchers, New York City.—A successful strike of 920 kosher butchers for a renewal of annual contracts providing for a 53-hour week and a minimum weekly wage of $40 is reported to have begun on January 10 and to have ended on January 22.

Textile (woolen) workers, Pennsylvania.—The Erben-Harding Co. (worsted mills) of Philadelphia, manufacturers of worsted yarns, is reported to have been affected by a brief and unsuccessful strike of 650 employees beginning January 12 and ending on the following day. Wages of those earning over $30 per week were reduced 10 per cent; those earning $30 or less per week were reduced 5 per cent.

Principal Strikes and Lockouts Continuing into January, 1931

Aeronautical workers, New Jersey.—The strike of some 600 employees of the Wright Aeronautical Corporation which began on December 12 was, it is understood, unsuccessful. It is reported that some of the strikers returned by January 14 and that the places of the others were filled.

Silk textile workers, Pennsylvania.—The strike of 400 employees of the Duplan Silk Corporation at Hazleton is reported to have ended with the signing on January 19 of an agreement drawn by Judge Clarence D. Coughlin of the Luzerne County Court, acting as mediator. The company announced, it is said, that because of business

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depression the resumption of operations may be slow, but it intends to expedite the reemployment of all workers as rapidly as possible under the circumstances. Old employees, it is understood, are to be reinstated without discrimination prior to hiring any new workers, and the wages in effect October 1 are to be restored.

Textile workers, Virginia.—The strike which began on September 29 involving directly or indirectly some 4,000 employees of the Riverside & Dan River Cotton Mills (Inc.) was ended on January 29 by a vote of the strikers.

Conciliation Work of the Department of Labor in January, 1931

By Hugh L. Kerwin, Director of Conciliation

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 40 labor disputes during January, 1931. These disputes affected a known total of 12,500 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 the 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 workers directly and indirectly involved.

On February 1, 1931, there were 35 strikes before the department for settlement and in addition 17 controversies which had not reached the strike stage. The total number of cases pending was 52.

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LABOR DISPUTES HANDLED BY CONCILIATION SERVICE DURING THE MONTH OF JANUARY, 1931

Company or industry, and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Old Ben Coal Co., Christopher, Ill.	Controversy	Miners	Mine closed. Effort to resume operation.	Unable to adjust. Unsatisfactory market conditions.	1928	1931 Jan. 21	1,000	
Hospital for the insane, Graystone Park, N. J.	do	Building crafts	Wages for new building and repairs.	Adjusted. Wages for all classes satisfactorily adjusted.	1930 Dec. 27	Feb. 2	35	
Queensboro Bridge approaches, New York City.	Strike	Bridge workers	Wages and nonunion labor	Pending	1931 Jan. 13		60	
Michigan State Normal Alumni Building, Ypsilanti, Mich.	Threatened strike.	Plasterers	Alleged refusal to observe union conditions.	Adjusted. Agreed on $9 per day for this job, $12 for succeeding jobs, and union conditions.	Jan. 12	Jan. 29	30	1,600
Do	Strike	Bricklayers	Wages cut from $1.67½ to $1.50 per hour.	Adjusted. Accepted $1.50 per hour beginning Feb. 1, 1931, for 1 year, and union recognition.	do	Feb. 4	20	2,845
Pontiac Dairy, Pontiac, Mich.	Threatened strike.	Operating engineers	Wages cut 10 per cent	Adjusted. Cut accepted for 6 months.	Jan. 1	Jan. 31	3	40
Barbers, Seattle, Wash.	Controversy	Barbers	Reduction in weekly allowance and commission.	Adjusted. Agreed on arbitration; board named and accepted.	Jan. 18	Jan. 23	425	
Lucille Knitting Co., Philadelphia, Pa.	Strike	Hosiery workers	Workers asked to pay for poor work.	Pending	Jan. 12		105	95
United States Silk Hosiery Mills, Philadelphia, Pa.	Lockout	do	Wages cut 15 to 40 per cent; alleged violation of agreement.	do	Jan. 19		800	
Paterson Mutual Hosiery Co., Philadelphia, Pa.	Strike	do	Wages cut 20 per cent	Adjusted. Former rate restored	Jan. 16	Jan. 20	100	120
Building trades, Pittsburgh, Pa.	do	Electricians, plumbers, steam fitters, and ironworkers.	Nonunion electricians employed.	Unclassified. All union workers employed before commissioner's arrival.	Jan. 15	Jan. 21	44	
Aaron Lieberman & Sons, Philadelphia, Pa.	do	Clothing workers	Alleged violation of agreement by company.	Pending	Jan. 2		42	
I. Doctor Dress Manufacturing Co., Chicago, Ill.	Threatened strike.	do	Wages cut in violation of agreement.	do	Jan. 21		32	
Ambassador Theater, Chicago, Ill.	do	Stage hands' union	Union asked theater to employ one stage hand.	Adjusted. Amicably settled; stage hand not employed.	Jan. 2	Jan. 29	1	
Taylor & Friedsam Co., Paterson, N. J.	Strike	Silk ribbon weavers	Change from piecework to week work reduced wages to $30 per week; asked $33.	Pending	Jan. 3		35	4
Queen Product Co., Manhattan, N. Y.	Lockout	Pocketbook makers	Work sent to outside shops in violation of agreement.	do	Jan. 21		85	
Shoe workers, Haverhill, Mass.	Threatened strike.	Shoe workers	Refusal to accept 10 per cent wage cut.	Compromise settlement	Jan. 7	Jan. 23	100	100
Mosaic and terrazzo workers, Detroit, Mich.	do	Building crafts	Alleged violation of agreement	Adjusted. Allowed union wages and conditions; agreement for 1 year beginning Feb. 1, 1931.	Jan. 22	Feb. 3	60	225

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City Hall Building, Buffalo, N. Y.	Strike	Building mechanics	Installation of electric facilities	Adjusted. Resumed work; negotiations continued and successfully concluded.	Jan. 20	Feb. 5	225	100
Patchogue-Plymouth Mill Corp., Patchogue, N. Y.	do	Lace operatives	Wages cut 10 per cent. Workers unable to accept cut without consent of international union.	Pending	Jan. 7		20	500
Fellows Huber Silk Co., East Stroudsburg, Pa.	do	Silk workers	Asked union wages and conditions.	Adjusted. Allowed union conditions.	Jan. 20	Jan. 24	77	
Finch Manufacturing Co., Scranton, Pa.	Lockout	Molders	Wages cut 10 per cent	Pending	Jan. 9		14	
Hillman Coal & Coke Co., Wendell, Pa.	Strike	Miners	Wages cut 15 to 20 per cent	Unable to adjust	Jan. 20	Jan. 29	400	
Hymen Bros. Dress Manufacturing Co., Chicago, Ill.	Threatened strike.	Garment workers	Employee in cutting room discharged.	Adjusted. Temporarily reinstated	Jan. 24	Jan. 28	115	
Yellow Taxicab Co., Providence, R. I.	Strike	Drivers	Asked 45 cents per hour, 10-hour day, and recognition.	Pending	Jan. 22		200	
Fred Herbert & Meisel Trunk Co., St. Louis, Mo.	Controversy	Leather workers	Wage cut	do	Jan. 5		38	
Valley Camp Coal Co., near Kensington, Pa.	Strike	Coal miners	Wages cut 15 per cent	Adjusted. Wage cut accepted	Jan. 1	Jan. 3	125	25
Hardwick & Magee Co., Philadelphia, Pa.	do	Weavers	Wages cut 10 per cent	Pending	Jan. 5		218	782
Thos. W. Buck Hosiery Co., Philadelphia, Pa.	do	Hosiery workers	Wage cut and alleged violation of agreement.	do	Jan. 1		20	
Chemical Building, Bloomington, Ind.	Controversy	Painters	Question of union or nonunion painters.	Adjusted. Union men employed	Jan. 3	Jan. 14	10	40
Do	Threatened strike.	Plumbers, electricians, and carpenters.	do	do	do	do	50	5
Pincus & Tobias Shoe Co., Brooklyn, N. Y.	Strike	Shoe workers	Dissatisfaction with foreman; discharges.	Adjusted. Foreman discharged; all employees reinstated.	Jan. 9	Jan. 22	80	
Franklin Hosiery Co., Philadelphia, Pa.	do	Hosiery workers	Wages cut in October. Asked restoration.	Pending	Jan. 8		165	
Kosher butchers, 850 shops, New York City.	do	Butchers	Hours and wages	Adjusted. Allowed $40 per week minimum.	Jan. 10	Jan. 22	920	
National Fur Co. and Eastern Fur Co., Danbury, Conn.	do	Fur workers	Wages cut from 20 to 45 per cent	Pending	Jan. 5		150	
Eastern Bank & Trust Co., Spokane, Wash.	Controversy	Building	Wages cut $1 to $1.60 per day and open shop.	do	Jan. 8		150	
Dredging contractors, Harrisburg, Ill.	Strike	Laborers, hod carriers, and engineers.	Engineers asked $1.25 per hour; laborers, work of clearing right of way.	Adjusted. Engineers allowed 8-hour day at $1 per hour; laborers given all clearing work except half-mile strip.	Jan. 2	Jan. 16	38	
Park Plaza Hotel Building, St. Louis, Mo.	do	Painters	Discharge of shop steward	Adjusted. Shop steward reinstated	Jan. 5	Jan. 15	25	
State Teachers College, Kutztown, Pa.	Controversy	Electricians	Nonunion electricians employed below prevailing wage.	Pending	Jan. 13		(1)	
State Hospital, Allentown, Pa	Strike	Building	Refusal to employ union men	Adjusted. Job to be finished without change.	Jan. 12	Jan. 13	2	
Total							6,019	6,481

[1] Not reported.

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Settlement of South Wales Coal Strike

AFTER the stoppage of 1926 the miners of South Wales went back to work under an agreement which set the hours of work underground at eight per day for five days and seven on Saturday for the morning shift, and for the afternoon and night shifts at eight for five days in the week with no Saturday turn. This arrangement was terminated by the coming into force of the coal mines act of 1930 (see Labor Review, October, 1930, p. 108), which reduced hours of work underground to seven and one-half a day, though it permitted a "spread over" of 90 hours per fortnight if the employers and workers of any district agreed in asking for it and their request was approved by the employers' association and the miners' federation. When it came to applying the new law there was a sharp disagreement between employers and workers. The employers claimed that the reduction in hours must be accompanied by a reduction in wages, but in some of the districts they were willing to maintain wage rates subject to the application of the spread-over. The workers opposed any reduction of rates and were on the whole opposed to the principle of the spread-over. This was the attitude of the miners' federation, which vetoed district agreements providing for the spread over, and since the federation's approval was necessary before it could be introduced, this action caused a serious hitch in negotiations. At the Prime Minister's request, the federation agreed to the use of the spread-over for three months, provided no reductions in wages were made. The South Wales miners were particularly reluctant to accept this decision, but worked through December under a temporary agreement with the employers, as follows:

1. No variation was made in the previous terms and conditions regarding payment of wages.
2. Hours of work per fortnight were: First week, five days of eight hours each and seven hours on Saturday; second week, five days of eight hours each and no work on Saturday, making a total of 87 hours in two weeks.

The owners proposed that this plan should be continued to the end of January, but the miners refused, pointing out that for the surface workers and the day wage men it meant the loss of one day's pay each fortnight. Instead they urged eight hours' work for five days a week with five hours on Saturday, thus making the full 90 a fortnight, but avoiding the loss of one day's pay. The owners would not agree, and the men carried the case to the national industrial board provided for in the coal act. This body recommended the working of as many hours as possible during the fortnight, but supported the men's contention that it should be spread over 12 days; except for this rearrangement of hours the board recommended maintaining the terms and conditions of the 1926 agreement to March 31, 1931, and thereafter until altered by agreement between the parties. The two parties would not come together on these terms, and on January 1, 1931, work in the mines stopped, affecting 150,000 men.

There were two fundamental points at issue: The men were unwilling to accept a reduction of wages and insisted that the national industrial board was, under the new act, the proper body to decide the dispute; the owners maintained that a reduction of wages was necessary, refused to recognize the right of the national board to handle

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the matter, and insisted on its being referred to a joint conciliation board with an independent chairman. The strike continued for more than two weeks, and was brought to an end only by the earnest efforts of the Government representatives, who finally effected a compromise agreement to last until January 31, 1934, with a provision for reviewing wages on the application of either side at the end of a year, and "before the coming into operation of any statutory change in the hours of work"—which meets the emergency likely to arise when the 8-hour act expires in July. The Manchester Guardian, in its issue for January 16, thus sums up the agreement:

> The agreement provides for a 7½-hour day instead of the 8-hour day worked in South Wales since the 1926 stoppage. For six weeks wages will remain at the same rate as before January 1. But by February 28 the joint conciliation board will have considered, and the independent chairman of the board will have given a final decision on the minimum percentage and subsistence wage to be paid. In other words, the coal owners' application for wages reductions will have been arbitrated upon, and the chairman's award will come into force on March 1.
> * * *
> The general effect is a compromise. South Wales does not adopt a spread-over, but conforms to the 7½-hour day of the act. The men suffer no reduction (beyond the loss of half an hour's pay a day by pieceworkers) until the end of February, when they stand to lose or gain according as the independent chairman rules. The men have gained their point on hours; the owners have gained theirs on the right to have wages settled finally by local arbitration and not by the national board.

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LABOR TURNOVER

Labor Turnover in American Factories, January, 1931

THE Bureau of Labor Statistics presents herewith turnover indexes for manufacturing as a whole and for eight separate manufacturing industries. The form of average used in the following tables is the weighted *arithmetic mean*. In the past the bureau has been using the unweighted median of company rates. The averages for the months January to December, 1930, as presented in Tables 1 and 2, have been recomputed to present the arithmetic mean. They, therefore, will differ from the figures presented for the same months when the unweighted median was used.

The form of average was changed because the bureau considers that the arithmetic mean gives a more representative picture of actual turnover conditions in industry as a whole than the median of company rates. In using the median, the small company had as much influence on the rates as the large company. In using the arithmetic mean each company has an influence on the rate in proportion to the number of its employees.

The number of quits, lay-offs, discharges, and accessions actually occurring during the month in all plants reporting are added. The totals of each of these items are divided by the total average number on the company pay rolls during the month. This gives the monthly quit, lay-off, discharge, and accession rates. The equivalent annual rates are obtained by multiplying the monthly rates by the number of times the days in the current month is contained in the 365 days in the year. Since the month of January has 31 days, the equivalent annual rate is obtained by multiplying the monthly rates by 11.77.

The indexes for manufacturing as a whole are compiled from reports made to the Bureau of Labor Statistics from representative establishments in over 75 industries employing at this time about 1,250,000 people. In the eight industries for which separate indexes are presented reports were received from representative plants employing approximately 25 per cent of the employees in such industries as shown by the Census of Manufactures of 1927. In the automotive industry schedules were received from plants employing nearly 200,000 people; firms reporting for boots and shoes employed nearly 100,000 people; and those for cotton manufacturing employed nearly 125,000 people; the foundry and machine shop firms reporting had approximately 175,000 people on their pay rolls; the furniture industry is represented by firms employing nearly 40,000 people; the iron and steel industry, by firms employing 225,000 people; the reports received from representative sawmills indicate that there were approximately 65,000 people on their pay rolls; while slaughtering and meat packing reports showed nearly 85,000 people.

In addition to the quit, discharge, lay-off, total separation, and accession rates, the bureau presents the net turnover rate. The net turnover rate means the rate of replacement. It is the number of jobs

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that are vacated and filled per 100 employees. In a plant that is increasing its force, the net turnover rate is the same as the separation rate because while more people are hired than are separated from their jobs the number hired above those leaving is due to expansion and can not justly be charged to turnover. On the other hand, in a plant that is reducing its employees the net turnover rate is the same as the accession rate, for while more people leave than are hired the excess of separations over accessions is due to a reduction of force and can not logically be charged as a turnover expense. For the first time since November, 1929, the net turnover rate for manufacturing as a whole is the same as the separation rate. Table 1 shows for all industries the total separation rate subdivided into quit, discharge, and lay-off rates, together with the accession and net turnover rates presented both on a monthly and an equivalent annual basis.

TABLE 1.—AVERAGE LABOR TURNOVER RATES IN SELECTED FACTORIES IN 75 INDUSTRIES

A.—Monthly Rates

Month	Separation rates								Accession rate		Net turnover rate	
	Quit		Lay-off		Discharge		Total					
	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931
January	1.85	0.74	2.70	1.95	0.54	0.19	5.09	2.88	3.95	2.97	3.95	2.88
February	1.60	-------	2.50	-------	.62	-------	4.72	-------	3.94	-------	3.94	-------
March	1.94	-------	2.83	-------	.60	-------	5.37	-------	4.15	-------	4.15	-------
April	2.11	-------	2.57	-------	.53	-------	5.21	-------	3.55	-------	3.55	-------
May	2.01	-------	2.68	-------	.48	-------	5.17	-------	3.28	-------	3.28	-------
June	1.85	-------	3.00	-------	.46	-------	5.31	-------	2.92	-------	2.92	-------
July	1.35	-------	4.17	-------	.32	-------	5.84	-------	2.51	-------	2.51	-------
August	1.40	-------	3.99	-------	.36	-------	5.75	-------	2.71	-------	2.71	-------
September	1.50	-------	3.14	-------	.36	-------	5.00	-------	3.27	-------	3.27	-------
October	1.29	-------	2.88	-------	.32	-------	4.49	-------	2.56	-------	2.56	-------
November	.90	-------	2.77	-------	.24	-------	3.91	-------	2.05	-------	2.05	-------
December	.84	-------	2.74	-------	.21	-------	3.79	-------	2.13	-------	2.13	-------
Average	**1.55**	-------	**3.00**	-------	**.42**	-------	**4.97**	-------	**3.08**	-------	**3.08**	-------

B.—Equivalent Annual Rates

January	21.8	8.7	31.8	23.0	6.4	2.2	60.0	33.9	46.5	35.0	46.5	33.9
February	20.9	-------	32.6	-------	8.0	-------	61.5	-------	51.4	-------	51.4	-------
March	22.8	-------	33.3	-------	7.1	-------	63.2	-------	48.8	-------	48.8	-------
April	25.7	-------	31.3	-------	6.5	-------	63.5	-------	43.2	-------	43.2	-------
May	23.7	-------	31.5	-------	5.6	-------	60.8	-------	38.6	-------	38.6	-------
June	22.5	-------	36.5	-------	5.6	-------	64.6	-------	35.5	-------	35.5	-------
July	15.9	-------	49.1	-------	3.8	-------	68.8	-------	29.5	-------	29.5	-------
August	16.5	-------	47.0	-------	4.2	-------	67.7	-------	31.9	-------	31.9	-------
September	18.3	-------	38.2	-------	4.4	-------	60.9	-------	39.8	-------	39.8	-------
October	15.2	-------	33.9	-------	3.8	-------	52.9	-------	30.1	-------	30.1	-------
November	11.0	-------	33.7	-------	2.9	-------	47.6	-------	24.9	-------	24.9	-------
December	9.9	-------	32.2	-------	2.5	-------	44.6	-------	25.1	-------	25.1	-------
Average	**18.7**	-------	**35.9**	-------	**5.1**	-------	**59.7**	-------	**37.1**	-------	**37.1**	-------

The accession rate for manufacturing as a whole for the month of January, 1931, was 2.97. The total separation rate was 2.88. Comparing January, 1931, rates with those for December, 1930, there was a decrease in the quit, lay-off, and discharge rates, but an increase in the accession rate. The quit, discharge, and lay-off rates were lower than for any month since January, 1930. The accession rate was higher than for any month since September, 1930. Comparing January, 1931, figures with those for January, 1930, it will be seen that

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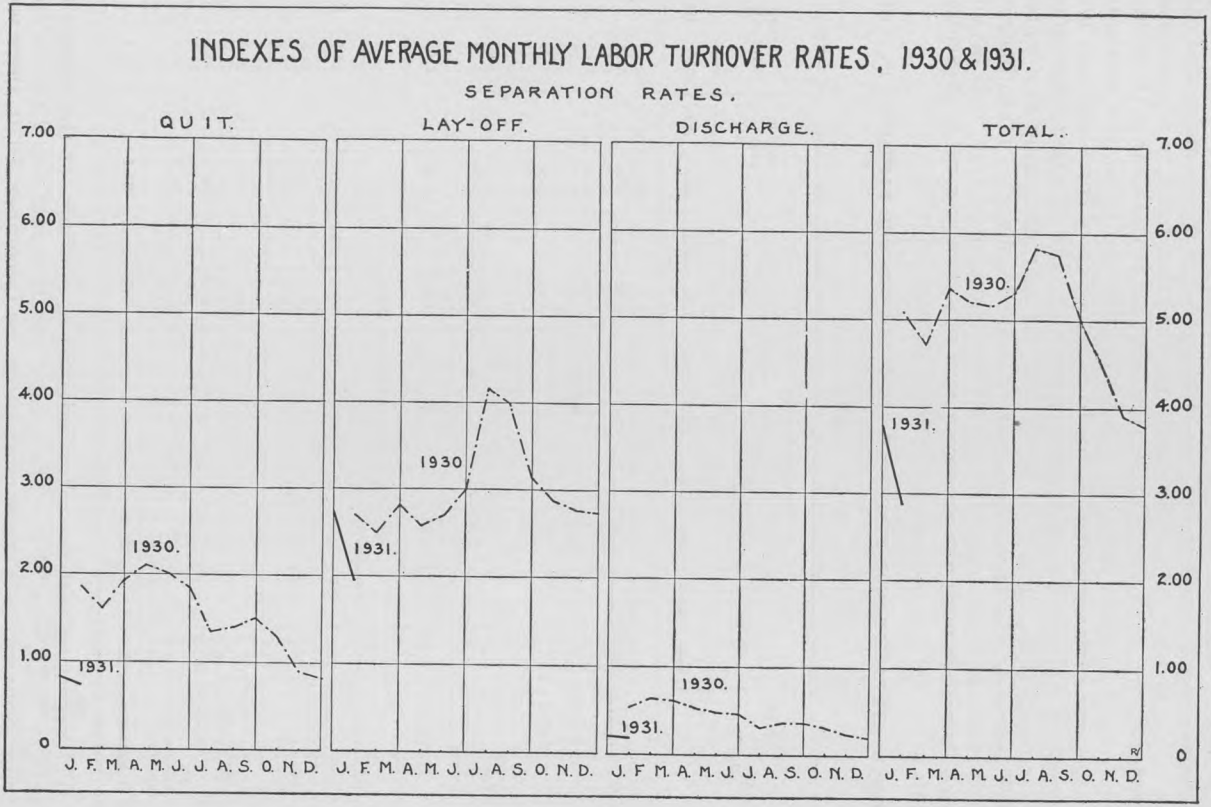

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the quit, lay-off, discharge, and accession rates were all lower than a year ago. For January, 1930, however, the total separation rate was much higher than the accession rate, while for January, 1931, the accession rate is slightly higher than the total separation rate.

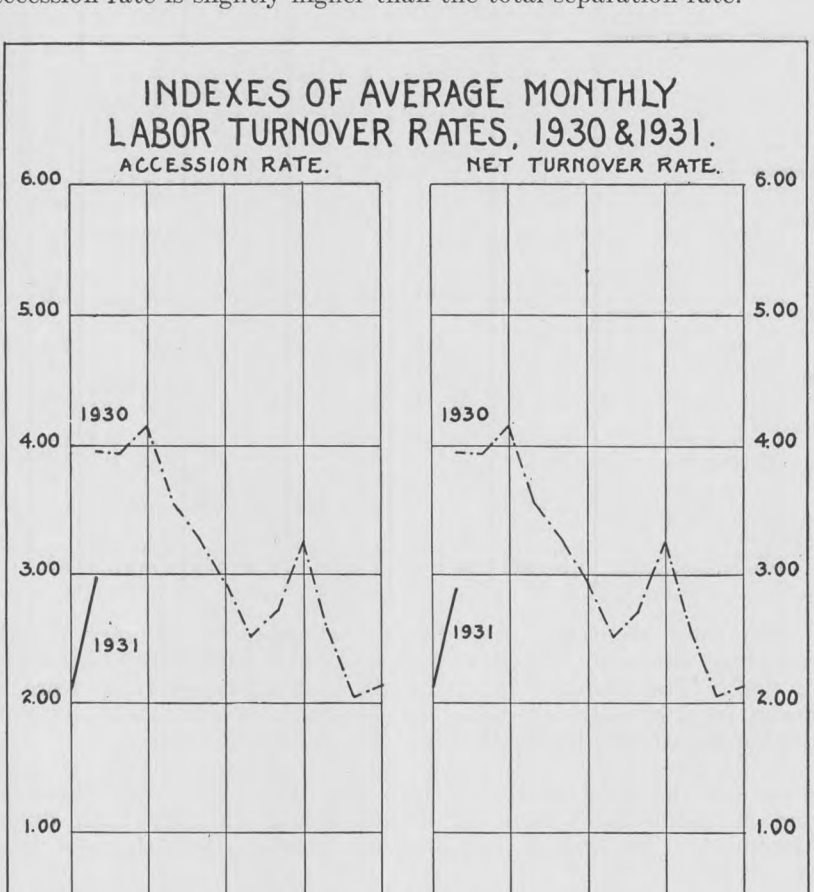

Table 2 shows the quit, discharge, lay-off, accession, and net turnover rates for automobiles, boots and shoes, cotton manufacturing, iron and steel, sawmills, slaughtering and meat packing, foundries and machine shops, and furniture for the months of December, 1930, and January, 1931, presented both on a monthly and an equivalent annual basis.

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TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES

Industry, year, and month	Separation rates								Accession rates		Net turnover rate	
	Quit		Discharge		Lay-off		Total					
	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual
Automobiles:												
December, 1930	0.88	10.4	0.17	2.0	3.69	43.4	4.74	55.8	3.43	40.4	3.43	40.4
January, 1931	.54	6.4	.18	2.1	2.63	31.0	3.35	39.5	2.92	34.4	2.92	34.4
Boots and shoes:												
December, 1930	1.03	12.1	.24	2.8	3.88	45.7	5.15	60.6	3.66	43.1	3.66	43.1
January, 1931	1.23	14.5	.37	4.4	1.88	22.1	3.48	41.0	4.48	52.7	3.48	41.0
Cotton manufacturing:												
December, 1930	.58	6.8	.24	2.8	1.92	22.6	2.74	32.2	1.46	17.2	1.46	17.2
January, 1931	1.00	11.8	.40	4.7	2.60	30.6	4.00	47.1	3.57	42.0	3.57	42.0
Foundries and machine shops:												
December, 1930	.55	6.5	.26	3.1	3.10	36.5	3.91	46.1	2.05	24.1	2.05	24.1
January, 1931	.52	6.1	.22	2.6	2.32	27.3	3.06	36.0	2.93	34.5	2.93	34.5
Furniture:												
December, 1930	.68	8.0	.35	4.1	6.66	78.4	7.69	90.5	2.35	27.7	2.35	27.7
January, 1931	.55	6.5	.25	2.9	4.84	57.0	5.64	66.4	5.24	61.7	5.24	61.7
Iron and steel:												
December, 1930	.82	9.7	.10	1.2	2.23	26.2	3.15	37.1	1.40	16.5	1.40	16.5
January, 1931	.71	8.4	.09	1.1	1.36	16.0	2.16	25.5	2.52	29.7	2.16	25.5
Sawmills:												
December, 1930	1.39	16.4	.93	10.9	7.42	87.3	9.74	114.6	4.51	53.1	4.51	53.1
January, 1931	.97	11.4	.43	5.1	8.02	94.4	9.42	110.9	9.99	117.6	9.42	110.9
Slaughtering and meat packing:												
December, 1930	1.69	19.9	.57	6.7	5.59	65.8	7.85	92.4	6.24	73.4	6.24	73.4
January, 1931	1.29	15.2	.61	7.2	4.40	51.8	6.30	74.2	9.50	111.8	6.30	111.8

The total separation rate for the automotive industry for the month of January, 1931, was 3.35 compared with an accession rate of 2.92. The January quit, lay-off, and accession rates were all lower in this industry than for December, 1930. The January discharge rate was higher than the December discharge rate.

In the boot and shoe industry, the accession rate for January was 4.48, and the total separation rate was 3.48. The quit, discharge, and accession rates were all higher during January than during December. The lay-off rate was much lower than the December lay-off rate.

The cotton manufacturing industry had a total separation rate of 4.00 and an accession rate of 3.57. The quit, discharge, lay-off and accession rates were all higher for January than for December.

The total separation rate for the foundry and machine-shop industry was 3.06, and the separation rate 2.93. Comparing January rates with December rates, the quit, discharge, and lay-off rates were all lower than a month ago. There was a sharp rise, however, in the January accession rate as compared with the December accession rate.

The January accession rate for the furniture industry was 5.24, while the total separation rate was 5.64. The quit, discharge, and lay-off rates were lower for January than for December. The accession rate for January was much higher than the December accession rate in the furniture industry.

The iron and steel industry during January had an accession rate of 2.52, and a total separation rate of 2.16. Comparing January

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rates with those for December, there was a decrease in the quit, discharge, and lay-off rates. The accession rate showed a marked increase.

The sawmill industry had a total separation rate of 9.42 and an accession rate of 9.99. The January accession rate was more than twice as high as the December accession rate in this industry. There was also a slight increase in the lay-off rate. The quit and discharge rates were both lower for January than for December.

The total separation rate for the slaughtering and meat-packing industry was 6.30. The accession rate was 9.50. The January accession and discharge rates were higher than the like rates for December. The quit and lay-off rates were lower for January than for December.

Boots and shoes, cotton manufacturing, sawmills, and slaughtering and meat packing each had higher quit rates than the all-industry quit rate. Automobiles, foundries and machine shops, furniture, and iron and steel had lower quit rates than that shown for all industries.

The discharge rate for boots and shoes, cotton manufacturing, foundries and machine shops, furniture, sawmills, and slaughtering and meat packing was higher than the all-manufacturing discharge rate. The discharge rate for automobiles and iron and steel was lower than the all-manufacturing rate.

A higher lay-off rate than the all-manufacturing rate was shown by the following industries: Automobiles, cotton manufacturing, foundries and machine shops, furniture, sawmills, and slaughtering and meat packing. The boot and shoe and iron and steel lay-off rates were lower than the lay-off rate for all manufacturing industries.

The accession rate for all manufacturing industries was 2.97. This was exceeded by the accession rate for boots and shoes, cotton manufacturing, furniture, sawmills, and slaughtering and meat packing. The accession rate for automobiles, foundries and machine shops, and iron and steel was lower than the accession rate as shown by all manufacturing. The highest quit rate for any of the industries for which separate indexes are presented was 1.29, shown by the slaughtering and meat-packing industry. The lowest quit rate, 0.52 was registered in the foundry and machine shop industry. The slaughtering and meat-packing industry also had the highest discharge rate, 0.61. The lowest discharge rate, 0.18, was shown by the automotive industry. The highest lay-off rate was 8.02 registered by sawmills. The lowest lay-off rate, 1.36, was shown by the iron and steel industry. Sawmills also had the highest accession rate with 9.99. The lowest accession rate was shown in the iron and steel industry, where the January hiring rate was 2.52.

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HOUSING

Building Permits in Principal Cities, January, 1931

THE Bureau of Labor Statistics has received building permit reports from 295 identical cities having a population of 25,000 and over for the months of December, 1930, and January, 1931, and from 295 identical cities for the months of January, 1930, and January, 1931. In addition, reports were received from 40 cities which have reached a population of 25,000 since the last census. The data for these 40 cities are shown in Table 7 for the month of January, 1931, but the figures for these cities are not included in the totals. The reports received from the cities enumerated show the amount of building projected within the corporate limits of the cities. No land costs are included.

The States of Illinois, Massachusetts, New Jersey, New York, and Pennsylvania, through their departments of labor, are cooperating with the United States Bureau of Labor Statistics in the collection of these data.

Table 1 shows the estimated cost of new residential buildings, of new nonresidential buildings, and of total building operations in 295 cities of the United States by geographic divisions.

TABLE 1.—ESTIMATED COST OF NEW BUILDINGS IN 295 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN DECEMBER, 1930, AND JANUARY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwellings					
	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931
New England	$5,689,850	$2,776,200	469	509	$8,342,048	$1,185,128	$15,699,771	$5,102,159
Middle Atlantic	22,279,370	19,098,745	4,933	3,741	14,702,872	15,279,214	45,289,905	44,318,550
East North Central	4,466,172	3,743,931	844	722	8,353,341	11,629,040	15,945,150	17,223,810
West North Central	1,371,229	1,241,211	338	308	5,701,063	2,372,414	8,219,015	4,065,987
South Atlantic	1,528,075	1,867,588	315	482	9,289,333	1,587,100	11,934,919	6,049,886
South Central	2,902,149	2,784,458	675	908	6,782,987	5,448,376	10,560,943	9,010,547
Mountain and Pacific	6,173,320	4,810,590	1,730	1,411	11,580,139	6,204,899	19,501,691	12,907,582
Total	44,410,165	36,322,723	9,304	8,081	64,751,783	43,706,171	127,151,394	98,678,521
Per cent of change		−18.2		−13.1		−32.5		−22.4

According to permits issued during January, 1931, the estimated cost of total construction was $98,678,521, a reduction of 22.4 per cent as compared with the total building operations for which permits were issued during December, 1930. Residential buildings decreased 18.2 per cent in estimated cost comparing permits of these two months, and new nonresidential buildings decreased 32.5 per cent. The new residential buildings for which permits were issued during the month of January, 1931, in these 295 cities were planned to house 8,081 families, a decrease of 13.1 per cent compared with

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the number of families provided for in the residences for which permits were issued in December, 1930.

Decreases in residential buildings occurred in each of the geographic divisions except the South Atlantic. Increases in new nonresidential buildings occurred in the Middle Atlantic States and the East North Central States. The other geographic divisions registered decreases in nonresidential buildings.

The East North Central was the only geographic division showing an increase in total building operations, all other geographic divisions registering decreases.

Comparing January, 1931, permits with December, 1930, permits, the number of families provided for increased in the New England States, the South Atlantic States, and the South Central States. Decreases in family dwelling units occurred in the Middle Atlantic States, the East North Central States, the West North Central States, and the Mountain and Pacific States.

Table 2 shows the estimated cost of additions, alterations, and repairs as shown by permits issued, together with the percentage of increase or decrease in January, 1931, as compared with December, 1930, in 295 identical cities by geographic divisions.

TABLE 2.—ESTIMATED COST OF ADDITIONS, ALTERATIONS, AND REPAIRS IN 295 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN DECEMBER, 1930, AND JANUARY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	Estimated cost		Per cent of increase or decrease in January, 1931, compared with December, 1930
	December, 1930	January, 1931	
New England	$1,667,873	$1,140,831	−31.6
Middle Atlantic	8,307,663	9,940,591	+19.7
East North Central	3,125,637	1,850,839	−40.8
West North Central	1,146,723	452,362	−60.6
South Atlantic	1,117,511	2,595,198	+132.2
South Central	875,807	777,713	−11.2
Mountain and Pacific	1,748,232	1,892,093	+8.2
Total	17,989,446	18,649,627	+3.7

There was an increase of 3.7 per cent in the estimated cost of the additions, alterations, and repairs for which permits were issued during the month of January, 1931, as compared with the estimated cost of this class of construction for which permits were issued during December, 1930.

Three of the seven geographic divisions showed increases in the estimated cost of additions and alterations; the other four divisions registered decreases. The increases ranged from 8.2 per cent in the Mountain and Pacific States to 132.2 per cent in the South Atlantic States. The decreases ranged from 11.2 per cent in the South Central States to 60.6 per cent in the West North Central States.

Table 3 shows the index numbers of families provided for and the index numbers of indicated expenditures for residential buildings, for nonresidential buildings, for additions, alterations, and repairs, and for total building operations. These indexes are worked on the chain system with the monthly average of 1929 equaling 100.

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TABLE 3.—INDEX NUMBERS OF FAMILIES PROVIDED FOR AND OF THE ESTIMATED COST OF BUILDING OPERATIONS AS SHOWN BY PERMITS ISSUED IN PRINCIPAL CITIES OF THE UNITED STATES, JANUARY, 1930, TO JANUARY, 1931

[Monthly average, 1929=100]

Year and month	Families provided for	Estimated cost of—			
		New residential buildings	New nonresidential buildings	Additions, alterations, and repairs	Total building operations
1930					
January	34.2	29.4	64.3	55.1	46.1
February	43.0	34.7	51.8	57.5	44.1
March	57.1	47.2	87.1	77.5	66.4
April	62.0	51.0	100.1	81.8	73.8
May	59.6	48.5	90.7	84.5	69.3
June	54.4	45.1	82.5	74.6	63.3
July	49.9	44.1	86.7	77.4	64.8
August	48.7	43.4	67.2	58.6	54.4
September	51.3	44.4	73.8	64.2	58.2
October	58.3	44.9	53.5	58.1	49.7
November	52.9	42.5	54.4	37.8	46.3
December	45.0	37.6	64.3	53.5	50.1
1931					
January	39.1	30.8	43.4	55.5	38.9

The index number of families provided for in January, 1931, while lower than for December, 1930, is nearly 5 points higher than for January, 1930. The index number for the estimated cost of total building operations stands at 38.9 for January, 1931. This is lower than for December, 1930, and also lower than for January, 1930. The index number of new residential buildings, while lower than for December, 1930, is higher than for January, 1930. The index number of estimated costs of new nonresidential buildings is lower for January, 1931, than for either December, 1930, or January, 1930. The index number of indicated expenditures for additions, alterations, and repairs is higher during January, 1931, than during either December or January, 1930.

The chart on page 145 shows in graphic form the estimated cost of all new residential buildings, of all new nonresidential buildings, and of total building operations.

Table 4 shows the dollar values of contracts let for public buildings by different agencies of the United States Government during the months of December, 1930, and January, 1931.

TABLE 4.—CONTRACTS LET FOR UNITED STATES GOVERNMENT BUILDINGS THROUGHOUT THE COUNTRY DURING DECEMBER, 1930, AND JANUARY, 1931

Issued by—	December, 1930	January, 1931
United States Capitol Architect	$5,270,000	$12,460
Office of the Quartermaster General, War Department	3,655,485	2,438,120
Bureau of Yards and Docks, Navy Department	1,556,653	908,907
Supervising Architect, Treasury Department	4,699,666	4,237,593
United States Veterans' Bureau	953,618	51,249
Total	16,135,422	7,648,329
Per cent of change		−52.6

During December, 1930, contracts were let by the United States Government for public buildings to cost $16,135,422. During January, 1931, the total value of contracts let was $7,648,329. These buildings are to be erected in all of the geographic divisions of the

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United States. Whenever the building occurs in a city having a population of 25,000 or over the amounts are included in the cities shown in Table 7. Much of the Government building, however, is in cities having a population of less than 25,000, or entirely outside the corporate limits of any city.

Table 5 shows the estimated cost of new residential buildings, new nonresidential buildings, and of total building operations in 295 identical cities having a population of 25,000 or over for January, 1931, and January, 1930, by geographic divisions.

TABLE 5.—ESTIMATED COST OF NEW BUILDINGS IN 295 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN JANUARY, 1930, AND JANUARY, 1931

Geographic division	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs) estimated cost	
	Estimated cost		Families provided for in new dwellings					
	January, 1930	January, 1931	January, 1930	January, 1931	January, 1930	January, 1931	January, 1930	January, 1931
New England	$2,176,200	$2,776,200	400	509	$3,372,595	$1,185,128	$7,212,810	$5,102,159
Middle Atlantic	10,716,865	19,098,745	2,028	3,741	23,686,817	15,267,114	41,262,491	44,277,725
East North Central	7,695,828	3,743,931	1,372	722	13,233,230	11,629,040	23,516,478	17,223,810
West North Central	804,180	1,241,211	219	308	1,174,640	2,372,414	2,656,829	4,065,987
South Atlantic	4,399,491	1,867,588	756	482	5,275,017	1,587,100	11,021,018	6,049,886
South Central	3,039,406	2,799,258	875	912	3,019,796	5,449,376	7,479,089	9,028,872
Mountain and Pacific	6,830,710	4,810,590	1,390	1,411	12,181,041	6,204,899	21,196,768	12,907,582
Total	35,662,680	36,337,523	7,040	8,085	61,943,136	43,695,071	114,345,483	98,656,021
Per cent of change		+1.9		+14.8		−29.5		−13.7

Permits issued for total building construction in these 295 cities during January, 1931, show a decrease of 13.7 per cent in estimated cost as compared with those issued during the month of January, 1930. Permits issued for residential buildings show an increase of 1.9 per cent in estimated cost comparing these two months. However, permits issued for new nonresidential buildings show a decrease of 29.5 per cent. Permits issued for residential buildings during January, 1931, indicate an increase of 14.8 per cent in the number of dwelling units provided, as compared with January, 1930.

Increases in the cost of new residential buildings occurred in the New England States, the Middle Atlantic States, and the West North Central States. Decreases occurred in the East North Central States, South Atlantic States, the South Central States, and the Mountain and Pacific States. Family dwelling units provided showed increases in the New England States, the Middle Atlantic States, the West North Central States, the South Central States, and the Mountain and Pacific States. Decreases in family dwelling units occurred in the East North Central States and the South Atlantic States. The estimated cost of new nonresidential buildings increased in the West North Central States and the South Central States. All other divisions showed decreases in this class of construction. Indicated expenditures for total building operations increased in the Middle Atlantic States, the West North Central States, and the South Central States, comparing January, 1931, permits with January, 1930, permits. Decreases were registered in the New England States, the East North Central States, the South Atlantic States, and the Mountain and Pacific States.

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Table 6 shows the estimated cost of additions, alterations, and repairs as shown by permits issued, together with the per cent of increase or decrease in January, 1931, as compared with January, 1930.

TABLE 6.—ESTIMATED COST OF ADDITIONS, ALTERATIONS, AND REPAIRS IN 295 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN JANUARY, 1930, AND JANUARY, 1931

Geographic division	Estimated cost		Per cent of increase or decrease in January, 1931, compared with January, 1930
	January, 1930	January, 1931	
New England	$1,664,015	$1,140,831	−31.4
Middle Atlantic	6,858,809	9,911,866	+44.5
East North Central	2,587,420	1,850,839	−28.5
West North Central	678,009	452,362	−33.3
South Atlantic	1,346,510	2,595,198	+92.7
South Central	1,419,887	780,238	−45.0
Mountain and Pacific	2,185,017	1,892,093	−13.4
Total	16,739,667	18,623,427	+11.3

Projected expenditures for alterations and repairs increased 11.3 per cent comparing January, 1931, with January, 1930. However, five of the seven geographic divisions showed decreases in expenditures for this class of building operation. The decreases ranged from 13.4 per cent in the Mountain and Pacific States to 45.0 per cent in the South Central States. Increases were shown in the Middle Atlantic States and the South Atlantic States. In the last named division the increase was 92.7 per cent.

Table 7 shows the estimated cost of new residential buildings, new nonresidential buildings, and total building operations, together with the number of families provided for in new dwellings in 295 identical cities for January, 1931, and December, 1930, and for 40 other cities (for which reports were received for the first time) for the month of January, 1931, only. Reports were received in the New England States from 47 cities for both January and December, and from 3 cities for January only; from 65 cities for January and December and from 4 cities for January only, in the Middle Atlantic States; from 75 cities for both January and December, and from 18 cities for January only, in the East North Central States; from 22 cities for both January and December, and from 1 city for January only, in the West North Central States; from 32 cities for January and December, and from 4 cities for January only, in the South Atlantic States; from 26 cities for January and December, and from 4 cities for January only, in the South Central States; from 28 cities for January and December, and from 6 cities for January only, in the Mountain and Pacific States.

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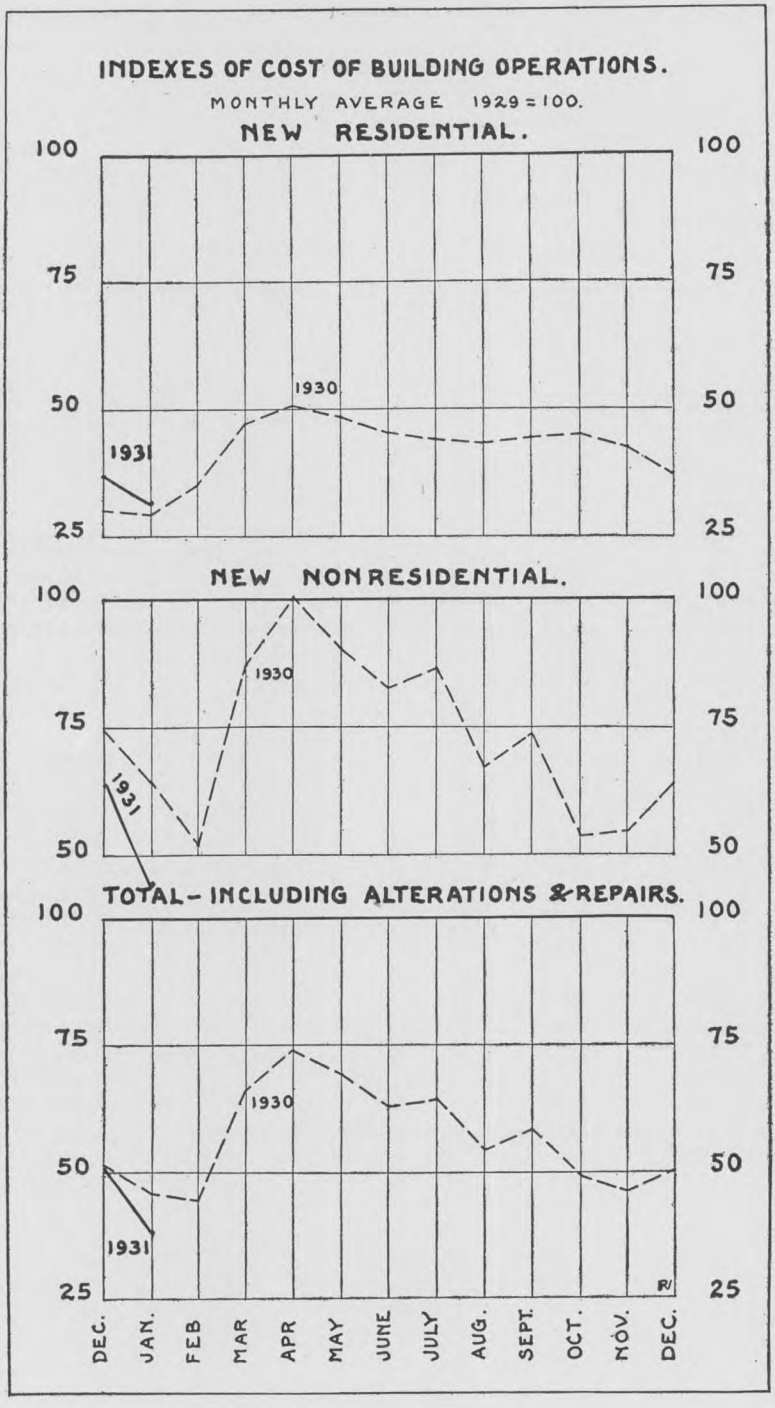

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TABLE 7.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 295 PRINCIPAL CITIES, DECEMBER, 1930, AND JANUARY, 1931

New England States

State and city	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwellings					
	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931
Connecticut:								
Bristol [1]	----------	$36,000	-------	7	----------	$700	----------	$45,805
Greenwich	$262,500	96,000	16	8	$3,600	4,050	$347,150	168,150
Hartford	17,000	19,000	3	4	50,133	18,935	176,075	101,525
Meriden	27,800	25,800	7	5	5,845	1,530	91,215	31,705
New Britain	42,500	0	5	0	98,850	6,250	146,452	19,935
New Haven	62,000	43,500	15	11	5,625,700	24,115	5,707,600	91,300
Norwalk	83,000	49,000	9	7	4,450	3,150	112,875	93,000
Stamford	44,700	34,400	8	5	18,750	8,425	117,250	62,535
Torrington [1]	----------	5,000	-------	1	----------	775	----------	7,650
Waterbury	15,000	13,800	3	3	18,850	4,200	45,350	20,650
Maine:								
Bangor	800	0	1	0	170	0	1,970	0
Lewiston	13,500	0	3	0	400	0	13,900	0
Portland	29,500	8,800	5	2	2,775	9,460	44,933	30,995
Massachusetts:								
Boston [2]	441,400	663,800	108	164	605,805	158,280	1,447,054	1,094,218
Brockton	23,300	11,500	6	2	4,325	12,575	86,725	62,725
Brookline	119,000	56,500	13	3	9,300	600	137,562	70,100
Cambridge	3,062,000	326,500	12	72	32,000	20,400	3,119,820	376,125
Chelsea	0	8,500	0	2	200	2,620	3,625	27,395
Chicopee	5,700	4,000	2	1	1,040	3,100	8,540	10,000
Everett	4,000	16,600	1	5	675	43,050	33,875	60,425
Fall River	300	2,800	1	1	415,425	37,250	423,860	49,530
Fitchburg	7,900	2,500	2	1	601,475	400	614,075	2,900
Haverhill	7,500	0	2	0	2,200	30	22,325	8,220
Holyoke	24,000	7,000	2	1	0	400	75,625	25,650
Lawrence	0	0	0	0	1,150	800	2,340	4,200
Lowell	14,700	13,500	5	4	650	10,675	41,240	42,550
Lynn	34,000	32,000	7	7	14,090	1,400	75,020	70,515
Malden	10,000	21,900	2	5	2,200	350	23,000	25,700
Medford	93,500	55,500	17	13	3,600	3,085	105,050	64,635
New Bedford	0	0	0	0	9,375	3,475	21,575	8,900
Newton	317,500	781,800	29	84	52,725	1,750	515,360	788,700
Pittsfield	168,700	25,000	35	5	64,950	300	253,900	35,850
Quincy	93,000	46,300	26	14	15,090	109,350	121,123	223,954
Revere	13,000	8,000	4	2	9,450	100	26,375	18,025
Salem	0	0	0	0	10,450	300	14,885	6,495
Somerville	0	46,500	0	10	17,800	13,000	32,290	94,750
Springfield	30,350	41,800	6	8	55,650	28,925	100,000	108,175
Taunton	0	6,000	0	1	620	540	2,585	20,670
Waltham	68,300	67,500	16	16	60,300	1,450	131,625	94,100
Watertown	69,000	36,500	12	6	3,400	1,300	87,150	44,575
Worcester	89,800	48,100	19	8	93,730	7,100	203,570	115,570
New Hampshire:								
Concord [1]	----------	0	-------	0	----------	0	----------	3,000
Manchester	10,800	0	2	0	12,725	250	28,915	2,438

[1] Schedule received for the first time, January, 1931, not included in totals.
[2] Applications filed.

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TABLE 7.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 295 PRINCIPAL CITIES, DECEMBER, 1930, AND JANUARY, 1931—Continued

New England States—Continued

State and city	New residential buildings: Estimated cost		New residential buildings: Families provided for in new dwellings		New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931
Rhode Island:								
Central Falls	$0	$0	0	0	$300	$0	$300	$1,850
Cranston	101,400	32,500	21	7	13,200	438,398	118,015	471,828
East Providence	34,500	15,300	7	3	4,075	3,040	44,027	24,906
Newport	14,000	0	2	0	18,300	1,500	38,570	9,785
Pawtucket	41,400	19,900	6	5	4,850	2,670	52,530	66,630
Providence	189,500	88,100	28	14	367,650	195,950	870,870	348,900
Woonsocket	3,000	0	1	0	3,750	600	11,600	1,375
Total	5,689,850	2,776,200	469	509	8,342,048	1,185,128	15,699,771	5,102,159
Per cent of change		−51.2		+8.5		−85.8		−67.5

Middle Atlantic States

New Jersey:								
Atlantic City	$10,700	$29,800	1	17	$1,417	$11,500	$52,010	$103,233
Bayonne	0	0	0	0	11,350	23,500	11,900	30,350
Belleville [1]		4,000		1		3,700		14,513
Bloomfield	79,000	35,000	20	6	7,000	11,000	87,000	48,000
Camden	100,000	0	41	0	31,875	15,475	139,235	22,740
Clifton	104,600	21,000	25	5	14,250	2,100	120,600	28,850
East Orange	142,400	11,400	29	2	132,975	2,780	287,109	29,607
Elizabeth	28,000	28,000	6	6	7,600	9,000	35,600	37,000
Garfield [1]		13,200		3		5,650		19,800
Hoboken	0	0	0	0	1,000	0	21,695	6,775
Irvington	16,000	63,000	4	15	8,100	9,850	33,651	77,514
Jersey City	24,000	49,000	6	20	34,025	51,765	113,600	199,300
Kearny	30,000	0	8	0	6,670	100	36,945	2,170
Montclair	76,000	27,600	5	4	75,030	14,600	156,336	45,870
Newark	256,500	111,500	52	17	148,870	78,294	497,180	419,516
New Brunswick	4,000	0	1	0	400,915	2,100	416,340	8,770
Orange	189,750	0	21	0	163,900	0	353,650	32,355
Passaic	0	0	0	0	1,000	14,000	9,897	38,215
Paterson	27,100	8,500	10	2	91,293	44,100	169,847	96,235
Perth Amboy	0	6,000	0	2	1,000	300	4,250	11,090
Plainfield	12,000	55,400	2	7	2,420	2,299	33,495	65,424
Trenton	12,300	0	3	0	48,110	275,097	68,810	303,734
Union City	0	0	0	0	450	25,700	8,575	63,485
West New York	0	0	0	0	5,600	0	9,500	12,450
New York:								
Albany	297,800	106,500	38	15	13,600	31,000	375,039	184,751
Amsterdam	9,000	0	1	0	1,400	0	18,825	0
Auburn	6,500	0	1	0	1,335,040	1,300	1,344,540	5,600
Binghamton	42,000	15,500	3	5	2,787	10,418	90,090	73,190
Buffalo	432,500	55,800	118	20	1,346,650	559,542	1,842,312	651,939
Elmira	15,300	12,000	4	1	10,070	380	35,147	24,335
Jamestown	8,500	11,500	2	3	4,650	1,115	28,075	36,225
Kingston	9,500	4,500	3	1	7,575	1,475	33,400	15,645
Mount Vernon	67,000	227,000	7	58	24,611	150,850	100,076	389,800
Newburgh	0	0	0	0	643,800	300	653,500	6,200
New Rochelle	294,135	330,200	17	21	3,150	211,350	342,987	556,325
New York City—								
Bronx [2]	5,593,900	2,921,000	1,328	683	805,000	4,919,700	6,982,945	8,005,910
Brooklyn [2]	4,598,600	3,352,100	1,033	833	506,575	517,025	5,988,492	4,661,997
Manhattan [2]	550,000	6,565,000	154	841	3,678,556	5,845,513	8,482,976	19,249,878
Queens [2]	5,478,800	3,839,400	1,458	923	1,207,382	744,655	7,353,317	4,938,118
Richmond [2]	175,450	100,595	46	34	816,210	239,745	1,050,247	368,268
Niagara Falls	68,200	21,000	18	5	20,075	2,825	338,950	48,855
Poughkeepsie	6,000	21,500	1	2	125	8,650	9,225	37,995
Rochester	786,300	13,700	11	2	1,320,423	21,482	2,140,771	59,632
Schenectady	56,000	16,000	10	2	11,300	38,350	98,150	85,800
Syracuse	63,600	97,300	12	20	15,765	152,550	105,565	321,125
Troy	37,500	0	7	0	1,700	0	51,170	13,075
Utica	36,500	16,000	8	2	6,575	109,018	50,251	137,438
Watertown	0	0	0	0	900	150	115,375	2,525
White Plains	175,800	91,500	14	5	1,150	6,000	186,175	108,950
Yonkers	1,302,600	274,000	237	35	24,185	9,950	1,337,435	305,200

[1] Schedule received for the first time, January, 1931; not included in totals.
[2] Applications filed.

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TABLE 7.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 295 PRINCIPAL CITIES, DECEMBER, 1930, AND JANUARY, 1931—Continued

Middle Atlantic States—Continued

State and city	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwellings					
	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931
Pennsylvania:								
Aliquippa [1]	----------	$6,000	-------	1	----------	$5,900	----------	$12,400
Allentown	$102,500	8,000	10	2	$8,300	4,850	$130,175	22,000
Altoona	2,500	6,500	1	1	5,682	6,615	18,127	21,839
Bethlehem	0	0	0	0	7,700	600	10,900	10,819
Butler	0	4,000	0	1	0	8,000	500	17,650
Chester	0	5,000	0	2	10,075	121,550	16,525	144,450
Easton	0	0	0	0	0	0	13,915	12,595
Erie	62,600	30,200	18	8	71,510	6,225	150,095	55,510
Harrisburg	318,500	0	1	0	71,586	12,100	397,461	40,825
Hazleton	0	0	0	0	4,904	690	4,904	6,278
Johnstown	0	3,500	0	1	1,600	4,255	14,460	10,030
Lancaster	3,000	0	1	0	4,280	1,953	36,330	15,278
McKeesport	13,300	14,900	3	4	1,050	1,020	20,189	26,745
Nanticoke [1]	----------	6,000	-------	1	----------	0	----------	14,000
New Castle	16,000	6,750	3	1	2,060	550	24,120	11,245
Norristown	29,000	0	3	0	500	258,756	31,395	261,604
Philadelphia	89,900	285,500	27	63	563,995	468,155	842,516	942,045
Pittsburgh	257,835	167,400	56	38	680,420	148,590	1,278,670	581,335
Reading [1]	----------	0	-------	0	----------	9,311	----------	36,936
Scranton	3,500	4,700	1	1	7,140	8,173	19,467	69,253
Wilkes-Barre	15,100	0	4	0	213,405	6,950	241,958	11,768
Wilkinsburg	106,800	24,000	32	5	4,850	30,380	118,836	57,630
Williamsport	0	0	0	0	1,329	869	2,314	10,069
York	35,000	0	8	0	38,382	12,030	94,788	18,123
Total	22,279,370	19,098,745	4,933	3,741	14,702,872	15,279,214	45,289,905	44,318,550
Per cent of change	----------	−14.3	-------	−24.2	----------	+3.9	----------	−2.1

East North Central States

Illinois:								
Alton	$20,757	$7,860	2	3	$50,000	$100	$85,657	$11,345
Aurora	26,600	34,934	7	1	244,575	2,440	276,689	41,516
Belleville	4,900	4,000	1	1	1,350	300	10,650	6,880
Berwyn [1]	----------	12,000	-------	2	----------	0	----------	12,000
Bloomington	48,000	4,000	10	1	165,948	155,000	215,948	159,000
Chicago	446,900	629,900	67	99	1,898,700	2,303,350	2,486,600	3,064,660
Cicero	0	5,000	0	1	850	6,000	6,950	53,070
Danville	3,600	7,600	1	2	7,852	1,000	14,368	12,015
Decatur	0	17,500	0	2	900	62,550	10,600	83,000
East St. Louis	31,800	13,100	11	6	17,650	3,850	50,750	17,950
Elgin	17,700	5,000	3	1	1,980	0	20,970	6,945
Evanston	21,000	11,000	2	1	1,000	1,000	77,000	27,000
Granite City [1]	----------	0	-------	0	----------	0	----------	0
Maywood [1]	----------	85,000	-------	31	----------	1,700	----------	89,390
Moline	13,500	40,000	3	9	950	37,450	33,119	81,435
Oak Park	13,000	12,000	1	1	429,665	10,425	499,130	23,625
Peoria	71,600	96,200	16	24	43,400	0	176,750	124,750
Quincy	15,500	0	3	0	2,700	50,210	18,500	50,210
Rockford	117,000	11,000	32	4	33,800	1,600	169,940	35,635
Rock Island	11,100	5,500	5	2	100,370	985	119,452	11,980
Springfield	63,050	47,700	16	9	23,768	1,425	97,952	63,080
Waukegan [1]	----------	31,000	-------	6	----------	13,600	----------	50,530
Indiana:								
Anderson	3,750	14,000	2	4	3,750	1,500	13,750	18,989
East Chicago	5,000	0	1	0	0	33,575	7,017	37,147
Elkhart	3,500	5,500	1	1	500	12,475	11,830	25,289
Evansville	25,800	16,200	9	5	87,825	8,270	128,535	36,213
Fort Wayne	58,700	19,050	14	3	153,805	19,382	233,405	66,379
Gary	22,600	12,500	4	3	8,785	2,420	36,685	38,470
Hammond	16,000	4,800	5	1	51,925	2,333,235	74,030	2,347,185
Indianapolis	99,790	171,550	18	28	190,308	75,749	327,392	306,310
Kokomo	0	3,000	0	1	290	225	725	31,910

[1] Schedule received for the first time, January, 1931; not included in totals.

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TABLE 7.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 295 PRINCIPAL CITIES, DECEMBER, 1930, AND JANUARY, 1931—Continued

East North Central States—Continued

State and city	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwellings					
	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931
Indiana—Continued.								
Lafayette [1]	----------	$2,500	-------	1	----------	$7,500	----------	$13,000
Marion	$0	0	0	0	$0	300	$5,433	7,344
Michigan City [1]	----------	2,000	-------	1	----------	5,100	----------	13,675
Mishawaka [1]	----------	0	-------	0	----------	560	----------	2,575
Muncie	4,900	3,000	2	1	507	1,450	7,197	9,730
Richmond	8,500	7,000	3	2	198,250	0	213,475	10,500
South Bend	10,300	18,400	3	6	39,890	23,530	64,870	47,835
Terre Haute	0	6,000	0	2	101,725	4,105	115,200	12,535
Michigan:								
Ann Arbor [1]	----------	11,400	-------	2	----------	7,800	----------	24,612
Bay City	24,000	10,000	6	3	625	2,335	24,725	116,590
Dearborn [1]	----------	189,220	-------	56	----------	480,349	----------	671,009
Detroit	1,065,200	1,135,290	206	167	1,375,894	3,485,216	2,822,063	4,996,059
Flint	37,570	41,022	8	8	14,698	2,730	66,728	57,339
Grand Rapids	49,800	26,300	16	8	13,030	28,325	76,500	95,725
Hamtramck	0	0	0	0	62,000	4,000	63,586	4,700
Highland Park	0	0	0	0	8,700	300	8,700	1,400
Jackson	3,900	1,600	1	1	2,030	500	7,715	4,755
Kalamazoo	21,500	25,500	4	8	6,640	439,325	43,911	473,409
Lansing	20,900	19,900	7	4	875	2,670	25,710	36,970
Muskegon	17,700	10,600	5	4	20,000	300	41,150	14,358
Pontiac	0	1,600	0	1	316,205	63,920	318,005	75,920
Port Huron	650	4,500	1	3	300	0	3,250	39,700
Saginaw	33,800	4,000	11	2	1,055	76,705	71,045	85,527
Wyandotte [1]	----------	19,100	-------	5	----------	37,554	----------	59,854
Ohio:								
Akron	51,200	24,950	5	11	15,903	45,394	83,868	107,819
Ashtabula	2,000	0	1	0	300	150	2,950	3,800
Canton	23,000	0	6	0	4,435	1,225	30,860	17,461
Cincinnati	1,089,550	297,300	148	61	506,505	199,860	1,839,788	544,000
Cleveland	133,000	185,700	27	30	68,300	943,900	662,247	1,366,500
Cleveland Heights [1]	----------	50,000	-------	7	----------	1,430	----------	58,030
Columbus	111,800	182,000	23	36	17,450	141,200	158,850	365,200
Dayton	16,450	29,300	3	6	1,244,592	19,865	1,282,692	73,869
East Cleveland	27,200	0	2	0	24,085	14,060	52,135	14,460
Elyria [1]	----------	6,200	-------	3	----------	9,585	----------	42,645
Hamilton	9,800	6,975	2	2	234,000	2,800	246,464	22,390
Lakewood	26,500	23,000	4	2	2,530	1,660	32,255	31,730
Lima	0	0	0	0	1,080	675	2,840	5,150
Lorain	5,150	5,500	2	2	2,495	690	9,120	7,690
Mansfield	19,800	8,000	4	2	11,075	174,425	38,691	190,226
Massillon [1]	----------	0	-------	0	----------	0	----------	1,875
Marion	3,500	0	1	0	835	150	5,010	1,450
Middletown [1]	----------	0	-------	0	----------	720	----------	2,320
Newark	0	3,700	0	1	1,300	0	1,650	4,600
Norwood [1]	----------	0	-------	0	----------	0	----------	80
Portsmouth	1,500	0	1	0	6,650	90	11,275	12,187
Springfield	16,000	0	4	0	2,865	650	19,315	3,685
Steubenville	9,000	6,500	3	2	500	400	11,000	8,100
Toledo	40,505	55,700	6	12	28,770	329,619	129,715	430,127
Warren	2,100	0	1	0	12,600	875	21,820	9,015
Youngstown	42,600	24,300	9	6	1,735	24,740	91,595	63,301
Wisconsin:								
Appleton [1]	----------	8,800	-------	2	----------	475	----------	9,950
Eau Claire [1]	----------	0	-------	0	----------	18,800	----------	20,700
Fond du Lac	13,350	0	5	0	550	225	13,900	1,200
Green Bay	4,500	132,800	1	41	5,700	78,125	13,700	210,925
Kenosha	5,500	10,000	1	1	3,350	250	13,276	16,950
Madison	46,000	30,500	11	6	224,758	2,350	303,505	51,405
Milwaukee	275,100	172,000	60	60	205,838	335,380	1,585,182	613,610
Oshkosh	2,400	0	1	0	2,750	9,500	7,900	12,177
Racine	24,800	19,700	5	4	11,550	13,625	52,960	44,871
Sheboygan	4,000	4,100	1	1	25,350	575	34,166	80,863
Superior	0	8,300	0	3	420	26,355	2,764	36,665
West Allis [1]	----------	19,500	-------	4	----------	1,200	----------	24,850
Total	4,466,172	3,743,931	844	722	8,353,341	11,629,040	15,945,150	17,223,810
Per cent of change	----------	−16.2	-------	−14.5	----------	+39.2	----------	+8.0

[1] Schedule received for the first time, January, 1931; not included in totals.

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TABLE 7.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 295 PRINCIPAL CITIES, DECEMBER, 1930, AND JANUARY, 1931—Continued

West North Central States

State and city	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwellings					
	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931
Iowa:								
Burlington	$0	$0	0	0	$4,875	$50,275	$5,250	$52,225
Cedar Rapids	21,850	0	3	0	23,100	9,265	71,635	36,370
Council Bluffs	8,000	3,000	1	1	11,300	30,500	50,800	44,500
Davenport	49,400	32,750	10	9	134,130	150	194,695	41,695
Des Moines	96,270	59,100	14	12	5,846	2,145	122,516	64,515
Dubuque	7,000	3,000	2	1	187,150	6,500	196,560	13,294
Ottumwa	5,000	16,000	1	4	40,000	14,250	54,000	30,750
Sioux City	29,500	36,200	8	9	51,375	6,200	83,525	46,850
Waterloo	11,500	11,400	4	4	6,375	9,000	18,700	29,700
Kansas:								
Topeka	24,000	9,150	3	5	125,252	97,070	165,012	119,760
Wichita	78,200	125,950	25	38	23,300	57,095	119,389	202,600
Minnesota:								
Duluth	16,500	8,386	4	2	6,600	1,050	49,119	30,721
Minneapolis	359,905	317,140	91	68	1,493,015	34,080	1,973,780	407,255
St. Paul	161,004	104,160	32	23	12,252	452,784	277,558	595,604
Missouri:								
Joplin	3,000	6,000	1	2	400	650	8,825	9,183
Kansas City	74,500	127,000	15	28	1,541,100	29,450	1,898,850	170,800
Springfield	9,500	5,100	4	2	57,900	3,225	100,135	18,225
St. Joseph	13,300	13,400	6	5	400	960	27,900	16,860
St. Louis	352,100	246,900	104	67	1,699,128	1,520,310	2,273,466	1,943,275
Nebraska:								
Lincoln	20,000	31,500	3	6	67,915	5,705	91,565	53,580
Omaha	15,700	48,200	4	14	58,025	28,875	90,860	87,225
North Dakota:								
Fargo [1]	----------	8,860	-------	2	----------	0	----------	14,505
South Dakota:								
Sioux Falls	15,000	36,875	3	8	151,625	12,875	344,875	51,000
Total	1,371,229	1,241,211	338	308	5,701,063	2,372,414	8,219,015	4,065,987
Per cent of change	----------	−9.5	-------	−9.8	----------	−58.4	----------	−50.5

South Atlantic States

Delaware:								
Wilmington	$78,000	$46,000	15	10	$12,525	$138,400	$117,022	$257,116
District of Columbia:								
Washington	665,000	666,780	97	103	7,117,860	758,835	7,968,753	2,896,341
Florida:								
Jacksonville	26,950	20,500	7	8	20,375	18,155	68,390	80,340
Miami	29,800	34,300	8	8	21,015	39,735	93,987	107,775
Orlando [1]	----------	6,400	-------	4	----------	575	----------	19,825
St. Petersburg	19,500	44,700	2	9	5,200	7,500	40,750	60,100
Tampa	9,900	4,600	4	5	7,280	5,740	38,600	35,870
Georgia:								
Atlanta	59,150	105,100	30	50	61,385	44,967	323,273	266,686
Columbus	5,800	6,000	3	2	22,155	10,535	30,465	18,285
Macon	3,325	0	7	0	0	50	21,586	19,956
Savannah	14,950	10,000	4	3	1,400	4,900	19,990	16,200
Maryland:								
Baltimore	313,000	564,000	61	176	851,300	83,300	1,535,200	1,129,100
Cumberland	4,500	3,500	1	1	450	2,475	5,465	8,175
Hagerstown	17,500	3,800	2	2	1,600	625	19,100	4,605
North Carolina:								
Asheville	0	500	0	1	1,225	0	2,200	1,825
Charlotte	43,550	47,000	11	12	9,035	3,200	65,419	66,607
Durham	4,200	20,400	2	4	7,500	1,740	21,700	56,270
Greensboro	6,000	3,000	1	1	1,350	230	21,320	11,495
High Point [1]	----------	347,185	-------	76	----------	185,775	----------	532,960
Raleigh [1]	----------	0	-------	0	----------	3,551	----------	5,751
Wilmington	6,000	8,000	2	4	26,000	1,000	34,950	21,900
Winston-Salem	9,600	30,000	6	1	13,965	1,490	40,595	43,265

[1] Schedule received for the first time, January, 1931; not included in totals.

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TABLE 7.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 295 PRINCIPAL CITIES, DECEMBER, 1930, AND JANUARY, 1931—Continued

South Atlantic States—Continued

State and city	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs) estimated cost	
	Estimated cost		Families provided for in new dwellings					
	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931
South Carolina:								
Charleston	$30,950	$3,450	7	4	$2,040	$18,585	$36,660	$28,898
Columbia	18,000	44,000	7	13	530	274,700	23,210	323,875
Greenville	0	5,700	0	3	65,141	300	68,266	15,575
Virginia:								
Newport News	12,350	8,658	6	4	3,850	14,675	28,583	96,819
Norfolk	44,300	66,800	7	29	40,685	12,000	106,215	89,535
Petersburg	0	12,000	0	1	9,850	10,130	10,855	29,070
Portsmouth	9,000	7,600	3	3	81,415	14,822	99,025	37,597
Richmond	45,950	63,100	11	13	30,963	48,290	125,991	181,485
Roanoke	10,350	5,600	2	2	550	4,300	38,378	12,975
West Virginia:								
Charleston	30,950	28,000	7	9	578,702	3,450	613,322	42,200
Clarksburg	0	0	0	0	279,750	13,770	284,650	26,470
Huntington	0	0	0	0	13,327	9,150	13,327	10,950
Parkersburg [1]	----------	12,500	-------	3	----------	84,755	----------	108,555
Wheeling	9,500	4,500	2	1	910	40,051	17,672	52,526
Total	1,528,075	1,867,588	315	482	9,289,333	1,587,100	11,934,919	6,049,886
Per cent of change	----------	+22.2	-------	+53.0	----------	−82.9	----------	−49.3

South Central States

Alabama:								
Birmingham [1]	----------	$22,710	-------	12	----------	$273,423	----------	$381,859
Mobile	$16,750	11,350	6	9	$0	9,800	$33,159	27,696
Montgomery	21,650	40,300	13	25	14,185	3,465	55,830	62,873
Arkansas:								
Little Rock	22,600	25,650	7	11	101,980	53,390	132,162	89,995
Kentucky:								
Ashland [1]	----------	0	-------	0	----------	100,000	----------	102,800
Covington [1]	----------	14,800	-------	4	----------	1,000	----------	18,325
Louisville	78,350	56,500	12	14	11,900	507,470	97,300	603,920
Newport	0	0	0	0	18,200	750	18,800	1,250
Paducah	5,310	3,000	6	2	0	0	5,310	3,350
Louisiana:								
Baton Rouge	5,350	18,620	3	8	28,462	4,590	51,391	32,583
New Orleans	57,600	56,200	11	20	110,845	6,235	238,830	108,043
Shreveport	8,850	20,505	3	13	3,918	80,209	32,741	125,242
Oklahoma:								
Enid [1]	----------	24,000	-------	8	----------	3,000	----------	28,400
Muskogee	1,000	1,500	1	3	425	350	2,225	5,250
Oklahoma City	1,022,800	434,600	100	160	2,666,807	3,537,320	3,710,332	4,006,655
Okmulgee	0	0	0	0	0	0	950	2,350
Tulsa	185,050	344,765	56	85	17,185	78,928	530,899	540,313
Tennessee:								
Chattanooga	0	27,700	0	12	14,000	12,800	34,131	65,544
Knoxville	29,820	21,200	8	9	1,025,878	19,410	1,055,998	44,960
Memphis	51,350	56,550	31	17	328,824	322,325	449,204	462,075
Nashville	15,250	34,150	12	16	168,100	65,435	228,139	178,691
Texas:								
Austin	28,075	62,441	26	34	371,626	53,532	399,701	136,871
Beaumont	89,125	17,700	13	7	5,764	20,772	128,816	67,781
Corpus Christi [1]	----------	20,725	-------	25	----------	2,200	----------	33,040
Dallas	141,550	312,350	64	120	1,024,210	58,720	1,266,046	438,094
Fort Worth	397,649	215,234	91	64	42,585	440,835	466,723	703,157
Houston	506,350	834,676	99	183	446,250	144,900	968,196	999,701
Port Arthur	3,300	23,879	2	9	2,600	2,455	11,946	54,095
San Angelo [1]	----------	9,400	-------	6	----------	17,485	----------	32,125
San Antonio	208,637	146,625	108	78	364,692	21,075	607,059	212,965
Waco	5,733	17,963	3	8	13,001	400	27,820	28,338
Wichita Falls	0	1,000	0	1	1,550	3,210	7,235	8,710
Total	2,902,149	2,784,458	675	908	6,782,987	5,448,376	10,560,943	9,010,547
Per cent of change	----------	−4.1	-------	+34.5	----------	−19.7	----------	−14.7

[1] Schedule received for the first time, January, 1931; not included in totals.

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TABLE 7.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 295 PRINCIPAL CITIES, DECEMBER, 1930, AND JANUARY, 1931—Continued

Mountain and Pacific States

State and city	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs) estimated cost	
	Estimated cost		Families provided for in new buildings					
	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931	December, 1930	January, 1931
Arizona:								
Phoenix	$52,250	$96,400	16	37	$332,225	$57,560	$396,456	$159,845
Tucson	15,000	50,500	7	15	49,685	27,770	78,785	117,024
California:								
Alameda	100,700	20,300	32	4	1,955	39,450	148,332	104,721
Bakersfield [1]		20,040		9		9,535		38,760
Berkeley	49,200	57,150	12	12	43,510	3,165	129,831	90,060
Fresno	42,950	42,500	11	12	13,410	19,171	89,985	83,127
Glendale [1]		138,600		40		94,050		244,210
Long Beach	276,360	208,425	110	83	406,440	187,535	729,230	446,300
Los Angeles	2,402,510	1,565,645	784	561	2,298,159	1,579,489	5,283,235	3,790,283
Oakland	129,600	502,075	25	157	850,832	89,240	1,040,117	663,172
Pasadena	71,020	389,035	13	19	200,855	1,058,071	313,741	1,516,175
Sacramento	133,950	108,750	32	22	119,320	73,925	284,810	218,143
San Bernardino [1]		27,930		10		500		37,621
San Diego	199,850	183,000	47	56	242,925	360,782	555,752	609,862
San Francisco	654,250	391,600	171	100	1,416,561	1,202,526	2,260,764	1,829,345
San Jose	68,900	42,100	15	12	124,160	151,960	200,450	216,760
Santa Ana [1]		60,291		17		149,210		220,357
Stockton	46,300	29,700	10	8	25,015	95,863	83,090	139,838
Vallejo	3,000	1,000	2	1	465	1,600	19,795	8,332
Colorado:								
Colorado Springs	9,300	2,600	3	2	6,635	840	34,335	24,380
Denver	98,000	168,000	24	30	59,200	233,200	237,950	494,100
Pueblo	8,250	12,100	4	5	4,235	15,225	26,553	35,329
Montana:								
Butte	0	0	0	0	15,575	0	16,550	2,265
Great Falls	1,800	8,400	1	3	15,475	1,385	20,600	17,950
New Mexico:								
Albuquerque [1]		86,000		24		8,150		105,550
Oregon:								
Portland	360,530	227,450	116	55	166,105	275,770	669,415	628,580
Salem [1]		6,000		3		23,485		46,949
Utah:								
Ogden	10,500	0	3	0	0	0	11,225	6,000
Salt Lake City	71,300	25,450	27	6	1,184,584	12,635	1,282,514	51,584
Washington:								
Bellingham	8,700	19,300	3	6	1,175	4,625	11,620	51,285
Everett	12,850	12,600	5	5	77,895	6,115	93,280	21,025
Seattle	1,268,200	567,310	236	176	3,635,533	285,477	5,061,308	1,015,872
Spokane	56,050	37,200	13	10	264,210	15,980	337,230	82,980
Tacoma	22,000	42,000	8	14	24,000	405,540	84,738	483,245
Total	6,173,320	4,810,590	1,730	1,411	11,580,139	6,204,899	19,501,691	12,907,582
Per cent of change		−22.1		−18.4		−46.4		−33.8

Hawaii

Hawaii:								
Honolulu	$156,148	$118,277	41	59	$171,850	$49,726	$342,368	$215,776
Per cent of change		−24.3		+43.9		−71.1		−37.0

[1] Schedule received for the first time, January, 1931; not included in totals.

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Building Permits in Principal Cities, 1930: General Summary

BUILDING permit reports covering the year 1930 have been received by the Bureau of Labor Statistics from 311 of the 319 cities in the United States having a population of 25,000 or over. In studying the following tables it should be borne in mind that the costs shown refer to the cost of the building only. No land costs are included. The costs as stated are estimated by the prospective builder at the time of his applying for a permit to build and are recorded on the application. Reports cover only the corporate limits of the cities enumerated. The States of Illinois, Massachusetts, New Jersey, New York, and Pennsylvania, through their departments of labor, are cooperating with the Bureau of Labor Statistics in collecting these data.

Table 1 shows the estimated cost of new residential buildings, new nonresidential buildings, and of total building operations in 311 cities of the United States having a population of 25,000 or over, by geographic divisions, for the calendar years of 1929 and 1930.

TABLE 1.—ESTIMATED COST OF NEW BUILDINGS AND OF TOTAL BUILDING OPERATIONS IN 1929 AND 1930 IN 311 CITIES HAVING A POPULATION OF 25,000 OR OVER, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings			
	Estimated cost		Families provided for	
	1929	1930	1929	1930
New England	$87,206,896	$46,241,528	14,315	7,211
Middle Atlantic	761,582,497	250,055,101	84,674	48,641
East North Central	299,944,612	123,125,354	64,304	20,480
West North Central	50,400,466	31,448,130	14,060	7,210
South Atlantic	63,919,418	37,971,134	13,698	7,609
South Central	80,667,899	48,245,833	23,412	13,673
Mountain and Pacific	133,898,208	88,813,906	38,303	25,679
Total	1,477,619,996	625,900,986	252,766	130,503
Per cent of change		−57.6		−48.4

Geographic division	Estimated cost of new nonresidential buildings		Estimated cost of total construction, including alterations and repairs	
	1929	1930	1929	1930
New England	$86,239,639	$75,602,766	$213,216,668	$148,918,876
Middle Atlantic	469,627,994	308,847,779	1,369,829,899	657,439,547
East North Central	304,448,779	190,442,123	680,300,051	361,209,653
West North Central	49,529,138	53,331,944	120,662,333	100,260,683
South Atlantic	75,453,825	74,347,354	167,447,817	135,881,151
South Central	91,615,300	79,662,644	194,941,817	144,751,894
Mountain and Pacific	113,765,942	97,643,772	289,377,666	217,682,862
Total	1,190,680,617	879,878,402	3,035,775,905	1,766,144,666
Per cent of change		−26.1		−41.8

The estimated cost of the total building operations for which permits were issued in these 311 cities during the year 1930 was $1,766,144,666, a decrease of 41.8 per cent as compared with the estimated cost of the buildings for which permits were issued during the year 1929 in the same cities. New residential buildings showed a

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much greater decrease than new nonresidential buildings. The estimated cost of the residences for which permits were issued during 1930 was 57.6 per cent less than the estimated cost of this class of structure for which permits were issued during 1929. The estimated cost of new nonresidential buildings decreased 26.1 per cent.

During the year 1929 permits were issued for residential buildings to house 252,416 families. Permits issued during 1930 indicate a decrease of 48.4 per cent in the number of families provided with dwelling places in new buildings. Only 130,503 family dwelling units were provided in the residential buildings for which permits were issued during the calendar year 1930.

All geographic divisions showed decreases in the estimated cost of new residential buildings and in the estimated cost of all building operations. The West North Central division was the only geographic division registering an increase in new nonresidential buildings. The number of dwelling units provided in new residential buildings decreased in each geographic division.

Table 2 shows the estimated cost of additions, alterations, and repairs, as shown by permits issued, together with the percentage of decrease in the calendar year 1930 as compared with the calendar year 1929, in 311 identical cities, by geographic divisions.

TABLE 2.—ESTIMATED COST OF ADDITIONS, ALTERATIONS, AND REPAIRS IN 311 IDENTICAL CITIES, 1929 AND 1930, BY GEOGRAPHIC DIVISIONS

Geographic division	Estimated cost		Per cent of decrease, 1930 compared with 1929
	1929	1930	
New England	$39,770,133	$27,074,582	−31.9
Middle Atlantic	138,619,408	98,536,667	−28.9
East North Central	75,906,660	47,642,176	−37.2
West North Central	20,732,729	15,480,669	−25.3
South Atlantic	28,074,228	23,562,663	−16.1
South Central	22,658,618	16,843,397	−25.7
Mountain and Pacific	41,713,516	31,225,184	−25.1
Total	367,475,292	260,365,278	−29.1

The estimated cost of the additions, alterations, and repairs for which permits were issued during the calendar year 1930 was $260,365,278, which was a decrease of 29.1 per cent as compared with the $367,475,292 which these items were estimated to cost during the calendar year 1929. There was a decrease in indicated expenditures for additions, alterations, and repairs in each of the geographic divisions. These decreases ranged from 16.1 per cent in the South Atlantic States to 37.2 per cent in the East North Central States.

Table 3 shows the estimated cost of new residential buildings, new nonresidential buildings, and total building operations, together with the number of families provided for in each of the 311 cities for the calendar years 1929 and 1930. Reports were received from 49 cities in the New England States, from 67 cities in the Middle Atlantic States, from 78 cities in the East North Central States, from 24 cities in the West North Central States, from 34 cities in the South Atlantic States, from 31 cities in the South Central States, and from 28 cities in the Mountain and Pacific States.

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TABLE 3.—ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL CONSTRUCTION, AND FAMILIES PROVIDED FOR, 1929 AND 1930, BY CITY

New England States

State and city	New residential buildings				Estimated cost of new nonresidential buildings		Estimated cost of total construction, including alterations and repairs	
	Estimated cost		Families provided for					
	1929	1930	1929	1930	1929	1930	1929	1930
Connecticut:								
Bridgeport	$2,267,610	$1,447,475	541	353	$1,564,573	$732,573	$4,242,322	$2,618,360
Greenwich	5,159,640	2,860,200	282	203	1,079,961	769,605	6,841,641	4,335,820
Hartford	1,459,800	623,300	281	61	10,789,997	4,299,898	16,144,354	6,364,738
Meriden	607,600	282,900	120	64	466,010	327,122	1,278,280	817,396
New Britain	770,000	313,600	130	42	161,573	406,310	1,247,999	896,082
New Haven	3,052,300	1,587,800	276	238	8,540,820	13,621,153	12,762,246	15,924,143
New London	832,900	456,680	112	70	500,558	2,605,555	1,611,158	3,138,116
Norwalk	1,872,600	1,296,750	262	165	1,249,110	736,222	3,529,745	2,365,723
Stamford	2,038,400	971,100	315	109	1,918,223	1,292,545	4,504,948	2,621,458
Waterbury	1,253,500	474,100	262	101	1,158,450	1,217,324	2,998,750	2,037,374
Maine:								
Bangor	248,300	155,100	36	46	318,575	377,650	597,765	560,375
Lewiston	192,000	151,000	49	31	194,300	1,010,600	466,300	1,199,900
Portland	738,692	480,480	172	110	568,994	690,586	2,133,188	1,567,156
Massachusetts:								
Boston[1]	19,190,447	6,226,700	3,327	1,415	24,032,418	12,927,294	53,834,471	26,906,300
Brockton	513,200	395,400	97	69	673,753	417,720	1,466,834	1,113,417
Brookline	3,676,480	2,294,500	3[illegible]2	231	589,510	952,460	5,021,603	3,687,061
Cambridge	7,238,100	5,547,143	788	159	3,192,540	4,402,047	12,165,840	11,062,711
Chelsea	163,000	26,500	36	6	520,065	108,895	802,221	202,535
Chicopee	310,850	167,200	80	57	1,010,625	115,360	1,441,825	354,935
Everett	305,800	183,600	81	53	509,530	1,185,385	1,124,532	1,532,490
Fall River	204,150	119,490	48	33	352,327	856,786	792,256	1,188,691
Fitchburg	190,600	108,500	33	22	120,416	732,950	546,360	879,320
Haverhill	130,800	111,975	45	38	95,485	108,835	390,640	340,860
Holyoke	346,000	208,000	52	37	383,225	1,205,620	1,256,295	1,702,995
Lawrence	69,500	70,000	22	19	385,556	307,137	854,496	617,922
Lowell	146,425	179,900	37	42	152,125	581,530	703,575	1,146,909
Lynn	1,740,800	507,600	475	103	1,144,778	1,924,066	3,941,899	2,972,201
Malden	1,260,400	453,500	332	99	407,812	498,305	1,893,948	1,133,275
Medford	2,243,000	1,280,200	438	249	588,685	247,660	3,483,495	1,656,066
New Bedford	116,400	123,000	18	15	446,780	654,593	788,555	982,463
Newton	5,635,350	3,666,400	568	346	515,321	1,223,298	6,857,045	5,870,127
Pittsfield	1,169,100	994,150	211	185	1,446,175	678,118	3,403,680	1,854,171
Quincy	2,420,650	1,187,125	550	288	995,597	1,204,848	4,216,542	2,723,641
Revere	417,000	233,500	95	58	120,935	163,950	730,375	702,101
Salem	608,850	330,600	115	56	672,890	426,415	1,885,208	1,162,440
Somerville	991,500	165,500	286	49	1,780,831	932,877	3,076,154	1,380,406
Springfield	1,942,500	1,200,600	466	284	1,995,043	3,719,508	5,095,049	5,703,263
Taunton	156,850	95,650	38	27	291,146	56,719	572,902	596,841
Waltham	1,022,800	577,900	205	124	1,149,470	1,085,110	2,340,155	1,806,011
Watertown	1,134,400	437,100	221	84	501,905	437,270	1,764,640	964,360
Worcester	2,132,900	1,603,425	379	294	2,391,074	3,437,872	7,250,965	6,341,063
New Hampshire:								
Manchester	396,035	250,200	100	86	488,679	270,925	1,241,253	764,802
Rhode Island:								
Central Falls	202,900	65,500	60	22	471,575	58,680	726,397	164,545
Cranston	2,147,000	1,222,300	448	273	419,818	291,470	2,649,308	1,596,555
East Providence	1,112,792	728,775	219	133	1,500,786	301,065	2,904,709	1,273,938
Newport	734,700	563,600	62	45	701,530	302,410	1,646,975	1,186,545
Pawtucket	1,368,125	679,600	318	149	334,045	833,745	1,994,925	1,847,125
Providence	5,184,200	3,073,500	842	446	6,536,550	4,720,480	14,943,495	10,742,334
Woonsocket	89,950	62,350	23	22	809,495	144,220	1,049,350	311,816
Total, New England	87,206,896	46,241,528	14,315	7,211	86,239,639	75,602,766	213,216,668	148,918,876
Per cent of change		−47.0		−49.6		−12.3		−30.2

Middle Atlantic States

New Jersey:								
Atlantic City	$5,745,985	$149,150	52	29	$625,164	$264,615	$7,483,138	$1,400,607
Bayonne	163,500	230,800	58	104	753,945	448,050	1,107,130	791,750
Bloomfield	2,496,700	1,483,500	476	344	832,487	733,500	3,698,547	2,460,000
Camden	1,034,800	486,900	320	159	4,401,233	1,651,272	6,163,791	2,582,097
Clifton	1,710,600	1,088,150	359	247	668,970	336,770	2,465,465	1,492,435
East Orange	2,889,500	504,900	500	85	2,574,228	1,694,938	5,945,690	2,627,236
Elizabeth	2,085,000	842,000	514	222	2,009,700	1,514,900	4,094,700	2,383,900

[1] Application filed.

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TABLE 3.—ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL CONSTRUCTION, AND FAMILIES PROVIDED FOR, 1929 AND 1930, BY CITY—Continued

Middle Atlantic States—Continued

State and city	New residential buildings				Estimated cost of new nonresidential buildings		Estimated cost of total construction, including alterations and repairs	
	Estimated cost		Families provided for					
	1929	1930	1929	1930	1929	1930	1929	1930
New Jersey—Con.								
Hoboken	$33,500	$27,500	4	4	$304,900	$280,025	$747,877	$827,763
Irvington	804,850	449,850	170	102	1,156,823	1,164,780	2,134,243	1,700,480
Jersey City	4,623,380	888,000	1,388	238	8,821,846	10,407,265	14,584,804	12,167,252
Kearny	1,024,200	404,000	261	103	2,737,134	393,427	3,847,528	842,832
Montclair	2,242,130	930,950	165	69	334,029	654,170	3,369,971	1,939,867
Newark	3,761,480	3,542,190	693	750	20,159,244	6,657,138	28,838,220	12,379,194
New Brunswick	1,027,768	97,400	195	21	357,235	630,590	1,560,619	970,260
Orange	735,000	662,500	136	96	1,217,382	567,620	2,366,097	1,527,847
Passaic	1,006,750	163,500	115	24	3,376,490	1,526,972	4,869,749	2,098,698
Paterson	1,527,500	583,500	435	139	2,205,399	722,619	4,871,609	2,088,193
Perth Amboy	325,525	144,950	66	32	956,841	853,227	1,671,126	1,245,477
Plainfield	1,079,756	656,334	128	81	507,408	727,842	2,010,023	1,643,295
Trenton	655,014	203,700	87	38	2,237,259	1,810,527	3,675,004	2,448,741
Union City	415,900	170,000	125	41	172,315	487,300	855,123	887,265
West New York	294,350	16,000	82	2	351,950	114,700	877,635	241,025
New York:								
Albany	3,584,100	2,834,700	385	311	3,536,578	4,720,555	9,034,990	9,004,273
Amsterdam	408,182	128,000	52	26	546,850	838,175	1,051,432	991,900
Auburn	291,670	496,150	50	39	872,984	567,290	1,490,427	1,134,013
Binghamton	725,000	677,130	169	161	2,211,297	1,003,563	3,987,909	2,255,199
Buffalo	6,290,920	3,493,465	1,769	1,072	16,511,595	9,975,375	24,127,500	14,824,861
Elmira	557,435	740,150	72	40	587,898	864,424	1,518,697	1,826,173
Jamestown	861,250	415,962	206	93	724,935	152,260	1,927,203	782,854
Kingston	400,500	217,800	53	41	169,120	453,115	1,135,464	862,132
Mount Vernon	2,558,200	2,922,900	325	481	1,987,430	679,713	6,179,243	4,197,164
Newburgh	337,700	153,850	57	23	514,520	844,417	1,102,347	1,217,847
New Rochelle	4,629,800	3,112,646	355	191	2,032,476	1,698,479	7,584,939	5,668,994
New York City—								
Bronx [1]	63,114,150	29,348,900	13,978	7,012	26,366,557	19,563,659	95,666,174	56,115,642
Brooklyn [1]	80,786,600	41,545,100	11,224	9,275	49,308,609	18,761,510	146,015,664	70,631,906
Manhattan [1]	401,068,000	59,269,000	18,067	8,669	147,270,865	107,533,888	595,522,025	198,445,431
Queens [1]	60,629,110	44,779,260	13,861	10,495	26,124,503	26,357,323	94,509,667	77,343,961
Richmond [1]	5,283,315	3,169,125	1,190	731	4,411,497	3,156,563	10,583,689	7,628,849
Niagara Falls	1,849,174	905,775	320	218	2,517,681	1,900,533	5,070,592	3,735,648
Poughkeepsie	663,850	351,900	68	48	704,075	63,582	1,622,188	744,667
Rochester	4,555,063	2,356,940	496	262	6,650,169	4,252,329	13,303,261	8,011,253
Schenectady	1,739,100	1,351,300	278	169	1,107,625	3,481,290	3,430,850	5,338,906
Syracuse	4,553,500	2,501,900	793	432	4,300,467	1,709,818	11,266,705	5,398,584
Troy	698,520	542,250	111	99	959,684	2,239,961	2,037,267	3,023,593
Utica	715,200	563,350	111	90	1,104,775	517,821	2,497,135	1,349,917
Watertown	302,800	58,800	52	14	650,605	147,005	1,089,602	434,825
White Plains	3,186,635	3,138,100	345	297	3,354,105	2,466,249	7,194,967	6,179,319
Yonkers	13,535,877	7,078,600	1,808	1,042	6,230,016	2,037,532	21,366,049	9,887,352
Pennsylvania:								
Allentown	2,300,200	858,400	397	97	1,782,065	750,855	4,509,654	2,270,422
Altoona	869,435	477,550	191	75	756,203	616,503	1,983,915	1,369,459
Bethlehem	1,188,775	379,125	201	69	915,277	531,770	2,905,192	1,065,400
Butler	169,600	63,075	31	21	249,775	78,000	459,695	197,022
Chester	460,450	124,400	98	34	348,610	817,636	1,099,410	1,139,061
Easton	108,368	244,700	18	15	1,587,973	121,007	2,004,751	568,981
Erie	1,679,209	1,150,400	393	209	2,047,647	1,287,461	6,431,038	3,302,453
Harrisburg	1,365,000	845,750	140	77	5,669,130	1,037,681	7,957,530	2,518,808
Hazleton	114,728	210,512	18	27	183,174	177,944	448,247	498,278
Johnstown	265,550	91,800	46	18	203,264	323,170	682,341	695,520
Lancaster	745,950	634,300	156	43	768,608	489,705	1,981,696	1,380,976
Lebanon	100,000	143,400	19	12	600,000	528,525	792,000	744,625
McKeesport	1,021,270	442,400	174	83	284,723	317,608	1,674,208	1,051,533
New Castle	364,450	325,000	65	49	629,435	126,050	1,109,785	521,895
Norristown	553,830	479,200	103	80	1,027,974	633,255	1,880,059	1,331,052
Philadelphia	34,048,685	8,902,100	7,098	1,744	61,205,405	34,850,059	104,405,545	53,141,770
Pittsburgh	11,064,650	6,620,135	2,153	1,349	17,445,091	9,955,505	35,638,867	20,729,727
Reading	2,688,627	740,250	253	119	2,430,215	1,190,406	6,110,566	2,473,571
Scranton	569,440	373,125	137	49	1,437,634	2,061,820	2,947,264	3,189,548
Wilkes-Barre	1,049,695	152,602	70	39	1,552,685	1,225,594	3,176,932	1,668,716
Williamsburg	945,755	392,750	199	79	134,955	217,714	1,335,095	842,215
Williamsport	456,466	247,000	103	36	427,957	860,117	1,283,565	1,278,302
York	443,525	278,300	87	56	421,296	1,020,718	1,458,469	1,678,736
Total, Middle Atlantic	761,582,497	250,055,101	84,674	48,641	469,627,994	308,847,779	1,369,829,899	657,439,547
Per cent of change		−67.2		−42.6		−34.2		−52.0

[1] Applications filed.

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TABLE 3.—ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL CONSTRUCTION, AND FAMILIES PROVIDED FOR, 1929 AND 1930, BY CITY—Continued

East North Central States

State and city	New residential buildings				Estimated cost of new nonresidential buildings		Estimated cost of total construction, including alterations and repairs	
	Estimated cost		Families provided for					
	1929	1930	1929	1930	1929	1930	1929	1930
Illinois:								
Alton	$411,928	$377,623	105	58	$241,192	$432,017	$918,896	$1,096,697
Aurora	991,172	411,594	192	82	853,264	715,296	2,237,321	1,401,762
Belleville	610,633	481,850	127	107	374,887	241,952	992,845	748,892
Bloomington	823,000	374,000	114	68	209,300	278,648	1,118,300	700,648
Chicago	91,177,250	25,871,750	18,837	2,741	112,504,075	54,615,250	210,797,640	85,749,167
Cicero	2,022,200	373,300	328	57	1,225,897	533,641	3,609,418	1,117,349
Danville	439,250	199,693	115	47	336,207	85,835	1,129,976	378,347
Decatur	1,127,950	408,900	212	79	2,519,515	1,476,245	3,890,215	1,991,015
East St. Louis	1,246,105	696,430	379	207	954,238	542,310	2,391,854	1,364,613
Elgin	711,385	354,050	144	72	437,763	245,758	1,380,359	735,716
Evanston	4,710,000	939,000	386	63	2,621,950	1,308,250	8,196,300	3,103,450
Joliet	1,462,800	590,500	188	88	1,455,560	1,415,915	3,333,682	2,471,040
Moline	857,300	530,770	163	112	981,464	660,158	2,224,519	1,381,154
Oak Park	3,040,060	455,300	310	55	2,450,020	1,203,350	5,720,895	1,861,455
Peoria	2,039,083	1,832,550	366	408	1,095,985	1,152,840	3,603,660	3,436,495
Quincy	371,400	624,400	87	68	394,205	373,474	831,750	1,031,674
Rockford	2,367,200	1,233,200	621	341	1,894,982	997,560	5,083,442	2,907,530
Rock Island	616,100	454,100	200	132	184,239	158,141	2,911,650	1,328,208
Springfield	928,805	654,150	229	151	1,805,303	2,063,963	3,112,006	3,179,424
Indiana:								
Anderson	1,077,400	400,550	215	51	314,684	131,844	1,740,298	610,162
East Chicago	880,402	159,026	84	37	4,270,804	1,447,418	5,307,338	1,801,145
Elkhart	426,050	203,440	107	43	404,566	209,814	1,060,637	527,274
Evansville	1,996,900	667,050	458	174	2,097,875	675,959	4,420,660	1,761,184
Fort Wayne	2,905,708	1,554,425	578	313	2,888,053	1,065,377	7,039,292	3,099,086
Gary	1,168,400	519,800	375	131	1,358,570	334,360	3,146,335	1,176,840
Hammond	1,294,800	596,580	312	152	2,453,350	1,077,611	4,154,300	1,875,733
Indianapolis	7,033,895	2,737,430	1,760	615	6,151,062	3,447,740	14,843,583	7,451,293
Kokomo	228,100	49,070	75	17	899,946	92,329	1,347,891	262,965
Marion	90,050	33,550	38	18	136,140	236,375	302,300	393,204
Muncie	903,292	152,267	319	47	693,412	172,132	2,061,167	443,863
Richmond	554,300	223,050	138	76	224,189	321,340	1,063,252	621,652
South Bend	2,884,080	1,390,950	661	193	3,725,290	1,995,485	7,014,705	3,708,609
Terre Haute	269,400	188,000	78	50	232,474	281,890	799,329	686,610
Michigan:								
Battle Creek	874,950	271,300	169	72	2,006,025	3,590,215	3,002,135	3,963,605
Bay City	256,700	306,500	63	54	361,426	505,342	1,308,971	1,269,864
Detroit	51,998,509	22,755,238	12,151	4,084	33,029,800	19,074,600	100,567,497	48,369,293
Flint	8,202,365	1,664,663	2,076	360	4,541,590	1,776,198	14,684,493	3,993,708
Grand Rapids	2,166,100	861,900	589	231	2,845,460	1,151,835	6,086,985	2,921,975
Hamtramck	46,500	78,700	8	21	546,700	1,066,410	1,065,615	1,298,536
Highland Park	995,500	337,000	250	5	1,042,015	179,225	2,327,370	624,440
Jackson	1,059,850	286,500	218	61	1,653,320	108,750	3,492,043	697,792
Kalamazoo	667,390	468,725	160	102	1,364,303	466,451	2,409,585	1,171,550
Lansing	2,687,183	533,189	537	137	5,503,086	1,157,696	8,737,894	2,064,747
Muskegon	575,035	234,450	197	81	1,496,280	721,382	2,475,404	1,195,423
Pontiac	3,481,182	175,340	1,284	50	2,259,035	1,000,720	6,218,915	1,280,121
Port Huron	105,875	73,550	54	32	151,535	32,565	323,850	149,290
Saginaw	1,498,680	566,517	501	193	1,151,420	1,758,291	3,120,772	2,690,423
Ohio:								
Akron	10,092,658	4,919,330	2,171	372	10,684,269	2,989,455	21,639,643	8,776,754
Ashtabula	77,650	105,900	16	29	493,909	153,730	650,759	344,835
Canton	2,164,465	501,500	331	95	963,492	874,674	3,456,197	1,585,196
Cincinnati	13,048,160	15,273,482	2,077	1,693	15,258,245	16,252,970	31,037,065	33,160,609
Cleveland	11,954,800	6,202,300	2,143	1,176	16,027,325	21,037,067	37,782,500	32,554,467
Columbus	6,104,650	3,188,400	1,211	575	3,043,450	1,413,650	10,613,050	5,616,100
Dayton	1,399,677	913,775	212	213	3,076,650	4,259,166	6,342,675	5,958,274
East Cleveland	358,500	712,200	30	56	1,215,976	85,689	1,658,353	843,404
Hamilton	1,010,094	361,950	261	81	735,664	937,064	2,411,352	1,552,153
Lakewood	1,109,800	1,039,800	203	248	621,590	369,398	1,830,380	1,481,992
Lima	19,500	51,300	6	11	157,225	867,947	431,115	1,017,506
Lorain	622,800	276,050	170	83	70,661	334,373	898,121	652,133
Mansfield	659,830	437,850	115	97	203,323	158,767	1,116,955	717,838
Marion	190,450	49,800	69	14	301,230	537,925	507,170	612,110
Newark	312,400	75,900	97	29	342,165	126,070	677,560	225,215
Portsmouth	352,150	158,650	98	31	270,862	168,496	718,096	373,942
Springfield	819,410	409,500	244	91	775,700	245,180	1,750,421	777,155
Steubenville	709,450	300,500	181	68	379,525	406,570	1,186,000	835,345

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TABLE 3.—ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL CONSTRUCTION, AND FAMILIES PROVIDED FOR, 1929 AND 1930, BY CITY—Continued

East North Central States—Continued

State and city	New residential buildings				Estimated cost of new nonresidential buildings		Estimated cost of total construction, including alterations and repairs	
	Estimated cost		Families provided for					
	1929	1930	1929	1930	1929	1930	1929	1930
Ohio—Continued.								
Toledo	$4,792,150	$1,454,435	1,310	372	$6,679,361	$6,367,638	$13,507,240	$10,404,771
Warren	1,352,845	310,245	269	93	532,595	171,845	2,168,200	678,340
Youngstown	3,780,325	729,405	525	163	1,702,172	1,678,782	5,894,320	2,801,434
Zanesville	323,160	99,750	103	39	129,664	97,414	578,180	213,039
Wisconsin:								
Fond du Lac	175,180	211,500	47	37	471,922	113,431	795,047	399,608
Green Bay	1,358,410	422,150	185	113	1,675,297	706,235	3,328,825	1,368,558
Kenosha	2,653,878	757,030	296	78	1,031,022	569,843	4,577,074	1,483,907
Madison	2,459,550	1,086,050	499	179	1,826,777	935,361	4,974,483	2,347,852
Milwaukee	15,047,002	6,961,332	3,848	1,729	17,237,422	11,880,438	37,947,243	25,285,322
Oshkosh	430,025	233,955	115	60	135,750	334,541	780,644	746,297
Racine	3,091,711	877,445	653	174	1,211,832	2,533,968	4,782,777	3,924,208
Sheboygan	686,600	486,500	127	98	465,765	574,019	1,467,998	1,407,165
Superior	505,115	165,450	134	47	385,483	680,460	1,183,264	969,101
Total, East North Central	299,944,612	123,125,354	64,304	20,480	304,448,779	190,442,123	680,300,051	361,209,653
Per cent of change		−59.0		−68.2		−37.4		−46.9

West North Central States

Iowa:								
Burlington	$164,800	$91,230	52	18	$195,905	$543,935	$571,297	$813,875
Cedar Rapids	580,664	345,700	113	91	1,748,173	1,210,337	2,905,969	2,032,213
Council Bluffs	247,000	111,000	79	32	222,750	465,250	674,050	769,550
Davenport	767,651	1,501,490	166	168	1,200,052	509,386	2,341,756	2,462,330
Des Moines	2,242,850	1,106,895	348	225	1,011,626	2,620,645	4,081,628	4,011,153
Dubuque	209,933	319,986	68	62	530,209	1,000,066	833,710	1,480,369
Ottumwa	222,500	214,800	41	48	427,650	219,100	717,525	527,460
Sioux City	942,300	2,015,500	308	179	1,797,953	1,075,000	3,130,368	3,411,875
Waterloo	1,021,825	485,025	357	137	666,460	578,950	1,974,049	1,191,385
Kansas:								
Hutchinson	699,480	392,485	148	105	813,417	1,321,789	1,586,482	1,894,011
Kansas City	658,350	521,800	271	187	1,106,321	714,645	1,844,411	1,350,053
Topeka	803,800	426,800	191	92	762,207	1,882,853	1,751,467	2,425,138
Wichita	4,846,605	2,855,140	1,580	736	3,225,682	2,953,415	8,651,582	6,307,617
Minnesota:								
Duluth	684,845	275,805	115	82	2,194,901	1,090,010	3,685,729	2,167,954
Minneapolis	6,851,210	5,126,205	1,570	1,355	9,639,150	5,668,910	20,960,135	13,449,340
St. Paul	2,889,612	2,830,632	591	402	4,197,074	6,232,388	9,365,275	10,682,039
Missouri:								
Joplin	197,250	146,700	63	36	370,675	492,318	645,180	843,939
Kansas City	7,083,800	4,025,500	2,234	864	6,852,800	9,740,041	14,844,550	15,663,491
Springfield	706,751	306,825	218	116	519,890	359,740	1,524,521	1,115,225
St. Joseph	472,850	246,550	205	96	383,296	1,166,861	1,404,445	1,619,511
St. Louis	14,014,240	5,710,520	4,364	1,618	8,089,367	8,336,667	27,073,669	17,321,832
Nebraska:								
Lincoln	1,489,350	552,450	346	98	840,008	902,692	2,560,098	1,597,734
Omaha	1,924,200	906,775	461	208	1,818,672	3,479,797	5,581,497	5,121,226
South Dakota:								
Sioux Falls	678,600	932,317	171	255	914,900	767,149	1,952,940	2,001,363
Total, West North Central	50,400,466	31,448,130	14,060	7,210	49,529,138	53,331,944	120,662,333	100,260,683
Per cent of change		−37.6		−48.7		+7.7		−16.9

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TABLE 3.—ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL CONSTRUCTION, AND FAMILIES PROVIDED FOR, 1929 AND 1930, BY CITY—Continued

South Atlantic States

State and city	New residential buildings: Estimated cost		New residential buildings: Families provided for		Estimated cost of new nonresidential buildings		Estimated cost of total construction, including alterations and repairs	
	1929	1930	1929	1930	1929	1930	1929	1930
Delaware:								
Wilmington	$2,426,335	$1,861,070	383	367	$2,263,763	$2,347,741	$6,142,665	$4,917,012
District of Columbia:								
Washington	22,747,645	14,987,000	3,223	1,962	29,796,686	28,151,738	56,127,919	48,823,891
Florida:								
Jacksonville	1,615,700	488,075	638	186	2,015,092	1,134,200	4,580,137	2,410,265
Miami	672,920	467,650	112	114	2,081,928	628,550	3,615,016	1,916,885
St. Petersburg	323,200	412,700	67	73	607,000	160,650	1,445,900	797,400
Tampa	345,195	151,730	188	91	967,638	819,575	1,858,420	1,302,088
Georgia:								
Atlanta	4,545,853	1,680,504	1,389	714	4,758,198	5,203,175	12,563,855	8,445,860
Augusta	609,462	336,010	207	124	226,845	170,094	1,136,661	715,330
Columbus	575,060	272,525	276	91	175,559	338,577	955,011	711,496
Macon	285,040	82,235	73	45	316,862	413,605	987,625	776,527
Savannah	668,050	343,150	195	94	311,220	623,890	1,122,012	1,068,610
Maryland:								
Baltimore	13,302,200	7,240,800	3,022	1,484	11,651,900	12,826,185	33,174,900	27,820,785
Cumberland	393,948	157,112	63	47	68,810	45,814	550,500	250,453
Hagerstown	409,825	233,000	90	43	275,051	298,064	756,946	572,018
North Carolina:								
Asheville	518,650	74,500	120	23	1,452,266	198,060	2,236,288	442,282
Charlotte	1,964,486	1,245,378	500	317	1,146,781	989,224	3,728,845	2,587,630
Durham	819,056	569,243	205	114	799,343	390,112	1,863,013	1,046,810
Greensboro	961,064	285,150	268	61	1,732,379	258,894	3,133,865	766,185
Wilmington	314,000	172,600	74	52	211,350	439,700	682,600	693,150
Winston-Salem	1,583,195	455,400	317	130	2,512,897	854,755	5,000,167	1,602,448
South Carolina:								
Charleston	266,900	161,068	97	56	182,977	784,525	670,804	1,102,690
Columbia	697,575	792,625	230	152	362,915	914,945	1,254,705	1,902,760
Greenville	475,975	269,160	97	72	481,880	537,576	1,171,103	1,055,275
Virginia:								
Lynchburg	337,655	630,847	92	114	480,880	816,152	1,002,777	1,635,523
Newport News	189,523	287,248	67	91	267,038	714,763	769,627	1,316,473
Norfolk	1,062,875	855,820	233	220	1,120,246	1,457,030	2,730,206	2,603,327
Petersburg	148,545	130,675	47	37	232,284	34,505	450,153	213,667
Portsmouth	161,700	176,800	66	71	71,602	216,820	407,377	542,035
Richmond	2,728,964	995,416	590	227	5,192,511	3,877,266	9,146,225	5,951,200
Roanoke	1,140,337	537,910	320	101	843,942	1,824,294	2,219,829	2,605,874
West Virginia:								
Charleston	788,935	803,283	262	217	922,196	5,822,841	2,240,986	6,880,506
Clarksburg	229,700	41,500	66	18	212,205	384,900	497,955	514,470
Huntington	163,900	553,300	49	56	1,249,400	161,722	1,455,360	769,622
Wheeling	445,950	219,650	72	45	462,181	507,412	1,768,019	1,120,604
Total, South Atlantic	63,919,418	37,971,134	13,698	7,609	75,453,825	74,347,354	167,447,471	135,881,151
Per cent of change		−40.6		−44.5		−1.5		−18.9

South Central States

Alabama:								
Birmingham	$1,752,250	$381,036	686	166	$5,362,880	$1,342,847	$8,233,925	$2,419,983
Mobile	644,722	361,775	299	191	839,743	446,841	1,666,888	1,100,220
Montgomery	1,293,070	563,200	488	280	1,053,320	358,592	2,768,599	1,274,072
Arkansas:								
Little Rock	1,406,457	1,041,910	356	283	1,220,501	534,376	3,268,217	2,251,437
Kentucky:								
Covington	536,500	272,500	159	67	711,900	171,050	1,479,425	628,900
Lexington	364,930	228,430	133	85	1,299,194	758,152	2,115,552	1,223,819
Louisville	5,110,600	2,329,900	1,427	428	5,945,400	3,761,060	13,204,910	6,937,105
Newport	163,400	67,800	35	17	96,375	108,300	290,750	213,865
Paducah	181,145	146,940	91	84	43,025	177,125	345,060	332,470
Louisiana:								
Baton Rouge	238,897	192,174	62	73	218,488	498,858	582,556	858,164
New Orleans	2,679,574	1,177,790	1,060	258	7,308,356	4,209,552	11,970,850	6,487,118
Shreveport	1,462,358	470,904	543	171	1,114,064	447,601	3,535,381	1,541,829

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TABLE 3.—ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL CONSTRUCTION, AND FAMILIES PROVIDED FOR, 1929 AND 1930, BY CITY—Continued

South Central States—Continued

State and city	New residential buildings: Estimated cost		New residential buildings: Families provided for		Estimated cost of new nonresidential buildings		Estimated cost of total construction, including alterations and repairs	
	1929	1930	1929	1930	1929	1930	1929	1930
Oklahoma:								
Muskogee	$100,050	$52,600	46	24	$253,681	$467,894	$426,161	$567,554
Oklahoma City	12,856,795	8,618,825	3,023	2,005	7,621,260	16,702,356	22,500,630	26,412,100
Okmulgee	10,000	1,000	1	1	74,200	19,735	141,950	39,540
Tulsa	5,629,097	3,874,395	1,646	943	5,626,391	3,731,226	11,756,631	8,356,095
Tennessee:								
Chattanooga	837,827	961,675	324	223	635,892	1,345,759	2,260,866	2,934,150
Knoxville	2,290,175	784,167	472	238	3,033,210	2,654,138	5,498,852	3,626,768
Memphis	4,248,865	3,862,730	1,246	1,057	2,416,032	4,107,634	8,061,546	9,501,481
Nashville	2,797,497	1,002,000	781	358	1,858,715	3,848,305	5,695,045	5,517,037
Texas:								
Austin	1,672,610	1,132,081	545	493	2,670,651	1,836,681	4,477,113	3,335,227
Beaumont	1,235,734	722,611	437	267	562,780	1,044,986	2,581,646	2,606,131
Dallas	2,963,798	2,460,230	1,145	996	4,497,845	6,786,709	9,659,660	11,027,546
El Paso	2,577,824	1,481,502	691	470	1,422,622	1,072,468	4,324,851	2,937,105
Fort Worth	4,546,476	2,262,499	1,262	626	5,723,641	7,446,738	11,262,046	10,463,409
Galveston	1,196,152	420,365	350	127	2,077,190	1,026,915	3,613,162	1,717,460
Houston	13,602,172	9,702,815	3,490	2,227	14,992,868	7,072,791	29,133,254	17,264,993
Port Arthur	405,053	610,059	58	244	1,086,379	1,579,302	1,978,579	2,429,720
San Antonio	6,385,782	2,601,672	2,233	1,135	10,019,391	5,023,175	18,070,350	8,487,719
Waco	983,204	339,208	214	106	1,300,859	421,235	2,700,025	1,154,055
Wichita Falls	494,885	121,040	109	30	528,447	660,263	1,337,337	1,104,822
Total, South Central	80,667,899	48,245,833	23,412	13,673	91,615,300	79,662,664	194,941,817	144,751,894
Per cent of change		−40.2		−41.6		−13.0		−25.7

Mountain and Pacific States

Arizona:								
Phoenix	$2,364,152	$1,023,215	995	410	$2,455,030	$1,954,673	$5,234,777	$3,275,852
Tucson	1,574,487	761,768	340	191	1,459,722	958,361	3,416,456	2,033,994
California:								
Alameda	1,120,335	466,450	404	145	160,885	221,610	1,404,416	981,138
Berkeley	3,454,425	1,721,014	587	345	2,249,514	753,847	6,369,100	2,985,789
Fresno	680,825	395,050	187	107	483,618	452,871	1,698,773	1,332,714
Long Beach	8,950,430	5,663,305	3,198	1,993	8,476,810	6,599,920	18,043,815	13,058,035
Los Angeles	46,939,091	33,201,363	15,234	11,437	33,880,140	31,451,568	93,020,160	75,356,715
Oakland	6,505,701	4,165,034	1,904	1,231	5,955,306	3,515,231	14,396,188	9,085,238
Pasadena	3,207,277	2,163,861	401	214	2,280,958	2,611,916	6,986,704	5,886,328
Sacramento	2,578,604	1,459,483	693	388	1,087,011	1,018,835	4,381,389	3,028,756
San Diego	4,818,317	2,988,775	1,318	829	5,842,358	1,672,216	11,414,833	5,425,922
San Francisco	15,345,027	9,504,560	3,518	2,206	13,412,415	9,973,490	33,426,317	22,414,449
San Jose	1,270,265	1,101,965	335	185	854,770	1,933,980	2,428,185	3,402,840
Stockton	476,750	349,450	151	100	558,630	688,041	1,432,088	1,296,295
Vallejo	166,130	93,525	48	28	161,839	154,052	459,021	337,663
Colorado:								
Colorado Springs	345,875	259,575	65	56	409,927	485,207	1,030,026	926,322
Denver	6,211,850	2,535,450	1,608	613	8,424,250	3,385,450	16,576,250	7,648,450
Pueblo	603,900	135,800	193	61	518,438	185,588	1,572,455	538,222
Montana:								
Butte	100,615	28,073	0	67	237,677	336,831	447,472	396,048
Great Falls	1,005,652	395,785	293	103	2,199,880	718,450	3,456,662	1,284,692
Oregon:								
Portland	6,875,645	3,900,595	1,586	866	5,790,190	5,311,345	15,503,680	12,063,305
Utah:								
Ogden	191,700	260,875	74	113	319,495	611,578	700,695	1,009,578
Salt Lake City	2,899,310	1,885,300	699	554	1,774,088	1,974,970	5,690,591	4,274,493
Washington:								
Bellingham	1,228,475	269,550	126	108	354,575	353,510	1,777,318	743,325
Everett	258,740	178,600	123	71	351,925	366,330	1,207,935	830,365
Seattle	11,707,910	11,633,985	3,289	2,583	10,540,090	15,649,758	29,101,450	30,355,973
Spokane	1,536,720	1,226,500	419	328	1,561,606	1,751,359	4,147,860	3,640,843
Tacoma	1,480,000	1,045,000	515	347	1,964,795	2,552,785	4,053,050	4,069,518
Total, Mountain and Pacific	133,898,208	88,813,906	38,303	25,679	113,765,942	97,643,772	289,377,666	217,682,862
Per cent of change		−33.7		−33.0		−14.2		−24.8

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Provision of Working-Class Housing in England

THE English magazine, Garden Cities and Town Planning, (London) which regularly publishes statistics of new housing provided under the various governmental schemes, contains in its issue for January, 1931, a discussion of the new situation produced by the passage of the 1930 housing legislation. (See Labor Review, October, 1930, p. 162.) The act of 1923 has been virtually eliminated, and henceforth housing work will be carried on under the acts of 1924 and 1930.

The 1924 act and the 1930 act have, as is generally known, different purposes in view. The former will still continue to operate to provide additional housing to meet ordinary housing needs, while the 1930 act is intended to simplify the procedure and to facilitate the task of clearing away existing slums and to provide accommodation for displaced persons.

We have thought it useful to ascertain for this new epoch a figure not hitherto included in our published data, or generally known to housing students, that is to say, the approximate number of working-class houses existing before the war, to which additions have been made by housing legislation since 1919. Information on the matter may be deduced from the reports of the inland revenue which show, among other things, the number and annual values of private dwelling houses. According to the 1914–15 report there were in England and Wales 5,750,000 private dwelling houses of an annual value of £20 [$97.33] or less, which broadly might be regarded as inhabited by the working classes.

Taking these figures as representing the situation at the close of the war, the magazine gives the following data on the number of working-class houses in England and Wales, September 30, 1930:

Number in 1914–15	5, 750, 000
Number provided, 1919–1930:	
Without State assistance	594, 600
With State assistance	965, 262
Number replacing houses demolished, 1890–1925	78
Total	7, 309, 940

No data are given as to the number of working-class houses in Scotland at the close of the war, but figures are presented showing that from the beginning of the operation of the 1919 act up to November 30, 1930, the number of houses erected with Government aid amounted to 116,463, with 8,587 under construction.

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WAGES AND HOURS OF LABOR

Hours and Earnings in the Men's Clothing Industry, 1930

THIS article presents the results of a study of wages and hours of labor in the men's clothing industry in the United States made in 1930 by the Bureau of Labor Statistics and covering 33,404 employees of 212 representative establishments. These establishments were located in 12 large cities and in two groups of small cities, one group being in eastern Pennsylvania outside of Philadelphia, and the other in northeastern New Jersey outside of Newark.

Based on the 1927 United States Census of Manufactures the wage earners in the industry in the cities included in the report, excluding Buffalo and Newark and the two groups of small cities, represent 55 per cent of the total number in the industry in the United States, and the 33,404 covered by the present study form 33 per cent of the number in the cities taken and 18 per cent of the number in the industry in the United States.

The establishments covered in the study were those engaged in the manufacture of men's outer garments—coats, pants, vests, and overcoats—for the trade, or what is commonly known as men's ready-made clothing. Special-order and merchant-tailor establishments were not included. In the case of a few large establishments data were collected for only a part of the wage earners, as the inclusion of all of them would have impaired the averages, especially for the cities in which these establishments were located.

The hours and earnings used in compiling the 1930 averages were for a representative weekly pay period in July, August, and September (except for a very few establishments in other months) and, therefore, are representative of conditions in the industry in those months.

The study reveals that since 1928, when the bureau's last previous study was made, average full-time hours per week have increased from 44.0 to 44.3, an increase of 0.7 per cent; average earnings per hour have fallen from 73.1 to 70.1 cents, a decrease of 4.1 per cent; and average full-time earnings per week have decreased from $32.16 to $31.05, or 3.5 per cent.

Trend of Hours and Earnings, 1911 to 1930

TABLE 1 shows for wage earners in selected occupations only, the hours and earnings for each of the years from 1911 to 1914, and for wage earners in all occupations in the industry for each of the specified years from 1914 to 1930. Averages for wage earners in selected occupations are not comparable with those for wage earners in all occupations. Index numbers of these averages with the 1913 average taken as the base, or 100 per cent, are also shown in the table and furnish comparable data, one year with another, from 1911 to 1930.

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The index numbers for wage earners in selected occupations from 1911 to 1914 are simple percentages with the 1913 average as the base. Those for wage earners in all occupations for each of the specified years from 1914 to 1930 were computed by increasing or decreasing the 1914 index for selected occupations in proportion to the increase or decrease in the average for each succeeding year as compared with the 1914 average for wage earners in all occupations.

Average full-time hours per week increased from an index of 104.6 in 1911 to 105.2 in 1912, decreased gradually from year to year to 85.3 in 1922 and 1924, increased to 85.7 in 1926, decreased to 85.1 in 1928, and increased to 85.7 in 1930.

Average earnings per hour increased from an index of 86.7 in 1911 to 100 in 1913, decreased to 99.6 in 1914, and increased from year to year thereafter until they reached a peak of 295.7 in 1924; since that time successive decreases are shown, the index standing at 272.7 in 1930. The increase between 1913 and 1924 was 195.7 per cent, the decrease between 1924 and 1930 was 7.8 per cent.

Average full-time earnings per week followed somewhat the same course as average earnings per hour, but did not fluctuate to the same degree, because of the change from year to year in average full-time hours per week. Average full-time earnings per week increased from an index of 90.2 in 1911 to 100 in 1913, decreased to 98.8 in 1914, increased from year to year to 253.6 in 1924, then decreased to 251.4 in 1926, to 243.2 in 1928, and to 234.8 in 1930. The increase between 1913 and 1924 was 153.6 per cent, and the decrease between 1924 and 1930 was 7.4 per cent.

TABLE 1.—AVERAGE HOURS AND EARNINGS, WITH INDEX NUMBERS, 1911 TO 1930

Item	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100) of—		
							Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Selected occupations	1911	80	13,751	54.4	$0.229	$12.30	104.6	86.7	90.2
	1912	117	18,168	54.7	.231	12.49	105.2	87.5	91.6
	1913	133	19,874	52.0	.264	13.63	100.0	100.0	100.0
	[1]1914	153	20,118	51.6	.263	13.47	99.2	99.6	98.8
All occupations	[1]1914	153	24,597	51.3	.256	13.06			
	1919	134	19,919	47.9	.446	21.08	92.7	173.5	159.5
	1922	112	25,013	44.1	.728	31.91	85.3	283.2	241.4
	1924	152	27,681	44.1	.760	33.52	85.3	295.7	253.6
	1926	198	33,659	44.3	.750	33.23	85.7	291.8	251.4
	1928	200	35,873	44.0	.731	32.16	85.1	284.4	243.2
	1930	212	33,404	44.3	.701	31.05	85.7	272.7	234.8

[1] Two sets of averages are shown for 1914 for the industry—one for selected occupations and the other for all occupations in the industry. The averages from 1911 to 1914 for selected occupations only are comparable one year with another, as are those for all occupations one year with another from 1914 to 1930.

Average Hours and Earnings, by Occupation and Sex

TABLE 2 shows for 1928 and 1930 average full-time hours per week, earnings per hour, and full-time earnings per week, for males and for females separately, in each of the specified occupations in the industry and also for a group designated as "Other employees." The group includes all wage earners in other occupations, each too few in number to warrant tabulation as an occupation.

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By occupations, average full-time hours per week of males in 1930 ranged from 44 for cloth cutters and shapers to 44.7 for pants pressers and those of females from 43.4 for fitters or trimmers to 44.8 for bushelers and tailors. In 1928 the hours of males ranged from 43.7 for vest operators to 44.3 for pants pressers and those of females from 43.3 for coat operators to 44.8 for pants basters.

Average earnings per hour of males in 1930 ranged, by occupations, from 79.5 cents for examiners to $1.139 for cloth cutters and those of females from 39.7 cents for examiners to 62.1 cents for vest basters. In 1928 the range for males was from 82.1 cents for examiners to $1.129 for cloth cutters and for females from 38.3 cents for examiners to 63.2 cents for coat operators.

By occupations, average full-time earnings per week of males in 1930 ranged from $35.30 for examiners to $50.12 for cloth cutters and those of females from $17.47 for examiners to $27.26 for vest basters. In 1928 the range for males was from $36.12 for examiners to $49.45 for cloth cutters and for females from $16.97 for examiners to $27.37 for coat operators.

TABLE 2.—AVERAGE HOURS AND EARNINGS, 1928 AND 1930, BY OCCUPATION AND SEX

Occupation	Sex	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Basters, coat	Male	1928	86	1,670	44.2	$0.905	$40.00
	do	1930	92	1,499	44.3	.834	36.95
	Female	1928	82	1,225	44.0	.557	24.51
	do	1930	101	1,253	44.5	.522	23.23
Basters, pants	do	1928	15	66	44.8	.548	24.55
	do	1930	14	59	44.1	.590	26.02
Basters, vest	do	1928	54	309	44.0	.570	25.08
	do	1930	41	147	43.9	.621	27.26
Total, basters	do	1928	119	1,630	44.0	.559	24.60
	do	1930	126	1,459	44.4	.534	23.71
Bushelers and tailors	Male	1928	103	508	44.1	.828	36.51
	do	1930	101	505	44.2	.824	36.42
	Female	1928	22	58	43.7	.570	24.91
	do	1930	34	81	44.8	.558	25.00
Cutters, cloth, hand and machine	Male	1928	81	2,048	43.8	1.129	49.45
	do	1930	87	1,620	44.0	1.139	50.12
Examiners, garments (shop and stock room)	do	1928	91	417	44.0	.821	36.12
	do	1930	96	329	44.4	.795	35.30
	Female	1928	47	208	44.3	.383	16.97
	do	1930	54	228	44.0	.397	17.47
Fitters or trimmers, coat	Male	1928	78	233	44.2	1.037	45.84
	do	1930	103	256	44.4	.988	43.87
	Female	1928	19	83	43.9	.461	20.24
	do	1930	14	62	43.4	.407	17.66
Hand sewers, coat	Male	1928	54	371	44.1	.953	42.03
	do	1930	61	359	44.1	.888	39.16
	Female	1928	104	4,103	43.9	.527	23.14
	do	1930	119	3,902	44.2	.496	21.92
Hand sewers, pants	do	1928	72	830	44.1	.454	20.02
	do	1930	71	776	44.4	.452	20.07
Hand sewers, vest	do	1928	75	943	43.9	.533	23.40
	do	1930	72	934	44.2	.494	21.83
Total, hand sewers	do	1928	173	5,876	44.0	.518	22.79
	do	1930	185	5,612	44.2	.490	21.66
Operators, coat	Male	1928	101	2,562	44.2	1.016	44.91
	do	1930	115	2,784	44.3	.958	42.44
	Female	1928	80	3,301	43.3	.632	27.37
	do	1930	95	2,911	43.8	.570	24.97
Operators, pants	Male	1928	78	1,507	44.2	.919	40.62
	do	1930	78	1,405	44.4	.859	38.14
	Female	1928	77	2,581	44.3	.573	25.38
	do	1930	81	2,372	44.7	.529	23.65

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TABLE 2.—AVERAGE HOURS AND EARNINGS, 1928 AND 1930, BY OCCUPATION AND SEX—Continued

Occupation	Sex	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Operators, vest	Male	1928	62	536	43.7	$1.024	$44.75
	do	1930	56	550	44.1	.965	42.56
	Female	1928	65	1,205	43.8	.571	25.01
	do	1930	62	1,134	43.8	.585	25.62
Total, operators	Male	1928	181	4,605	44.1	.981	43.26
	do	1930	193	4,739	44.3	.930	41.20
	Female	1928	149	7,087	43.7	.600	26.22
	do	1930	165	6,417	44.1	.558	24.61
Pressers, coat	Male	1928	108	3,636	44.0	.912	40.13
	do	1930	121	3,452	44.2	.867	38.32
	Female	1928	7	177	44.2	.475	21.00
	do	1930	8	176	44.1	.486	21.43
Pressers, pants	Male	1928	88	847	44.3	.870	38.54
	do	1930	89	784	44.7	.805	35.98
	Female	1928	6	77	44.0	.539	23.72
	do	1930	7	49	44.0	.534	23.50
Pressers, vest	Male	1928	78	486	44.2	.893	39.47
	do	1930	71	402	44.1	.889	39.20
	Female	1928	13	76	44.4	.517	22.95
	do	1930	18	90	44.0	.522	22.97
Total, pressers	Male	1928	192	4,969	44.1	.904	39.87
	do	1930	203	4,638	44.3	.859	38.05
	Female	1928	18	330	44.2	.498	22.01
	do	1930	22	315	44.0	.503	22.13
Shapers, coat	Male	1928	85	243	43.9	1.060	46.53
	do	1930	90	246	44.0	1.012	44.53
	Female	1928	7	33	44.2	.453	20.02
	do	1930	7	28	44.6	.455	20.29
Other employees	Male	1928	146	2,562	44.3	.713	31.59
	do	1930	162	2,380	44.5	.715	31.82
	Female	1928	140	2,942	43.9	.417	18.31
	do	1930	169	2,631	44.4	.408	18.12
All occupations	Male	1928	199	17,626	44.1	.924	40.75
	do	1930	212	16,571	44.3	.885	39.21
	Female	1928	194	18,247	43.9	.534	23.44
	do	1930	211	16,833	44.2	.504	22.28
All occupations, male and female		1928	200	35,873	44.0	.731	32.16
		1930	212	33,404	44.3	.701	31.05

Average Hours and Earnings, by Sex and City

THE same data are shown, by sex, for each city in Table 3.

As the table shows, average full-time hours per week of males ranged in the various cities from 42.1 to 51.8 in 1930 and from 42.1 to 51.3 in 1928 and those of females from 39.5 to 50.7 in 1930 and from 39.6 to 49.6 in 1928. The averages for both sexes combined ranged from 40.4 to 51 in 1930 and from 40.4 to 50.1 in 1928. The averages for males in all cities combined were 44.3 in 1930 and 44.1 in 1928 and for females were 44.2 in 1930 and 43.9 in 1928.

By cities, average earnings per hour of males ranged from 43.2 cents to $1.029 in 1930 and from 47.4 cents to $1.023 in 1928 and those of females from 27.5 to 73.6 cents in 1930 and from 33.6 to 75.8 cents in 1928. The averages for both sexes combined ranged from 32.7 to 90 cents in 1930 and from 38.1 to 91.5 cents in 1928. The averages for males in all cities combined were 88.5 cents in 1930 and 92.4 cents in 1928 and for females were 50.4 cents in 1930 and 53.4 cents in 1928.

Average full-time earnings per week of males, by cities ranged from $22.38 to $45.28 in 1930 and from $24.32 to $45.01 in 1928, while those

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of females ranged from $13.94 to $32.38 in 1930 and from $16.47 to $33.35 in 1928. The averages for both sexes combined ranged from $16.68 to $39.60 in 1930 and from $19.09 to $40.26 in 1928. The averages for males in all cities combined were $39.21 in 1930 and $40.75 in 1928 and for females were $22.28 in 1930 and $23.44 in 1928.

TABLE 3.—AVERAGE HOURS AND EARNINGS, 1928 AND 1930, BY SEX AND CITY OR DISTRICT

Sex, and city or district	Number of establishments		Number of wage earners		Average full-time hours per week		Average earnings per hour		Average full-time earnings per week	
	1928	1930	1928	1930	1928	1930	1928	1930	1928	1930
Males										
Baltimore	5	6	661	727	44.1	44.3	$0.721	$0.681	$31.80	$30.17
Boston	11	11	668	585	42.7	44.0	.893	.868	38.13	38.19
Buffalo	7	7	256	170	44.3	44.0	.722	.801	31.98	35.24
Chicago	7	6	4,044	3,153	44.0	44.0	1.023	1.029	45.01	45.28
Cincinnati	6	5	762	647	42.1	42.1	1.007	.910	42.39	38.31
Cleveland	5	5	494	376	44.0	44.0	.796	.734	35.02	32.30
Milwaukee	(1)	9	(1)	203	(1)	45.1	(1)	.761	(1)	34.32
Newark	9	11	384	373	44.1	44.0	.933	.934	41.15	41.10
Northeastern New Jersey [2]	14	15	554	606	46.3	46.4	.718	.661	33.24	30.67
New York	100	102	6,258	6,365	44.2	44.3	.983	.926	43.45	41.02
Philadelphia	13	13	1,404	1,447	44.4	44.2	.783	.792	34.77	35.01
Eastern Pennsylvania [3]	9	9	285	264	51.3	51.8	.474	.432	24.32	22.38
Rochester	5	5	1,297	1,278	43.1	44.0	.936	.915	40.34	40.26
St. Louis	8	8	559	377	44.0	44.3	.724	.676	31.86	29.95
Total	199	212	17,626	16,571	44.1	44.3	.924	.885	40.75	39.21
Females										
Baltimore	5	5	1,721	1,751	44.4	44.3	.371	.362	16.47	16.04
Boston	11	11	567	503	42.2	44.0	.465	.486	19.62	21.38
Buffalo	7	7	554	406	44.1	44.0	.468	.531	20.64	23.36
Chicago	6	6	3,411	2,750	44.0	44.0	.758	.736	33.35	32.38
Cincinnati	7	5	1,582	1,230	39.6	39.5	.593	.588	23.48	23.23
Cleveland	5	5	1,578	1,249	44.0	44.0	.575	.523	25.30	23.01
Milwaukee	(1)	9	(1)	447	(1)	45.2	(1)	.532	(1)	24.05
Newark	9	11	250	215	44.2	44.0	.560	.521	24.75	22.92
Northeastern New Jersey [2]	14	15	644	785	47.2	47.0	.384	.345	18.12	16.22
New York	95	102	2,426	2,631	44.7	44.6	.533	.485	23.83	21.63
Philadelphia	13	13	1,294	1,224	44.2	44.1	.420	.434	18.56	19.14
Eastern Pennsylvania [3]	9	9	658	579	49.6	50.7	.336	.275	16.67	13.94
Rochester	5	5	2,347	2,105	42.8	44.0	.575	.580	24.61	25.52
St. Louis	8	8	1,215	958	44.1	44.3	.436	.419	19.23	18.56
Total	194	211	18,247	16,833	43.9	44.2	.534	.504	23.44	22.28
Males and females										
Baltimore	5	6	2,382	2,478	44.3	44.3	.467	.454	20.69	20.11
Boston	11	11	1,235	1,088	42.5	44.0	.698	.695	29.67	30.58
Buffalo	7	7	810	576	44.1	44.0	.553	.612	24.39	26.93
Chicago	7	6	7,455	5,903	44.0	44.0	.915	.900	40.26	39.60
Cincinnati	7	5	2,344	1,877	40.4	40.4	.731	.712	29.53	28.76
Cleveland	5	5	2,072	1,625	44.0	44.0	.629	.575	27.68	25.30
Milwaukee	(1)	9	(1)	650	(1)	45.2	(1)	.607	(1)	27.44
Newark	9	11	634	588	44.1	44.0	.794	.786	35.02	34.58
Northeastern New Jersey [2]	14	15	1,198	1,391	46.8	46.8	.542	.484	25.37	22.65
New York	100	102	8,684	8,996	44.4	44.4	.859	.799	38.14	35.48
Philadelphia	13	13	2,698	2,671	44.4	44.1	.613	.632	27.22	27.87
Eastern Pennsylvania [3]	9	9	943	843	50.1	51.0	.381	.327	19.09	16.68
Rochester	5	5	3,644	3,383	42.9	44.0	.707	.711	30.33	31.28
St. Louis	8	8	1,774	1,335	44.0	44.3	.528	.495	23.23	21.93
Total	200	212	35,873	33,404	44.0	44.3	.731	.701	32.16	31.05

[1] No data available. [2] Exclusive of Newark. [3] Exclusive of Philadelphia.

Table 4 presents for each city or group of cities for 1930 average full-time hours per week, earnings per hour, and full-time earnings per week of wage earners in nine of the representative occupations in the industry for which averages are shown in Table 2.

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By cities, average full-time hours per week of male coat basters, the first occupation in the table, ranged from 44 to 52.7 and for all cities averaged 44.3 hours. Average earnings per hour ranged from 38.3 to 98.5 cents, and the average for all cities was 83.4 cents. Average full-time earnings per week ranged from $20.18 to $43.34, and the average for all cities was $36.95.

TABLE 4.—AVERAGE HOURS AND EARNINGS FOR NINE SPECIFIED OCCUPATIONS, 1930, BY SEX, AND CITY OR DISTRICT

City or district	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
	Basters, coat, male					Basters, coat, female				
Baltimore	3	41	44.0	$0.731	$32.16	4	150	44.0	$0.354	$15.58
Boston	5	32	44.0	.848	37.31	3	22	44.0	.476	20.94
Buffalo	1	(1)	(1)	(1)	(1)	3	47	44.0	.561	24.68
Chicago	3	274	44.0	.985	43.34	4	176	44.0	.766	33.70
Cincinnati	1	(1)	(1)	(1)	(1)	4	43	42.7	.590	25.19
Cleveland	2	28	44.0	.644	28.34	4	66	44.0	.485	21.34
Milwaukee	2	5	45.2	.632	28.57	4	37	45.1	.501	22.60
Newark	5	40	44.0	.849	37.36	5	47	44.0	.563	24.77
Northeastern New Jersey [2]	3	44	44.8	.699	31.32	6	73	46.6	.378	17.61
New York	51	671	44.4	.805	35.74	44	155	44.6	.571	25.47
Philadelphia	8	199	44.2	.799	35.32	8	146	44.0	.453	19.93
Eastern Pennsylvania [3]	2	6	52.7	.383	20.18	4	42	51.4	.248	12.75
Rochester	4	147	44.0	.918	40.39	4	222	44.0	.587	25.83
St. Louis	2	2	44.0	.801	35.24	4	27	44.0	.447	19.67
Total	92	1,499	44.3	.834	36.95	101	1,253	44.5	.522	23.23
	Cutters, cloth, male					Hand sewers, coat, female				
Baltimore	4	112	44.0	$1.011	$44.48	4	295	44.0	$0.330	$14.52
Boston	6	69	44.0	1.066	46.90	6	199	44.0	.482	21.21
Buffalo	3	31	44.0	.988	43.47	3	81	44.0	.502	22.09
Chicago	4	413	44.0	1.162	51.13	4	722	44.0	.693	30.49
Cincinnati	4	142	41.6	1.147	47.72	4	195	39.5	.509	20.11
Cleveland	4	54	44.0	1.044	45.94	4	148	44.0	.493	21.69
Milwaukee	4	26	46.3	.825	38.20	4	83	45.7	.479	21.89
Newark	3	16	44.0	1.249	54.96	5	43	44.0	.452	19.89
Northeastern New Jersey [2]	5	21	46.0	1.039	47.79	6	119	47.2	.322	15.20
New York	31	398	44.0	1.278	56.23	58	1,079	44.8	.461	20.65
Philadelphia	4	92	44.0	1.067	46.95	8	258	44.0	.446	19.62
Eastern Pennsylvania [3]	5	23	53.6	.620	33.23	4	33	50.6	.201	10.17
Rochester	4	176	44.0	1.158	50.95	4	509	44.0	.564	24.82
St. Louis	6	47	44.0	.891	39.20	5	138	44.2	.388	17.15
Total	87	1,620	44.0	1.139	50.12	119	3,902	44.2	.496	21.92
	Operators, coat, male					Operators, coat, female				
Baltimore	3	73	44.0	$0.725	$31.90	4	389	44.0	$0.426	$18.74
Boston	6	155	44.0	.870	38.28	5	80	44.0	.496	21.82
Buffalo	3	17	44.0	.890	39.16	3	100	44.0	.597	26.27
Chicago	4	418	44.0	1.132	49.81	4	305	44.0	.987	43.43
Cincinnati	4	39	42.6	.997	42.47	4	373	37.6	.702	26.40
Cleveland	2	10	44.0	.846	37.22	4	321	44.0	.559	24.60
Milwaukee	3	13	44.2	.834	36.86	4	103	46.0	.579	26.63
Newark	5	59	44.0	.940	41.36	5	37	44.0	.615	27.06
Northeastern New Jersey [2]	6	117	46.7	.841	39.27	6	188	47.0	.394	18.52
New York	59	1,481	44.2	.960	42.43	35	185	44.7	.588	26.28
Philadelphia	8	204	44.0	.934	41.10	8	154	44.0	.513	22.57
Eastern Pennsylvania [3]	4	11	52.7	.540	28.46	4	113	51.5	.286	14.73
Rochester	4	143	44.0	.969	42.64	4	344	44.0	.656	28.86
St. Louis	4	44	44.5	.745	33.15	5	219	44.1	.486	21.43
Total	115	2,784	44.3	.958	42.44	95	2,911	43.8	.570	24.97

[1] Data included in total. [2] Exclusive of Newark. [3] Exclusive of Philadelphia.

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TABLE 4.—AVERAGE HOURS AND EARNINGS FOR NINE SPECIFIED OCCUPATIONS, 1930, BY SEX, AND CITY OR DISTRICT—Continued

City or district	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
	Operators, pants, male					Operators, pants, female				
Baltimore	3	79	44.8	$0.596	$26.70	4	147	44.0	$0.374	$16.46
Boston	5	33	44.0	.827	36.39	4	52	44.0	.529	23.28
Buffalo	3	10	44.0	.597	26.27	3	53	44.0	.504	22.18
Chicago	4	237	44.0	1.061	46.68	4	363	44.0	.859	37.80
Cincinnati	3	7	41.1	.667	27.41	5	243	40.6	.656	26.63
Cleveland	3	7	44.0	.581	25.56	4	210	44.0	.504	22.18
Milwaukee	2	4	44.0	.744	32.74	3	107	44.8	.572	25.63
Newark	3	43	44.0	.841	37.00	3	13	44.0	.575	25.30
Northeastern New Jersey [2]	5	47	46.9	.562	26.36	7	145	47.1	.380	17.90
New York	33	800	44.1	.895	39.47	24	165	44.4	.553	24.55
Philadelphia	6	94	45.5	.766	34.85	6	138	44.2	.512	22.63
Eastern Pennsylvania [3]	4	18	50.9	.346	17.61	5	269	50.2	.320	16.06
Rochester	1	(1)	(1)	(1)	(1)	4	235	44.0	.668	29.39
St. Louis	3	23	45.3	.605	27.41	5	232	44.7	.457	20.43
Total	78	1,405	44.4	.859	38.14	81	2,372	44.7	.529	23.65
	Operators, vest, female					Pressers, coat, male				
Baltimore	4	125	44.0	$0.379	$16.68	4	149	44.0	$0.649	$28.56
Boston	4	29	44.0	.648	28.51	6	132	44.0	.890	39.16
Buffalo	3	44	44.0	.500	22.00	3	49	44.0	.782	34.41
Chicago	5	203	44.0	.789	34.72	4	592	44.0	1.008	44.35
Cincinnati	4	86	39.6	.589	23.32	4	143	42.0	.915	38.43
Cleveland	4	109	44.0	.544	23.94	4	86	44.0	.689	30.32
Milwaukee	3	28	44.0	.587	25.83	4	56	45.2	.810	36.61
Newark	2	6	44.0	.614	27.02	5	94	44.0	.937	41.23
Northeastern New Jersey [2]	3	37	48.1	.392	18.86	6	139	46.3	.627	29.03
New York	16	97	44.4	.651	28.90	60	1,178	44.3	.904	40.05
Philadelphia	6	91	44.0	.544	23.94	8	311	44.0	.831	36.56
Eastern Pennsylvania [3]						4	41	52.3	.409	21.39
Rochester	4	206	44.0	.638	28.07	4	390	44.0	.898	39.51
St. Louis	4	73	44.1	.470	20.73	5	92	44.2	.646	28.55
Total	62	1,134	43.8	.585	25.62	121	3,452	44.2	.867	38.32
	Pressers, pants, male					Pressers, vest, male				
Baltimore	3	37	44.9	$0.574	$25.77	2	11	44.0	$0.604	$26.58
Boston	4	21	44.0	.819	36.04	5	11	44.0	.746	32.82
Buffalo	3	13	44.0	.790	34.76	3	5	44.0	.823	36.21
Chicago	4	142	44.0	1.133	49.85	5	87	44.0	1.033	45.45
Cincinnati	5	48	42.7	.838	35.78	4	22	42.2	.749	31.61
Cleveland	3	26	44.0	.646	28.42	3	10	44.0	.748	32.91
Milwaukee	3	24	44.7	.740	33.08	3	11	44.0	.767	33.75
Newark	3	20	44.0	.912	40.13	3	9	44.0	.945	41.58
Northeastern New Jersey [2]	7	33	47.2	.523	24.69	3	11	47.9	.478	22.90
New York	34	221	44.3	.834	36.95	26	136	44.3	.963	42.66
Philadelphia	6	47	45.1	.846	38.15	6	38	44.0	.720	31.68
Eastern Pennsylvania [3]	5	54	50.3	.424	21.33					
Rochester	4	61	44.0	.947	41.67	4	39	44.0	.881	38.76
St. Louis	5	37	44.8	.667	29.88	4	12	44.2	.656	29.00
Total	89	784	44.7	.805	35.98	71	402	44.1	.889	39.20

[1] Data included in total. [2] Exclusive of Newark. [3] Exclusive of Philadelphia.

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Recent Changes in Wages and Hours of Labor

INFORMATION received by the bureau regarding recent wage changes is presented below in two distinct groups: Part 1 relates to manufacturing establishments that report monthly figures regarding volume of employment, while part 2 presents data obtained from new trade agreements and other miscellaneous sources. Although the effort is made, it is not always possible to avoid duplication of data as between parts 1 and 2.

Part 1. Wage Changes in Manufacturing Industries

TWENTY-THREE establishments in five manufacturing industries reported wage-rate increases during the month ending January 15. These increases, averaging 3 per cent, affected 1,664 employees, or 35 per cent of all employees in the establishments concerned.

Three hundred and thirty-five establishments in 50 industries reported wage-rate decreases during the same period. These decreases, averaging 10.2 per cent, affected 43,507 employees, or 80 per cent of all employees in the establishments concerned.

Nineteen of the 23 wage-rate *increases* were reported by printing establishments.

Thirty-five wage-rate *decreases* were reported by establishments in the food group of industries; 65 *decreases* were in textile industries; 51 *decreases* were in iron and steel industries; 68 *decreases* were in lumber industries; 31 *decreases* were in paper and printing industries.

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WAGE ADJUSTMENTS OCCURRING BETWEEN DECEMBER 15, 1930, AND JANUARY 15, 1931

Industry	Establishments		Per cent of increase or decrease in wage rate		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
			Increases				
Slaughtering and meat packing	207	1	3.5	3.5	83	100	(1)
Baking	709	2	12.5–15.0	13.7	17	20	(1)
Clothing, women's	401	1	24.7	24.7	64	100	(1)
Printing, book and job	434	17	1.0– 2.7	2.0	1,444	33	3
Printing, newspapers	428	2	1.0– 2.4	1.7	56	43	(1)
			Decreases				
Slaughtering and meat packing	207	6	8.0–15.0	9.3	406	90	(1)
Confectionery	320	12	7.5–20.0	10.4	704	81	2
Ice cream	307	1	8.0	8.0	19	83	(1)
Flour	349	10	5.0–15.0	8.3	209	92	1
Baking	709	6	10.0–20.0	13.4	76	46	(1)
Cotton goods	440	10	8.5–14.0	10.6	2,604	66	2
Hosiery and knit goods	342	14	10.0–20.0	12.4	3,516	79	5
Silk goods	265	5	9.1–10.0	9.3	872	72	2
Woolen and worsted goods	177	9	6.0–12.5	10.7	2,597	95	5
Carpets and rugs	29	8	10.0–15.0	7.1	2,931	98	18
Dyeing and finishing textiles	116	1	10.0	10.0	40	18	(1)
Clothing, men's	338	11	3.0–25.0	12.1	679	91	1
Shirts and collars	105	4	5.0–15.0	8.9	319	100	2
Clothing, women's	401	1	10.0	10.0	430	100	1
Millinery and lace goods	126	2	10.0	10.0	722	72	5
Iron and steel	199	7	1.5– 8.0	4.9	869	45	(1)
Structural ironwork	180	6	10.0–20.0	11.4	869	96	3
Foundry and machine-shop products	1,074	18	5.0–20.0	11.2	1,447	62	1
Hardware	73	5	10.0–13.8	10.2	345	68	1
Machine tools	149	2	10.0	10.0	95	97	(1)
Steam fittings and steam and hot-water heating apparatus	107	2	10.0	10.0	89	37	(1)
Stoves	133	11	7.0–15.0	10.9	354	78	3
Lumber, sawmills	546	41	6.0–25.0	11.3	7,487	95	10
Lumber, millwork	327	14	6.0–20.0	11.8	377	61	2
Furniture	388	13	5.0–20.0	10.9	1,484	71	3
Leather	129	3	5.0–10.0	7.7	235	68	1
Boots and shoes	294	8	10.0–15.0	10.9	1,039	72	1
Paper and pulp	213	20	5.0–10.0	9.3	2,158	76	4
Paper boxes	308	5	5.0–25.0	10.7	119	66	(1)
Printing, book and job	434	3	5.0–10.0	6.3	285	95	1
Printing, newspapers	428	3	10.0	10.0	361	85	(1)
Chemicals	156	2	7.5–20.0	12.0	157	90	(1)
Fertilizers	179	2	15.0	15.0	17	71	(1)
Petroleum refining	102	1	10.0	10.0	119	100	(1)
Brick, tile, and terra cotta	677	17	7.0–20.0	11.8	562	98	2
Pottery	111	2	11.1	11.1	241	100	1
Glass	138	5	8.0–10.0	9.8	204	39	1
Stamped and enameled ware	77	1	10.0	10.0	91	31	1
Brass, bronze, and copper products	160	5	10.0–12.5	11.7	113	61	(1)
Cigars and cigarettes	188	11	5.0–10.0	9.5	3,199	90	7
Automobiles	207	2	10.0	10.0	1,277	90	(1)
Agricultural implements	85	5	6.0–10.0	8.7	1,806	97	9
Electrical machinery, apparatus, and supplies	202	2	10.0	10.0	864	84	1
Pianos and organs	66	1	10.0	10.0	130	100	2
Automobile tires and inner tubes	37	5	10.0–13.0	10.4	176	57	(1)
Aircraft	41	3	10.0–12.5	10.3	260	62	3
Jewelry	118	1	9.0	9.0	70	49	1
Paint and varnish	170	6	7.0–15.0	9.7	422	69	4
Beet sugar	68	1	21.0	21.0	12	80	(1)
Beverages	173	2	10.0	10.0	50	62	1

[1] Less than one-half of 1 per cent.

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Part 2. Wage Changes Reported by Trade-Unions since November, 1930

CHANGES in wages and hours reported in this group are principally confined to trade-unions. The number of workers affected as reported in the Review for the past four months has steadily increased, the number being 4,925 in the December, 1930, issue; 10,590 in January, 1931; 20,574 in February; and 45,522 in this issue.

Of the 45,522 workers for which changes are reported in the present Review, 26,026 were reported as adopting the 5-day week and nearly 9,000 showed a reduction in wages. These reductions took place among restaurant workers, textile workers, and in one case among motion-picture operators.

Increases in wages were generally slight, ranging from 2¾ to 12½ cents per hour, the majority being 4¼ to 6¼ cents in the building trades and from 50 cents to $2.50 per week in the printing trades. A few substantial increases were reported in the metal trades.

The table following shows in detail the changes summarized above:

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, NOVEMBER, 1930, TO FEBRUARY, 1931

Industry or occupation, and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Building trades:		*Per hour*	*Per hour*		
Asbestos workers, Kansas City, Mo	Jan. 1	$1.21¼	$1.27½	40	40
Carpenters—					
Astoria, Oreg., and vicinity	Jan. 4	1.00	1.00	44	40
Chicago, and Cook, Lake, and Du Page Counties, Ill	Dec. 15	1.62½	1.62½	44	40
Kansas City, Mo	Jan. 1	1.31¼	1.37½	40	40
Elevator constructors, Kansas City, Mo	do	1.43¾	1.50	40	40
Engineers, hoisting, Kansas City, Mo	do	1.31¼	1.37½	40	40
Jack-hammer men, Kansas City, Mo	do	.89¼	.93½	40	40
Laborers and hod carriers, Kansas City, Mo.—					
Bricklayer hod carriers	do	.94½	.99	40	40
Laborers	do	.78¾	.82½	40	40
Paving breakers	do	.89¼	.93½	40	40
Pier hole diggers	do	.89¼	.93½	40	40
Plumbers' laborers	do	.89¼	.93½	40	40
Painters, decorators, and paper hangers—					
Cleveland, Ohio, glaziers	Dec. 26	1.25	1.37½	48	48
Kansas City, Mo.—					
Glaziers and art glass workers	Jan. 1	1.31¼	1.37½	40	40
Painters	do	1.31¼	1.37½	40	40
Plasterers' helpers, Kansas City, Mo	do	.94½	.99	40	40
Plumbers, Los Angeles, Calif	Jan. 5	1.12½	1.12½	44	40
Powder men, Kansas City, Mo	Jan. 1	1.05	1.10	40	40
Roofers, Kansas City, Mo	do	1.06¼	1.12½	40	40
Sheet-metal workers, Kansas City, Mo	do	1.31¼	1.37½	40	40
Sprinkler fitters, Kansas City, Mo	do	1.31¼	1.37½	40	40
Steamfitters, Kansas City, Mo	Nov. 1	1.37½	1.50	40	40
Steamfitters' helpers, Kansas City, Mo	Jan. 1	.78¾	.82½	40	40
Structural-iron workers, Kansas City, Mo	do	1.31¼	1.37½	40	40
Structural-iron workers' helpers, Kansas City, Mo	do	.87½	.91⅞	40	40
Tile and marble setters' helpers and terrazzo workers' helpers, Kansas City, Mo	do	.86⅝	.90¾	40	40
Wreckers, Kansas City, Mo	do	.57¾	.60½	40	40
Clothing:					
Shirt and overall workers—					
Kansas City, Mo., Minneapolis, Minn., San Francisco, Calif., South Bend, Ind., and Trenton, N. J	Feb. 1	(1)	(2)	44	40
St. Joseph, Mo	Jan. 2	(1)	(2)	44	40
Furniture:					
Upholsterers, carpet, shade, and drapery workers, Kansas City, Mo	Jan. 1	.57¾	.60½	40	40
Glass workers:					
Window glass cutters—Clarksburg, W. Va., Henryetta, Okla., and Mount Vernon, Ohio	Dec. 4	(3)	(4)	50	44½

[1] Piecework. [2] 10 per cent increase. [3] Not reported. [4] No change.

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RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, NOVEMBER, 1930, TO FEBRUARY, 1931—Continued

Industry or occupation, and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Hotel and restaurant workers:		*Per hour*	*Per hour*		
Restaurant workers, 26 cities	Jan. 1	[3]	[5]	48–54	48–54
Metal trades:					
Kansas City, Mo.—					
Boilermakers	do	$1.31¼	$1.37½	40	40
Boilermakers' helpers	do	1.20	1.31¼	40	40
Washington, D. C., machinists, auto repairmen, and helpers	do	[6] 1.00	[6] 1.10	44	44
Motion-picture operators, actors, and theatrical workers, Racine, Wis.:		*Per week*	*Per week*		
Operators	Dec. 10	$62.00	[7] $45.00	40	[6] 33
Operators, first-class theaters	do	57.75	57.75	35	35
Printing trades:					
Compositors, Seattle, Wash.—					
Job work	Dec. 7	[3]	[4]	44	40
Newspaper	do	[3]	[4]	42	35
Electrotypers, Dayton, Ohio	Nov. 1	45.00–49.00	46.00–50.00	48	48
Pressmen, Dayton, Ohio—					
Foremen, newspaper, day	Feb. 1	55.00	56.50	48	48
Foremen, newspaper, night	do	57.00	59.50	48	48
Journeymen, newspaper, day	do	50.50	52.00	48	48
Journeymen, newspaper, night	do	52.50	55.00	48	48
Stereotypers—					
Dayton, Ohio—					
Newspaper, day	do	50.50	52.00	48	48
Newspaper, night	do	52.50	55.00	48	48
Des Moines, Iowa—					
Newspaper, day	Dec. 1	47.00	47.50	48	48
Newspaper, night	do	50.00	50.50	48	48
		Per day	*Per day*		
Sioux City, Iowa	Dec. 15	$7.17	$7.17	48	40
Street railway workers:					
Pawtucket, Providence, and Woonsocket, R. I.—Trainmen, mechanics, linemen, trackmen, bus drivers, and miscellaneous craftsmen	Jan. 17	*Per hour* [8] $0.66	*Per hour* [8] $0.66	56	48
Municipal workers: Common laborers and truck drivers, Prettyboy Dam, Parkton, Md	Jan. 9	.30	.35	48	48
Textiles:					
New Bedford, Mass.—		*Per week*	*Per week*		
Cotton weavers	Jan. 5	$30.00–$34.00	$24.00–$28.00	48	48
Loom fixers	do	36.00	30.00	48	48
Philadelphia, Pa., hosiery workers	Dec. 29	[1]	[9]	50	50
Warren, R. I., cotton carders and spinners	Nov. 28	[3]	[10]	48	48

[1] Piecework.
[3] Not reported.
[4] No change.
[5] 10 per cent reduction.
[6] Minimum.
[7] Pro rata overtime after 33 hours.
[8] Basic wage.
[9] 15 per cent reduction.
[10] 5 per cent reduction.

Wages of Seamen, 1930

MERCHANT Marine Statistics, 1930, compiled by the Bureau of Navigation of the United States Department of Commerce, contains the following data on wages of seamen on American and foreign vessels.

The report states that all wages, except American, are taken from consular reports. The American figures are averages taken from reports of the shipping commissioners. The wages on foreign vessels are stated in the United States equivalents of the foreign values, taken at the exchange rate on January 1 of the year named. When more than one rate has been reported for foreign vessels, due to length of service or other conditions, the highest is usually given in the table. On Dutch tank steamers the wages in the deck department are about 10 per cent more than those listed. The wages on American motor ships average about 10 per cent more than on steamships. On German

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motor ships the engineers receive $5 per month more and the other personnel in the engineer department $3 more than on steamships.

Table 1 gives average monthly wage rates on January 1, 1930, of four typical classes of seamen on vessels of American and foreign registry.

TABLE 1.—AVERAGE MONTHLY WAGES OF FOUR TYPICAL CLASSES OF SEAMEN ON AMERICAN AND FOREIGN STEAM AND MOTOR CARGO VESSELS OF 5,000 GROSS TONS AND OVER ON JANUARY 1, 1930

Nationality of vessels	Able seamen	Carpenters	Chief engineers	Firemen
American:				
Private	$61	$77	$278	$64
U. S. Shipping Board	62	80	265	66
British	43	63	[1] 147	46
Danish	42	47	167	43
Dutch	40	46	151	42
French	22	24	151	26
German	32	38	141	37
Italian	28	35	90	30
Norwegian	43	47	141	44
Spanish	26	27	158	26
Swedish	42	44	146	37

[1] After 3 years, $143; after 5 years, $152; on motor vessels, $227.

Data similar to those given in Table 1 are presented in Table 2 for all classes of seamen, as of January 1 of 1928, 1929, and 1930.

TABLE 2.—AVERAGE MONTHLY WAGES OF SEAMEN ON AMERICAN AND FOREIGN STEAM AND MOTOR CARGO VESSELS OF 5,000 GROSS TONS AND OVER ON JANUARY 1, 1928, 1929, AND 1930

Position	American						British			Danish			Dutch		
	Private			U. S. Shipping Board											
	1928	1929	1930	1928	1929	1930	1928	1929	1930	1928	1929	1930	1928	1929	1930
Deck department:															
First mate	$178	$182	$180	$185	$185	$185	[1] $112	[1] $112	[1] $112	$140	$137	$138	$111	$111	$111
Second mate	155	160	159	165	165	165	[2] 77	[2] 77	[2] 77	108	97	105	84	84	84
Third mate	140	143	144	150	150	149	59	59	58	62	60	60	54	54	54
Fourth mate	121	121	121	125	128	120	51	51	51	62	60	60	----	----	----
Boatswain	73	74	74	75	75	75	51	51	51	48	47	47	46	46	46
Carpenter	76	68	77	79	80	80	63	63	63	48	47	47	46	46	46
Seaman, able	60	64	61	62	62	62	44	44	43	42	42	42	40	40	40
Seaman, ordinary	45	45	45	47	47	47	29	29	28	21	21	21	20	20	20
Engineer department:															
Chief engineer	267	280	278	262	261	265	[3] 148	[3] 148	[3] 147	171	168	167	151	151	151
Second engineer	177	183	182	185	187	187	[4] 112	[4] 112	[4] 112	126	121	120	103	103	103
Third engineer	156	161	161	165	168	167	[5] 77	[5] 77	[5] 76	91	91	89	72	72	72
Fourth engineer	141	145	145	150	152	151	[6] 59	[6] 59	[6] 58	72	71	71	50	50	50
Junior engineer	----	----	----	----	----	----	51	51	51	53	53	51	----	----	----
Fireman	63	63	64	65	65	66	46	46	46	43	43	43	42	42	42
Greaser	69	71	70	72	72	72	[7] 49	[7] 49	[7] 48	48	47	47	46	46	46
Water tender	70	71	70	72	72	72	49	49	48	43	43	43	----	----	----
Coal passer or wiper	53	55	55	58	58	58	44	44	43	29	29	28	34	34	34
Radio operators (Class I):															
Grade I	----	----	100	----	----	105	----	----	[8] 83	----	----	84	----	----	[9] 145
Grade II	----	----	----	----	----	----	----	----	51	----	----	64	----	----	----
Grade III	----	----	----	----	----	----	----	----	34	----	----	40	----	----	24
Steward department:															
Chief steward	122	122	123	120	121	121	71	71	68	78	78	78	----	----	----
Second steward	96	103	97	100	100	90	46	46	45	----	----	----	----	----	----
Cook	100	100	100	100	100	100	66	66	65	58	57	57	58	58	58
Second cook	78	81	78	79	80	80	43	43	43	29	29	28	52	52	52
Mess steward	47	49	51	48	51	47	40	40	39	----	----	----	----	----	----
Mess boy	42	42	44	42	43	42	----	----	----	11	11	10	10	10	10

[1] On the largest vessels, with superior certificate, after 3 years, $122.
[2] On the largest vessels, with superior certificate, after 3 years, $83.
[3] After 3 years, $143; after 5 years, $152; on motor vessels, $227.
[4] On motor vessels, $146.
[5] On motor vessels, $95.
[6] On motor vessels, $62.
[7] On motor vessels, $51.
[8] On vessels of Classes II and III, the wages are $72 and $63, respectively; the other grades are unchanged.
[9] As reported to the Department of Commerce.

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TABLE 2.—AVERAGE MONTHLY WAGES OF SEAMEN ON AMERICAN AND FOREIGN STEAM AND MOTOR CARGO VESSELS OF 5,000 GROSS TONS AND OVER ON JANUARY 1, 1928, 1929, AND 1930—Continued

Position	French			German			Italian			Norwegian			Spanish			Swedish		
	1928	1929	1930	1928	1929	1930	1928	1929	1930	1928	1929	1930	1928	1929	1930	1928	1929	1930
Deck department:																		
First mate	$79	$102	$102	$79	$86	$91	$72	$72	$71	$154	$154	$155	$128	$122	$99	$105	$105	$109
Second mate	53	63	62	62	69	74	60	60	59	120	120	121	86	81	66	80	80	82
Third mate	----	63	62	48	52	56	54	54	54	93	93	94	73	69	56	60	60	61
Fourth mate	----	----	----	37	39	40	----	----	----	70	70	71	----	----	----	----	----	----
Boatswain	24	24	26	33	35	38	46	46	36	47	47	48	38	36	29	46	46	46
Carpenter	24	24	24	33	35	38	35	35	35	47	47	47	35	33	27	44	44	44
Seaman, able	21	21	22	27	30	32	29	29	28	43	42	43	33	32	26	42	42	42
Seaman, ordinary	19	19	20	14	14	17	19	19	19	23	22	23	29	28	23	30	30	30
Engineer department:																		
Chief engineer	108	152	151	112	126	141	91	91	90	141	140	141	205	195	158	146	146	146
Second engineer	77	96	97	79	86	94	72	72	71	103	103	104	128	122	99	92	92	92
Third engineer	60	63	63	62	69	77	60	60	59	84	84	84	90	84	68	69	69	69
Fourth engineer	50	63	63	48	52	59	54	54	54	70	70	71	----	----	----	55	55	55
Junior engineer	----	----	----	31	34	39	----	----	----	----	----	----	----	----	----	----	----	----
Fireman	24	24	26	30	32	37	31	31	30	44	44	44	34	32	26	37	37	37
Greaser	23	23	23	31	34	39	----	----	----	25	25	25	34	32	26	43	43	43
Water tender	----	----	----	31	34	39	----	----	----	----	----	----	38	36	29	----	----	----
Coal passer or wiper	21	21	22	26	28	32	28	28	28	25	25	25	29	28	23	24	24	24
Radio operators (Class I):																		
Grade I	----	----	41	----	----	79	----	----	86	----	----	86	----	----	33	----	----	54
Grade II	----	----	27	----	----	----	----	----	71	----	----	----	----	----	----	----	----	----
Grade III	----	----	19	----	----	----	----	----	58	----	----	----	----	----	----	----	----	----
Steward department:																		
Chief steward	----	----	39	62	35	38	27	27	26	101	101	102	43	41	33	74	74	74
Second steward	----	----	----	49	26	32	----	----	----	----	----	----	----	----	----	----	----	----
Cook	23	23	23	33	35	38	32	32	31	80	80	80	39	37	30	50	50	50
Second cook	16	16	16	20	21	23	30	30	29	----	----	----	----	----	----	----	16	16
Mess steward	19	19	19	14	14	15	30	30	29	----	----	----	22	21	17	----	----	----
Mess boy	9	9	9	7	7	7	16	16	15	13	13	14	16	15	12	13	13	13

The variations in the wage rates of seamen on American merchant vessels of 500 gross tons and over, in 1930, are shown in Table 3, by destination of vessel.

TABLE 3.—AVERAGE MONTHLY WAGES PAID ON AMERICAN MERCHANT VESSELS OF 500 GROSS TONS AND OVER IN 1930, BY DESTINATION OF VESSEL

Occupation	Destination of vessel								
	Great Britain	Continental Europe	South America	West Indies, Mexico, and Central America	Atlantic and Gulf coasting trade	Asia and Australia	Pacific coasting trade	Africa	Atlantic to Pacific ports and vice versa
Steam vessels:									
Able seaman	$63	$62	$62	$60	$61	$62	$65	$62	$61
Boatswain	75	75	74	74	75	74	78	72	73
Carpenter	80	80	80	79	78	78	80	80	77
First mate	185	185	184	178	176	184	171	185	178
Second mate	164	165	160	156	152	162	148	164	157
Fireman	66	65	64	64	65	64	66	57	63
Trimmer	59	57	55	55	55	56	54	64	55
First engineer	246	247	250	249	242	266	226	262	250
Second engineer	179	180	180	174	173	182	165	185	174
Chief radio operator	104	104	103	104	101	103	101	105	101
Second radio operator	90	90	87	88	85	90	78	90	90
Sailing vessels:									
Able seaman	45	52	56	56	54	52	67	45	57
Boatswain	50	60	63	65	68	70	50	50	68
Carpenter	----	----	----	----	----	----	----	----	85
First mate	75	82	80	81	85	115	102	75	123
Second mate	----	----	----	72	74	----	110	----	115

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Experience of Manufacturing Company with 5-Day Week

AN INCREASE of 10 per cent in production and a decrease in production cost, over a 6-month period in 1929, was the result of the adoption of the 5-day week by the Snow King Baking Powder Co., of Cincinnati, according to an account given in the magazine Management (Chicago) for February, 1931.

The two years' experience of the company with the 5-day week has developed the following advantages:

(1) It is much easier to get a better class of employees when they know we work on the 5-day plan.
(2) It reduces labor turnover to a minimum.
(3) A saving in light, heat, and power is effected by not operating on Saturday.
(4) Workers throughout the plant show an increase in efficiency.
(5) Basing the monthly quota on our best previous record has materially increased production while reducing the cost.
(6) Should it become necessary to increase production in any one week, this can easily be done on Saturday without increasing the cost of production.

Prior to the adoption of the 5-day week the factory employees worked 48¼ hours per week and the office employees 41 hours. With the change to the shorter work week in November, 1928, the working hours of the factory employees were reduced to 47½ for the male workers and to 45 for the female workers. The office employees' hours were reduced to 40. There was no change in wage rates, but a production quota, based on the best single month's production of 1928, was established, and if this quota was not reached the employees were required to work on Saturday, without extra pay, to make it up.

To reduce absenteeism the wages of the factory employees were based on a 50-hour week instead of the shorter work week adopted. Thus, if an employee worked full time he was paid for full-time work, but if he worked less than the full five days he was paid only for as many hours as he actually worked. This plan is said to have reduced absenteeism to a minimum.

Average Weekly Earnings in New York State Factories, 1917 to 1930

THE following table showing average weekly earnings in New York State factories, by month, from 1917 to 1930, inclusive, is from the Industrial Bulletin for January, 1931, issued by the State industrial commissioner:

AVERAGE WEEKLY EARNINGS IN REPRESENTATIVE NEW YORK STATE FACTORIES

[Includes all employees in both office and shop. The average weekly earnings are obtained by dividing the total weekly pay roll by the total number of employees on the pay roll for the given week. Reports cover the week including the 15th of the month]

Month	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
January	$15.28	$16.81	$23.03	$26.52	$27.61	$24.43	$26.21	$27.81	$28.30	$29.05	$29.52	$29.21	$29.71	$29.80
February	15.31	17.66	22.07	26.47	26.77	24.17	25.87	27.73	27.96	28.61	29.39	29.16	29.99	29.46
March	15.79	18.71	22.20	27.87	26.97	24.57	26.92	28.16	28.45	29.04	29.78	29.64	30.35	29.90
April	15.50	19.25	22.11	27.80	26.20	24.15	27.00	27.70	27.67	28.85	29.17	28.79	30.07	29.44
May	16.08	19.91	22.23	28.45	25.86	24.59	27.63	27.56	28.07	28.69	29.18	29.19	30.03	29.10
June	16.20	20.44	22.51	28.77	25.71	24.91	27.87	27.21	27.94	28.99	29.17	29.48	30.02	28.96
July	16.17	20.78	23.10	28.49	25.26	24.77	27.54	27.06	27.98	28.81	28.95	29.15	29.80	28.50
August	16.44	21.23	23.85	28.71	25.43	25.10	27.12	27.40	28.16	28.86	29.29	29.38	30.09	28.59
September	16.97	22.31	24.83	28.73	25.07	25.71	27.41	28.05	28.33	29.31	29.57	29.72	30.47	28.94
October	17.33	22.34	24.41	28.93	24.53	25.61	27.72	27.53	28.57	29.35	29.28	29.78	30.08	28.03
November	17.69	21.60	25.37	28.70	24.32	26.04	27.64	27.66	28.67	29.15	28.75	29.62	29.54	27.42
December	17.71	23.18	26.32	28.35	24.91	26.39	27.98	28.25	29.05	29.47	29.57	30.12	29.75	27.52
Average	16.37	20.35	23.50	28.15	25.72	25.04	27.24	27.68	28.26	29.02	29.30	29.44	29.99	28.81

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Hours and Wages in the Building Trades in Western Australia

IN NOVEMBER, 1930, the Master Builders' and Contractors' Association of Western Australia applied to the State arbitration board for an increase of hours in the building industry from 44 to 48 per week and for a reduction of wages, which had been fixed by a former award at a minimum of 2s. 8d. (65 cents) per hour. According to Industrial and Labor Information for January, 1931, both requests were denied. In regard to hours, the president of the board pointed out that it was generally admitted throughout Australia that building workers should have a shorter standard week than prevailed in other trades, in recognition of the fact that their jobs might shift from place to place, involving the loss of considerable time in traveling, for which the worker received no pay; no change, therefore, would be made in the hours.

The president added that the wages on which the hourly pay would be calculated would be as follows: The basic wage would be at the rate of £4 6s. [$20.93] per week; the margin for skilled workers, £1 4s. per week [$5.84]; lost time, 11s. [$2.68]; total, £6 1s. [$29.44]. The hourly rate would thus be 2s. 9d. [66.9 cents].

Basic Wage in Queensland and New South Wales

THE Queensland Industrial Gazette for December 24, 1930, publishes the text of a declaration of the industrial court reducing the basic wage to £3 17s. ($18.74) for adult males and £1 19s. 6d. ($9.61) for adult females, effective December 1. This is a reduction of 3s. (73 cents) weekly from the rates formerly prevailing. The court directs that in varying rates of existing awards to accord with this declaration the rates of juniors shall be reduced by one-half the rate for adults and that piecework and casual rates shall be reduced by 3½ per cent.

The Employers' Review of New South Wales states that the employers' federation and other bodies of that State had applied to the State industrial commission for a reduction in the basic wage, but that after a very brief discussion the application was refused, the wage remaining at the figure of £4 3s. 6d. ($20.32) per week for an adult male. The reasons for the refusal were not given.

Changes in Employment and Wage Rates in Great Britain During 1930

Changes in Employment

BY THE close of 1929 the industrial situation in Great Britain had begun to grow worse, and the decline continued throughout 1930, the number of insured persons in employment falling lower than at any time since 1926, when the prolonged stoppage in the coal-mining industry affected the situation adversely. In a discussion of the year's developments in the Ministry of Labor Gazette for January, 1931, the following comparative figures are given as to the average

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number of insured persons, aged 16 to 64, inclusive, employed each year since complete figures of this kind were first obtained:

1924	9, 514, 000	1928	10, 007, 000
1925	9, 599, 000	1929	10, 207, 000
1926	9, 050, 000	1930	9, 764, 000
1927	10, 003, 000		

These figures are obtained by deducting from the estimated total number of insured persons the average numbers recorded as unemployed and the numbers directly involved in trade disputes, together with an allowance of 3.5 per cent of the number insured for absences from work through sickness and other forms of unrecorded unemployment, apart from recognized holidays.

The average percentage of insured persons recorded as unemployed was higher in 1930 than it had been since 1921, these percentages for 10 years standing as follows:

	Per cent		Per cent
1921	17. 0	1926	12. 5
1922	14. 3	1927	9. 7
1923	11. 7	1928	10. 8
1924	10. 3	1929	10. 4
1925	11. 3	1930	16. 1

The percentages for 1921 and 1926 do not take any account of those who were directly involved in the trade disputes in the coal industry in those years, or the figures would be larger. In 1930 some part of the increase in the numbers recorded as unemployed by the unemployment exchanges was due to the effect of changes in the conditions for receiving benefit which came into operation in March, 1930, and this also affected the percentage rates of unemployment.

While there was an increase in unemployment throughout Great Britain, the severity of the depression varied from one locality to another. The following table shows the average percentage of unemployment among insured persons in each of the administrative divisions during the last four years:

TABLE 1.—UNEMPLOYMENT RATES, BY YEAR AND ADMINISTRATIVE DIVISION

Division	Average per cent of unemployment among insured persons			
	1927	1928	1929	1930
London	5.8	5.6	5.6	8.1
Southeastern	5.0	5.4	5.6	8.0
Southwestern	7.3	8.1	8.1	10.4
Midlands	8.4	9.9	9.3	14.7
Northeastern	13.7	15.1	13.7	20.2
Northwestern	10.6	12.4	13.3	23.8
Scotland	10.6	11.7	12.1	18.5
Wales	19.5	23.0	19.3	25.9
Northern Ireland	13.2	17.0	14.8	23.9
Great Britain and Northern Ireland	9.7	10.8	10.4	16.1

While every division shows a marked increase, the situation is far better in London and the south, where there is a greater variety of industries and where most of the new trades have been established, than in the north, where the heavy industries predominate. In Wales the position of the coal-mining industry accounts for most of the distress.

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Employment in the Principal Industries

In coal mining, employment was slack during the first four months of the year, with a slight decline, and thereafter fell off sharply. From the end of April onwards the situation was much worse than during the corresponding months of 1929. The average percentages for the year of persons wholly unemployed and temporarily stopped, respectively, were 13.3 per cent and 7.1 per cent as compared with 11.9 per cent and 4.3 per cent in 1929. In the metal trades the situation was much the same except that the rapid decline began earlier. In the manufacture of pig iron the percentage of unemployed rose from 12 in January to 34.6 in October, and to 35.7 on December 22, as compared with 12.2 on December 16, 1929. Of 394 furnaces, the number in blast at the end of December was 76, as compared with 162 in December, 1929. In iron and steel manufacture employment declined steadily from March on and was very bad. By December the percentage of unemployed had reached 50.6. The average monthly production of steel ingots and castings was 608,300 tons, as compared with 804,600 tons in 1929.

All the textile industries suffered, and in cotton manufacturing the situation was particularly acute. Throughout the year employment fell off, until in August the percentage unemployed was 45.7. Matters improved slightly during the next three months, but on December 22 the percentage had risen to 47.4. In the wool-textile industry the situation was not quite so bad. During the first quarter the percentage wholly unemployed was relatively low—6.5 in January and 7.8 in March—but the average percentage temporarily out of work was 14.1. During the second three months a trade dispute affected the situation seriously, lasting from early in April till after the end of the quarter and causing a loss of 3,258,000 working-days.

Employment was bad throughout the year also in pottery and earthenware manufacture, in the engineering trades, and in shipbuilding and ship repairing. It was less severe in the manufacture of leather and leather goods, clothing, and food, drink, and tobacco, in the printing and paper trades, in building and contracting, in gas, water, and electricity supply, and in the transport industries.

Changes in Rates of Wages

The following table shows the number of workers affected by the changes in rates of wages reported to the department in 1929 and 1930, and the net amount of the change in the weekly rates of wages in each of the principal groups of industries for which statistics are available:

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TABLE 2.—NUMBER OF WORKERS AFFECTED BY WAGE CHANGES IN 1929 AND 1930, BY INDUSTRY

[Conversions into United States currency on basis of pound=$4.8665]

Industry group	Number affected by net increases and net decreases in rates of wages				Estimated net weekly increase or decrease in wage rates of all workers affected	
	1929		1930		1929	1930
	Increase	Decrease	Increase	Decrease		
Coal mining	15,500	75,000	15,500	800	−$16,059	+$1,582
Other mining and quarrying	18,750	9,750	7,150	18,500	−1,338	−6,205
Brick, pottery, glass, etc	9,500	500	700	2,650	+3,163	−1,582
Iron and steel	32,000	3,000	69,000	68,000	+11,436	−2,190
Engineering	700		107,000	750	+1,046	+45,015
Shipbuilding	1,550		66,000	1,500	+608	+23,603
Other metal	11,000	15,500	27,500	40,250	−4,867	−608
Textile	3,600	590,000	4,750	409,000	−314,498	−255,005
Clothing	200	3,300	2,650	6,550	−2,579	−3,163
Food, drink, and tobacco	13,250	1,800	2,000	19,750	+3,042	−8,273
Woodworking, furniture, etc	950	11,000	1,700	9,500	−6,691	−4,258
Paper, printing, etc	1,000	150		17,000	+1,071	−12,531
Building, public works, contracting	12,000	56,000	16,500	429,000	−29,442	−181,034
Gas, water, and electricity supply	6,650	2,000	2,050	2,250	+3,893	+365
Transport	4,500	131,000	421,000	24,000	−30,902	+129,449
Public administration services	10,600	4,000	16,000	10,000	+3,261	+7,543
Other	250	14,000	500	38,500	−4,623	−14,964
Total	142,000	917,000	760,000	1,098,000	−383,480	−282,257

These statistics do not include changes affecting agricultural laborers, domestic servants, Government employees, shop assistants, and clerks. They relate to changes in wage rates for full-time employment and show nothing as to actual earnings as affected by irregular work or no employment. The figures for 1930 are preliminary and subject to revision.

The principal increases during 1930 were received by railway employees, including the workers in railway machine shops, and workers in the shipbuilding industry. In the case of the railway workers, the change was considered a restoration rather than an advance; in 1928 the workers had agreed to a reduction of 2.5 per cent of their earnings, as a means of helping to reestablish the industry, for a definite period. This agreement reached its conclusion in May, 1930, and the 2.5 per cent was restored. Against this improvement some of the traffic workers sustained a deduction of 1s. (24 cents) a week, under a cost-of-living sliding scale. In the shipbuilding industry a considerable number of time workers received increases following the adoption of national uniform time rates, the increases varying in most cases from about 6d. (12 cents) to 5s. ($1.22) a week.

Other workpeople who received a net increase in wages in 1930 included coal miners in Warwickshire, iron puddlers and iron and steel millmen in the Midlands, the lower-paid men employed in steel melting plants and rolling mills in various districts in England and Scotland, tin-plate makers in South Wales and Monmouthshire, and men employed by electrical contractors in England and Wales.

In the matter of reductions, the textile workers and building-trades people were the principal sufferers, furnishing nearly 80 per cent of the total number affected. In Yorkshire the majority of the wool-

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textile workers had their wages reduced by amounts varying from 5 per cent to 9.25 per cent on current rates. In the building industry in most districts there was a reduction of one-half penny (1 cent) per hour for craftsmen and of one-half penny (1 cent) or one farthing (one-half cent) for laborers.

In most branches of industry wages were unchanged during the year. In the case of about 85,000 workers in different industries, there were two or more movements in wages during the year, leaving the general level the same as at the beginning of 1930.

Methods by Which Wage Changes Were Arranged

The total of all the increases shown in the above table was equivalent to about £90,600 ($440,905) per week, and the total of all the decreases to £148,600 ($723,162) per week, producing the net effect of a reduction of £58,000 ($282,257) per week.

Of the total increase of £90,600 [$440,905] per week, about £16,400 [$79,811] took effect under cost-of-living sliding scales, including £1,800 [$8,760] under scales arranged by joint industrial councils or other joint standing bodies of employers and workpeople and £1,150 [$5,596] under scales embodied in trade board orders; £5,300 [$25,792] took effect under other arrangements made by joint standing bodies of employers and workpeople or by trade boards; £13,000 [$63,265] took effect under scales based on selling prices of manufactured iron, steel, etc., or on the proceeds of the industry (coal mining); £550 [$2,677] took effect as the result of arbitration or mediation; and the remaining sum was the result of direct negotiation between employers and workpeople, or of independent action on the part of employers. Increases preceded by disputes causing stoppage of work accounted for less than £200 [$973] of the total.

Of the total reduction of £148,600 [$723,162] per week, nearly £90,000 [$437,985] (or over 60 per cent of the total) took effect under cost-of-living sliding scales, including over £50,000 [$243,325] under scales arranged by joint industrial councils or other joint standing bodies of employers and workpeople, and £2,250 [$10,950] under scales embodied in trade board orders; other arrangements made by joint standing bodies or trade boards accounted for £6,600 [$32,119]; £8,500 [$41,365] took effect under sliding scales based on selling prices or on the proceeds of the industry; £650 [$3,163] took effect under arbitration awards; and the remainder was the result of direct negotiation or of independent action by employers. Reductions preceded by disputes causing stoppage of work accounted for about £27,400 [$133,342] of the total, due principally to the stoppage which occurred in the wool-textile industry.

Changes in Wages in the Years 1919 to 1930

The following table gives for the various industries and services for which statistics are available the number of workers whose wage rates were increased or diminished, so far as reported, in each of the years 1919 to 1930, with the net amount of increase or decrease in their weekly wages and the net weekly effect upon the wages of all the workers affected.

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TABLE 3.—NUMBER OF WORKERS AFFECTED BY CHANGES IN WAGE RATES, AND CHANGES IN TOTAL AMOUNT OF WAGES PAID, 1919 TO 1930

[Conversions into United States currency on basis of pound=$4.8665]

Year	Number of workers affected by—		Net weekly amount of change in rates of wages		Net weekly increase or decrease in amount of wages paid to workers affected
	Increases	Decreases	Increases	Decreases	
1919	6,240,000	100	$12,395,949	$292	+$12,395,657
1920	7,867,000	500	23,326,108	876	+23,325,232
1921	78,000	7,244,000	66,184	29,562,041	−29,495,857
1922	73,700	7,633,000	55,721	20,543,930	−20,488,208
1923	1,202,000	3,079,000	822,439	2,365,119	−1,542,681
1924	3,019,000	481,500	2,997,764	302,210	+2,695,554
1925	873,000	851,000	393,700	773,774	−380,074
1926	420,000	740,000	647,245	407,326	+239,918
1927	282,000	1,855,000	149,402	1,890,635	−1,741,234
1928	217,000	1,615,000	106,090	797,133	−691,043
1929	142,000	917,000	62,778	446,258	−383,480
1930	760,000	1,098,000	281,284	563,541	−282,257

Too much stress should not be laid on this table, owing to the fact that large bodies of workers, notably the agricultural employees, are not included, and that where an industry is not closely organized, many wage changes may take place by agreement between employers and employees without any formal notice being given of the fact. The table is to be regarded as giving only a general indication of the movement of wages in any year, and a rough measure of the extent of such movements in comparison with that in other years.

Hours of Labor

THE total number of workers whose normal hours of labor were reported to the department as having been changed in 1930 was approximately 357,000. Of these, 12,550 had an average increase of rather under one hour per week, and about 344,000 had an average reduction of about two and one-half hours per week. The reductions were almost entirely accounted for by the changes which took place in the hours of coal miners as a result of the coal mines act, 1930, the hours of underground workers being reduced in all districts where the previous average had exceeded seven and one-half hours per shift, by amounts varying, as between different districts, up to four hours per week.

TABLE 4.—NUMBER OF WORKERS AFFECTED BY CHANGES IN HOURS, AND AGGREGATE WEEKLY CHANGE IN HOURS, BY YEARS

Year	Number of workers whose hours of work were—		Aggregate increase or decrease in weekly hours
	Increased	Reduced	
1919	1,150	6,305,000	−40,651,000
1920	2,000	570,000	−2,114,000
1921	31,500	12,900	+14,500
1922	16,000	302,700	−93,000
1923	325,000	9,600	+108,750
1924	13,150	16,150	+12,500
1925	1,300	3,925	−11,750
1926	934,200	340	+3,985,000
1927	18,700	1,700	+59,000
1928	1,400	2,000	−200
1929	4,050	1,050	+8,750
1930	12,550	344,000	−863,500

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By the end of 1920 the adjustment of hours consequent upon the close of the war period was practically completed, and since then there have been no very marked changes, with the exception of the years 1926 and 1930. In 1926, after the close of the dispute in the coal-mining industry, hours were increased in coal mines, with the effect shown above. In 1930 they were reduced, but the reduction was only partial, so that the aggregate decrease by no means balances the aggregate increase in the earlier year.

Cost of Living

FLUCTUATIONS in the general level of working-class cost of living followed an abnormal course during 1930. The usual seasonal decline in the earlier part of the year was accentuated by a general downward trend in prices, which subsequently retarded, and at October 1 and December 1 more than neutralized the normal tendency toward a recovery in prices in the latter part of the year. From 66 per cent above pre-war on January 1, 1930, when it was only one point below the corresponding figure a year earlier, the index number fell rapidly to 54 at May 31, or six points below that of the previous year. Slight rises in July and August brought the figure to 57, at which level, except for a slight but abnormal fall at October 1, it remained until November 1. A further abnormal fall to 55 was recorded on December 1, and the seasonal decline usual at this time of year brought the figure at January 1, 1931, to 53, a net reduction since the beginning of 1930 of 13 points. This is the greatest reduction recorded in any single year since 1922.

Wages in the Sugar Industry of Java

THE average daily wages paid in the sugar industry of Java from 1925 to 1929 are shown in the following figures taken from the Statistical Abstract for the Netherland East Indies, 1929.[1]

AVERAGE DAILY WAGES OF WORKERS IN THE SUGAR INDUSTRY IN JAVA, 1925 TO 1929

Class of worker	1925		1926		1927		1928		1929	
	Dutch cents	U. S. currency	Dutch cents	U. S. currency	Dutch cents	U. S. currency	Dutch cents	U. S. currency	Dutch cents	U. S. currency
Regular workers:										
Professional laborers	114	$0.46	114	$0.46	114	$0.46	114	$0.46	115	$0.46
Helpers	60	.24	58	.23	58	.23	58	.23	58	.23
Total	85	.34	85	.34	85	.34	85	.34	85	.34
Season laborers:										
Factory foremen	64	.26	62	.25	63	.25	66	.26	63	.25
Factory collies, male	46	.18	46	.18	46	.18	46	.18	46	.18
Factory coolies, female	36	.14	35	.14	36	.14	37	.15	37	.15
Field watchers	35	.14	34	.14	34	.14	35	.14	35	.14
Railway coolies	41	.16	41	.16	41	.16	41	.16	41	.16
Total, male	48	.19	45	.18	45	.18	46	.18	46	.18
Total, female	36	.14	35	.14	36	.14	37	.15	37	.15
Grand total	59	.24	56	.22	56	.22	57	.23	56	.22

[1] Netherland East Indies. Departement van Landbouw, Nijverheid en Handel. Centraal Kantoor voor de Statistiek. Weltevreden, 1930, p, 224.

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TREND OF EMPLOYMENT

Summary for January, 1931

EMPLOYMENT decreased 4.2 per cent in January, 1931, as compared with December, 1930, and pay-roll totals decreased 8.2 per cent, according to reports made to the Bureau of Labor Statistics.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the total pay rolls for one week, for both December and January, together with the per cent of change in January, are shown in the following summary:

SUMMARY OF EMPLOYMENT AND PAY-ROLL TOTALS, DECEMBER, 1930, AND JANUARY, 1931

Industrial group	Establishments	Employment		Per cent of change	Pay roll in 1 week		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
1. Manufacturing	**13,659**	**2,908,988**	**2,822,479**	[1]**−2.7**	**$69,495,561**	**$63,697,395**	[1]**−7.6**
2. Coal mining	**1,499**	**355,018**	**346,588**	**−2.4**	**8,693,285**	**8,004,416**	**−7.9**
Anthracite	160	135,669	124,032	−8.6	3,975,357	3,550,840	−10.7
Bituminous	1,339	219,349	222,556	+1.5	4,717,928	4,453,576	−5.6
3. Metalliferous mining	**315**	**44,846**	**43,669**	**−2.6**	**1,154,063**	**1,059,113**	**−8.2**
4. Quarrying and nonmetallic mining	**706**	**28,545**	**26,207**	**−8.2**	**642,046**	**540,545**	**−15.8**
5. Crude petroleum producing	**539**	**29,692**	**28,677**	**−3.4**	**1,091,742**	**1,010,556**	**−7.4**
6. Public utilities	**12,070**	**731,870**	**714,643**	**−2.4**	**22,752,354**	**21,517,315**	**−5.4**
Telephone and telegraph	7,934	324,377	320,431	−1.2	9,707,600	9,227,666	−4.9
Power, light, and water	3,617	257,871	247,711	−3.9	8,279,550	7,685,146	−7.2
Electric railroad operation and maintenance, exclusive of car shops	519	149,622	146,501	−2.1	4,765,204	4,604,503	−3.4
7. Trade	**9,203**	**404,872**	**328,154**	**−18.5**	**9,666,973**	**8,265,736**	**−14.5**
Wholesale	1,868	60,528	58,870	−2.7	1,891,652	1,812,272	−4.2
Retail	7,335	344,344	269,284	−21.8	7,775,321	6,453,464	−17.0
8. Hotels	**2,055**	**147,380**	**148,576**	**+0.8**	[2]**2,485,125**	[2]**2,458,210**	**−1.1**
9. Canning and preserving	**809**	**37,812**	**30,010**	**−20.6**	**617,649**	**496,669**	**−19.6**
10. Laundries	**206**	**18,528**	**18,674**	**+0.8**	**370,874**	**368,128**	**−0.7**
11. Dyeing and cleaning	**57**	**2,437**	**2,374**	**−2.6**	**57,326**	**55,747**	**−2.8**
Total	**41,118**	**4,709,988**	**4,510,051**	**−4.2**	**117,026,998**	**107,473,830**	**−8.2**

Recapitulation by Geographic Divisions

Geographic division							
New England [3]	3,065	425,205	413,782	−2.7	$9,975,753	$9,642,623	−3.3
Middle Atlantic [4]	7,106	1,465,097	1,394,920	−4.8	38,972,041	35,958,346	−7.7
East North Central [5]	9,663	1,296,457	1,249,926	−3.6	32,921,796	29,389,011	−10.7
West North Central [6]	4,451	304,744	291,883	−4.2	7,458,421	7,033,749	−5.7
South Atlantic [7]	4,405	463,809	444,898	−4.1	9,387,039	8,691,743	−7.4
East South Central [8]	2,073	187,767	184,448	−1.8	3,453,859	3,262,445	−5.5
West South Central [9]	3,272	186,595	179,636	−3.7	4,528,491	4,233,241	−6.5
Mountain [10]	1,573	101,890	96,969	−4.8	2,773,957	2,524,127	−9.0
Pacific [11]	5,510	278,424	253,589	−8.9	7,555,641	6,738,545	−10.8
All divisions	**41,118**	**4,709,988**	**4,510,051**	**−4.2**	**117,026,998**	**107,473,830**	**−8.2**

[1] Weighted per cent of change for the combined 54 manufacturing industries, repeated from Table 2, p. 188; the remaining per cents of change, including total, are unweighted.
[2] Cash payments only; see text, p. 208.
[3] Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
[4] New Jersey, New York, Pennsylvania.
[5] Illinois, Indiana, Michigan, Ohio, Wisconsin.
[6] Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.
[7] Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.
[8] Alabama, Kentucky, Mississippi, Tennessee.
[9] Arkansas, Louisiana, Oklahoma, Texas.
[10] Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming.
[11] California, Oregon, Washington.

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The combined totals of these 15 industrial groups showed a decrease of 4.2 per cent in employment from December, 1930, to January, 1931, and a decrease of 8.2 per cent in employees' earnings.

The per cents of change shown for the total figures represent only the changes in the establishments reporting, as the figures of the several groups are not weighted according to the relative importance of each industry.

Increased employment was shown in January in 3 of the 15 industrial groups: Bituminous coal mining gained 1.5 per cent; hotels and laundries gained 0.8 per cent each.

Decreased employment was shown in January in each of the remaining 12 industrial groups: Manufacturing, 2.7 per cent; anthracite mining, 8.6 per cent; metalliferous mining, 2.6 per cent; quarrying and nonmetallic mining, 8.2 per cent; crude petroleum producing, 3.4 per cent; telephone and telegraph, 1.2 per cent; power, light, and water, 3.9 per cent; electric railroads, 2.1 per cent; wholesale trade, 2.7 per cent; retail trade, 21.8 per cent; canning and preserving, 20.6 per cent; dyeing and cleaning, 2.6 per cent.

Pay-roll totals in January were lower than in December in each of the 15 industrial groups.

Each of the nine geographic divisions reported decreased employment and pay-roll totals in January as compared with December, the decreases in pay rolls having been considerably greater than the decreases in employment, due to the fact that while taking inventories and making repairs (prevalent at this season) cause loss of working time they do not necessitate the complete dropping of large numbers of employees.

PER CAPITA WEEKLY EARNINGS IN JANUARY, 1931, AND COMPARISON WITH DECEMBER, 1930, AND JANUARY, 1930

Industrial group	Actual weekly per capita earnings January, 1931	Per cent of change January, 1931, compared with—	
		December, 1930	January, 1930
1. Manufacturing	$22.49	−5.0	−12.3
2. Coal mining:			
Anthracite	28.63	−2.3	−4.8
Bituminous	20.01	−7.0	−21.0
3. Metalliferous mining	24.25	−5.8	−16.9
4. Quarrying and nonmetallic mining	20.63	−8.3	−13.3
5. Crude petroleum producing	35.24	−4.2	−5.7
6. Public utilities:			
Telephone and telegraph	28.80	−3.8	+2.9
Power, light, and water	31.02	−3.4	−0.7
Electric railroads	31.43	−1.3	−2.2
7. Trade:			
Wholesale	30.78	−1.5	−2.2
Retail	23.97	+6.2	−1.5
8. Hotels (cash payments only)[1]	16.55	−1.8	−3.8
9. Canning and preserving	16.55	+1.3	−13.6
10. Laundries	19.71	−1.5	[2]
11. Dyeing and cleaning	23.48	−0.2	[2]
Total	23.83	−4.1	[2]

[1] The additional value of board, room, and tips can not be computed. [2] Data not available.

Per capita earnings for January, 1931, given in the preceding table must not be confused with full-time weekly rates of wages; they are actual per capita weekly earnings computed by dividing the total num-

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ber of employees reported into the total amount of pay roll in the week reported, and the "number of employees" includes all persons who worked any part of the period reported—that is, part-time workers as well as full-time workers.

Comparisons are made with per capita earnings in December, 1930, and with January, 1930, where data are available.

For convenient reference the latest data available relating to all employees, excluding executives and officials, on Class I railroads, drawn from Interstate Commerce Commission reports, are shown in the following statement. These reports are for the months of November and December, 1930, instead of for December, 1930, and January, 1931, consequently the figures can not be combined with those presented in the foregoing table.

EMPLOYMENT AND PAY-ROLL TOTALS, CLASS I RAILROADS

Industry	Employment		Per cent of change	Amount of pay roll in entire month		Per cent of change
	Nov. 15, 1930	Dec. 15, 1930		November, 1930	December, 1930	
Class I railroads	1,378,242	1,340,470	−2.7	$186,155,582	$185,396,509	−0.4

The total number of employees included in this summary is approximately 5,900,000, whose combined earnings in one week amounted to about $150,000,000.

1. Employment in Selected Manufacturing Industries in January, 1931

Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, December, 1930, and January, 1931

EMPLOYMENT in manufacturing industries decreased 2.7 per cent in January, 1931, as compared with December, 1930, and pay-roll totals decreased 7.6 per cent. These changes are based upon returns made by 12,913 establishments in 54 of the principal manufacturing industries of the United States. These establishments in January had 2,697,244 employees whose combined earnings in one week were $60,665,960.

The latter part of December and first part of January habitually show marked and rapid fluctuations both in employment and pay-roll totals due to the holiday season and the custom of taking inventories and making repairs at that time. These conditions usually notably affect pay rolls in the large iron and steel and automobile plants.

The bureau's weighted index of employment for January, 1931, is 73.1, as compared with 75.1 for December, 1930, 76.5 for November, and 90.2 for January, 1930; the index of pay-roll totals for January, 1931, is 62.3, as compared with 67.4 for December, 1930, 68.3 for November, 1930, and 87.6 for January, 1930. The monthly average for 1926 equals 100.

The leather group of industries shows an increase of 3.9 per cent in employment and an increase of 4.1 per cent in pay-roll totals in Janu-

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ary, but each of the remaining 11 groups reported fewer employees and decreased pay-roll totals as compared with December.

There were increases in employment in 11 industries in January and increases in pay-roll totals in 8 of the same industries. These increases were largely seasonal and were in the following industries: Agricultural implements, chewing and smoking tobacco, boots and shoes, millinery and lace goods, men's clothing, automobile tires and inner tubes, cane-sugar refining, and slaughtering and meat packing; carpets, leather, and steam-railroad car shops reported increased employment with decreased pay-roll totals.

The outstanding decreases in employment in January ranged from 7.9 per cent in sawmills to 18.4 per cent in brick plants and occurred in the following additional industries: Confectionery, rubber boots and shoes, cement, hosiery and knit goods, carriages and wagons, cigars and cigarettes, and stoves.

Eight of the nine industries which are surveyed but not included in the bureau's indexes reported decreased employment in January as compared with December and all of them reported decreased pay-roll totals. The outstanding decreases were 35.7 per cent in beet sugar and 26.5 per cent in radio and were seasonal; jewelry had 9.7 per cent fewer employees, rayon 7.2 per cent fewer employees, while the decreases in paint and varnish, rubber goods, beverages, and cash registers, etc., were small. Aircraft reported an increase of 0.6 per cent in employment.

Decreased employment in January was shown in each of the nine geographic divisions. The smallest decrease was 1 per cent in the East South Central division and the greatest decrease was 8.2 per cent in the Mountain division, the beet-sugar industry's closing season being responsible for the latter.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN DECEMBER, 1930, AND JANUARY, 1931, BY INDUSTRIES

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
Food and kindred products	**1,908**	**229,114**	**224,231**	(1)	**$5,820,832**	**$5,750,526**	(1)
Slaughtering and meat packing	207	89,177	89,717	+0.6	2,331,307	2,403,143	+3.1
Confectionery	320	38,322	35,136	−8.3	718,521	645,508	−10.2
Ice cream	307	11,131	10,988	−1.3	358,658	357,356	−0.4
Flour	349	14,847	14,567	−1.9	385,826	370,117	−4.1
Baking	709	66,302	64,298	−3.0	1,758,468	1,705,738	−3.0
Sugar refining, cane	16	9,335	9,525	+2.0	268,052	268,664	+0.2
Textiles and their products	**2,339**	**514,854**	**502,779**	(1)	**9,250,948**	**8,747,469**	(1)
Cotton goods	440	161,309	158,121	−2.0	2,392,674	2,259,115	−5.6
Hosiery and knit goods	342	85,209	76,427	−10.3	1,456,465	1,220,233	−16.2
Silk goods	265	57,172	56,583	−1.0	1,104,909	1,005,676	−9.0
Woolen and worsted goods	177	48,017	47,347	−1.4	990,942	955,326	−3.6
Carpets and rugs	29	15,658	16,093	+2.8	331,640	316,894	−4.4
Dyeing and finishing textiles	116	35,777	35,706	−0.2	865,445	843,297	−2.6
Clothing, men's	338	52,580	54,327	+3.3	907,505	981,037	+8.1
Shirts and collars	105	16,410	15,326	−6.6	222,342	199,387	−10.3
Clothing, women's	401	29,842	29,482	−1.2	718,887	697,042	−3.0
Millinery and lace goods	126	12,880	13,367	+3.8	260,139	269,462	+3.6

See footnotes at end of table.

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TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **MANUFACTURING** ESTABLISHMENTS IN DECEMBER, 1930, AND JANUARY, 1931, BY INDUSTRIES—Continued

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
Iron and steel and their products	**1,955**	**559,344**	**542,553**	(1)	**$13,771,198**	**$12,765,873**	(1)
Iron and steel	199	228,577	226,006	−1.1	5,689,861	5,413,666	−4.9
Cast-iron pipe	40	8,757	8,503	−2.9	184,191	169,619	−7.9
Structural ironwork	180	27,024	25,485	−5.7	728,345	650,399	−10.7
Foundry and machine-shop products	1,074	201,689	193,992	−3.8	4,992,428	4,561,740	−8.6
Hardware	73	25,122	24,383	−2.9	521,117	477,013	−8.5
Machine tools	149	24,998	23,746	−5.0	614,164	558,526	−9.1
Steam fittings and steam and hot-water heating apparatus	107	26,978	26,629	−1.3	677,959	641,240	−5.4
Stoves	133	16,199	13,809	−14.8	363,133	293,670	−19.1
Lumber and its products	**1,261**	**152,509**	**142,105**	(1)	**2,903,215**	**2,526,510**	(1)
Lumber, sawmills	546	82,960	76,440	−7.9	1,496,993	1,263,917	−15.6
Lumber, millwork	327	24,524	23,008	−6.2	513,327	457,554	−10.9
Furniture	288	45,025	42,657	−5.3	892,895	805,039	−9.8
Leather and its products	**423**	**111,256**	**115,693**	(1)	**1,999,995**	**2,087,731**	(1)
Leather	129	22,553	22,904	+1.6	527,898	514,831	−2.5
Boots and shoes	294	88,703	92,789	+4.6	1,472,097	1,572,900	+6.8
Paper and printing	**1,383**	**215,120**	**210,566**	(1)	**7,028,219**	**6,731,635**	(1)
Paper and pulp	213	55,061	53,541	−2.8	1,361,820	1,285,162	−5.6
Paper boxes	308	25,867	24,406	−5.6	566,201	516,819	−8.7
Printing, book and job	434	51,112	50,523	−1.2	1,746,358	1,702,781	−2.5
Printing, newspapers	428	83,080	82,096	−1.2	3,353,840	3,226,873	−3.8
Chemicals and allied products	**437**	**101,744**	**100,039**	(1)	**2,913,057**	**2,804,385**	(1)
Chemicals	156	37,653	37,091	−1.5	1,011,857	949,997	−6.1
Fertilizers	179	9,573	9,404	−1.8	171,789	163,001	−5.1
Petroleum refining	102	54,518	53,544	−1.8	1,729,411	1,691,387	−0.4
Stone, clay, and glass products	**1,030**	**102,498**	**92,081**	(1)	**2,317,682**	**1,935,119**	(1)
Cement	104	17,938	16,061	−10.5	457,924	377,053	−17.7
Brick, tile, and terra cotta	677	30,818	25,156	−18.4	621,948	466,097	−25.1
Pottery	111	16,990	16,570	−2.5	382,442	326,727	−14.6
Glass	138	36,752	34,294	−6.7	855,368	765,242	−10.5
Metal products, other than iron and steel	**237**	**44,226**	**42,570**	(1)	**1,023,958**	**927,178**	(1)
Stamped and enameled ware	77	16,151	15,383	−4.8	350,466	296,844	−15.3
Brass, bronze, and copper products	160	28,075	27,187	−3.2	673,492	630,334	−6.4
Tobacco products	**214**	**59,201**	**53,228**	(1)	**939,544**	**788,009**	(1)
Chewing and smoking tobacco and snuff	26	8,625	9,217	+6.9	133,474	141,430	+6.0
Cigars and cigarettes	188	50,576	44,011	−13.0	806,070	646,579	−19.8
Vehicles for land transportation	**1,240**	**401,839**	**399,475**	(1)	**10,604,570**	**8,488,430**	(1)
Automobiles	207	268,951	266,255	−1.0	6,747,544	4,861,709	−27.9
Carriages and wagons	50	741	648	−12.6	15,168	13,334	−12.1
Car building and repairing, electric-railroad	435	28,451	28,180	−1.0	869,973	840,172	−3.4
Car building and repairing, steam-railroad	548	103,696	104,392	+0.7	2,971,885	2,773,215	−6.7
Miscellaneous industries	**486**	**274,303**	**271,924**	(1)	**7,395,280**	**7,113,095**	(1)
Agricultural implements	85	19,267	20,494	+6.4	444,919	503,752	+13.2
Electrical machinery, apparatus, and supplies	202	159,709	157,252	−1.5	4,446,728	4,187,817	−5.3
Pianos and organs	66	6,098	5,642	−7.5	163,149	136,587	−16.1
Rubber boots and shoes	9	14,952	13,713	−8.3	303,357	254,486	−16.8
Automobile tires and inner tubes	37	36,985	37,976	+2.7	939,052	1,005,073	+7.0
Shipbuilding	87	37,292	36,847	−1.2	1,098,075	1,025,380	−6.6
Total—54 industries used in computing index numbers of employment and pay roll	**12,913**	**2,766,008**	**2,697,244**	(1)	**65,968,498**	**60,665,960**	(1)

See footnotes at end of table.

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TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **MANUFACTURING** ESTABLISHMENTS IN DECEMBER, 1930, AND JANUARY, 1931, BY INDUSTRIES—Continued

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
Industries added in 1929 and 1930, for which data for the index-base year (1926) are not available	**746**	**142,980**	**125,235**	(2)	**$3,527,063**	**$3,031,435**	(2)
Rayon	16	21,043	19,528	−7.2	407,332	397,060	−2.5
Radio	44	31,426	23,112	−26.5	646,999	520,277	−19.6
Aircraft	41	8,442	8,493	+0.6	268,515	256,122	−4.6
Jewelry	118	12,662	11,432	−9.7	300,535	258,646	−13.9
Paint and varnish	170	12,188	12,055	−1.1	331,909	314,676	−5.2
Rubber goods, other than boots, shoes, tires, and inner tubes	76	13,855	13,536	−2.3	332,723	310,483	−6.7
Beet sugar	68	16,815	10,813	−35.7	419,744	208,763	−50.3
Beverages	173	9,816	9,694	−1.2	298,683	289,210	−3.2
Cash registers, adding machines, and calculating machines	40	16,733	16,572	−1.0	520,623	476,198	−8.5
All industries	**13,659**	**2,908,988**	**2,822,479**	(2)	**69,495,561**	**63,697,395**	(2)

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION [3]							
New England	1,499	323,547	318,679	−1.5	$7,088,449	$6,883,024	−2.9
Middle Atlantic	3,567	880,620	850,831	−3.4	22,604,389	20,994,606	−7.1
East North Central	3,385	925,774	902,206	−2.5	23,072,966	20,274,254	−12.1
West North Central	1,193	162,188	156,981	−3.2	3,906,941	3,709,529	−5.1
South Atlantic	1,576	296,534	284,534	−4.0	5,571,655	5,113,759	−8.2
East South Central	594	98,883	97,887	−1.0	1,774,459	1,698,149	−4.3
West South Central	779	84,371	81,549	−3.3	1,923,168	1,816,120	−5.6
Mountain	273	36,755	33,743	−8.2	952,810	819,189	−14.0
Pacific	793	100,316	96,069	−4.2	2,600,724	2,388,765	−8.1
All divisions	**13,659**	**2,908,988**	**2,822,479**	(2)	**69,495,561**	**63,697,395**	(2)

[1] The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

[2] The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting.

[3] See footnotes 3 to 11, p. 183.

TABLE 2.—PER CENT OF CHANGE, DECEMBER, 1930, TO JANUARY, 1931—12 GROUPS OF **MANUFACTURING** INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change December, 1930, to January, 1931		Group	Per cent of change December, 1930, to January, 1931	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products	−2.4	−1.6	Stone, clay, and glass products	−10.6	−17.0
Textiles and their products	−2.1	−4.8	Metal products, other than iron and steel	−3.7	−8.9
Iron and steel and their products	−3.2	−7.5	Tobacco products	−10.6	−17.0
Lumber and its products	−7.0	−13.1	Vehicles for land transportation	−0.1	−16.0
Leather and its products	+3.9	+4.1	Miscellaneous industries	−1.0	−3.8
Paper and printing	−2.2	−4.1			
Chemicals and allied products	−1.6	−4.1	**All industries**	**−2.7**	**−7.6**

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Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, January, 1931, with January, 1930

THE level of employment in manufacturing industries in January, 1931, was 19 per cent below the level of January, 1930, and pay-roll totals were 28.9 per cent lower.

Each of the 54 industries had considerably fewer employees in January, 1931, than in January, 1930, the notable decreases having been 44.6 per cent in carriages and wagons, 37.8 per cent in machine tools, over 34 per cent each in carpets and agricultural implements, and 31.9 per cent in sawmills. Iron and steel lost 15.7 per cent of its employees over the 12-month interval, cotton goods lost 19 per cent, automobiles lost 20.3 per cent, and shipbuilding 14.4 per cent.

Among the 12 groups of industries the decreases in employment ranged from 29.2 per cent in the lumber group to 7.6 per cent in the food group.

The decreases in employment in the several geographic divisions ranged from 24.9 per cent in the West South Central division to 14.9 per cent in the West North Central division.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN **MANUFACTURING** INDUSTRIES, JANUARY, 1931, WITH JANUARY, 1930

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change January, 1931, compared with January, 1930	
	Number on pay roll	Amount of pay roll
Food and kindred products	**−7.6**	**−9.0**
Slaughtering and meat packing	−6.8	−4.6
Confectionery	−9.4	−13.1
Ice cream	−3.1	−3.5
Flour	−9.8	−15.1
Baking	−7.4	−10.4
Sugar refining, cane	−10.2	−16.5
Textiles and their products	**−17.8**	**−26.7**
Cotton goods	−19.0	−23.6
Hosiery and knit goods	−18.8	−31.1
Silk goods	−13.4	−21.5
Woolen and worsted goods	−21.7	−26.6
Carpets and rugs	−34.1	−44.7
Dyeing and finishing textiles	−6.4	−10.1
Clothing, men's	−19.5	−34.7
Shirts and collars	−25.6	−36.3
Clothing, women's	−11.0	−26.1
Millinery and lace goods	−15.0	−25.4
Iron and steel and their products	**−21.9**	**−35.7**
Iron and steel	−15.7	−30.9
Cast-iron pipe	−19.3	−22.3
Structural ironwork	−19.0	−28.5
Foundry and machine-shop products	−26.1	−39.8
Hardware	−20.6	−35.2
Machine tools	−37.8	−52.1
Steam fittings and steam and hot-water heating apparatus	−12.5	−22.1
Stoves	−27.9	−40.7
Lumber and its products	**−29.2**	**−39.7**
Lumber, sawmills	−31.9	−43.3
Lumber, millwork	−22.2	−29.6
Furniture	−26.7	−38.3
Leather and its products	**−15.2**	**−29.0**
Leather	−14.3	−22.6
Boots and shoes	−15.4	−31.0
Paper and printing	**−8.3**	**−11.7**
Paper and pulp	−14.1	−22.3
Paper boxes	−10.8	−17.2
Printing, book and job	−7.7	−10.3
Printing, newspapers	−2.5	−5.2
Chemicals and allied products	**−14.1**	**−17.6**
Chemicals	−8.0	−15.7
Fertilizers	−20.5	−25.8
Petroleum refining	−19.0	−18.0
Stone, clay, and glass products	**−20.5**	**−30.6**
Cement	−15.0	−27.5
Brick, tile, and terra cotta	−25.5	−36.3
Pottery	−14.5	−28.3
Glass	−21.0	−28.5
Metal products, other than iron and steel	**−16.7**	**−28.0**
Stamped and enameled ware	−9.3	−20.2
Brass, bronze, and copper products	−19.9	−30.4

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TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN **MANUFACTURING** INDUSTRIES, JANUARY, 1931, WITH JANUARY, 1930—Continued

Industry	Per cent of change January, 1931, compared with January, 1930	
	Number on pay roll	Amount of pay roll
Tobacco products	**−10.1**	**−16.5**
Chewing and smoking tobacco and snuff	−2.5	−10.4
Cigars and cigarettes	−11.3	−17.4
Vehicles for land transportation	**−22.1**	**−37.8**
Automobiles	−20.3	−46.0
Carriages and wagons	−44.6	−46.8
Car building and repairing, electric-railroad	−11.9	−17.0
Car building and repairing, steam-railroad	−24.4	−32.4
Miscellaneous industries	**−21.9**	**−30.8**
Agricultural implements	−34.3	−44.3
Electrical machinery, apparatus, and supplies	−23.5	−33.4
Pianos and organs	−8.8	−21.7
Rubber boots and shoes	−26.6	−42.9
Automobile tires and inner tubes	−15.7	−24.0
Shipbuilding	−14.4	−18.7
All industries	**−19.0**	**−28.9**

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION [1]		
New England	−17.9	−25.8
Middle Atlantic	−17.0	−27.4
East North Central	−20.5	−34.5
West North Central	−14.9	−20.2
South Atlantic	−16.2	−24.0
East South Central	−20.8	−28.3
West South Central	−24.9	−28.7
Mountain	−18.7	−23.5
Pacific	−20.5	−27.8
All divisions	**−19.0**	**−28.9**

[1] See footnotes 3 to 11, p. 183.

Per Capita Earnings in Manufacturing Industries

ACTUAL per capita weekly earnings in January, 1931, for each of the 63 manufacturing industries surveyed by the Bureau of Labor Statistics, together with per cents of change in January, 1931, as compared with December, 1930, and January, 1930, are shown in Table 4.

Per capita earnings given in Table 4 must not be confused with full-time weekly rates of wages. They are actual per capita weekly earnings computed by dividing the total number of employees reported into the total amount of pay roll in the week reported, and the "number of employees" includes all persons who worked any part of the period reported—that is, part-time workers as well as full-time workers.

Per capita weekly earnings in January, 1931, for the combined 54 chief manufacturing industries of the United States, upon which the bureau's indexes of employment and pay rolls are based, were 5 per cent lower than in December, 1930, and 12.3 per cent lower than January, 1930.

The actual average per capita weekly earnings in January, 1931, for the 54 manufacturing industries were $22.49; the average per capita earnings for all of the 63 industries combined were $22.57.

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TABLE 4.—PER CAPITA WEEKLY EARNINGS IN **MANUFACTURING** INDUSTRIES IN JANUARY, 1931, AND COMPARISON WITH DECEMBER, 1930, AND JANUARY, 1930

Industry	Per capita weekly earnings in January, 1931	Per cent of change January, 1931, compared with—	
		December, 1930	January, 1930
Food and kindred products:			
Slaughtering and meat packing	$26.79	+2.5	+2.5
Confectionery	18.37	−2.0	−4.2
Ice cream	32.52	+0.9	−0.5
Flour	25.41	−2.2	−5.7
Baking	26.53	+[1]	−3.0
Sugar refining, cane	28.21	−1.7	−7.1
Textiles and their products:			
Cotton goods	14.29	−3.6	−5.5
Hosiery and knit goods	15.97	−6.6	−15.3
Silk goods	17.77	−8.1	−9.5
Woolen and worsted goods	20.18	−2.2	−5.7
Carpets and rugs	19.69	−7.0	−15.8
Dyeing and finishing textiles	23.62	−2.4	−3.9
Clothing, men's	18.06	+4.6	−19.0
Shirts and collars	13.01	−4.0	−14.4
Clothing, women's	23.64	−1.9	−17.0
Millinery and lace goods	20.16	−0.2	−12.1
Iron and steel and their products:			
Iron and steel	23.95	−3.8	−18.1
Cast-iron pipe	19.95	−5.1	−3.4
Structural ironwork	25.52	−5.3	−11.7
Foundry and machine-shop products	23.52	−5.0	−18.8
Hardware	19.56	−5.7	−18.4
Machine tools	23.52	−4.3	−22.9
Steam fittings and steam and hot-water heating apparatus	24.08	−4.2	−11.1
Stoves	21.27	−5.1	−17.5
Lumber and its products:			
Lumber, sawmills	16.53	−8.4	−16.8
Lumber, millwork	19.89	−5.0	−9.5
Furniture	18.87	−4.8	−15.8
Leather and its products:			
Leather	22.48	−4.0	−10.2
Boots and shoes	16.95	+2.1	−18.4
Paper and printing:			
Paper and pulp	24.00	−3.0	−10.0
Paper boxes	21.18	−3.2	−6.9
Printing, book and job	33.70	−1.4	−3.0
Printing, newspapers	39.31	−2.6	−2.6
Chemicals and allied products:			
Chemicals	25.61	−4.7	−8.3
Fertilizers	17.33	−3.5	−7.0
Petroleum refining	31.59	−0.4	+0.9
Stone, clay, and glass products:			
Cement	23.48	−8.0	−14.7
Brick, tile, and terra cotta	18.53	−8.2	−14.3
Pottery	19.72	−12.4	−16.0
Glass	22.31	−4.1	−9.2
Metal products, other than iron and steel:			
Stamped and enameled ware	19.30	−11.1	−12.0
Brass, bronze, and copper products	23.19	−3.3	−13.4
Tobacco products:			
Chewing and smoking tobacco and snuff	15.34	−0.9	−7.7
Cigars and cigarettes	14.69	−7.8	−6.9
Vehicles for land transportation:			
Automobiles	18.26	−27.2	−32.0
Carriages and wagons	20.58	+0.5	−3.6
Car building and repairing, electric-railroad	29.81	−2.5	−5.6
Car building and repairing, steam-railroad	26.57	−7.3	−10.3
Miscellaneous industries:			
Agricultural implements	24.58	+6.5	−15.3
Electrical machinery, apparatus, and supplies	26.63	−4.3	−12.7
Pianos and organs	24.21	−9.5	−14.3
Rubber boots and shoes	18.56	−8.5	−22.3
Automobile tires and inner tubes	26.47	+4.3	−9.9
Shipbuilding	27.83	−5.5	−5.1
Industries added in 1929 and 1930, for which data for the index-base year (1926) are not available:			
Rayon	20.33	+5.0	−2.7
Radio	22.51	+9.3	−21.2
Aircraft	30.16	−5.2	−5.8
Jewelry	22.62	−4.7	−9.9
Paint and varnish	26.10	−4.1	−5.5
Rubber goods, other than boots, shoes, tires, and inner tubes	22.94	−4.5	−12.0
Beet sugar	19.31	−22.6	[2]
Beverages	29.83	−2.0	[2]
Cash registers, adding machines, and calculating machines	28.74	−7.6	[2]

[1] Less than one-tenth of 1 per cent.

[2] Data not available.

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Index Numbers of Employment and Pay-Roll Totals in Manufacturing Industries

TABLE 5 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to January, 1931, together with the average indexes for each of the years 1923 to 1930, inclusive.

TABLE 5.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN **MANUFACTURING** INDUSTRIES, JANUARY, 1923, TO JANUARY, 1931

[Monthly average, 1926=100]

Month	Employment									Pay-roll totals								
	1923	1924	1925	1926	1927	1928	1929	1930	1931	1923	1924	1925	1926	1927	1928	1929	1930	1931
Jan.	106.6	103.8	97.9	100.4	97.3	91.6	95.2	90.2	73.1	95.8	98.6	93.9	98.0	94.9	89.6	94.5	87.6	62 3
Feb.	108.4	105.1	99.7	101.5	99.0	93.0	97.4	90.3	-----	99.4	103.8	99.3	102.2	100.6	93.9	101.8	90.7	-----
Mar.	110.8	104.9	100.4	102.0	99.5	93.7	98.6	89.8	-----	104.7	103.3	100.8	103.4	102.0	95.2	103.9	90.8	-----
Apr.	100.8	102.8	100.2	101.0	98.6	93.3	99.1	89.1	-----	105.7	101.1	98.3	101.5	100.8	93.8	104.6	89.8	-----
May	110.8	98.8	98.9	99.8	97.6	93.0	99.2	87.7	-----	109.4	96.5	98.5	99.8	99.8	94.1	104.8	87.6	-----
June	110.9	95.6	98.0	99.3	97.0	93.1	98.8	85.5	-----	109.3	90.8	95.7	99.7	97.4	94.2	102.8	84.1	-----
July	109.2	92.3	97.2	97.7	95.0	92.2	98.2	81.6	-----	104.3	84.3	93.5	95.2	93.0	91.2	98.2	75.9	-----
Aug.	108.5	92.5	97.8	98.7	95.1	93.6	98.6	79.9	-----	103.7	87.2	95.4	98.7	95.0	94.2	102.1	73.9	-----
Sept.	108.6	94.3	98.9	100.3	95.8	95.0	99.3	79.7	-----	104.4	89.8	94.4	99.3	94.1	95.4	102.6	74.2	-----
Oct.	108.1	95.6	100.4	100.7	95.3	95.9	98.3	78.6	-----	106.8	92.4	100.4	102.9	95.2	99.0	102.3	72.7	-----
Nov.	107.4	95.5	100.7	99.5	93.5	95.4	94.8	76.5	-----	105.4	91.4	100.4	99.6	91.6	96.1	95.1	68.3	-----
Dec.	105.4	97.3	100.8	98.9	92.6	95.5	91.9	75.1	-----	103.2	95.7	101.6	99.8	93.2	97.7	92.0	67.4	-----
Av.	**108.8**	**98.2**	**99.2**	**100.0**	**96.4**	**93.8**	**97.5**	**83.7**	-----	**104.3**	**94.6**	**97.7**	**100.0**	**96.5**	**94.5**	**100.4**	**80.3**	-----

Index numbers showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 manufacturing industries surveyed by the Bureau of Labor Statistics and in each of the 12 groups of industries, and also general indexes for the combined 12 groups of industries, are shown in Table 6 for January, November, and December, 1930, and January, 1931.

In computing the general indexes and the group indexes the index numbers of separate industries are weighted according to the relative importance of the industries.

Following Table 6 are two charts which represent the 54 separate industries combined and show the course of pay-roll totals as well as the course of employment for each month of the years 1926 to 1930, and January, 1931, inclusive.

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN **MANUFACTURING** INDUSTRIES, JANUARY, NOVEMBER, AND DECEMBER, 1930, AND JANUARY, 1931

[Monthly average, 1926=100]

Industry	Employment				Pay-roll totals			
	1930			Januarary, 1931	1930			Januarary, 1931
	January	November	December		January	November	December	
General index	**90.2**	**76.5**	**75.1**	**73.1**	**87.6**	**68.3**	**67.4**	**62.3**
Food and kindred products	**97.3**	**93.3**	**92.1**	**89.9**	**99.9**	**94.0**	**92.4**	**90.9**
Slaughtering and meat packing	103.7	95.5	96.1	96.6	106.6	98.9	98.6	101.7
Confectionery	91.7	92.5	90.6	83.1	93.3	87.6	90.3	81.1
Ice cream	76.7	77.9	75.3	74.3	76.6	78.6	74.2	73.9
Flour	100.2	93.8	92.1	90.4	103.3	93.6	91.5	87.7
Baking	97.7	94.6	93.3	90.5	100.0	95.1	92.4	89.6
Sugar refining, cane	90.6	88.0	79.8	81.4	95.0	87.1	79.2	79.3

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TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN **MANUFACTURING** INDUSTRIES, JANUARY, NOVEMBER, AND DECEMBER, 1930, AND JANUARY, 1931—Continued

Industry	Employment				Pay-roll totals			
	1930			January, 1931	1930			January, 1931
	January	November	December		January	November	December	
Textiles and their products	**91.9**	**78.7**	**77.1**	**75.5**	**88.4**	**69.0**	**68.1**	**64.8**
Cotton goods	90.4	75.4	74.7	73.2	85.5	66.8	69.1	65.3
Hosiery and knit goods	92.4	87.4	85.6	75.0	93.5	85.5	76.8	64.4
Silk goods	94.2	83.4	82.5	81.6	90.2	76.4	77.8	70.8
Woolen and worsted goods	87.9	71.7	69.7	68.8	84.3	63.6	64.2	61.9
Carpets and rugs	101.7	71.6	65.1	67.0	90.7	57.9	52.6	50.2
Dyeing and finishing textiles	99.3	92.8	93.1	92.9	95.5	88.1	88.1	85.9
Clothing, men's	88.5	70.9	68.9	71.2	82.6	50.7	49.9	53.9
Shirts and collars	90.3	77.1	72.0	67.2	83.1	65.4	59.0	52.9
Clothing, women's	98.6	88.8	88.8	87.8	97.6	76.1	74.4	72.1
Millinery and lace goods	90.3	74.8	74.0	76.8	84.8	61.2	61.1	63.3
Iron and steel and their products	**91.7**	**75.4**	**74.0**	**71.6**	**88.3**	**62.1**	**61.4**	**56.8**
Iron and steel	88.7	76.8	75.6	74.8	85.1	63.5	61.8	58.8
Cast-iron pipe	66.7	60.3	55.4	53.8	60.2	55.3	50.8	46.8
Structural ironwork	97.4	84.7	83.6	78.9	94.2	75.9	75.5	67.4
Foundry and machine-shop products	97.3	75.6	74.8	71.9	94.5	60.9	62.2	56.9
Hardware	87.8	72.2	71.8	69.7	82.5	58.9	58.4	53.5
Machine tools	119.6	81.2	78.3	74.4	118.2	63.7	62.3	56.6
Steam fittings and steam and hot-water heating apparatus	69.6	63.0	61.7	60.9	63.9	53.7	52.7	49.8
Stoves	73.1	71.2	61.9	52.7	64.9	57.0	47.6	38.5
Lumber and its products	**76.4**	**61.3**	**58.2**	**54.1**	**71.5**	**53.8**	**49.6**	**43.1**
Lumber, sawmills	74.7	58.8	55.3	50.9	70.6	52.2	47.4	40.0
Lumber, millwork	68.9	57.7	57.2	53.6	63.8	51.5	50.4	44.9
Furniture	85.5	70.0	66.2	62.7	78.4	58.6	53.6	48.4
Leather and its products	**90.4**	**76.2**	**73.8**	**76.7**	**82.5**	**53.3**	**56.3**	**58.6**
Leather	90.5	80.1	76.4	77.6	90.3	74.6	71.7	69.9
Boots and shoes	90.4	75.2	73.1	76.5	80.3	47.2	51.9	55.4
Paper and printing	**102.1**	**95.7**	**95.7**	**93.6**	**106.3**	**97.3**	**97.9**	**93.9**
Paper and pulp	96.0	84.9	84.9	82.5	96.4	80.0	79.3	74.9
Paper boxes	92.8	90.9	87.7	82.8	96.4	92.9	87.4	79.8
Printing, book and job	104.9	95.9	98.0	96.8	108.5	97.0	99.8	97.3
Printing, newspapers	109.8	109.2	108.4	107.1	114.0	111.6	112.4	108.1
Chemicals and allied products	**98.4**	**86.4**	**85.9**	**84.5**	**99.1**	**86.5**	**85.2**	**81.7**
Chemicals	98.7	93.5	92.2	90.8	100.0	91.0	89.7	84.3
Fertilizer	92.4	73.6	74.9	73.5	89.8	69.6	70.2	66.6
Petroleum refining	100.0	82.7	82.5	81.0	99.8	85.1	83.6	81.8
Stone, clay, and glass products	**72.3**	**68.1**	**64.3**	**57.5**	**66.1**	**59.8**	**55.3**	**45.9**
Cement	66.0	68.4	62.7	56.1	61.2	60.4	54.0	44.4
Brick, tile, and terra cotta	58.9	58.6	53.8	43.9	50.2	48.2	42.8	32.0
Pottery	91.8	82.1	80.5	78.5	83.8	72.7	70.3	60.1
Glass	85.2	74.7	72.1	67.3	82.9	69.5	66.3	59.3
Metal products, other than iron and steel	**83.7**	**73.3**	**72.4**	**69.7**	**81.4**	**64.4**	**64.3**	**58.6**
Stamped and enameled ware	75.6	73.8	72.0	68.6	68.7	66.4	64.6	54.8
Brass, bronze, and copper products	87.6	73.1	72.6	70.2	86.4	63.6	64.2	60.1
Tobacco products	**86.4**	**89.1**	**86.9**	**77.7**	**81.7**	**81.3**	**82.2**	**68.2**
Chewing and smoking tobacco and snuff	96.1	87.5	87.7	93.7	97.3	81.0	82.3	87.2
Cigars and cigarettes	85.2	89.3	86.8	75.6	79.8	81.3	82.2	65.9
Vehicles for land transportation	**85.6**	**66.4**	**66.8**	**66.7**	**79.4**	**59.0**	**58.8**	**49.4**
Automobiles	87.7	69.5	70.6	69.9	72.0	55.9	54.0	38.9
Carriages and wagons	62.3	44.0	39.5	34.5	66.2	46.5	40.1	35.2
Car building and repairing, electric-railroad	90.5	84.0	80.5	79.7	92.9	82.2	79.8	77.1
Car building and repairing, steam-railroad	83.5	62.5	62.6	63.1	86.1	60.5	62.4	58.2
Miscellaneous industries	**105.2**	**84.1**	**83.0**	**82.2**	**105.7**	**76.9**	**76.0**	**73.1**
Agricultural implements	118.1	71.2	72.9	77.6	119.9	57.2	59.0	66.8
Electrical machinery, apparatus, and supplies	114.9	91.8	89.2	87.9	118.3	87.0	83.6	78.8
Pianos and organs	47.5	48.8	46.8	43.3	42.3	42.5	39.5	33.1
Rubber boots and shoes	94.9	75.9	76.0	69.7	95.8	62.3	65.2	54.7
Automobile tires and inner tubes	81.7	66.4	67.1	68.9	77.6	51.5	55.2	59.0
Shipbuilding	121.1	104.2	105.0	103.7	120.9	104.7	105.3	98.3

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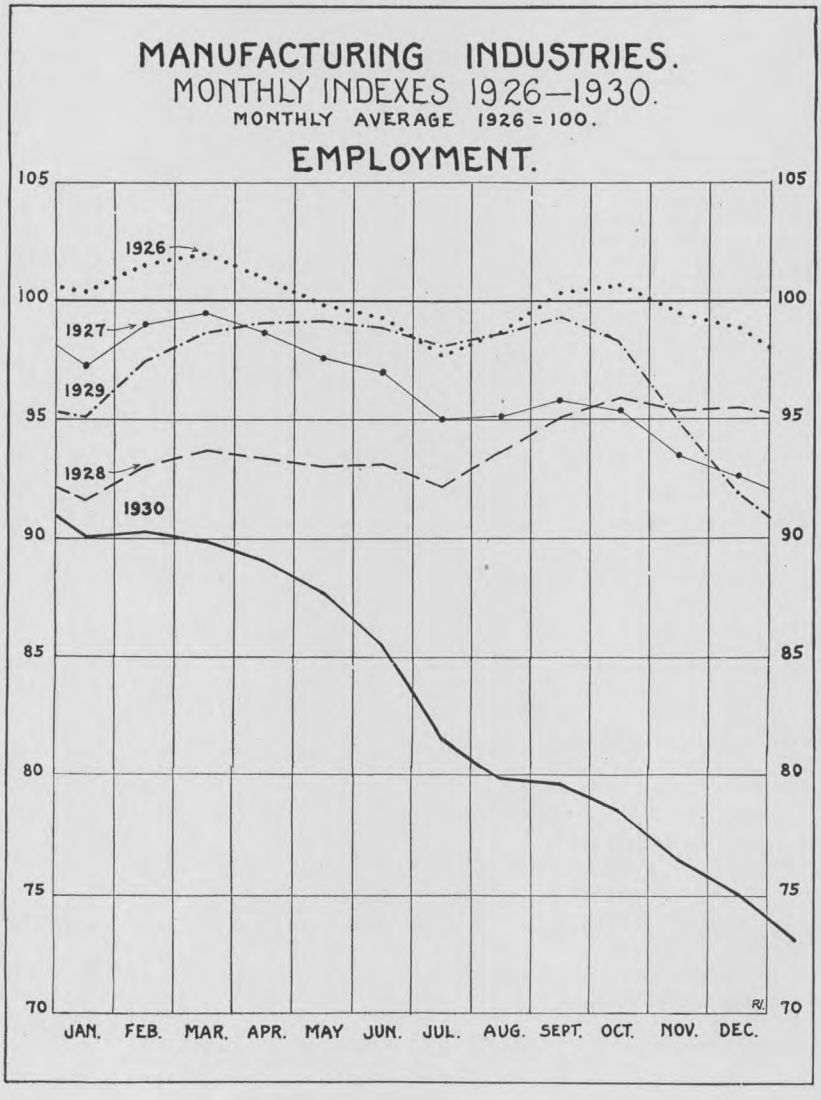

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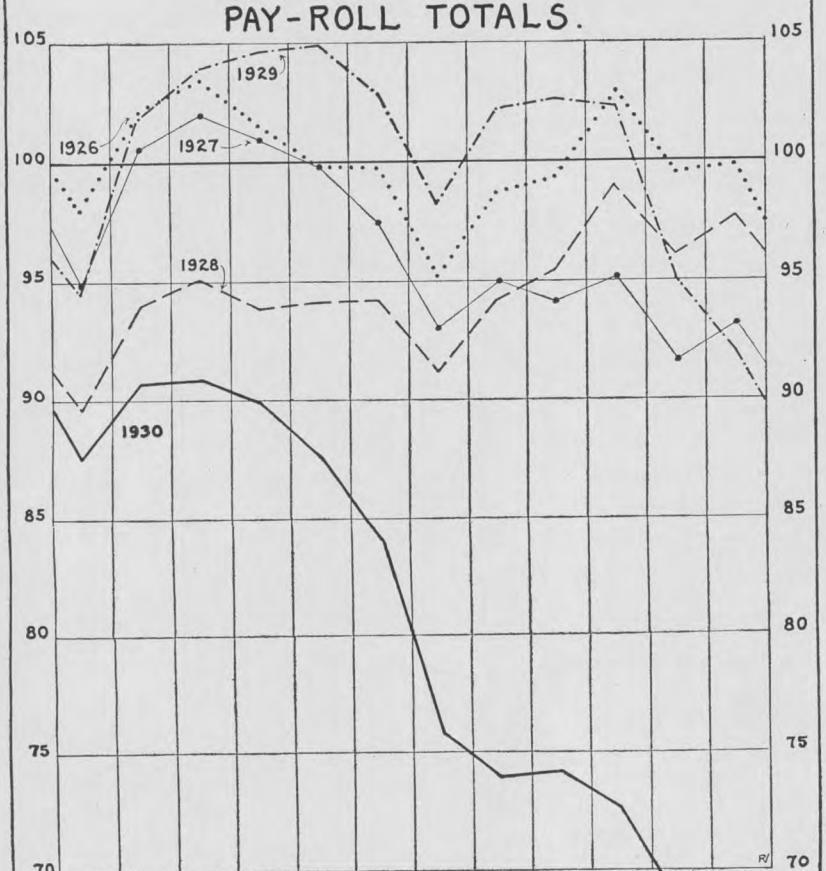

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Time Worked in Manufacturing Industries in January, 1931

REPORTS as to working time of employees in January were received from 11,073 establishments in 62 manufacturing industries. Three per cent of the establishments were idle, while employees in 56 per cent of the establishments were working full time and employees in 42 per cent were working part time.

Employees in the establishments in operation in January, 1931, were working an average of 89 per cent of full time or 1 per cent less than in December, 1930.

The 42 per cent of the establishments working part time in January averaged 75 per cent of full-time operation.

TABLE 7.—PROPORTION OF FULL TIME WORKED IN **MANUFACTURING** INDUSTRIES BY ESTABLISHMENTS REPORTING IN JANUARY, 1931

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
Food and kindred products	**1,567**	**1**	**82**	**17**	**97**	**80**
Slaughtering and meat packing	167		78	22	98	89
Confectionery	272	1	66	33	93	79
Ice cream	214	(1)	80	19	97	86
Flour	317	3	80	17	95	72
Baking	583	(1)	92	8	98	80
Sugar refining, cane	14		43	57	85	73
Textiles and their products	**1,856**	**4**	**59**	**37**	**90**	**74**
Cotton goods	385	5	49	46	85	69
Hosiery and knit goods	293	5	57	38	89	72
Silk goods	235	1	72	27	95	82
Woolen and worsted goods	160	3	55	42	88	73
Carpets and rugs	26		38	62	82	70
Dyeing and finishing textiles	92		48	52	87	75
Clothing, men's	250	7	53	40	90	77
Shirts and collars	77	10	58	31	91	76
Clothing, women's	255	4	74	23	94	72
Millinery and lace goods	83	4	63	34	95	85
Iron and steel and their products	**1,701**	**2**	**33**	**66**	**80**	**70**
Iron and steel	127	7	57	36	85	62
Cast-iron pipe	37	5	16	78	67	60
Structural ironwork	157	1	43	57	87	77
Foundry and machine-shop products	981	1	32	67	80	70
Hardware	63		10	90	74	71
Machine tools	132	2	21	77	74	67
Steam fittings and steam and hot-water heating apparatus	93	1	23	76	77	71
Stoves	111	5	34	60	81	70

[1] Less than one-half of 1 per cent.

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TABLE 7.—PROPORTION OF FULL TIME WORKED IN **MANUFACTURING** INDUSTRIES BY ESTABLISHMENTS REPORTING IN JANUARY, 1931—Continued

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
Lumber and its products	**972**	**4**	**36**	**60**	**83**	**73**
Lumber, sawmills	403	5	38	57	84	74
Lumber, millwork	251	1	37	62	83	73
Furniture	318	4	32	64	81	72
Leather and its products	**360**	**3**	**51**	**46**	**89**	**76**
Leather	103	1	59	40	91	77
Boots and shoes	257	4	47	49	88	76
Paper and printing	**1,118**	(1)	**72**	**28**	**95**	**81**
Paper and pulp	142	4	58	38	91	77
Paper boxes	254	----	48	52	89	79
Printing, book and job	372	----	74	26	96	84
Printing, newspapers	350	----	91	9	99	87
Chemicals and allied products	**343**	**1**	**73**	**27**	**95**	**80**
Chemicals	130	2	64	35	93	80
Fertilizers	144	----	71	29	94	79
Petroleum refining	69	----	94	6	100	88
Stone, clay, and glass products	**678**	**11**	**53**	**35**	**90**	**74**
Cement	81	27	63	10	96	70
Brick, tile, and terra cotta	388	11	48	41	88	75
Pottery	95	3	49	47	88	75
Glass	114	7	69	24	92	69
Metal products, other than iron and steel	**204**	(1)	**43**	**57**	**86**	**76**
Stamped and enameled ware	61	----	56	44	90	77
Brass, bronze, and copper products	143	1	37	62	84	75
Tobacco products	**195**	**6**	**41**	**54**	**88**	**79**
Chewing and smoking tobacco and snuff	23	----	43	57	92	85
Cigars and cigarettes	172	6	40	53	87	78
Vehicles for land transportation	**1,107**	**1**	**53**	**46**	**89**	**77**
Automobiles	170	----	32	68	82	72
Carriages and wagons	46	9	41	50	87	77
Car building and repairing, electric-railroad	394	----	86	14	98	85
Car building and repairing, steam-railroad	497	1	36	64	85	77
Miscellaneous industries	**405**	**2**	**45**	**53**	**88**	**77**
Agricultural implements	73	4	34	62	82	72
Electrical machinery, apparatus, and supplies	166	----	47	53	89	79
Pianos and organs	48	4	40	56	84	72
Rubber boots and shoes	9	----	33	67	86	79
Automobile tires and inner tubes	33	----	15	85	81	77
Shipbuilding	76	4	71	25	96	83
Industries added in 1929 and 1930	**567**	**1**	**65**	**34**	**93**	**79**
Rayon	9	----	78	22	96	83
Radio	40	----	68	33	95	86
Aircraft	35	6	86	9	98	76
Jewelry	98	3	48	49	88	77
Paint and varnish	153	----	57	43	91	80
Rubber goods, other than boots, shoes, tires, and inner tubes	70	3	57	40	92	80
Beverages	132	----	80	20	95	77
Cash registers, adding machines, and calculating machines	30	----	87	13	97	77
All industries	**11,073**	**3**	**56**	**42**	**89**	**75**

[1] Less than one-half of 1 per cent.

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Indexes of Employment and Pay Rolls in Manufacturing Industries in Each Geographic Division of the United States, April, 1924, to December, 1930

INDEX numbers of employment in each geographic division for each month of 1930, together with average indexes for each of the years 1924 to 1930, are shown in Table 8 and index numbers of pay rolls in each geographic division for each month from April, 1924, to December, 1930, are shown in Table 9; following the tables are charts showing the trend of employment in each geographic division, by months, from January, 1929, to December, 1930, made from the index numbers of employment.

TABLE 8.—INDEXES OF EMPLOYMENT IN **MANUFACTURING** INDUSTRIES IN EACH GEOGRAPHIC DIVISION, JANUARY TO DECEMBER, 1930, AND YEARLY AVERAGES, 1924 TO 1930[1]

[Monthly average, 1926=100]

Year and month	Geographic division								
	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
1924 average [2]	97.7	97.1	90.7	98.8	92.0	96.0	101.3	102.7	98.5
1925 average	101.2	99.7	98.2	100.6	96.3	101.9	98.7	101.2	98.7
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	96.0	94.3	95.5	97.2	101.2	93.4	94.9	96.8	98.4
1928 average	89.2	89.2	102.3	96.3	97.9	90.6	90.2	94.4	96.9
1929 average	91.4	94.3	108.8	98.8	99.8	92.2	94.6	96.9	97.8
1930 average	78.6	83.9	87.5	89.1	90.6	78.1	81.2	83.5	82.9
1930									
January	85.9	89.6	94.1	93.2	95.7	85.7	90.3	88.3	87.3
February	85.6	89.0	95.8	94.9	95.8	86.8	89.7	86.0	85.4
March	84.4	89.0	95.1	93.9	96.4	84.5	88.4	85.5	86.6
April	82.7	87.7	95.2	93.1	96.5	84.5	87.2	85.4	87.5
May	80.7	86.0	94.7	92.2	94.0	81.9	84.6	88.8	87.3
June	78.8	84.0	91.5	90.9	91.9	78.9	83.4	89.2	86.4
July	74.9	81.3	86.2	88.1	88.6	75.0	79.9	86.3	82.5
August	74.1	80.4	82.9	86.4	86.7	74.7	77.9	83.1	81.3
September	75.0	81.7	81.2	86.1	87.3	73.3	77.0	79.7	81.0
October	75.3	81.7	79.1	85.0	86.2	72.7	74.1	77.9	79.9
November	73.8	79.7	77.0	83.4	85.1	70.0	71.2	76.6	76.8
December	71.6	77.0	76.8	81.9	83.5	68.6	70.2	74.7	72.5

[1] For monthly indexes for years prior to 1930 see Labor Review for March, 1930, pp. 162 and 163.
[2] Last 9 months.

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TABLE 9.—INDEXES OF PAY-ROLL TOTALS IN **MANUFACTURING** INDUSTRIES IN EACH GEOGRAPHIC DIVISION BY MONTHS, APRIL, 1924, TO DECEMBER, 1930

[Monthly average, 1926=100]

Year and month	Geographic division								
	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
1924									
April	103.7	100.9	100.8	100.8	94.5	96.4	99.4	102.7	103.8
May	99.3	96.5	93.2	98.2	90.5	94.1	97.6	104.7	103.7
June	92.6	91.9	83.4	96.6	85.9	89.2	94.9	106.6	102.6
July	86.0	84.9	75.9	93.0	79.5	83.0	90.8	101.0	93.6
August	88.4	87.1	80.5	93.3	81.4	88.3	95.2	101.3	94.9
September	93.2	90.8	82.7	95.7	84.3	89.3	95.3	100.2	94.8
October	96.1	93.1	87.1	96.2	87.9	97.0	99.2	96.8	97.7
November	95.5	92.9	84.8	94.6	89.1	93.3	97.7	95.7	94.3
December	101.7	97.5	89.2	98.7	92.9	99.6	99.9	91.5	94.4
Average	**95.2**	**92.8**	**86.4**	**96.3**	**87.3**	**92.2**	**96.7**	**100.1**	**97.8**
1925									
January	103.7	96.6	84.7	95.1	90.1	98.4	94.1	89.5	89.7
February	105.1	99.4	95.7	99.7	94.8	102.0	99.3	96.9	95.6
March	105.2	101.3	98.3	99.6	97.6	102.0	101.1	98.6	95.8
April	101.0	97.0	99.6	98.5	95.4	101.4	98.0	99.1	95.6
May	100.6	97.9	101.3	99.6	93.2	99.4	95.2	102.4	99.4
June	96.3	95.1	97.0	99.8	91.2	97.6	94.1	105.0	102.3
July	95.3	92.9	94.3	98.5	88.1	92.8	92.8	103.9	98.4
August	97.1	93.8	96.2	100.5	91.5	99.0	95.3	101.6	98.1
September	93.4	93.8	96.3	98.6	90.9	97.8	95.1	98.3	99.9
October	101.5	99.2	106.1	103.9	96.5	103.6	98.3	99.7	102.2
November	101.2	99.4	107.1	101.2	98.9	104.7	98.4	99.7	102.0
December	103.0	102.4	104.3	100.6	102.4	106.4	101.5	102.3	98.4
Average	**100.3**	**97.4**	**98.4**	**99.6**	**94.2**	**100.4**	**96.9**	**99.8**	**98.1**
1926									
January	103.7	100.3	95.2	96.3	98.6	101.4	96.6	96.9	90.9
February	104.6	101.5	105.4	100.2	102.0	105.1	99.4	97.3	94.6
March	106.7	103.2	106.5	100.4	103.1	103.8	97.6	97.2	97.2
April	102.4	100.9	104.1	99.8	101.2	103.6	98.0	97.0	99.7
May	99.1	99.4	101.5	100.1	97.5	99.6	98.5	101.0	103.4
June	97.4	99.6	100.2	102.2	97.4	98.7	100.5	104.3	104.6
July	91.4	95.8	94.2	97.9	95.1	97.2	98.2	97.4	99.2
August	94.9	97.1	101.2	101.2	96.4	98.2	103.0	98.7	103.1
September	98.2	99.4	99.4	101.2	99.6	97.0	100.8	101.0	101.2
October	101.1	102.3	103.4	104.2	102.7	98.9	102.5	103.2	104.9
November	99.8	99.9	96.5	100.0	101.9	96.9	101.9	102.8	101.9
December	100.1	100.4	92.1	96.4	104.0	99.3	102.9	102.6	99.0
Average	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
1927									
January	98.5	96.0	84.7	92.1	98.7	93.6	98.1	97.2	91.9
February	101.3	99.4	99.2	96.5	103.4	98.1	101.0	97.6	95.2
March	101.5	99.8	102.9	96.5	104.1	98.1	100.3	97.6	99.0
April	97.6	97.3	103.4	97.3	104.4	96.4	98.6	98.5	100.4
May	98.2	95.4	103.2	99.6	102.0	94.8	99.8	101.6	103.4
June	96.0	94.1	97.4	99.9	100.3	93.7	98.5	102.1	104.0
July	93.6	89.8	91.2	97.3	96.9	89.6	95.0	100.5	99.0
August	94.2	91.8	96.5	98.4	97.5	91.8	96.8	99.8	102.1
September	96.7	92.3	91.7	96.8	99.9	91.8	98.0	97.9	100.5
October	94.8	92.4	94.4	98.1	101.1	93.3	97.9	97.8	102.9
November	91.4	89.7	88.7	93.0	99.2	90.0	94.6	99.0	99.1
December	92.0	90.6	92.3	92.1	99.4	91.1	94.7	91.2	97.9
Average	**96.3**	**94.1**	**95.5**	**96.5**	**100.6**	**93.5**	**97.8**	**98.4**	**99.6**

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TABLE 9.—INDEXES OF PAY-ROLL TOTALS IN **MANUFACTURING** INDUSTRIES IN EACH GEOGRAPHIC DIVISION BY MONTHS, APRIL, 1924, TO DECEMBER, 1930—Con.

Year and month	Geographic division								
	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
1928									
January	90.1	86.8	90.2	90.3	94.7	86.6	92.9	90.3	89.8
February	91.6	89.8	102.4	95.8	98.0	92.4	93.5	91.3	92.7
March	90.2	90.6	105.4	97.4	99.5	91.9	93.0	94.1	96.6
April	88.0	87.4	104.9	96.1	96.2	92.1	92.3	96.9	100.2
May	86.0	88.8	107.3	97.3	96.4	90.5	91.9	97.8	102.1
June	86.1	89.0	105.7	100.5	95.9	89.3	91.6	99.8	101.8
July	85.4	86.2	102.3	97.4	91.9	85.4	92.9	98.8	99.4
August	85.8	88.5	109.8	98.2	95.7	89.0	95.1	98.7	101.5
September	90.5	89.8	109.7	97.0	97.1	88.3	95.4	100.1	101.6
October	92.9	93.4	114.8	99.5	100.7	89.9	97.6	102.6	102.4
November	91.6	92.1	107.2	92.2	100.7	90.2	96.3	100.9	98.7
December	95.3	93.5	106.7	94.9	100.9	93.0	95.3	98.7	96.6
Average	**89.5**	**89.7**	**105.5**	**96.4**	**97.3**	**89.9**	**94.0**	**97.5**	**98.6**
1929									
January	92.4	91.1	104.5	94.1	96.3	88.8	91.4	95.2	90.9
February	96.0	95.8	120.0	98.4	102.3	92.7	93.5	95.0	93.3
March	97.4	97.9	121.8	99.3	104.3	93.1	100.5	98.4	96.3
April	96.6	98.2	123.7	100.6	105.1	94.9	101.9	101.2	101.5
May	95.7	98.7	123.9	102.4	104.2	92.1	101.4	104.4	105.5
June	95.0	98.8	117.6	103.1	103.1	92.0	99.9	106.2	104.2
July	93.8	96.2	107.0	102.1	98.7	90.9	102.4	106.2	102.7
August	93.9	98.7	115.5	104.3	101.6	94.3	104.8	104.3	102.7
September	96.7	99.6	113.1	104.5	102.1	94.8	109.9	105.1	102.5
October	96.1	100.2	110.0	103.2	103.7	95.6	112.1	105.3	103.1
November	88.4	95.9	95.6	97.8	101.3	89.8	105.1	103.6	98.6
December	86.8	93.5	89.8	94.7	99.4	87.3	102.4	102.3	96.0
Average	**94.1**	**97.1**	**111.9**	**100.4**	**101.8**	**92.2**	**102.1**	**102.3**	**99.8**
1930									
January	84.5	89.2	86.5	91.8	95.6	83.6	96.0	91.4	85.9
February	84.5	89.9	95.5	94.8	97.7	88.9	96.5	90.8	86.8
March	83.3	90.6	95.4	95.4	98.1	84.6	97.3	91.9	89.7
April	80.6	88.2	96.2	95.3	98.7	85.2	95.9	94.3	91.3
May	78.1	85.6	95.0	94.1	95.2	80.9	92.0	96.0	91.2
June	75.1	82.8	89.3	90.8	91.4	77.3	92.1	93.9	90.2
July	70.3	77.1	76.6	84.6	84.3	68.7	86.1	89.1	79.2
August	69.2	76.5	70.7	82.9	82.4	69.4	82.6	84.3	80.3
September	70.2	77.7	71.2	82.7	83.4	68.1	81.8	80.6	78.5
October	69.1	76.9	69.2	80.7	83.6	67.9	78.6	79.4	78.0
November	65.1	72.2	65.3	76.8	80.5	62.3	73.1	75.9	71.2
December	64.6	69.7	64.5	77.2	79.2	62.6	72.4	75.5	67.4
Average	**74.6**	**81.4**	**81.3**	**87.3**	**89.2**	**75.0**	**87.0**	**86.9**	**82.5**

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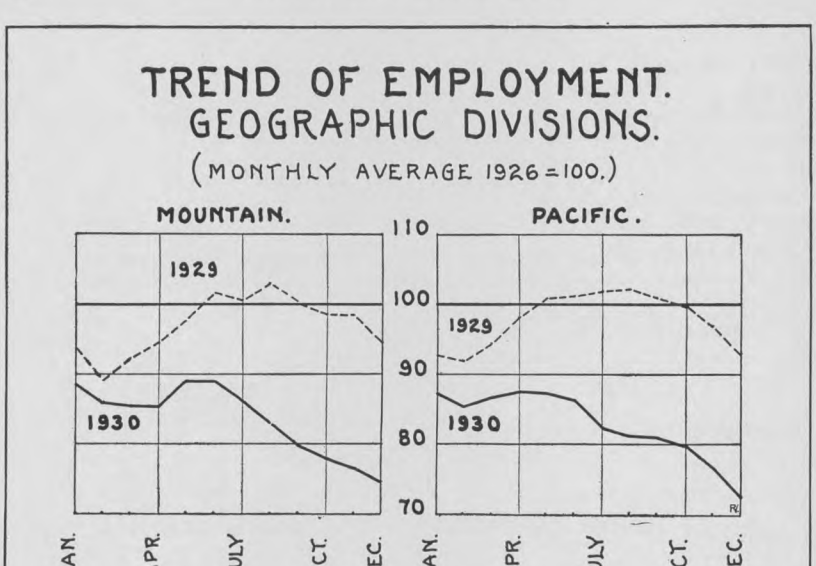

2. Employment in Coal Mining in January, 1931

EMPLOYMENT in coal mining—anthracite and bituminous coal combined—showed a decrease of 2.4 per cent in January as compared with December, and pay-roll totals decreased 7.9 per cent.

The 1,499 mines reported had in January 346,588 employees, whose combined earnings in one week were $8,004,416.

Anthracite

IN ANTHRACITE mining in January there was a decrease of 8.6 per cent in employment as compared with December, and a decrease of 10.7 per cent in pay-roll totals.

Employment in January, 1931, was 11.3 per cent lower than in January, 1930, and pay-roll totals were 15.6 per cent lower.

All anthracite mines reported are in Pennsylvania—the Middle Atlantic geographic division. The details for December and January are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **ANTHRACITE MINES** IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
Middle Atlantic	**160**	**135,669**	**124,032**	**−8.6**	**$3,975,357**	**$3,550,840**	**−10.7**

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Bituminous Coal

EMPLOYMENT in bituminous coal mining increased 1.5 per cent in January over December, while pay-roll totals decreased 5.6 per cent, as shown by reports received from 1,339 mines, in which there were in January 222,556 employees, whose combined earnings in one week were $4,453,576.

Employment in January, 1931, was 8.4 per cent lower than in January, 1930, and pay-roll totals were 27.7 per cent lower.

Details for each geographic division except the New England, from which no coal mining is reported, are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **BITUMINOUS COAL MINES** IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
Middle Atlantic	399	62,412	63,990	+2.5	$1,298,299	$1,218,992	−6.1
East North Central	179	33,265	34,773	+4.5	800,419	773,877	−3.3
West North Central	58	5,661	5,717	+1.0	118,272	115,073	−2.7
South Atlantic	329	54,491	54,002	−0.9	1,115,137	1,036,950	−7.0
East South Central	216	41,859	42,075	+0.5	724,519	695,976	−3.9
West South Central	30	2,685	2,881	+7.3	54,041	52,183	−3.4
Mountain	120	17,660	17,818	+0.9	559,200	522,383	−6.6
Pacific	8	1,316	1,300	−1.2	48,041	38,142	−20.6
All divisions	**1,339**	**219,349**	**222,556**	**+1.5**	**4,717,928**	**4,453,576**	**−5.6**

3. Employment in Metalliferous Mining in January, 1931

METALLIFEROUS mines in January showed a decrease in employment of 2.6 per cent, as compared with December, and a decrease of 8.2 per cent in pay-roll totals. The 315 mines covered had in January 43,669 employees, whose combined earnings in one week were $1,059,113.

Employment in January, 1931, was 28.6 per cent lower than in January, 1930, and pay-roll totals were 40.7 per cent lower.

Details for each geographic division from which metalliferous mining is reported are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **METALLIFEROUS MINES** IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
Middle Atlantic	7	1,342	1,265	−5.7	$35,655	$26,265	−26.3
East North Central	47	11,132	10,546	−5.3	231,733	201,991	−12.8
West North Central	36	6,231	6,143	−1.4	169,679	160,959	−5.1
East South Central	14	3,369	3,288	−2.4	64,145	52,701	−17.8
West South Central	61	2,611	2,567	−1.7	60,938	59,587	−2.2
Mountain	116	17,893	17,631	−1.5	527,060	494,635	−6.2
Pacific	34	2,268	2,229	−1.7	64,853	62,975	−2.9
All divisions	**315**	**44,846**	**43,669**	**−2.6**	**1,154,063**	**1,059,113**	**−8.2**

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4. Employment in Quarrying and Nonmetallic Mining in January, 1931

A DECREASE of 8.2 per cent was shown in employment, and a decrease of 15.8 per cent in earnings, from December to January, according to reports received from 706 establishments in this industrial group.

These establishments had in January 26,207 employees, whose combined earnings in one week were $540,545.

Employment in January, 1931, was 19.1 per cent lower than in January, 1930, and pay-roll totals were 29.9 per cent lower.

Details for each geographic division are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **QUARRIES AND NONMETALLIC MINES** IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
New England	95	3,940	3,458	−12.2	$104,908	$90,639	−13.6
Middle Atlantic	97	5,120	4,277	−16.5	127,428	88,463	−30.6
East North Central	226	7,291	6,454	−11.5	177,341	149,176	−15.9
West North Central	70	1,734	1,644	−5.2	37,366	32,926	−11.9
South Atlantic	85	4,540	4,638	+2.2	79,207	73,829	−6.8
East South Central	53	2,407	2,478	+2.9	33,395	29,023	−13.1
West South Central	44	2,319	2,095	−9.7	48,742	47,565	−2.4
Mountain	3	61	57	−6.6	2,062	2,235	+8.4
Pacific	33	1,133	1,106	−2.4	31,597	26,689	−15.5
All divisions	**706**	**28,545**	**26,207**	**−8.2**	**642,046**	**540,545**	**−15.8**

5. Employment in Crude Petroleum Producing in January, 1931

REPORTS from 539 crude petroleum-producing plants in January showed a decrease of 3.4 per cent in employment, with a decrease of 7.4 per cent in pay-roll totals, as compared with December figures.

These plants had in January 28,677 employees, whose combined earnings in one week were $1,010,556.

Employment in January, 1931, was 19.3 per cent lower and pay-roll totals 23.9 per cent lower than in January, 1930.

Details for each geographic division except New England, for which no production is reported, are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **CRUDE PETROLEUM PRODUCING** COMPANIES IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
Middle Atlantic	40	619	626	+1.1	$17,271	$15,891	−8.0
East North Central	5	58	42	−27.6	1,192	782	−34.4
West North Central	22	119	107	−10.1	2,945	2,357	−20.0
South Atlantic	10	521	538	+3.3	14,724	14,227	−3.4
East South Central	4	236	257	+8.9	5,757	5,437	−5.6
West South Central	371	20,411	19,544	−4.2	735,516	670,236	−8.9
Mountain	17	288	265	−8.0	10,518	8,851	−15.8
Pacific	70	7,440	7,298	−1.9	303,819	292,775	−3.6
All divisions	**539**	**29,692**	**28,677**	**−3.4**	**1,091,742**	**1,010,556**	**−7.4**

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6. Employment in Public Utilities in January, 1931

EMPLOYMENT in 12,070 establishments—telephone and telegraph companies, power, light, and water companies, and electric railroads, combined—decreased 2.4 per cent in January as compared with December, and pay-roll totals decreased 5.4 per cent. These establishments had in January 714,643 employees whose combined earnings in one week were $21,517,315.

Employment in public utilities was 7.6 per cent lower in January, 1931, than in January, 1930, while pay-roll totals were 6.9 per cent lower.

Data for the three groups into which public utilities have been separated follow.

Telephone and Telegraph

EMPLOYMENT in telephone and telegraph companies was 1.2 per cent lower in January than in December, and earnings were 4.9 per cent lower. The 7,934 establishments reporting had in January 320,431 employees whose combined earnings in one week were $9,227,666.

Employment in January, 1931, was 10.9 per cent below the level of January, 1930, and pay-roll totals were 8.4 per cent lower.

Details for each geographic division are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **TELEPHONE AND TELEGRAPH** ESTABLISHMENTS IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
New England	721	28,962	28,287	−2.3	$878,280	$863,996	−1.6
Middle Atlantic	1,228	103,497	102,875	−0.6	3,481,573	3,328,005	−4.4
East North Central	1,435	73,545	72,653	−1.2	2,105,390	1,994,783	−5.3
West North Central	1,314	30,159	29,586	−1.9	784,389	734,639	−6.3
South Atlantic	556	21,108	20,762	−1.6	597,790	564,023	−5.6
East South Central	592	10,479	10,343	−1.3	239,627	223,837	−6.6
West South Central	691	18,067	17,883	−1.0	424,475	402,278	−5.2
Mountain	482	7,787	7,561	−2.9	200,483	186,638	−6.9
Pacific	915	30,773	30,481	−0.9	995,593	929,467	−6.6
All divisions	**7,934**	**324,377**	**320,431**	**−1.2**	**9,707,600**	**9,227,666**	**−4.9**

Power, Light, and Water

EMPLOYMENT in power, light, and water plants was 3.9 per cent lower in January than in December, and pay-roll totals were 7.2 per cent lower. The 3,617 establishments reporting had in January 247,711 employees whose combined earnings in one week were $7,685,146.

Employment in January, 1931, was 0.4 per cent lower than in January, 1930, and pay-roll totals were 1.1 per cent lower.

Details for each geographic division are shown in Table 2.

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TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **POWER, LIGHT, AND WATER** COMPANIES IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
New England	252	21,667	21,260	−1.9	$709,215	$691,677	−2.5
Middle Atlantic	365	66,040	64,069	−3.0	2,191,221	2,084,580	−4.9
East North Central	663	57,127	55,439	−3.0	1,924,030	1,807,410	−6.1
West North Central	423	29,337	28,461	−3.0	870,060	813,920	−6.5
South Atlantic	268	24,128	23,866	−1.1	738,392	716,883	−2.9
East South Central	127	6,219	6,166	−0.9	158,683	146,211	−7.9
West South Central	549	17,860	17,630	−1.3	505,903	471,839	−6.7
Mountain	124	6,319	6,167	−2.4	188,780	179,271	−5.0
Pacific	846	29,174	24,653	−15.5	993,266	773,355	−22.1
All divisions	**3,617**	**257,871**	**247,711**	**−3.9**	**8,279,550**	**7,685,146**	**−7.2**

Electric Railroads

EMPLOYMENT in the operation and maintenance of electric railroads, exclusive of car shops, decreased 2.1 per cent from December to January, and pay-roll totals decreased 3.4 per cent. The 519 establishments reporting had in January 146,501 employees, whose combined earnings in one week were $4,604,503.

Employment in January, 1931, was 10.5 per cent lower than in January, 1930, and pay-roll totals were 12.5 per cent lower.

Details for each geographic division are shown in Table 3.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN THE OPERATION AND MAINTENANCE OF IDENTICAL **ELECTRIC RAILROADS** IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
New England	49	14,237	13,503	−5.2	$511,290	$485,580	−5.0
Middle Atlantic	110	37,753	37,131	−1.6	1,220,665	1,197,737	−1.9
East North Central	102	43,999	43,341	−1.5	1,438,411	1,380,896	−4.0
West North Central	63	13,482	13,317	−1.2	414,573	401,367	−3.2
South Atlantic	47	11,129	11,016	−1.0	317,082	307,933	−2.9
East South Central	59	4,600	4,552	−1.0	128,737	122,731	−4.7
West South Central	36	5,611	5,452	−2.8	152,397	143,134	−6.1
Mountain	15	2,099	2,034	−3.1	57,745	53,774	−6.9
Pacific	38	16,712	16,155	−3.3	524,304	511,351	−2.5
All divisions	**519**	**149,622**	**146,501**	**−2.1**	**4,765,204**	**4,604,503**	**−3.4**

7. Employment in Wholesale and Retail Trade in January, 1931

EMPLOYMENT in 9,203 establishments—wholesale and retail trade combined—showed a drop of 18.5 per cent in January as compared with December, and a drop of 14.5 per cent in pay-roll totals. These establishments had in January 328,154 employees whose combined earnings in one week were $8,265,736.

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Wholesale Trade

EMPLOYMENT in wholesale trade alone decreased 2.7 per cent in January as compared with December, while pay-roll totals decreased 4.2 per cent. The 1,868 establishments reporting had in January 58,870 employees and pay-roll totals in one week of $1,812,272.

Employment in January, 1931, was 10.5 per cent lower than in January, 1930, and pay-roll totals were 12.5 per cent lower.

Details for each geographic division are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **WHOLESALE TRADE** ESTABLISHMENTS IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
New England	170	3,938	3,739	−5.1	$110,922	$106,747	−3.8
Middle Atlantic	299	9,498	9,199	−3.1	312,178	308,392	−1.2
East North Central	259	10,618	10,386	−2.2	328,247	315,859	−3.8
West North Central	243	13,431	13,003	−3.2	400,755	378,950	−5.4
South Atlantic	181	3,685	3,663	−0.6	111,009	105,842	−4.7
East South Central	54	1,552	1,516	−2.3	45,909	42,635	−7.1
West South Central	256	5,998	5,852	−2.4	183,614	174,542	−4.9
Mountain	78	1,755	1,717	−2.2	59,867	57,501	−4.0
Pacific	328	10,053	9,795	−2.6	339,151	321,804	−5.1
All divisions	**1,868**	**60,528**	**58,870**	**−2.7**	**1,891,652**	**1,812,272**	**−4.2**

Retail Trade

EMPLOYMENT in retail trade in January decreased 21.8 per cent owing to the dropping of employees taken on for the December holiday business, while pay-roll totals decreased 17.0 per cent.

The 7,335 establishments from which reports were received had in January 269,284 employees whose combined earnings in one week were $6,453,464.

Employment in January, 1931, was 9.0 per cent lower than in January, 1930, and pay-roll totals were 10.3 per cent lower.

Details by geographic divisions are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **RETAIL TRADE** ESTABLISHMENTS IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
New England	88	17,538	13,893	−20.8	$376,375	$327,948	−12.9
Middle Atlantic	313	97,937	74,204	−24.2	2,491,276	1,993,094	−20.0
East North Central	2,705	95,555	76,340	−20.1	2,167,338	1,837,329	−15.2
West North Central	690	25,249	20,016	−20.7	493,216	431,576	−12.5
South Atlantic	1,042	27,901	21,233	−23.9	562,779	465,559	−17.3
East South Central	225	10,020	7,958	−20.6	180,980	152,209	−15.9
West South Central	242	14,287	11,916	−16.6	286,043	246,043	−14.0
Mountain	177	6,191	5,086	−17.8	122,743	108,998	−11.2
Pacific	1,853	49,666	38,638	−22.2	1,094,571	890,708	−18.6
All divisions	**7,335**	**344,344**	**269,284**	**−21.8**	**7,775,321**	**6,453,464**	**−17.0**

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8. Employment in Hotels in January, 1931

EMPLOYMENT in hotels increased 0.8 per cent in January as compared with December, and pay-roll totals decreased 1.1 per cent. The 2,055 hotels reporting in January had 148,576 employees, whose earnings in one week were $2,458,210.

Gains in employment were reported in the East North Central, West South Central, and Mountain divisions, while the South Atlantic and Pacific divisions had increases in both employment and pay-roll totals, due largely to the opening of winter-resort hotels.

Employment in January, 1931, was 6.2 per cent lower than in January, 1930, and pay-roll totals were 9.8 per cent lower.

Per capita earnings, obtained by dividing the total number of employees into the total amount of pay roll, should not be interpreted as being the entire earnings of hotel employees. The pay-roll totals here reported are cash payments only, with no regard to the value of room or board furnished employees, and of course no satisfactory estimate can be made of additional recompense in the way of tips. The additions to the money wages granted vary greatly, not only among localities but among hotels in one locality and among employees in one hotel. Some employees are furnished board and room, others are given board only for 1, 2, or 3 meals, while the division of tips is made in many ways. Per capita earnings are further reduced by the considerable amount of part-time employment caused by conventions and banquets or other functions.

The details for each geographic division are shown in the table following:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **HOTELS** IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Hotels	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
New England	100	8,258	8,007	−3.0	$136,237	$133,670	−1.9
Middle Atlantic	376	47,499	46,832	−1.4	858,558	830,872	−3.2
East North Central	401	30,524	30,632	+0.4	531,141	521,499	−1.8
West North Central	275	14,345	14,274	−0.5	210,363	204,120	−3.0
South Atlantic	198	11,978	13,543	+13.1	177,445	198,429	+11.8
East South Central	81	5,611	5,449	−2.9	72,003	68,234	−5.2
West South Central	160	9,260	9,386	+1.4	125,346	123,888	−1.2
Mountain	113	3,452	3,547	+2.8	60,001	59,349	−1.1
Pacific	351	16,453	16,906	+2.8	314,031	318,149	+1.3
All divisions	**2,055**	**147,380**	**148,576**	**+0.8**	**2,485,125**	**2,458,210**	**−1.1**

9. Employment in Canning and Preserving in January, 1931

THE seasonal decrease in canning and preserving was continued in January with declines of 20.6 per cent in employment and 19.6 per cent in pay-roll totals, as compared with December.

Reports from 809 establishments showed 30,010 employees, whose earnings in one week in January were $496,669. Sixty-seven of the 809 establishments were operated in December but not in January, and 4 establishments which had been closed in December were again in operation in January; 287 other plants remained closed during both months.

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Employment in January, 1931, was 6.1 per cent higher than in January, 1930, but pay-roll totals declined 8.3 per cent over the year interval.

Details by geographic divisions are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **CANNING AND PRESERVING** ESTABLISHMENTS IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
New England	65	1,604	1,467	−8.5	$26,130	$26,065	−0.2
Middle Atlantic	86	8,403	6,929	−17.5	170,350	136,137	−20.1
East North Central	231	6,491	6,040	−6.9	123,590	111,908	−9.5
West North Central	35	806	684	−15.1	15,092	13,811	−8.5
South Atlantic	96	6,025	5,199	−13.7	70,966	62,672	−11.7
East South Central	40	1,981	1,933	−2.4	16,809	16,482	−1.9
West South Central	28	1,827	1,607	−12.0	6,254	5,237	−16.3
Mountain	39	917	625	−31.8	20,097	17,476	−13.0
Pacific	189	9,758	5,526	−43.4	168,361	106,881	−36.5
All divisions	**809**	**37,812**	**30,010**	**−20.6**	**617,649**	**496,669**	**−19.6**

10. Employment in Laundries in January, 1931

EMPLOYMENT in laundries increased 0.8 per cent in January and pay-roll totals decreased 0.7 per cent, as shown by reports from 206 establishments which had in January 18,674 employees whose earnings in one week were $368,128.

There were increases in employment and pay-roll totals in the South Atlantic, East South Central, Mountain, and Pacific geographic divisions, with a slight increase in employment only in the West South Central division, and decreases in the remaining divisions.

As data for January, 1930, are not available no comparison of employment over the 12-month period can be made.

Details for each geographic division appear in the table following:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **LAUNDRIES** IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Laundries	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
New England	22	1,282	1,265	−1.3	$27,544	$27,004	−2.0
Middle Atlantic	52	8,108	8,095	−0.2	172,457	169,809	−1.5
East North Central	20	863	863	(1)	15,308	14,719	−3.8
West North Central	20	1,726	1,685	−2.4	29,395	29,011	−1.3
South Atlantic	13	1,655	1,786	+7.9	28,368	29,054	+2.4
East South Central	10	384	394	+2.6	5,892	6,062	+2.9
West South Central	13	932	935	+0.3	14,493	13,589	−6.2
Mountain	9	633	636	+0.5	10,557	11,788	+11.7
Pacific	47	2,945	3,015	+2.4	66,860	67,092	+0.3
All divisions	**206**	**18,528**	**18,674**	**+0.8**	**370,874**	**368,128**	**−0.7**

[1] No change.

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11. Employment in Dyeing and Cleaning in January, 1931

EMPLOYMENT in dyeing and cleaning establishments decreased 2.6 per cent in January as compared with December, and pay-roll totals decreased 2.8 per cent, as shown by reports from 57 establishments, having in January 2,374 employees whose combined earnings in one week were $55,747.

As data for January, 1930, are not available no comparison of employment over the 12-month period can be made.

Details for each geographic division appear in the table following:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **DYEING AND CLEANING** ESTABLISHMENTS IN DECEMBER, 1930, AND JANUARY, 1931

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
New England	4	232	224	−3.4	$6,403	$6,273	−2.0
Middle Atlantic	7	580	565	−2.6	15,364	14,663	−4.6
East North Central	5	215	211	−1.9	4,690	4,528	−3.5
West North Central	9	276	265	−4.0	5,375	5,511	+2.5
South Atlantic	4	114	118	+3.5	2,485	2,583	+3.9
East South Central	4	167	152	−9.0	2,944	2,758	−6.3
West South Central	12	356	339	−4.8	7,561	7,000	−7.4
Mountain	7	80	82	+2.5	2,034	2,039	+0.2
Pacific	5	417	418	+0.2	10,470	10,392	−0.7
All divisions	**57**	**2,437**	**2,374**	**−2.6**	**57,326**	**55,747**	**−2.8**

Indexes of Employment and Pay-Rolls Totals—Mining, Quarrying, Crude Petroleum Producing, Public Utilities, Trade, Hotels, and Canning

THE following table shows the index numbers of employment and pay-roll totals for anthracite, bituminous coal, and metalliferous mining, quarrying, crude petroleum producing, telephone and telegraph, power, light, and water, electric railroads, wholesale and retail trade, hotels, and canning and preserving, by months, from January, 1930, to January, 1931, with the monthly average for 1929 as 100.

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INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS, JANUARY, 1930, TO JANUARY, 1931—MINING, QUARRYING, CRUDE PETROLEUM PRODUCING, PUBLIC UTILITIES, TRADE, HOTELS, AND CANNING

[Monthly average, 1929=100]

Year and month	Anthracite mining		Bituminous coal mining		Metalliferous mining		Quarrying and nonmetallic mining		Crude petroleum producing		Telephone and telegraph		Power, light, and water		Operation and maintenance of electric railroads [1]		Wholesale trade		Retail trade		Hotels		Canning and preserving	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1930																								
January	102.1	105.8	102.5	101.4	95.7	92.7	79.6	71.9	92.7	94.0	101.6	105.1	99.6	99.7	97.1	97.8	100.0	100.0	98.9	99.7	100.4	100.3	46.1	50.3
February	106.9	121.5	102.4	102.1	92.3	92.5	79.8	73.5	90.8	88.6	100.2	101.9	98.8	100.4	95.1	95.7	98.5	98.3	94.4	96.0	102.4	103.8	45.7	51.5
March	82.6	78.5	98.6	86.4	90.9	90.8	83.0	80.0	89.3	91.3	99.4	105.8	99.7	102.1	94.4	95.4	97.7	99.7	93.9	95.5	102.4	104.4	49.7	50.8
April	84.1	75.0	94.4	81.7	89.3	88.3	87.4	85.4	86.8	86.6	98.9	103.4	100.7	102.6	95.2	97.1	97.3	97.9	97.3	97.5	100.1	100.3	74.8	72.6
May	93.8	98.8	90.4	77.5	87.5	85.6	90.8	90.2	89.8	85.4	99.7	103.2	103.4	104.5	95.2	96.0	96.8	97.4	96.7	97.3	98.0	98.4	65.7	66.9
June	90.8	94.3	88.4	75.6	84.6	81.6	90.3	90.9	90.2	87.1	99.8	103.4	104.6	107.8	94.8	97.0	96.5	98.6	93.9	96.8	98.0	98.1	83.0	81.5
July	91.6	84.0	88.0	68.9	80.5	71.9	89.9	75.5	89.9	88.5	100.0	106.6	105.9	106.7	95.3	95.6	96.0	96.0	89.0	91.7	101.3	99.8	126.3	112.7
August	80.2	78.8	89.2	71.1	79.0	71.0	89.3	85.8	87.7	86.0	98.8	102.5	106.4	106.6	92.9	92.1	95.0	93.6	85.6	87.6	101.5	98.6	185.7	172.0
September	93.8	91.6	90.5	74.9	78.1	69.9	87.7	82.5	85.0	84.0	96.8	102.2	105.2	106.1	91.8	90.5	94.8	93.6	92.0	92.4	100.1	97.1	246.6	214.8
October	99.0	117.2	91.8	79.4	77.2	68.6	84.7	79.3	85.2	82.6	94.5	100.9	104.8	105.6	91.0	88.9	94.2	92.9	95.5	95.1	97.5	95.5	164.7	140.0
November	97.2	98.0	92.5	79.1	72.8	63.4	78.3	66.8	83.6	80.0	93.0	97.9	103.4	103.7	89.3	87.7	92.6	91.0	98.4	96.8	95.2	93.6	96.7	82.9
December	99.1	100.0	92.5	77.7	70.1	59.9	70.2	59.9	77.4	77.2	91.6	101.3	103.2	106.3	88.8	88.6	92.0	91.3	115.1	107.7	93.5	91.5	61.6	57.4
Average	**93.4**	**95.3**	**93.4**	**81.3**	**83.2**	**78.0**	**84.3**	**79.3**	**87.4**	**85.9**	**97.9**	**102.9**	**103.0**	**104.3**	**93.4**	**93.5**	**96.0**	**95.9**	**95.9**	**96.2**	**99.2**	**98.5**	**103.9**	**96.1**
1931																								
January	90.6	89.3	93.9	73.3	68.3	55.0	64.4	50.4	74.8	71.5	90.5	96.3	99.2	98.6	86.9	85.6	89.5	87.5	90.0	89.4	94.2	90.5	48.9	46.1

[1] Not including electric-railroad car building and repairing; see vehicles group, manufacturing industries, p. 187, et seq.

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Employment in Building Construction

THE Bureau of Labor Statistics has begun the collection of employment and pay-roll reports from establishments engaged in building construction, and here presents data received from Washington, Providence, and St. Louis.

In addition, figures collected by the Illinois Bureau of Statistics and Research, Maryland Commission of Labor and Statistics, Massachusetts Department of Labor and Industries, and the Industrial Commission of Wisconsin also are presented.

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN **BUILDING CONSTRUCTION,** DECEMBER, 1930, AND JANUARY, 1931

Locality	Number of establishments	Employees		Per cent of change	Pay roll (1 week)		Per cent of change
		December, 1930	January, 1931		December, 1930	January, 1931	
Washington, D. C	420	7,017	6,338	−9.7	$230,227	$203,973	−11.4
Providence, R. I	231	3,120	2,471	−20.8	98,812	72,824	−26.3
St. Louis, Mo	429	4,965	3,954	−20.4	181,836	134,859	−25.8
Illinois	68	1,897	1,419	−25.2	68,079	49,494	−27.3
Maryland	66	1,191	961	−19.3	27,716	21,930	−20.9
Massachusetts	357	8,079	6,475	−19.9	308,738	242,391	−21.5
Wisconsin	73	2,954	2,509	−15.1	77,200	69,298	−10.2
Total	1,644	29,223	24,127	−17.4	992,608	794,769	−19.9

The employees included in these reports are such a small part of the total number of employees engaged in building construction in the United States that these figures are not yet included in the summary tables.

Employment on Class I Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to December, 1930, on Class I railroads—that is, all roads having operating revenues of $1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON CLASS I STEAM RAILROADS IN THE UNITED STATES, JANUARY, 1923, TO DECEMBER, 1930

[Monthly average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929	1930
January	98.3	96.9	95.6	95.8	95.5	89.3	88.2	86.3
February	98.6	97.0	95.4	96.0	95.3	89.0	88.9	85.4
March	100.5	97.4	95.2	96.7	95.8	89.9	90.1	85.5
April	102.0	98.9	96.6	98.9	97.4	91.7	92.2	87.0
May	105.0	99.2	97.8	100.2	99.4	94.5	94.9	88.6
June	107.1	98.0	98.6	101.6	100.9	95.9	96.1	86.5
July	108.2	98.1	99.4	102.9	101.0	95.6	96.6	84.7
August	109.4	99.0	99.7	102.7	99.5	95.7	97.4	83.7
September	107.8	99.7	99.9	102.8	99.1	95.3	96.8	82.2
October	107.3	100.8	100.7	103.4	98.9	95.3	96.9	80.4
November	105.2	99.0	99.1	101.2	95.7	92.9	93.0	77.0
December	99.4	96.0	97.1	98.2	91.9	89.7	88.8	74.9
Average	**104.1**	**98.3**	**97.9**	**100.0**	**97.5**	**92.9**	**93.3**	**83.5**

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Table 2 shows the total number of employees on the 15th day of December, 1929, and of November and December, 1930, and the pay-roll totals for the entire months.

In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES—DECEMBER, 1929, AND NOVEMBER AND DECEMBER, 1930

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	December, 1929	November, 1930	December, 1930	December, 1929	November, 1930	December, 1930
Professional, clerical, and general	**269,014**	**242,839**	**239,506**	**$39,426,388**	**$35,233,582**	**$35,480,420**
Clerks	151,528	134,521	131,874	20,996,901	18,262,624	18,416,619
Stenographers and typists	24,745	22,474	22,248	3,234,631	2,906,532	2,938,400
Maintenance of way and structures	**351,390**	**293,534**	**274,479**	**33,747,870**	**26,543,586**	**25,481,474**
Laborers, extra gang and work train	47,259	28,799	24,148	3,430,438	1,946,167	1,627,868
Laborers, track, and roadway section	173,857	151,695	141,546	12,663,772	9,766,946	9,343,103
Maintenance of equipment and stores	**447,254**	**376,973**	**375,160**	**60,953,184**	**46,758,153**	**47,968,887**
Carmen	97,043	79,549	78,647	14,929,995	10,984,697	11,217,057
Machinists	53,843	48,046	48,077	8,880,948	6,955,261	7,215,944
Skilled trades helpers	99,308	82,705	82,391	11,602,924	8,593,256	8,821,751
Laborers (shops, engine houses, power plants, and stores)	37,027	31,654	31,558	3,660,367	2,923,088	2,998,569
Common laborers (shops, engine houses, power plants, and stores)	50,770	40,536	40,251	4,052,673	2,887,638	2,990,203
Transportation, other than train, engine, and yard	**191,514**	**172,791**	**168,939**	**24,390,747**	**21,302,482**	**21,537,554**
Station agents	29,118	28,349	28,298	4,671,454	4,391,919	4,547,678
Telegraphers, telephoners, and towermen	22,859	20,954	20,737	3,627,813	3,209,579	3,292,425
Truckers (stations, warehouses, and platforms)	32,535	27,059	25,151	3,028,581	2,368,815	2,259,704
Crossing and bridge flagmen and gatemen	20,259	19,408	19,226	1,574,613	1,506,232	1,502,394
Transportation (yardmasters, switch tenders, and hostlers)	**21,535**	**19,402**	**19,027**	**4,317,886**	**3,745,771**	**3,746,253**
Transportation, train and engine	**307,369**	**272,703**	**263,359**	**63,162,970**	**52,572,008**	**51,181,921**
Road conductors	34,567	30,734	29,707	8,353,296	7,067,319	6,939,799
Road brakemen and flagmen	67,646	59,886	57,720	11,842,626	9,869,203	9,505,914
Yard brakemen, and yard helpers	52,272	46,559	44,611	9,379,942	7,739,573	7,443,911
Road engineers and motormen	41,202	36,541	35,344	11,306,172	9,436,009	9,242,135
Road firemen and helpers	41,919	37,150	36,289	8,309,157	6,872,920	6,725,785
All employees	**1,588,076**	**1,378,242**	**1,340,470**	**225,999,045**	**186,155,582**	**185,396,509**

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Changes in Employment and Pay Rolls in Various States

THE following data as to changes in employment and pay rolls have been compiled from reports received from the various State labor offices:

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES

Monthly period

State, and industry group	Per cent of change, November to December, 1930	
	Employment	Pay roll
California		
Stone, clay, and glass products	−11.3	−13.8
Metals, machinery, and conveyances	−2.8	−.1
Wood manufactures	−10.6	−10.9
Leather and rubber goods	−4.2	+.2
Chemicals, oils, paints, etc	−1.4	−.4
Printing and paper goods	−1.9	+3.1
Textiles	−.9	+2.8
Clothing, millinery, and laundering	−2.7	−2.6
Foods, beverages, and tobacco	−14.3	−10.5
Motion pictures	+21.1	+16.2
Miscellaneous	−6.2	−5.7
All industries	−5.6	−2.6
Illinois		
Stone, clay, and glass products	−10.9	−14.2
Metals, machinery, and conveyances	+1.0	−2.1
Wood products	−4.8	−8.5
Furs and leather goods	+5.8	+24.9
Chemicals, oils, paints, etc	+1.6	+3.3
Printing and paper goods	+3.2	+6.2
Textiles	−3.2	−10.8
Clothing and millinery	+5.8	+18.7
Food, beverages, and tobacco	−1.4	−1.0
Miscellaneous	−.8	+5.4
All manufacturing	+.6	−.1
Trade, wholesale and retail	+6.5	+3.6
Services	+.2	−3.8
Public utilities	+.2	−2.3
Coal mining	+2.3	+1.1
Building and contracting	−29.1	−33.3
All nonmanufacturing	+.6	−2.3
All industries	+.6	−1.0

State, and industry group	Per cent of change, December, 1930, to January, 1931	
	Employment	Pay roll
Iowa		
Food and kindred products	−3.1	
Textiles	−10.4	
Iron and steel works	+6.0	
Lumber products	−2.6	
Leather products	+6.2	
Paper products, printing, and publishing	−7.4	
Patent medicines, chemicals, and compounds	−6.8	
Stone and clay products	−8.4	
Tobacco and cigars	−3.9	
Railway-car shops	−1.0	
Various industries	−6.2	
All industries	−2.9	
Maryland		
Food products	−6.8	−6.3
Textiles	−2.4	−.8
Iron and steel, and their products	−1.6	−3.8
Lumber and its products	−8.9	−8.0
Leather and its products	−.9	−3.9
Rubber tires	−1.4	+22.3
Paper and printing	−5.6	−7.0
Chemicals and allied products	−9.3	−10.6
Stone, clay, and glass products	−10.8	−14.1
Metal products other than iron and steel	−3.0	−11.9
Tobacco products	−67.2	−50.8
Transportation equipment	−8.2	−12.0
Car building and repairing	−8.3	−12.4
Miscellaneous	−1.7	−11.5
All manufacturing	−4.1	−5.4
Retail establishments	−27.9	−18.6
Wholesale establishments	−1.4	−.9
Public utilities	−1.7	+3.2
Coal mines	−1.2	−11.9
Hotels	−3.6	−1.7
Quarries	−35.9	−50.9
Building construction	−19.3	−20.9

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PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Monthly period—Continued

State, and industry group	Employment — index numbers (1925-1927=100)	
	November, 1930	December, 1930
Massachusetts		
Boot and shoe cut stock and findings	84.7	79.3
Boots and shoes	65.6	53.5
Bread and other bakery products	107.5	103.8
Clothing, men's	72.5	60.5
Clothing, women's	103.2	104.7
Confectionery	107.5	98.6
Cotton goods	51.4	50.0
Dyeing and finishing textiles	89.3	89.5
Electrical machinery, apparatus, and supplies	68.1	67.1
Foundry and machine-shop products	94.5	93.6
Furniture	80.9	75.9
Hosiery and knit goods	69.9	59.2
Leather, tanned, curried, and finished	88.0	83.2
Paper and wood pulp	85.2	85.5
Printing and publishing	103.5	102.7
Rubber footwear	76.4	78.7
Rubber goods, tires, and tubes	55.0	53.9
Silk goods	67.2	70.7
Textile machinery and parts	58.2	61.2
Woolen and worsted goods	62.3	56.0
All industries	70.4	67.2

State, and industry group	Per cent of change, November to December, 1930	
	Employment	Pay roll
Michigan		
Paper and printing	−1.9	−2.8
Chemicals and allied products	−1.4	+.1
Stone, clay, and glass products	−19.7	−26.2
Metal products, not iron and steel	−2.6	+1.4
Iron and steel products	+4.5	+38.0
Lumber and its products	−2.5	−4.9
Leather and its products	+11.1	+.1
Food and kindred products	−5.4	−3.8
Textiles and their products	+3.1	−2.9
Tobacco products	+6.1	+9.6
Vehicles for land transportation	+1.5	−.7
Miscellaneous	−.7	−.3
All industries	+1.1	−3.5
New Jersey		
Food and kindred products	−3.5	−4.0
Textiles and their products	−.1	−.6
Iron and steel and their products	−2.9	−1.4
Lumber and its products	−4.4	−2.4
Leather and its products	−5.1	−3.8
Tobacco products	−5.3	−8.9
Paper and printing	−1.1	+.1
Chemical and allied products	−1.7	−5.6
Stone, clay, and glass products	−1.5	−.6
Metal products other than iron and steel	−3.1	−1.7
Vehicles for land transportation	+2.0	−.5
Miscellaneous	−14.1	−16.9
All industries	−4.3	−4.9

State, and industry group	Per cent of change, November to December, 1930	
	Employment	Pay roll
	December, 1930, to January, 1931	
New York		
Stone, clay and glass	−10.8	−14.1
Miscellaneous stone and minerals	−2.6	−7.8
Lime, cement, and plaster	−8.4	−17.6
Brick, tile, and pottery	−23.0	−24.4
Glass	−7.5	−10.8
Metals and machinery	−2.4	−5.8
Silver and jewelry	−6.4	−25.4
Brass, copper, and aluminum	−2.9	−7.1
Iron and steel	+6.3	+11.6
Structural and architectural iron	−2.7	−3.9
Sheet metal and hardware	−2.0	−4.2
Firearms, tools, and cutlery	−5.8	−6.2
Cooking, heating, and ventilating apparatus	−.7	+5.3
Machinery, including electrical apparatus	−2.9	−4.2
Automobiles, carriages, and airplanes	−6.2	−12.1
Railroad equipment and repair	−.6	−10.8
Boat and ship building	−15.8	−16.9
Instruments and appliances	−.4	−4.0
Wood manufactures	−3.2	−6.5
Saw and planing mills	−4.3	−6.4
Furniture and cabinetwork	−3.4	−5.4
Pianos and other musical instruments	−4.6	−14.6
Miscellaneous wood	−.9	−1.2
Furs, leather, and rubber goods	−2.7	−5.3
Leather	−5.1	−5.4
Furs and fur goods	−12.4	−17.0
Shoes	+1.7	+.4
Other leather and canvas goods	−14.2	−15.4
Rubber and guttapercha	−2.4	−7.2
Pearl, horn, bone, etc.	−15.1	−16.4

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PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Monthly period—Continued

State, and industry group	Per cent of change, December, 1930, to January, 1931	
	Employment	Pay roll
New York—Continued		
Chemicals, oils, paints, etc.	−2.0	−3.4
Drugs and chemicals	+.4	−1.4
Paints and colors	−2.8	−4.6
Oil products	−4.3	−6.0
Miscellaneous chemicals	−1.6	−2.2
Paper	+.1	−1.8
Printing and paper goods	−2.0	−3.0
Paper boxes and tubes	−4.7	−6.8
Miscellaneous paper goods	−.8	−.9
Printing and bookmaking	−1.8	−2.9
Textiles	−3.3	−3.2
Silk and silk goods	−8.3	−11.9
Wool manufactures	+10.0	+11.0
Cotton goods	−3.6	−8.6
Knit goods (excluding silk)	−15.9	−16.5
Other textiles	−2.2	−1.4
Clothing and millinery	−.8	−.4
Men's clothing	+6.6	+15.5
Men's furnishings	−6.2	−8.5
Women's clothing	−4.6	−7.6
Women's underwear	−5.8	−8.4
Women's headwear	+7.9	+19.0
Miscellaneous sewing	−8.2	−13.6
Laundering and cleaning	−.1	−.6
Food and tobacco	−5.5	−4.9
Flour, feed, and cereal	−.3	+1.2
Canning and preserving	−6.6	−9.4
Other groceries	−2.7	−.3
Meat and dairy products	+.4	[1]
Bakery products	−1.8	−2.0
Candy	−12.4	−16.1
Beverages	−1.9	−3.4
Tobacco	−27.4	−22.4
Water, light, and power	−1.8	−3.4
All industries	−2.7	−4.4
Oklahoma		
Cottonseed-oil mills	−4.2	−3.8
Food production:		
Bakeries	−8.1	−13.2
Confections	+3.3	+1.8
Creameries and dairies	−2.5	−5.9
Flour mills	+5.4	−6.8
Ice and ice cream	−2.4	−2.7
Meat and poultry	−1.5	−8.9
Lead and zinc:		
Mines and mills	−12.2	−10.9
Smelters	−2.2	−23.9
Metals and machinery:		
Auto repairs, etc.	−3.1	−5.1
Machine shops and foundries	−13.6	−26.7
Tank construction and erection	−17.0	−29.1

State, and industry group	Per cent of change, December, 1930, to January, 1931	
	Employment	Pay roll
Oklahoma—Continued		
Oil industry:		
Producing and gasoline manufacture	−0.7	−9.9
Refineries	−.7	−5.1
Printing: Job work	+4.3	−1.9
Public utilities:		
Steam-railway shops	−.9	−2.6
Street railways	−2.3	−10.6
Water, light, and power	−4.7	−9.2
Stone, clay, and glass:		
Brick and tile	−4.6	−27.6
Cement and plaster	−14.6	−21.3
Crushed stone	−41.3	−36.5
Glass manufacture	−10.0	−16.2
Textiles and cleaning:		
Textile manufacture	+11.9	−7.3
Laundries, etc.	−5.1	−6.6
Woodworking:		
Sawmills	−7.6	−8.5
Millwork, etc.	−5.9	−1.8
All industries	−5.2	−9.8

	Index numbers (1923–1925 = 100)—employment	
	December, 1930	January, 1931
Pennsylvania		
Metal products	79.3	76.4
Transportation equipment	62.6	54.7
Textile products	91.0	87.4
Foods and tobacco	104.6	97.7
Stone, clay, and glass products	63.2	57.5
Lumber products	65.1	52.8
Chemical products	88.9	86.3
Leather and rubber products	91.0	90.9
Paper and printing	97.0	95.1
All manufacturing	83.1	78.9
	Pay roll	
Metal products	65.2	63.8
Transportation equipment	53.7	40.2
Textile products	86.3	73.6
Foods and tobacco	101.3	90.3
Stone, clay, and glass products	58.9	39.6
Lumber products	61.3	40.8
Chemical products	89.4	84.2
Leather and rubber products	90.0	83.5
Paper and printing	101.7	96.2
All manufacturing	72.7	66.2

[1] Change of less than one-tenth of 1 per cent.

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PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Monthly period—Continued

State, and industry group	Per cent of change, December, 1930, to January, 1931	
	Employment	Pay roll
Texas		
Auto and body works	+5.7	
Bakeries	−8.4	
Confectioneries	+.7	
Pure food products	+11.0	
Ice-cream factories	−9.5	
Flour mills	−3.1	
Ice factories	−9.2	
Meat packing and slaughtering	−3.2	
Cotton-oil mills	−18.4	
Cotton compresses	−48.7	
Men's clothing manufacture	−6.6	
Women's clothing manufacture	+22.9	
Brick, tile, and terra cotta	−28.5	
Foundries and machine shops	−4.4	
Structural-iron works	+1.5	
Railroad car shops	+3.1	
Electric-railway car shops	−.4	
Petroleum refining	−1.6	
Sawmills	−9.9	
Lumber mills	.0	
Furniture manufacture	−13.4	
Paper-box manufacture	−.8	
Cotton textile mills	−5.7	
Cement plants	+.1	
Commercial printing	+9.7	
Newspaper publishing	−3.5	
Quarrying	+2.9	
Public utilities	−1.1	
Retail stores	−15.3	
Wholesale stores	−2.4	
Hotels	+.4	
Miscellaneous	−5.0	
All industries	−3.7	
	November to December, 1930	
Wisconsin		
Manual		
Logging	+5.7	+6.8
Mining:		
Lead and zinc	+6.1	−14.8
Iron	+1.2	−5.0

State, and industry group	Per cent of change, November to December, 1930	
	Employment	Pay roll
Wisconsin—Continued		
Manual—Continued		
Stone crushing and quarrying	−18.9	−39.4
Manufacturing:		
Stone and allied industries	−4.3	−17.1
Metal	−6.1	−8.5
Wood	+.1	−3.2
Rubber	−7.3	+.8
Leather	−5.0	−9.5
Paper	−2.7	−1.2
Textiles	+1.7	−8.8
Foods	−8.8	−8.9
Printing and publishing	−3.2	+.8
Chemicals (including soap, glue, and explosives)	−1.7	−1.7
All manufacturing	−4.3	−6.9
Construction:		
Building	−18.5	−23.3
Highway	−28.3	−32.2
Railroad	−16.1	−16.0
Marine dredging, sewer digging	+23.6	+12.2
Communication:		
Steam railways	+1.0	−8.4
Electric railways	−16.4	−15.4
Express, telephone, and telegraph	−4.0	+2.3
Light and power	−2.8	−2.6
Wholesale trade	−2.3	−4.7
Hotels and restaurants	−3.0	
Laundering and dyeing	−2.4	+.5
Nonmanual		
Manufacturing, mines, and quarries	−2.1	−2.1
Construction	−1.0	+1.3
Communication	−2.2	+1.8
Wholesale trade	+.2	+1.0
Retail trade, sales force only	+20.2	+14.8
Miscellaneous professional services	−.4	+11.2

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PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period

State, and industry group	Per cent of change, December, 1929, to December, 1930	
	Employment	Pay roll
California		
Stone, clay, and glass products	−33.9	−41.2
Metals, machinery, and conveyances	−15.7	−29.2
Wood manufactures	−21.1	−28.6
Leather and rubber goods	−27.5	−23.2
Chemicals, oils, paints, etc.	−33.7	−38.7
Printing and paper goods	−8.3	−9.2
Textiles	−6.7	−15.7
Clothing, millinery, and laundering	−12.1	−15.7
Foods, beverages, and tobacco	−9.6	−13.9
Miscellaneous [2]	−39.1	−39.5
All industries	−21.2	−29.5
Public utilities	−7.5	−8.0
Wholesale and retail	−7.1	−8.0

State, and industry group	Employment—index numbers (1925-1927=100)	
	December, 1929	December, 1930
Illinois		
Stone, clay, and glass products	77.3	67.8
Metals, machinery, and conveyances	108.0	79.5
Wood products	69.7	54.5
Furs and leather goods	96.6	79.1
Chemicals, oils, paints, etc.	98.0	81.4
Printing and paper goods	111.9	99.3
Textiles	93.9	84.1
Clothing and millinery	84.5	70.0
Foods, beverages, and tobacco	93.3	79.5
All manufacturing	99.3	78.2
Trade, wholesale and retail	95.0	76.6
Public utilities	105.4	98.3
Coal mining	79.1	87.6
Building and contracting	78.4	42.6
All industries	99.3	82.3
Massachusetts		
Boot and shoe cut stock and findings	103.5	79.3
Boots and shoes	69.4	53.5

[2] Includes motion pictures.

State, and industry group	Employment—index numbers (1925-1927=100)	
	December, 1929	December, 1930
Massachusetts—Con.		
Bread and other bakery products	109.1	103.8
Clothing, men's	91.5	60.5
Clothing, women's	106.5	104.7
Confectionery	95.6	98.6
Cotton goods	70.7	50.0
Dyeing and finishing textiles	95.2	89.5
Electrical machinery, apparatus, and supplies	84.1	67.1
Foundry and machine-shop products	111.8	93.6
Furniture	98.2	75.9
Hosiery and knit goods	76.3	59.2
Leather, tanned, curried, and finished	101.4	83.2
Paper and wood pulp	96.4	85.5
Printing and publishing	111.2	102.7
Rubber footwear	93.2	78.7
Rubber goods, tires, and tubes	72.8	53.9
Silk goods	78.6	70.7
Textile machinery and parts	83.0	61.2
Woolen and worsted goods	70.6	56.0
All industries	83.5	67.2

State, and industry group	Per cent of change, December, 1929, to December, 1930	
	Employment	Pay roll
Michigan		
Paper and printing	−13.0	−17.1
Chemicals and allied products	−1.1	−5.8
Stone, clay, and glass products	−41.7	−53.3
Metal products, not iron and steel	−21.7	−17.1
Iron and steel products	−21.6	−27.7
Lumber and its products	−37.1	−49.2
Leather and its products	−2.7	−9.7
Food and kindred products	−12.5	−15.8
Textiles and their products	−11.1	−16.6
Tobacco products	+1.0	−16.4
Vehicles for land transportation	−13.6	−14.0
Miscellaneous	+33.9	+2.0
All industries	−14.2	−16.3

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PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period—Continued

State, and industry group	Per cent of change, January, 1930, to January, 1931	
	Employment	Pay roll
New York		
Stone, clay, and glass	−14.0	−19.2
Miscellaneous stone and minerals	−11.9	−12.7
Lime, cement, and plaster	−3.1	−11.2
Brick, tile, and pottery	−20.7	−30.5
Glass	−16.1	−22.2
Metals and machinery	−23.5	−33.0
Silver and jewelry	−21.2	−43.6
Brass, copper, and aluminum	−16.6	−25.1
Iron and steel	−23.6	−31.2
Structural and architectural iron	−21.0	−30.1
Sheet metal and hardware	−15.2	−23.5
Firearms, tools, and cutlery	−17.4	−27.3
Cooking, heating, and ventilating apparatus	−17.7	−26.2
Machinery, including electrical apparatus	−24.6	−31.1
Automobiles, carriages, and airplanes	−38.2	−51.4
Railroad equipment and repair	−23.4	−34.3
Boat and ship building	−31.4	−42.9
Instruments and appliances	−17.1	−27.5
Wood manufactures	−14.6	−23.1
Saw and planing mills	−14.3	−20.4
Furniture and cabinetwork	−23.4	−31.3
Pianos and other musical instruments	+6.2	−10.9
Miscellaneous wood	−12.7	−18.9
Furs, leather, and rubber goods	−12.0	−25.9
Leather	−21.9	−21.0
Furs and fur goods	+2.2	+.4
Shoes	−8.9	−27.5
Other leather and canvas goods	−19.8	−24.9
Rubber and guttapercha	−26.0	−37.2
Pearl, horn, bone, etc.	−14.4	−21.8
Chemicals, oils, paints, etc.	−5.9	−10.9
Drugs and chemicals	+.3	−7.4
Paints and colors	−16.1	−17.8
Oil products	−8.0	−9.8
Miscellaneous chemicals	−5.8	−12.6
Paper	−17.2	−27.9
Printing and paper goods	−8.9	−11.8
Paper boxes and tubes	−13.6	−20.9
Miscellaneous paper goods	−10.7	−11.2
Printing and bookmaking	−8.0	−11.1
Textiles	−27.4	−34.4
Silk and silk goods	−22.0	−28.7
Wool manufactures	−31.3	−40.2
Cotton goods	−25.7	−30.9
Knit goods (excluding silk)	−24.0	−29.9
Other textiles	−28.4	−33.6
Clothing and millinery	−16.7	−27.3
Men's clothing	−19.9	−36.7
Men's furnishings	−23.6	−33.9
Women's clothing	−13.9	−23.0
Women's underwear	−14.4	−22.7
Women's headwear	−15.8	−23.5
Miscellaneous sewing	−19.4	−28.2
Laundering and cleaning	−4.0	−7.2
Food and tobacco	−15.2	−17.2
Flour, feed, and cereals	−11.1	−13.3
Canning and preserving	−10.2	−19.8
Other groceries	−20.0	−21.2
Meat and dairy products	−8.3	−11.2
Bakery products	−10.4	−13.0
Candy	−13.5	−21.0
Beverages	−4.6	−8.4
Tobacco	−42.2	−35.5
Water, light, and power	−2.8	−2.5
All industries	−18.1	−25.7
Oklahoma		
Cottonseed-oil mills	−10.1	−26.9
Food production:		
Bakeries	−8.6	−19.4
Confections	+96.6	+61.5
Creameries and dairies	+25.6	+28.3
Flour mills	−15.5	−20.7
Ice and ice cream	−10.2	−9.1
Meat and poultry	−.9	−15.8
Lead and zinc:		
Mines and mills	−40.4	−37.0
Smelters	−5.9	−42.0
Metals and machinery:		
Auto repairs, etc.	−17.8	−23.8
Machine shops and foundries	−40.4	−58.2
Tank construction and erection	−34.8	−23.8
Oil industry:		
Producing and gasoline manufacture	−27.2	−25.3
Refineries	−2.7	−7.8
Printing: Job work	+4.3	−6.9
Public utilities:		
Steam-railway shops	−31.6	−33.4
Street railways	−24.3	−18.7
Water, light, and power	−.1	+.3
Stone, clay, and glass:		
Brick and tile	−30.2	−36.0
Cement and plaster	−5.6	−22.0
Crushed stone	+47.7	+64.4
Glass manufacture	+12.4	+21.3
Textiles and cleaning:		
Textile manufacture	−9.9	−32.1
Laundries, etc.	−7.6	−12.7
Woodworking:		
Sawmills	−34.5	−52.8
Millwork, etc.	−22.7	−31.6
All industries	−13.8	−16.7

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PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period—Continued

State, and industry group	Index numbers (1923–1925=100)—employment		State, and industry group	Per cent of change, January, 1930, to January, 1931	
	January, 1930	January, 1931		Employment	Pay roll
Pennsylvania			**Texas**—Continued		
Metal products	97.4	76.4	Ice-cream factories	−13.8	
Transportation equipment	83.3	54.7	Flour mills	−11.9	
Textile products	103.9	87.4	Ice factories	−26.5	
Foods and tobacco	106.0	97.7	Meat packing and slaughtering	−10.7	
Stone, clay, and glass products	78.5	57.5	Cotton-oil mills	−31.7	
Lumber products	89.6	52.8	Cotton compresses	+14.0	
Chemical products	95.6	86.3	Men's clothing manufacture	−21.6	
Leather and rubber products	102.1	90.9	Women's clothing manufacture	−.6	
Paper and printing	100.5	95.1	Brick, tile, and terra cotta	−25.1	
All manufacturing	96.9	78.9	Foundries and machine shops	−39.3	
Metal products	99.8	63.8	Structural-iron works	−18.2	
Transportation equipment	89.3	40.2	Railroad car shops	−34.0	
Textile products	104.6	73.6	Electric-railway car shops	−5.2	
Foods and tobacco	103.6	90.3	Petroleum refining	−20.8	
Stone, clay, and glass products	77.9	39.6	Sawmills	−19.8	
Lumber products	89.7	40.8	Lumber mills	−33.3	
Chemical products	98.3	84.2	Furniture manufacture	−31.6	
Leather and rubber products	103.7	83.5	Paper-box manufacture	−1.5	
Paper and printing	108.7	96.2	Cotton textile mills	−18.9	
All manufacturing	98.9	66.2	Cement plants	−5.3	
Texas			Commercial printing	−.3	
Auto and body works	−22.0		Newspaper publishing	−6.4	
Bakeries	−16.2		Quarrying	−13.5	
Confectioneries	−14.6		Public utilities	+7.5	
Pure food products	−9.8		Retail stores	−6.6	
			Wholesale stores	−8.8	
			Hotels	−5.7	
			Miscellaneous	−28.2	
			All industries	−16.4	

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WHOLESALE AND RETAIL PRICES

Retail Prices of Food in January, 1931

THE following tables are compiled from simple averages of the actual selling prices [1] received monthly by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food January 15 and December 15, 1930, and January 15, 1931, as well as the percentage changes in the year and in the month. For example, the retail price per pound of cheese was 37.4 cents on January 15, 1930; 33.2 cents on December 15, 1930; and 32.1 cents on January 15, 1931. These figures show decreases of 14 per cent in the year and 3 per cent in the month.

The cost of various articles of food combined shows a decrease of 14.5 per cent January 15, 1931, as compared with January 15, 1930, and a decrease of 3.2 per cent January 15, 1931, as compared with December 15, 1930.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JANUARY 15, 1931, COMPARED WITH DECEMBER 15, 1930, AND JANUARY 15, 1930

[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 (−) Jan. 15, 1931, compared with—	
		Jan. 15, 1930	Dec. 15, 1930	Jan. 15, 1931	Jan. 15, 1930	Dec. 15, 1930
		Cents	*Cents*	*Cents*		
Sirloin steak	Pound	49.0	42.9	42.5	−13	−1
Round steak	do	43.6	37.7	37.5	−14	−1
Rib roast	do	36.3	31.6	31.5	−13	−0.3
Chuck roast	do	29.5	24.6	24.4	−17	−1
Plate beef	do	20.9	16.9	16.7	−20	−1
Pork chops	do	35.3	31.4	29.8	−16	−5
Bacon, sliced	do	42.4	41.3	40.2	−5	−3
Ham, sliced	do	53.6	51.5	50.6	−6	−2
Lamb, leg of	do	39.1	31.1	31.4	−20	+1
Hens	do	38.0	32.0	32.7	−14	+2
Salmon, red, canned	do	31.9	34.3	34.4	+8	+0.3
Milk, fresh	Quart	14.2	13.5	13.3	−6	−1
Milk, evaporated	16-oz. can	10.4	9.9	9.8	−6	−1
Butter	Pound	46.7	42.5	37.7	−19	−11
Oleomargarine (all butter substitutes)	do	26.4	24.5	23.7	−10	−3
Cheese	do	37.4	33.2	32.1	−14	−3
Lard	do	17.2	16.7	15.7	−9	−6
Vegetable lard substitute	do	24.5	23.8	23.8	−3	0
Eggs, strictly fresh	Dozen	55.4	41.6	36.1	−35	−13
Bread	Pound	8.9	8.5	8.2	−8	−4

[1] In addition to monthly retail prices of food and coal, the bureau publishes periodically the prices of gas and electricity for household use in each of 51 cities. At present this information is being collected in June and December of each year.

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TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JANUARY 15, 1931, COMPARED WITH DECEMBER 15, 1930, AND JANUARY 15, 1930—Continued

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (−) Jan. 15, 1931, compared with—	
		Jan. 15, 1930	Dec. 15, 1930	Jan. 15, 1931	Jan. 15, 1930	Dec. 15, 1930
		Cents	*Cents*	*Cents*		
Flour	Pound	5.1	4.1	4.0	−22	−2
Corn meal	do	5.4	5.2	5.1	−6	−2
Rolled oats	do	8.8	8.6	8.5	−3	−1
Corn flakes	8-oz. pkg	9.5	9.3	9.3	−2	0
Wheat cereal	28-oz. pkg	25.5	25.3	25.2	−1	−0.4
Macaroni	Pound	19.6	18.6	18.2	−7	−2
Rice	do	9.6	9.2	8.9	−7	−3
Beans, navy	do	12.7	9.7	9.2	−28	−5
Potatoes	do	3.9	2.9	2.9	−26	0
Onions	do	5.1	3.9	3.9	−24	0
Cabbage	do	5.1	3.7	4.3	−16	+16
Pork and beans	No. 2 cans	11.4	10.7	10.5	−8	−2
Corn, canned	do	15.6	14.9	14.7	−6	−1
Peas, canned	do	16.5	15.7	15.5	−6	−1
Tomatoes, canned	do	12.6	11.5	11.2	−11	−3
Sugar	Pound	6.6	5.9	5.9	−11	0
Tea	do	78.0	76.9	76.6	−2	−0.4
Coffee	do	43.8	38.5	37.8	−14	−2
Prunes	do	18.4	13.1	12.9	−30	−2
Raisins	do	12.3	11.4	11.3	−8	−1
Bananas	Dozen	32.1	29.0	29.1	−9	+0.3
Oranges	do	46.7	35.7	32.5	−30	−9
Weighted food index					−14.5	−3.2

Table 2 shows for the United States average retail prices of specified food articles on January 15, 1913, and on January 15 of each year from 1925 to 1931, together with percentage changes in January of each of these specified years compared with January, 1913. For example, the retail price per pound of butter was 40.9 cents in January, 1913; 52.3 cents in January, 1925; 55.4 cents in January, 1926; 58.4 cents in January, 1927; 57.8 cents in January, 1928; 57.7 cents in January, 1929; 46.7 cents in January, 1930; and 37.7 cents in January, 1931.

As compared with January, 1913, these figures show increases of 28 per cent in January, 1925; 35 per cent in January, 1926; 43 per cent in January, 1927; 41 per cent in January, 1928, and January, 1929; and 14 per cent in January, 1930. In January, 1931, there was a decrease of 8 per cent as compared with January, 1913.

The cost of the various articles of food combined showed an increase of 35.1 per cent in January, 1931, as compared with January, 1913.

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

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

Article	Average retail prices on Jan. 15—								Per cent of increase Jan. 15 of each specified year compared with Jan. 15, 1913						
	1913	1925	1926	1927	1928	1929	1930	1931	1925	1926	1927	1928	1929	1930	1931
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*							
Sirloin steak--pound--	23.8	38.7	40.8	40.8	44.4	48.4	49.0	42.5	63	71	71	87	103	106	79
Round steak----do----	20.5	32.8	35.0	35.3	38.6	42.6	43.6	37.5	60	71	72	88	108	113	83
Rib roast-------do----	18.8	28.5	30.0	30.3	32.7	35.8	36.3	31.5	52	60	61	74	90	93	68
Chuck roast-----do----	14.9	20.5	22.1	22.7	25.4	29.0	29.5	24.4	38	48	52	70	95	98	64
Plate beef------do----	11.1	13.3	14.5	15.0	17.2	20.6	20.9	16.7	20	31	35	55	86	88	50
Pork chops------do----	18.7	30.7	36.5	36.6	31.3	32.3	35.3	29.8	64	95	96	67	73	89	59
Bacon, sliced----do----	25.4	40.3	48.2	48.9	44.6	43.0	42.4	40.2	59	90	93	76	69	67	58
Ham, sliced-----do----	25.1	47.6	53.3	56.8	51.7	53.8	53.6	50.6	90	112	126	106	114	114	102
Lamb, leg of----do----	18.0	38.8	39.1	37.4	37.4	39.9	39.1	31.4	116	117	108	108	122	117	74
Hens-----------do----	20.2	35.8	38.6	38.5	36.8	39.2	38.0	32.7	77	91	91	82	94	88	62
Salmon, red, canned ----------pound--	-----	31.7	37.3	33.5	35.3	31.9	31.9	34.4	-----	-----	-----	-----	-----	-----	-----
Milk, fresh-----quart--	8.9	13.9	14.2	14.1	14.3	14.3	14.2	13.3	56	60	58	61	61	60	49
Milk, evaporated -------16-ounce can--	-----	11.1	11.6	11.4	11.5	11.4	10.4	9.8	-----	-----	-----	-----	-----	-----	-----
Butter--------pound--	40.9	52.3	55.4	58.4	57.8	57.7	46.7	37.7	28	35	43	41	41	14	[1] 8
Oleomargarine (all butter substitutes) ----------pound--	-----	30.1	31.3	29.2	27.6	27.6	26.4	23.7	-----	-----	-----	-----	-----	-----	-----
Cheese----------do----	22.2	35.9	37.6	37.6	39.2	38.4	37.4	32.1	62	69	69	77	73	68	45
Lard------------do----	15.4	22.8	22.3	20.0	18.9	18.5	17.2	15.7	48	45	30	23	20	12	2
Vegetable lard substitute----------do----	-----	25.3	25.6	25.2	25.0	24.7	24.5	23.8	-----	-----	-----	-----	-----	-----	-----
Eggs, strictly fresh ----------dozen--	37.3	70.5	53.9	55.9	55.9	50.6	55.4	36.1	89	45	50	50	36	49	[1] 3
Bread----------pound--	5.6	9.2	9.4	9.4	9.2	9.0	8.9	8.2	64	68	68	64	61	59	46
Flour-----------do----	3.3	6.0	6.2	5.6	5.3	5.1	5.1	4.0	82	88	70	61	55	55	21
Corn meal-------do----	3.0	5.4	5.2	5.1	5.2	5.3	5.4	5.1	80	73	70	73	77	80	70
Rolled oats------do----	-----	9.0	9.1	9.1	9.0	8.9	8.8	8.5	-----	-----	-----	-----	-----	-----	-----
Corn flakes ---8-ounce package--	-----	10.9	11.0	10.9	9.7	9.5	9.5	9.3	-----	-----	-----	-----	-----	-----	-----
Wheat cereal --28-ounce package--	-----	24.5	25.3	25.5	25.6	25.5	25.5	25.2	-----	-----	-----	-----	-----	-----	-----
Macaroni-----pound--	-----	20.0	20.3	20.1	20.0	19.7	19.6	18.2	-----	-----	-----	-----	-----	-----	-----
Rice------------do----	8.6	10.7	11.6	11.0	10.2	9.8	9.6	8.9	24	35	28	19	14	12	3
Beans, navy----do----	-----	10.2	9.8	9.2	9.5	13.2	12.7	9.2	-----	-----	-----	-----	-----	-----	-----
Potatoes-------do----	1.6	2.5	5.8	4.0	3.0	2.3	3.9	2.9	56	263	150	88	44	144	81
Onions---------do----	-----	5.9	5.9	5.5	5.1	7.6	5.1	3.9	-----	-----	-----	-----	-----	-----	-----
Cabbage-------do----	-----	4.6	5.6	4.7	4.2	5.8	5.1	4.3	-----	-----	-----	-----	-----	-----	-----
Pork and beans ----------No. 2 can--	-----	12.5	12.3	11.7	11.4	11.7	11.4	10.5	-----	-----	-----	-----	-----	-----	-----
Corn, canned----do----	-----	17.5	16.8	16.1	15.8	16.0	15.6	14.7	-----	-----	-----	-----	-----	-----	-----
Peas, canned----do----	-----	18.5	17.8	17.2	16.8	16.8	16.5	15.5	-----	-----	-----	-----	-----	-----	-----
Tomatoes, canned ----------No. 2 can--	-----	13.8	12.6	12.3	11.7	12.3	12.6	11.2	-----	-----	-----	-----	-----	-----	-----
Sugar, granulated ----------pound--	5.8	8.1	6.7	7.5	7.1	6.7	6.6	5.9	40	16	29	22	16	14	2
Tea-------------do----	54.3	74.2	76.1	77.5	77.4	77.5	78.0	76.6	37	40	43	43	43	44	41
Coffee----------do----	29.9	51.6	51.3	50.2	48.5	49.5	43.8	37.8	73	72	68	62	66	46	26
Prunes----------do----	-----	17.4	17.2	16.0	13.6	14.2	18.4	12.9	-----	-----	-----	-----	-----	-----	-----
Raisins---------do----	-----	14.6	14.5	14.4	13.7	11.7	12.3	11.3	-----	-----	-----	-----	-----	-----	-----
Bananas-------dozen--	-----	33.2	35.8	34.5	34.6	33.9	32.1	29.1	-----	-----	-----	-----	-----	-----	-----
Oranges---------do----	-----	44.8	46.9	46.9	51.0	46.4	46.7	32.5	-----	-----	-----	-----	-----	-----	-----
All articles combined [2]	-----	-----	-----	-----	-----	-----	-----	-----	57.0	67.2	62.1	57.7	57.3	57.9	35.1

[1] Decrease.

[2] Beginning with January, 1921, index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: 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.

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Table 3 shows the trend in the retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years, from 1913 to 1930, and by months for 1929, 1930, and 1931. The articles within these groups are as follows:

Cereals: Bread, flour, corn meal, rice, rolled oats, corn flakes, wheat cereal, and macaroni.

Meats: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, hens, and leg of lamb.

Dairy products: Butter, cheese, fresh milk, and evaporated milk.

TABLE 3.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS AND DAIRY PRODUCTS FOR THE UNITED STATES, 1913, TO JANUARY, 1931

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913: Average for year	100.0	100.0	100.0	1929—Continued.			
1914: Average for year	106.7	103.4	97.1	July	163.5	195.9	146.8
1915: Average for year	121.6	99.6	96.1	August	164.7	196.0	147.1
1916: Average for year	126.8	108.2	103.2	September	165.2	194.2	148.1
1917: Average for year	186.5	137.0	127.6	October	163.5	189.2	149.3
1918: Average for year	194.3	172.8	153.4	November	163.6	184.1	147.0
1919: Average for year	198.0	184.2	176.6	December	162.9	181.8	144.9
1920: Average for year	232.1	185.7	185.1	1930: Average for year	158.0	175.8	136.5
1921: Average for year	179.8	158.1	149.5	January	162.9	183.6	138.9
1922: Average for year	159.3	150.3	135.9	February	161.6	183.1	138.5
1923: Average for year	156.9	149.0	147.6	March	160.9	183.0	137.6
1924: Average for year	160.4	150.2	142.8	April	160.3	183.3	138.9
1925: Average for year	176.2	163.0	147.1	May	159.8	181.5	137.0
1926: Average for year	175.5	171.3	145.5	June	160.1	179.9	133.7
1927: Average for year	170.7	169.9	148.7	July	158.6	175.2	133.9
1928: Average for year	167.2	179.2	150.0	August	156.9	169.9	137.4
1929: Average for year	164.1	188.4	148.6	September	156.4	173.3	138.8
January	164.1	180.9	151.9	October	154.4	171.1	137.8
February	164.1	180.3	152.6	November	152.4	164.0	135.3
March	164.1	182.8	152.4	December	151.6	161.6	129.8
April	164.1	187.5	148.9	1931:			
May	163.5	191.2	147.5	January	147.1	159.5	123.6
June	163.0	192.4	146.8				

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 specified food articles, by years, for 1913 and 1920 to 1930,[2] by months for 1930 and 1931. 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 sirloin steak for the year 1930 was 182.7, which means that the average money price for the year 1930 was 82.7 per cent higher than the average money price for the year 1913. As compared with the relative price, 196.9 in 1929, the figures for 1930 show a decrease of 14.2 points, but an increase of 7.2 per cent in the year.

In the last column of Table 4 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March,

[2] For index numbers of each month, January, 1913, to December, 1928, see Bulletin No. 396, pp. 44 to 61; and Bulletin No. 495, pp. 32 to 45. Index numbers for 1929 are published in each Monthly Review February, 1930, to February, 1931.

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1921, issue, p. 25.) Although previous to January, 1921, the number of food articles varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100.0 are 137.2 for December, 1930, and 132.8 for January, 1931.

TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920 TO 1930, AND BY MONTHS FOR 1930 AND 1931

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Hens	Milk	Butter	Cheese
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.9
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9
1923	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0
1924	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7
1925	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	165.6
1927	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1
1928	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	175.6	159.6	147.5	174.2
1929	196.9	199.1	185.4	186.9	172.7	175.7	161.1	204.1	186.4	160.7	143.9	171.9
1930	182.7	184.8	172.7	170.0	155.4	171.0	156.7	198.5	166.7	157.3	120.4	158.8
1930: January	192.9	195.5	183.3	184.4	172.7	168.1	157.0	199.3	178.4	159.6	121.9	169.2
February	191.3	194.2	181.8	184.4	171.9	167.6	157.8	200.7	179.3	158.4	122.7	167.0
March	190.6	192.8	181.3	182.5	170.2	171.9	157.8	201.1	179.8	157.3	121.9	164.7
April	190.2	193.3	181.3	182.5	168.6	176.7	157.4	200.4	179.3	157.3	125.6	162.9
May	190.2	192.8	179.8	179.4	164.5	171.9	156.7	200.7	175.6	157.3	120.9	162.0
June	188.6	191.5	177.3	175.6	160.3	174.3	156.7	200.7	167.6	157.3	113.1	157.9
July	182.3	184.3	171.7	166.3	149.6	173.8	156.7	200.0	161.5	157.3	114.1	155.2
August	175.6	176.7	163.1	155.6	138.8	174.8	155.6	198.1	158.7	157.3	123.8	153.4
September	177.2	178.0	166.7	160.0	142.1	186.2	158.1	198.9	159.6	157.3	127.2	154.8
October	175.2	176.2	164.1	158.7	142.1	180.5	157.8	197.4	158.7	157.3	124.8	154.8
November	170.5	170.9	160.6	154.4	139.7	156.2	155.9	193.7	153.1	157.3	118.5	152.9
December	168.9	169.1	159.6	153.8	139.7	149.5	153.0	191.4	150.2	151.7	111.0	150.2
1931: January	167.3	168.2	159.1	152.5	138.0	141.9	148.9	188.1	153.5	149.4	98.4	145.2

Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Tea	Coffee	All articles [1]
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1921	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6
1927	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1928	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1929	115.8	142.0	160.7	154.5	176.7	111.5	188.2	120.0	142.6	164.8	156.7
1930	107.6	118.8	155.4	142.4	176.7	109.2	211.8	112.7	142.5	136.2	147.1
1930: January	108.9	160.6	158.9	154.5	180.0	110.3	229.4	120.0	143.4	147.0	155.4
February	108.2	136.8	157.1	154.5	176.7	110.3	229.4	118.2	143.2	143.3	153.0
March	107.0	102.3	157.1	151.5	176.7	109.2	229.4	116.4	142.8	140.6	150.1
April	106.3	100.0	157.1	148.5	176.7	110.3	241.2	114.5	142.5	138.9	151.2
May	105.7	97.7	157.1	145.5	176.7	109.2	252.9	114.5	142.5	137.2	150.1
June	105.1	97.4	157.1	145.5	176.7	109.2	247.1	110.9	143.0	136.2	147.9
July	103.2	101.7	157.1	139.4	176.7	109.2	194.1	110.9	142.6	135.6	144.0
August	104.4	112.5	155.4	136.4	176.7	109.2	182.4	110.9	142.3	134.6	143.7
September	110.8	124.9	155.4	133.3	176.7	110.3	188.2	107.3	142.1	132.6	145.6
October	112.0	129.9	153.6	130.3	176.7	109.2	182.4	105.5	141.9	131.2	144.4
November	110.8	140.3	151.8	127.3	173.3	106.9	170.6	107.3	141.4	129.9	141.4
December	105.7	120.6	151.8	124.2	173.3	105.8	170.6	107.3	141.4	129.2	137.2
1931: January	99.4	104.6	146.4	121.2	170.0	102.3	170.6	107.3	140.8	126.8	132.8

[1] 22 articles in 1913–1920; 42 articles in 1921–1931.

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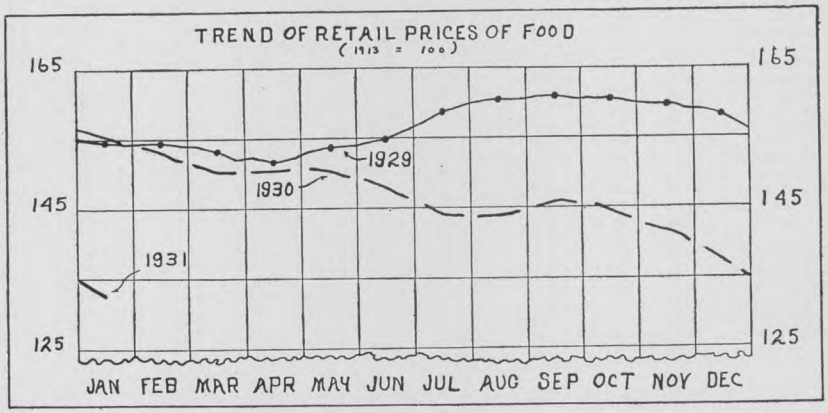
The curve shown in the chart below pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

Comparison of Retail Food Costs in 51 Cities

TABLE 5 shows for 39 cities the percentage of increase or decrease in the retail cost of food [3] January, 1931, compared with the average cost in the year 1913, in January, 1930, and December, 1930. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average consumption of these articles in each city.[4]



Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of January 99.6 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 45 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Baltimore, Birmingham, Boston, Bridgeport, Buffalo, Butte, Charleston (S. C.), Chicago, Cincinnati, Cleveland, Columbus, Denver, Fall River, Houston, Indianapolis, Little Rock, Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Mobile, Newark, New Haven, New Orleans, New York, Norfolk, Omaha, Peoria, Philadelphia, Pittsburgh, Portland (Me.), Portland (Oreg.), Providence, Richmond, St. Louis, St. Paul, Salt Lake City, San Francisco, Savannah, Scranton, Seattle, Springfield (Ill.), and Washington.

[3] For list of articles see note 2, p. 223.
[4] The consumption figures used for January, 1913, to December, 1920, for each article in each city are given in the 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 Labor Review for March, 1921, p. 26.

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TABLE 5.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN JANUARY, 1931, COMPARED WITH THE COST IN DECEMBER, 1930, JANUARY, 1930, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percentage increase January, 1931, compared with 1913	Percentage decrease January, 1931, compared with—		City	Percentage increase January, 1931, compared with 1913	Percentage decrease January, 1931, compared with—	
		January, 1930	December, 1930			January, 1930	December 1930
Atlanta	30.6	16.2	4.9	Minneapolis	34.3	14.3	3.3
Baltimore	39.1	13.1	1.9	Mobile	----------	13.1	4.1
Birmingham	36.3	14.0	3.9	Newark	30.9	12.5	2.9
Boston	34.9	14.5	5.6	New Haven	38.6	11.9	4.6
Bridgeport	----------	12.2	3.4	New Orleans	32.3	15.1	3.3
Buffalo	34.0	15.9	4.5	New York	36.8	12.9	3.6
Butte	----------	15.8	3.1	Norfolk	----------	12.3	2.4
Charleston, S. C	38.1	12.6	2.9	Omaha	25.1	16.8	5.0
Chicago	44.9	13.9	3.0	Peoria	----------	16.7	5.1
Cincinnati	41.1	12.8	2.9	Philadelphia	34.9	14.5	3.9
Cleveland	27.6	15.1	3.8	Pittsburgh	32.3	15.7	3.2
Columbus	----------	14.4	3.9	Portland, Me	----------	14.2	4.9
Dallas	34.1	13.7	3.3	Portland, Oreg	14.5	18.8	3.8
Denver	18.4	14.3	2.9	Providence	32.5	15.9	5.0
Detroit	34.5	16.8	1.6	Richmond	39.4	13.1	2.3
Fall River	27.9	16.6	4.8	Rochester	----------	14.8	2.6
Houston	----------	16.1	3.4	St. Louis	34.5	15.8	2.5
Indianapolis	28.8	16.1	2.1	St. Paul	----------	13.8	1.9
Jacksonville	27.6	11.1	4.3	Salt Lake City	11.4	15.2	5.0
Kansas City	31.6	15.2	2.0	San Francisco	33.0	13.6	3.5
Little Rock	25.4	17.4	5.2	Savannah	----------	15.3	4.8
Los Angeles	18.2	17.0	4.3	Scranton	40.9	13.6	2.7
Louisville	26.6	16.0	3.4	Seattle	23.4	15.8	3.2
Manchester	28.7	14.9	4.2	Springfield, Ill	----------	16.0	4.5
Memphis	24.6	17.1	3.3	Washington	43.3	11.4	2.2
Milwaukee	33.4	15.7	3.4				

Retail Prices of Coal in January, 1931 [1]

THE following table shows the average retail prices of coal on January 15 and December 15, 1930, and January 15, 1931, for the United States and for each of the cities from which retail food prices have been obtained. 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.

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 sold for household use.

[1] Prices of coal were formerly secured semiannually and published in the March and September issues of the Labor Review. Since June, 1920, these prices have been secured and published monthly.

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AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND DECEMBER 15, 1930, AND JANUARY 15, 1931

City, and kind of coal	1930		1931
	Jan. 15	Dec. 15	Jan. 15
United States:			
Pennsylvania anthracite—			
Stove—			
Average price	$15.33	$15.13	$15.12
Index (1913=100)	198.4	195.9	195.8
Chestnut—			
Average price	$15.00	$14.89	$14.88
Index (1913=100)	189.5	188.1	188.1
Bituminous—			
Average price	$9.11	$8.94	$8.87
Index (1913=100)	167.6	164.4	163.2
Atlanta, Ga.:			
Bituminous, prepared sizes	$7.80	$7.59	$7.60
Baltimore, Md.:			
Pennsylvania anthracite—			
Stove	14.25	14.25	14.25
Chestnut	13.75	13.75	13.75
Bituminous, run of mine—			
High volatile	7.89	7.82	7.75
Birmingham, Ala.:			
Bituminous, prepared sizes	7.65	7.42	7.38
Boston, Mass.:			
Pennsylvania anthracite—			
Stove	16.00	16.25	16.25
Chestnut	15.50	15.75	15.75
Bridgeport, Conn.:			
Pennsylvania anthracite—			
Stove	15.50	14.75	14.75
Chestnut	15.50	14.75	14.75
Buffalo, N. Y.:			
Pennsylvania anthracite—			
Stove	13.77	13.81	13.79
Chestnut	13.32	13.31	13.29
Butte, Mont.:			
Bituminous, prepared sizes	11.15	10.70	10.48
Charleston, S. C.:			
Bituminous, prepared sizes	9.67	9.67	9.67
Chicago, Ill.:			
Pennsylvania anthracite—			
Stove	16.85	16.40	16.40
Chestnut	16.40	16.30	16.30
Bituminous—			
Prepared sizes—			
High volatile	8.53	8.09	8.09
Low volatile	12.32	11.96	11.89
Run of mine—			
Low volatile	8.25	8.00	8.00
Cincinnati, Ohio:			
Bituminous—			
Prepared sizes—			
High volatile	6.30	6.30	6.30
Low volatile	8.78	8.53	8.53
Cleveland, Ohio:			
Pennsylvania anthracite—			
Stove	15.19	14.50	14.63
Chestnut	14.75	14.31	14.50
Bituminous—			
Prepared sizes—			
High volatile	7.10	6.89	6.81
Low volatile	9.97	9.93	9.93
Columbus, Ohio:			
Bituminous—			
Prepared sizes—			
High volatile	6.07	6.23	6.09
Low volatile	8.38	8.38	8.13
Dallas, Tex.:			
Arkansas anthracite—Egg	$15.50	$15.00	$15.00
Bituminous, prepared sizes	12.92	12.58	12.58
Denver, Colo.:			
Colorado anthracite—			
Furnace, 1 and 2 mixed	14.75	15.25	15.25
Stove, 3 and 5 mixed	14.75	15.25	15.25
Bituminous, prepared sizes	10.45	10.27	10.21
Detroit, Mich.:			
Pennsylvania anthracite—			
Stove	16.00	15.00	14.92
Chestnut	15.50	15.00	14.92
Bituminous—			
Prepared sizes—			
High volatile	8.39	7.82	7.41
Low volatile	10.31	9.92	9.24
Run of mine—			
Low volatile	8.00	7.92	7.50
Fall River, Mass.:			
Pennsylvania anthracite—			
Stove	16.50	16.50	16.50
Chestnut	16.25	16.25	16.25
Houston, Tex.:			
Bituminous, prepared sizes	13.60	12.40	12.20
Indianapolis, Ind.:			
Bituminous—			
Prepared sizes—			
High volatile	6.01	5.98	5.93
Low volatile	8.71	9.21	9.17
Run of mine—			
Low volatile	7.17	7.10	7.05
Jacksonville, Fla.:			
Bituminous, prepared sizes	14.00	10.75	10.00
Kansas City, Mo.:			
Arkansas anthracite—			
Furnace	12.55	12.44	12.44
Stove No. 4	13.67	13.50	13.50
Bituminous, prepared sizes	7.18	6.84	6.79
Little Rock, Ark.:			
Arkansas anthracite—Egg	13.50	13.50	13.50
Bituminous, prepared sizes	9.95	10.10	10.05
Los Angeles, Calif.:			
Bituminous, prepared sizes	16.50	16.50	16.50
Louisville, Ky.:			
Bituminous—			
Prepared sizes—			
High volatile	7.01	6.27	6.24
Low volatile	9.50	8.75	8.75
Manchester, N. H.:			
Pennsylvania anthracite—			
Stove	17.00	16.83	16.83
Chestnut	17.00	16.83	16.83
Memphis, Tenn.:			
Bituminous, prepared sizes	7.85	7.76	7.44
Milwaukee, Wis.:			
Pennsylvania anthracite—			
Stove	16.30	15.75	15.75
Chestnut	15.85	15.50	15.50
Bituminous—			
Prepared sizes—			
High volatile	7.68	7.68	7.70
Low volatile	10.99	10.66	10.57
Minneapolis, Minn.:			
Pennsylvania anthracite—			
Stove	18.30	16.90	16.90
Chestnut	17.85	16.90	16.90

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AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS FOR HOUSEHOLD USE, ON JANUARY 15 AND DECEMBER 15, 1930, AND JANUARY 15, 1931—Continued

City, and kind of coal	1930		1931
	Jan. 15	Dec. 15	Jan. 15
Minneapolis, Minn.—Contd.			
Bituminous—			
Prepared sizes—			
High volatile	$10.56	$9.67	$9.85
Low volatile	13.65	12.63	12.63
Mobile, Ala.:			
Bituminous, prepared sizes	9.63	9.40	9.59
Newark, N. J.:			
Pennsylvania anthracite—			
Stove	13.96	13.90	13.90
Chestnut	13.46	13.40	13.40
New Haven, Conn.:			
Pennsylvania anthracite—			
Stove	15.17	14.90	14.90
Chestnut	15.17	14.90	14.90
New Orleans, La.:			
Bituminous, prepared sizes	10.96	10.93	10.93
New York, N. Y.:			
Pennsylvania anthracite—			
Stove	14.63	14.17	14.17
Chestnut	14.13	13.67	13.67
Norfolk, Va.:			
Pennsylvania anthracite—			
Stove	14.00	15.00	15.00
Chestnut	14.00	15.00	15.00
Bituminous—			
Prepared sizes—			
High volatile	7.25	7.38	7.38
Low volatile	9.00	10.00	10.00
Run of mine—			
Low volatile	6.50	7.00	7.00
Omaha, Nebr.:			
Bituminous, prepared sizes	9.69	9.68	9.68
Peoria, Ill.:			
Bituminous, prepared sizes	6.75	6.53	6.43
Philadelphia, Pa.:			
Pennsylvania anthracite—			
Stove	[1] 15.00	14.00	14.00
Chestnut	[1] 14.50	13.50	13.50
Pittsburgh, Pa.:			
Pennsylvania anthracite—			
Chestnut	15.00	14.50	14.50
Bituminous, prepared sizes	5.29	4.93	4.91
Portland, Me.:			
Pennsylvania anthracite—			
Stove	16.80	16.80	16.80
Chestnut	16.80	16.80	16.80
Portland, Oreg.:			
Bituminous, prepared sizes	13.46	13.29	13.38
Providence, R. I.:			
Pennsylvania anthracite—			
Stove	[2] 16.00	[2] 16.00	[2] 16.00
Chestnut	[2] 16.00	[2] 16.00	[2] 16.00
Richmond, Va.:			
Pennsylvania anthracite—			
Stove	15.00	15.00	15.00
Chestnut	15.00	15.00	15.00
Richmond, Va.—Continued.			
Bituminous—			
Prepared sizes—			
High volatile	$8.38	$8.75	$8.75
Low volatile	9.13	9.87	9.83
Run of mine—			
Low volatile	7.25	7.50	7.50
Rochester, N. Y.:			
Pennsylvania anthracite—			
Stove	14.75	14.75	14.50
Chestnut	14.25	14.25	14.00
St. Louis, Mo.:			
Pennsylvania anthracite—			
Stove	16.70	16.23	16.23
Chestnut	16.45	15.98	15.98
Bituminous, prepared sizes	6.75	6.36	6.40
St. Paul, Minn.:			
Pennsylvania anthracite—			
Stove	18.30	16.90	16.90
Chestnut	17.85	16.90	16.90
Bituminous—			
Prepared sizes—			
High volatile	10.27	9.58	9.58
Low volatile	13.65	12.65	12.66
Salt Lake City, Utah:			
Bituminous, prepared sizes	8.37	8.48	8.47
San Francisco, Calif.:			
New Mexico anthracite—			
Cerillos egg	26.00	26.00	26.00
Colorado anthracite—			
Egg	25.50	25.50	25.75
Bituminous, prepared sizes	16.98	17.00	17.00
Savannah, Ga.:			
Bituminous, prepared sizes	[3] 10.24	[3] 10.45	[3] 10.53
Scranton, Pa.:			
Pennsylvania anthracite—			
Stove	10.28	10.18	10.18
Chestnut	9.92	9.88	9.88
Seattle, Wash.:			
Bituminous, prepared sizes	10.68	10.79	10.79
Springfield, Ill.:			
Bituminous, prepared sizes	4.34	4.34	4.34
Washington, D. C.:			
Pennsylvania anthracite—			
Stove	[1] 15.73	[1] 15.73	[1] 15.73
Chestnut	[1] 15.23	[1] 15.23	[1] 15.23
Bituminous—			
Prepared sizes—			
High volatile	[1] 8.63	[1] 8.63	[1] 8.61
Low volatile	[1] 11.43	[1] 11.43	[1] 11.43
Run of mine—			
Mixed	[1] 7.75	[1] 7.81	[1] 7.81

[1] Per ton of 2,240 pounds.
[2] The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.
[3] 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 has been included in the above price.

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Index Numbers of Wholesale Prices in January, 1931

THE index number of wholesale prices computed by the Bureau of Labor Statistics of the United States Department of Labor shows a further recession in January. This index number, which includes 550 price quotations weighted according to the importance of each article and based on prices in 1926 as 100.0, declined from 78.4 in December to 77.0 in January, a decrease of 1¾ per cent. This compares with a decrease of 2½ per cent between November and December and a decrease of over 2½ per cent between October and November, thus showing a slowing down of the recent price slump. The purchasing power of the 1926 dollar in January was $1.299.

Farm products as a group decreased 2¼ per cent below the December level, due to lower prices for corn, oats, rye, wheat, beef cattle, eggs, hay, and wool. Milk also averaged somewhat lower than in December. Sheep and lambs, poultry, onions, and potatoes, on the other hand, averaged somewhat higher than in the month before, while cotton showed a negligible increase.

Foods were 2 per cent lower than in December, with declines in butter, cheese, cured meats, fresh pork, lard, and coffee. Lamb, mutton, veal, and dressed poultry averaged higher than in the month before, while fresh beef, flour, and granulated sugar were practically unchanged in price. Both butter and eggs were at lower levels in January than at any time since pre-war days.

Hides and skins showed a further price drop, with leather, boots and shoes, and other leather products also declining.

In the group of textile products there were small decreases among silk and rayon, woolen and worsted goods, and other textile products, with larger decreases among cotton goods.

Anthracite and bituminous coal and petroleum products showed a downward price trend, while no change was reported for coke, resulting in a small decrease in fuel and lighting materials as a whole.

Among metals and metal products there was a negligible increase in iron and steel, while nonferrous metals declined appreciably. Automobiles and other metal products showed decreases.

Building materials were downward, as lumber, paint materials, and certain other building materials declined in price. Brick prices were practically stationary, while structural steel advanced.

Chemicals and drugs, including mixed fertilizers, were somewhat cheaper than in December.

House-furnishing goods also moved downward, with slight declines in furnishings.

In the group of miscellaneous commodities, cattle feed, crude rubber, and automobile tires again moved downward, while paper and pulp were unchanged in price.

Raw materials as a whole averaged lower than in December, as did also semimanufactured articles and finished products.

In the large group of nonagricultural commodities, including all articles other than farm products, and among all commodities other than farm products and foods January prices averaged lower than those of the month before.

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INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Groups and subgroups	January, 1930	December, 1930	January, 1931	Purchasing power of the dollar, January, 1931
All commodities	93.4	78.4	77.0	$1.299
Farm products	101.0	75.2	73.5	1.361
Grains	93.8	64.0	62.4	1.603
Livestock and poultry	100.5	76.3	75.2	1.330
Other farm products	103.9	78.1	76.0	1.316
Foods	97.2	81.8	80.1	1.248
Butter, cheese, and milk	97.5	89.4	85.2	1.174
Meats	106.2	89.2	88.4	1.131
Other foods	91.7	74.5	73.4	1.362
Hides and leather products	105.1	91.2	88.6	1.129
Hides and skins	104.2	69.4	64.4	1.553
Leather	108.3	91.5	90.8	1.101
Boots and shoes	103.8	97.7	95.1	1.052
Other leather products	105.8	104.2	102.4	977
Textile products	89.4	72.4	71.0	1.408
Cotton goods	95.4	79.7	77.3	1.294
Silk and rayon	76.0	51.7	50.1	1.996
Woolen and worsted goods	94.0	82.3	82.1	1.218
Other textile products	72.3	57.8	57.5	1.739
Fuel and lighting materials	79.9	70.5	69.8	1.433
Anthracite coal	91.2	89.6	88.9	1.125
Bituminous coal	92.2	89.1	88.1	1.135
Coke	84.1	83.8	83.8	1.193
Gas	92.5	95.4	[1]	
Petroleum products	67.3	51.1	50.4	1.984
Metals and metal products	101.2	90.0	89.3	1.120
Iron and steel	95.7	88.0	88.1	1.135
Nonferrous metals	100.6	69.7	67.4	1.484
Agricultural implements	96.1	94.9	94.7	1.056
Automobiles	106.8	99.5	98.7	1.013
Other metal products	98.4	95.2	95.0	1.053
Building materials	96.2	84.4	82.9	1.206
Lumber	92.7	78.1	76.0	1.316
Brick	90.4	81.6	81.7	1.224
Cement	90.4	90.6	90.5	1.105
Structural steel	97.0	81.7	83.0	1.205
Paint materials	93.7	72.4	70.2	1.425
Other building materials	106.4	97.1	95.5	1.047
Chemicals and drugs	93.0	84.8	83.6	1.196
Chemicals	98.9	89.1	87.0	1.149
Drugs and pharmaceuticals	69.0	65.5	65.1	1.536
Fertilizer materials	89.8	81.4	81.4	1.229
Mixed fertilizers	97.1	90.6	90.4	1.106
House-furnishing goods	97.3	91.3	91.1	1.098
Furniture	96.6	95.5	95.5	1.047
Furnishings	97.7	87.6	87.3	1.145
Miscellaneous	78.7	66.9	64.7	1.546
Cattle feed	113.5	78.2	75.0	1.333
Paper and pulp	87.3	83.6	83.6	1.196
Rubber	31.1	18.6	17.1	5.848
Automobile tires	55.2	51.3	45.7	2.188
Other miscellaneous	108.3	86.9	86.1	1.161
Raw materials	94.0	74.2	72.9	1.372
Semimanufactured articles	93.0	74.3	73.4	1.362
Finished products	93.3	81.9	80.5	1.242
Nonagricultural commodities	91.4	79.4	78.2	1.279
All commodities less farm products and foods	90.3	79.0	77.8	1.285

[1] Data not yet available.

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Wholesale Prices in the United States and in Foreign Countries, 1923 to December, 1930

IN THE following table the more important index numbers of wholesale prices in foreign countries and those of the United States Bureau of Labor Statistics have been brought together in order that the trend of prices in the several countries may be compared. The base periods here shown are those appearing in the sources from which the information has been drawn, in most cases being the year 1913 or some other pre-war period. Only general comparisons can be made from these figures, since, in addition to differences in the base periods, there are important differences in the composition of the index numbers themselves.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES

Country	United States	Canada	Austria	Belgium	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Computing agency	Bureau of Labor Statistics	Dominion Bureau of Statistics (revised)	Federal Statistical Bureau	Ministry of Industry and Labor	Central Bureau of Statistics (revised index)	Statistical Department	Central Bureau of Statistics (revised)	General Statistical Bureau	Federal Statistical Bureau	Riccardo Bachi (revised)
Base period	1926	1926	January–June, 1914	April, 1914	July, 1914	1913	1926	1913	1913	1913
Commodities	550	250	47	132	69	118	139	45	400	138
Year and month										
1923	100.6	98.0	124	497	977			419		[1] 503.9
1924	98.1	99.4	136	573	997			488	137.3	[1] 497.4
1925	103.5	102.6	136	558	1008	210		551	141.8	[1] 612.0
1926	100.0	100.0	123	744	955	163	100	703	134.4	[1] 618.2
1927	95.4	97.7	133	847	979	153	101	617	137.6	[1] 466.7
1928	97.7	96.4	130	843	979	153	102	620	140.0	[1] 453.1
1929	96.5	95.6	130	851	924	150	98	611	137.2	[1] 439.7
1923										
January	102.0			434	991			387		516.1
April	103.9			480	1012			415		525.7
July	98.4			504	949			407		503.9
October	99.4			515	960			421		499.6
1924										
January	99.6			580	974			494		504.4
April	97.3			555	1008			450		510.3
July	95.6			566	953			481		497.4
October	98.2			555	999			497		522.0
1925										
January	102.9			559	1045	243		514		568.2
February	104.0			551	1048	240		515		571.1
March	104.2			546	1034	236		514		571.2
April	101.9			538	1020	230		513		570.1
May	101.6			537	1006	227		520		571.2
June	103.0			552	998	223		543		590.9
July	104.3			559	1009	212		557		612.0
August	103.9			567	993	197		557		630.6
September	103.4			577	996	186		556		621.5
October	103.6			575	989	179		572		617.1
November	104.5			569	977	176		605		612.3
December	103.4			565	977	176		633		613.8

[1] July.

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Country	United States	Canada	Austria	Belgium	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Computing agency	Bureau of Labor Statistics	Dominion Bureau of Statistics (revised)	Federal Statistical Bureau	Ministry of Industry and Labor	Central Bureau of Statistics (revised index)	Statistical Department	Central Bureau of Statistics (revised)	General Statistical Bureau	Federal Statistical Bureau	Riccardo Bachi (revised)
Base period	1926	1926	January–June, 1914	April, 1914	July, 1914	1913	1926	1913	1913	1913
Commodities	550	502	47	132	69	118	139	45	400	138
1926										
January	103.6	103.0	122	560	966	172	----------	634	135.8	608.0
February	102.1	102.1	120	556	950	165	----------	636	134.3	603.5
March	100.4	101.3	119	583	938	158	----------	632	133.1	592.3
April	100.1	101.2	119	621	923	157	----------	650	132.7	590.0
May	100.5	100.2	118	692	928	158	----------	688	132.3	595.8
June	100.5	100.2	124	761	926	157	----------	738	131.9	604.9
July	99.5	100.2	126	876	948	158	----------	836	133.1	618.2
August	99.0	99.1	126	836	963	162	----------	769	134.0	632.5
September	99.7	98.5	123	859	973	162	----------	787	134.9	622.0
October	99.4	98.1	125	856	972	178	----------	751	136.2	596.7
November	98.4	97.6	128	865	978	170	----------	684	137.1	594.2
December	97.9	97.9	127	860	978	158	----------	627	137.1	573.6
1927										
January	96.6	97.8	130	856	979	157	100	622	135.9	558.2
February	95.9	97.6	130	854	975	156	101	632	135.6	555.8
March	94.5	97.3	133	858	976	153	101	641	135.0	544.7
April	93.7	97.5	135	846	979	152	100	636	134.8	521.3
May	93.7	98.5	137	848	988	152	100	628	137.1	496.2
June	93.8	98.9	142	851	990	152	101	622	137.9	473.4
July	94.1	98.6	140	845	992	152	101	621	137.6	466.7
August	95.2	98.3	133	850	983	153	102	618	137.9	465.4
September	96.5	97.1	130	837	975	153	101	600	139.7	465.4
October	97.0	97.2	129	839	966	154	101	587	139.8	467.5
November	96.7	96.9	127	838	967	154	103	594	140.1	466.0
December	96.8	97.3	127	841	975	154	103	604	139.6	462.9
1928										
January	96.3	96.9	129	851	982	153	102	607	138.7	463.5
February	96.4	96.8	128	848	985	152	102	609	137.9	461.3
March	96.0	97.7	129	848	978	153	103	623	138.5	463.9
April	97.4	98.3	131	847	984	154	103	624	139.5	464.4
May	98.6	97.7	131	844	987	155	103	632	141.2	464.9
June	97.6	97.1	133	844	986	155	103	626	141.3	461.7
July	98.3	96.2	133	841	979	155	103	624	141.6	453.1
August	98.9	95.4	133	831	996	154	103	617	141.5	456.2
September	100.1	95.5	131	830	986	151	101	620	139.9	457.8
October	97.8	95.4	129	835	971	150	101	617	140.1	463.3
November	96.7	94.9	128	847	957	151	101	626	140.3	456.6
December	96.7	94.5	127	855	955	151	101	624	139.9	464.4
1929										
January	97.2	93.7	128	867	953	151	100	630	138.9	461.2
February	96.7	94.9	130	865	950	159	100	638	139.3	462.7
March	97.5	95.5	133	869	964	154	100	640	139.6	461.1
April	96.8	94.1	134	862	963	150	99	627	137.1	455.0
May	95.8	92.4	135	851	940	148	98	623	135.5	451.6
June	96.4	92.6	134	848	917	146	98	611	135.1	446.6
July	98.0	96.0	132	858	922	149	97	613	137.8	439.7
August	97.7	98.1	132	850	916	150	97	597	138.1	437.4
September	97.5	97.3	128	846	902	150	96	597	138.1	437.0
October	96.3	96.7	127	838	895	149	96	590	137.2	435.8
November	94.4	95.8	125	834	888	147	95	584	135.5	430.8
December	94.2	96.2	123	823	876	146	95	576	134.3	424.5
1930										
January	93.4	95.6	125	808	[2] 126.1	143	94	564	132.3	417.4
February	92.1	95.0	123	791	[2] 124.2	140	93	564	129.3	408.0
March	90.8	91.9	121	774	[2] 121.5	136	92	553	126.4	399.7
April	90.7	91.7	119	777	[2] 121.0	135	92	548	126.7	396.1
May	89.1	89.9	118	774	[2] 120.2	132	90	542	125.7	390.3
June	86.8	88.0	121	750	[2] 119.1	130	90	533	124.5	380.6
July	84.0	85.8	119	739	[2] 119.7	129	90	538	125.1	374.9
August	84.0	84.1	118	729	[2] 118.1	128	89	532	124.7	379.4
September	84.2	82.5	115	712	[2] 115.1	126	88	524	122.8	374.6
October	82.6	81.4	112	705	[2] 113.3	123	86	508	120.2	364.4
November	80.4	79.8	110	693	[2] 112.7	122	87	494	120.1	360.6
December	78.4	77.8	107	679	[2] 111.1	120	----------	488	117.8	349.6

[2] In gold.

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Country	Netherlands	Norway	Spain	Sweden	Switzerland	United Kingdom	Australia	New Zealand	South Africa	Japan	China	India
Computing agency	Central Bureau of Statistics	Central Bureau of Statistics	Institute of Geography and Statistics	Chamber of Commerce	Federal Labor Department	Board of Trade	Bureau of Census and Statistics	Census and Statistics Office (revised)	Office of Census and Statistics	Bank of Japan Tokyo	National Tariff Commission, Shanghai	Labor Office, Bombay
Base period	1913	1913	1913	1913	July, 1914	1913	July, 1914	1913	1913	1913	1913	July, 1914
Commodities	48	95	74	160	118	150	92	180	188	56	[3] 117	44
Year and month												
1923	151	232		163	181	158.9	170	158	127	199	156.4	181
1924	156	268	172	162	175	166.2	165	165	129	206	153.9	182
1925	155	253	183	161	162	159.1	162	161	128	202	159.4	163
1926	145	198	188	149	145	148.1	161	154	123	179	164.1	149
1927	148	167	181	146	142	141.4	159	146	124	170	170.4	147
1928	149	161	172	148	145	140.3	157	147	121	171	160.7	146
1929	142	153	168	140	141	136.5	-------	147	116	166	163.7	145
1923			171									
January	157	223		163	-------	157.0	163	-------	131	184	152.7	181
April	156	229	170	168	-------	162.0	167	-------	126	196	157.7	180
July	145	231	174	162	-------	156.5	180	-------	124	192	155.4	178
October	148	235	170	161	-------	158.1	171	-------	125	212	156.1	181
1924			171									
January	156	251		161	-------	165.4	174	-------	131	211	155.8	188
April	154	263	178	161	-------	164.7	166	-------	126	207	153.7	184
July	151	265	184	157	-------	162.6	163	-------	125	195	151.5	184
October	161	273	182	167	-------	170.0	163	-------	133	213	152.8	181
1925			186									
January	160	279		169	-------	171.1	163	166	130	214	159.9	173
February	158	281	191	169	-------	168.9	162	162	-------	210	159.2	173
March	155	279	192	168	-------	166.3	160	162	-------	204	160.3	171
April	151	273	193	163	-------	161.9	158	162	130	202	159.3	165
May	151	262	190	162	-------	158.6	159	162	-------	199	157.8	164
June	153	260	191	161	-------	157.2	162	162	-------	200	157.3	160
July	155	254	187	161	-------	156.9	162	161	127	198	162.8	158
August	155	249	188	159	-------	156.2	162	161	-------	200	160.3	160
September	155	237	184	157	-------	155.1	162	160	-------	201	160.2	157
October	154	223	185	154	-------	153.9	163	162	124	200	159.0	158
November	154	220	187	155	-------	152.7	165	161	-------	198	158.4	160
December	155	220	186	156	-------	152.1	160	160	-------	194	158.1	154
1926			187									
January	153	214		153	153	151.3	161	159	124	192	164.0	154
February	149	211	186	152	147	148.8	160	159	-------	188	163.0	151
March	145	205	186	149	146	144.4	163	157	-------	184	164.4	150
April	143	199	183	150	145	143.6	168	156	120	181	162.8	151
May	143	197	179	151	143	144.9	167	156	-------	177	159.7	151
June	144	194	179	150	143	146.4	163	155	-------	177	155.8	150
July	141	192	177	148	145	148.7	162	156	122	179	156.9	149
August	139	193	178	147	142	149.1	162	154	-------	177	160.5	148
September	140	193	180	146	142	150.9	158	153	-------	176	164.2	149
October	143	198	178	148	144	152.1	154	153	127	174	171.1	147
November	147	199	179	148	142	152.4	155	151	-------	171	174.4	146
December	147	184	185	150	142	146.1	155	153	-------	170	172.0	146
1927			186									
January	145	174		146	141	143.6	154	151	128	170	172.8	146
February	146	172	184	146	141	142.6	153	147	-------	171	172.0	148
March	144	167	180	145	141	140.6	150	147	-------	171	174.7	146
April	143	164	179	143	140	139.8	151	147	126	170	173.1	145
May	145	162	177	145	141	141.1	152	145	-------	171	171.3	146
June	149	166	172	146	140	141.8	155	146	-------	172	169.3	147
July	151	165	171	146	140	141.1	161	146	120	170	171.0	147
August	149	167	168	146	142	140.9	165	146	-------	167	170.8	148
September	150	167	168	148	144	142.1	170	146	-------	169	171.8	148
October	150	165	169	147	145	141.4	173	146	122	170	168.7	146
November	151	166	169	148	147	141.1	166	147	-------	168	165.7	144
December	151	166	168	148	146	140.4	162	148	-------	168	163.5	143
			169									

[3] 147 items.

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Country	Netherlands	Norway	Spain	Sweden	Switzerland	United Kingdom	Australia	New Zealand	South Africa	Japan	China	India
Computing agency	Central Bureau of Statistics	Central Bureau of Statistics	Institute of Geography and Statistics	Chamber of Commerce	Federal Labor Department	Board of Trade	Bureau of Census and Statistics	Census and Statistics Office (revised)	Office of Census and Statistics	Bank of Japan, Tokyo	National Tariff Commission-Shanghai	Labor Office, Bombay
Base period	1913	1913	1913	1913	July, 1914	1913	July, 1914	1913	1913	1913	1913	July, 1914
Commodities	48	95	74	160	118	150	92	180	188	56	117	44
1928												
January	153	164	166	148	145	141.1	163	150	123	169	163.1	141
February	150	163	166	147	144	140.3	160	147	-------	169	164.3	142
March	152	164	165	149	145	140.8	160	147	-------	169	163.4	140
April	153	162	166	151	146	142.9	162	147	121	170	163.1	142
May	152	162	164	152	145	143.6	159	148	-------	171	164.5	145
June	153	161	164	151	145	142.6	158	148	-------	169	160.0	149
July	148	162	164	150	144	141.1	157	148	119	169	159.2	147
August	144	162	166	149	144	139.3	154	147	-------	170	157.2	146
September	145	158	168	146	144	137.6	153	148	-------	174	156.2	148
October	146	157	174	145	145	137.9	152	149	120	174	158.8	150
November	148	157	176	145	145	137.9	152	150	-------	173	159.2	149
December	148	157	175	145	144	138.3	154	149	-------	174	159.9	145
1929												
January	146	154	171	144	143	138.3	157	147	120	172	160.1	148
February	146	155	175	145	143	138.4	156	146	-------	171	162.4	150
March	147	155	174	144	142	140.1	157	146	-------	171	164.2	147
April	144	154	174	141	140	138.8	158	146	117	170	161.2	144
May	142	152	171	140	139	135.8	156	147	-------	169	161.7	141
June	141	151	170	139	139	135.6	158	147	-------	168	162.6	143
July	141	152	169	140	143	137.4	159	147	115	166	162.7	145
August	142	154	170	141	143	135.8	160	148	-------	165	164.7	146
September	141	154	171	140	142	135.8	162	148	-------	164	167.1	147
October	140	154	172	138	142	136.1	161	148	113	163	168.0	146
November	137	152	171	135	140	134.0	158	147	-------	160	164.7	143
December	135	152	172	134	139	132.5	154	146	-------	155	164.7	141
1930												
January	131	150	172	131	136	131.0	151	147	107	152	169.6	139
February	126	147	173	128	133	127.8	147	146	-------	151	174.7	137
March	122	146	173	125	131	124.5	144	146	-------	148	173.9	137
April	122	145	172	124	129	123.7	146	146	104	147	174.2	134
May	118	144	168	123	128	122.0	148	146	-------	143	173.4	130
June	118	143	166	123	126	120.7	145	145	-------	138	185.9	127
July	115	142	170	121	126	119.2	144	144	100	134	190.1	124
August	114	141	173	121	126	117.8	142	146	-------	133	189.4	124
September	112	141	174	119	123	115.5	134	144	-------	130	187.5	120
October	111	140	175	118	122	113.0	130	142	99	124	182.3	117
November	110	139	-------	117	120	112.0	-------	141	-------	123	177.7	112
December	-------	136	-------	-------	117	108.9	-------	-------	-------	122	177.7	-------

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COST OF LIVING

Income and Expenditure of a Laborer's Family in Buenos Aires in 1929

A SURVEY in Buenos Aires to ascertain the average income and expenditure of a laborer's family during the year 1929 was made by the National Department of Labor of Argentina, the results of which appeared in the May, 1930, issue of Crónica Mensual (pp. 3142–3147). The data were obtained from a study of 680 families, including 3,019 persons.

The report states that the average earnings of the workman's family in 1929 were 2,119.61 paper pesos ($886.00)[1] as against 2,043.63 pesos ($867.73) in 1928, while the average annual expenditure per family in 1929 was 2,108.80 pesos ($881.48) as against 2,035.87 pesos ($864.43) in 1928.

Of the 680 families investigated, 560 had balanced budgets, 63 had a surplus for the year, and 57 reported a deficit.

The following table shows the average income and expenditure of the 680 laborers' families in Buenos Aires in 1929, by means of support.

AVERAGE ANNUAL INCOME AND EXPENDITURE FOR 680 FAMILIES IN BUENOS AIRES, BY MEANS OF SUPPORT

[Paper peso is valued at 44 per cent of gold peso, the average exchange rate of which was 95.1 cents in 1929]

Families supported by—	Number of families	Average annual income		Average annual expenditure	
		Pesos (paper)	U. S. currency	Pesos (paper)	U. S. currency
Father	285	1, 768. 43	$739. 20	1, 788. 08	$747. 42
Mother	15	1, 128. 13	471. 56	1, 213. 60	507. 28
Parents	83	1, 190. 84	497. 77	2, 004. 72	837. 97
Parents and 1 or more children	43	2, 666. 14	1, 114. 45	2, 760. 56	1, 153. 91
Father and 1 or more children	140	3, 039. 51	1, 270. 52	3, 004. 65	1, 255. 94
Mother and 1 or more children	38	1, 903. 11	795. 50	1, 878. 00	785. 00
1 or more children	46	2, 152. 24	899. 64	2, 114. 02	883. 66
Husband	11	1, 719. 27	718. 65	1, 509. 82	631. 10
Wife	19	781. 57	326. 70	800. 58	334. 64
Total and average	680	2, 119. 61	886. 00	2, 108. 80	881. 48

Changes in Cost of Canadian Family Budget, 1921 to 1930

THE Canadian Department of Labor has recently issued figures[2] showing the cost per week, in specified months from 1921 to 1930, of the family budget in terms of average retail prices of certain classes of commodities in some 60 Canadian cities.

The following items are included in the budget:

[1] All amounts are given in paper pesos, which are worth 44 per cent of the gold pesos, the average exchange rate of which was 95.1 cents in 1929 and 96.5 cents in 1928.

[2] Canada. Department of Labor. Prices in Canada and other countries, 1930 (issued as a supplemen to the Labor Gazette, January, 1931). Ottawa, 1931, pp. 4, 5.

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TABLE 1.—ITEMS OF CANADIAN FAMILY BUDGET

Item	Quantity	Item	Quantity
Foods (29):		Foods (29)—Continued.	
Beef, sirloin, steak ---- pounds	2	Beans, hand-picked ---- pounds	2
Beef, shoulder ---- do	2	Apples, evaporated ---- do	1
Veal, shoulder ---- do	1	Prunes, medium ---- do	1
Mutton, roast ---- do	1	Sugar, granulated ---- do	4
Pork, leg ---- do	1	Sugar, yellow ---- do	2
Pork, salt ---- do	2	Tea, black [1] ---- do	¼
Bacon, breakfast ---- do	1	Tea, green [1] ---- do	¼
Lard, pure ---- do	2	Coffee ---- do	¼
Eggs, fresh ---- dozen	1	Potatoes ---- bags	⅓
Eggs, storage ---- do	1	Vinegar ---- quarts	1/16
Milk ---- quarts	6	Starch, laundry ---- pounds	⅓
Butter, dairy ---- pounds	2	Fuel and lighting:	
Butter, creamery ---- do	1	Coal, anthracite ---- tons	1/16
Cheese, old [1] ---- do	1	Coal, bituminous ---- do	1/16
Cheese, new [1] ---- do	1	Wood, hard ---- cords	1/16
Bread ---- do	15	Wood, soft ---- do	1/16
Flour, family [1] ---- do	10	Coal oil ---- gallons	1
Rolled oats ---- do	5	Rent ---- months	¼
Rice [1] ---- do	2		

[1] Kind most sold since October, 1922.

While this budget serves to indicate the rise or fall from time to time in the cost of the included items, it is not intended to show the minimum cost of food and fuel for an average family in Canada or in any one of its Provinces. The quantities of meats, cereals, dairy products, etc., in this budget were adopted as constituting a weekly liberal allowance for the healthy family of a man engaged in hard physical labor. An average family, however, with an income sufficient to do so would purchase less meat, etc., but more fresh and canned vegetables, fruit, etc., so that there would be little change in the total amount of expenditure for food.

For the average family of five the expenditure for the items in this budget would perhaps be equivalent to 65 per cent of the total income. It is estimated that an allowance for clothing and sundries would increase the given totals about 50 per cent.

TABLE 2.—COST PER WEEK OF FAMILY BUDGET IN CANADA IN SPECIFIED MONTHS, 1921 TO 1930

[This budget is intended to show the change in the cost of items included, not to show the minimum cost for an average family]

Year and month	All (29) foods	Starch, laundry (⅓ pound)	Fuel and lighting	Rent (¼ month)	Total
1921: January	$14.48	$0.049	$4.17	$6.60	$25.30
July	10.96	.044	3.70	6.83	21.53
1922: January	11.03	.042	3.53	6.92	21.52
July	10.27	.040	3.41	6.95	20.67
1923: January	10.52	.040	3.61	6.96	21.13
July	10.17	.040	3.48	6.97	20.65
1924: January	10.78	.041	3.49	6.92	21.23
July	9.91	.041	3.37	6.98	20.30
1925: January	10.77	.041	3.37	6.91	21.09
July	10.49	.041	3.28	6.89	20.70
1926: January	11.63	.041	3.44	6.86	21.96
July	11.07	.042	3.32	6.87	21.30
1927: January	11.37	.041	3.33	6.85	21.59
July	10.92	.041	3.28	6.86	21.10
December	11.17	.041	3.29	6.87	21.37
1928: January	11.19	.041	3.28	6.89	21.41
July	10.80	.041	3.26	6.91	21.01
December	11.31	.041	3.26	6.94	21.56
1929: January	11.30	.041	3.27	6.94	21.55
July	10.98	.040	3.26	6.98	21.26
December	11.83	.041	3.26	6.98	22.11
1930: January	11.88	.041	3.26	6.99	22.17
July	10.91	.040	3.24	7.07	21.26
December	10.10	.040	3.24	7.07	20.46

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Living Standards of Workers' Families in Shanghai, 1929

THE following tables and text summarize the results of a study of the incomes and expenditures of 21 working-class families in Shanghai in 1929.[1] This study was made in the spring of that year under the direction of the associate professor of sociology in Shanghai College. Four woman student investigators visited the families over a period of from 6 to 9 weeks. Yearly estimates were checked by special weekly schedules upon which were entered actual receipts and expenditures. "It is believed," the director of the survey states, "that the results obtained are worth considering as tentative indications of the standard of living of some of the factory workers' families in the Yangtzepoo District for the year ending June 1, 1929."

In Table 1 the composition and income of the 21 families covered are shown, the average number of persons ranging from 2 to 7.8 and the average income of the families from $86.14, Mexican (U. S. currency $39.54),[2] to $824.14 Mexican (U. S. currency $378.28). Wages, tips, and bonuses formed 92.1 per cent of the total income, on the average. The other 7.9 per cent included gifts, interest, rent, sales, and miscellaneous receipts.

TABLE 1.—COMPOSITION AND INCOME OF FAMILIES OF 21 LABORERS IN SHANGHAI

[Conversions on basis of Mexican dollar=45.9 cents]

Yearly income group	Number of families	Average number of persons in family	Average number of equivalent adult males	Average number of wage-earners	Average yearly income	Average income per equivalent adult male
Under $45.90	1	2	1.30	1.00	$39.54	$30.77
$91.80 and under $137.70	4	3	2.35	2.00	119.86	54.33
$137.70 and under $183.60	4	3	2.35	2.25	153.42	71.48
$183.60 and under $275.40	6	4	3.00	2.67	221.54	71.92
$321.30 and under $413.10	6	7.8	6.08	4.00	378.28	64.28

From Table 2, showing the percentages of the family wage contributed by different members of the family, it will be noted that the proportional contributions of mothers decline in the higher income groups. The explanation given for this is that as the family increases in size the children and other members of the family contribute. In the larger families the mother is older and her services are required for domestic duties. The fathers' contributions to family wages are less than that of the mothers in the five families in the two lowest income groups. This is because two of the families in these groups have no male head. Attention is called to the conspicuous part played by daughters, including daughters-in-law, in family support.

[1] China. Ministry of Commerce and Labor. Bureau of Industrial and Commercial Information. Chinese Economic Journal, Shanghai, November, 1930, pp. 1240–1256.

[2] Conversions into United States currency on basis of average exchange rate of Mexican dollar for 12 months ending June 1, 1929 (45.9 cents).

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TABLE 2.—WAGE CONTRIBUTIONS OF FAMILY MEMBERS TO FAMILY WAGES

[Conversions on basis of Mexican dollar=45.9 cents]

Income group	Number of families	Percentage contributed by—					
		Mothers	Fathers	Daughters	Sons	All females	All males
Under $45.90	1	100.0				100.0	
$91.80 and under $137.70	4	49.4	26.4	24.2		73.6	26.4
$137.70 and under $183.60	4	25.8	45.6	28.6		54.4	45.6
$183.60 and under $275.40	6	19.8	51.9	28.3		48.1	51.9
$321.30 and under $413.10	6	5.6	16.7	30.6	47.1	36.2	63.8
Total and average	21	26.3	33.4	26.8	13.5	53.3	46.7

Figures are also presented in the article which show the amount of the surplus or deficit in the total income in connection with the expenditures of six families with child workers. Four of these families had a surplus and two a deficit even when the wages of the children were included. The average surplus of the six families was $36.07, Mexican (U. S. currency, $16.56). If the wages of the child workers are deducted from the total income of these families, a deficit is found in four families and the surplus in the other two families is found to be under $20, Mexican (U. S. currency, $9.18). The six families taken together without the wages of the children show an average deficit of $75.95, Mexican (U. S. currency, $34.86). One family with the wages of two child workers has a surplus of $15.67, Mexican (U. S. currency, $7.19). Without such wages this family shows a deficit of $144.89, Mexican (U. S. currency, $66.50). Another family with the wages of two children has a surplus of $76.78, Mexican (U. S. currency, $35.24), but would have had a deficit of $180.82, Mexican (U. S. currency, $83.00), without such contribution to the domestic exchequer.

The holidays per annum per wage earner averaged 5.07, and the rest days, exclusive of holidays, 46.6. After deductions for holidays and rest days and for time lost because of sickness, accidents, etc., it was found that the total number of days worked by the 58 wage earners ranged from 188 to 351, averaging 294.5.

The annual income and expenditures per equivalent adult male are reported in Table 3, in which is indicated a tendency for the larger-sized families to have lower incomes and lower expenditures per equivalent adult male. L. K. Tao in "Livelihood in Peking" and Sung Ho-lin in "Factory Workers in Tangku" noted this same phenomenon. The large family, then, according to the report under review, "far from being an economic asset, means a lowered standard of living."

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TABLE 3.—ANNUAL INCOME AND EXPENDITURES PER EQUIVALENT ADULT MALE IN 21 FAMILIES

[Conversions on basis of Mexican dollar=45.9 cents]

Number of equivalent adult males in family	Number of families	Total income per equivalent adult male	Total expense per equivalent adult male
1.0 to 2.49 equivalent adult males	6	$66.30	$69.08
2.5 to 3.49 equivalent adult males	8	64.37	63.72
3.5 to 4.49 equivalent adult males	2	69.28	63.45
5.5 to 7.49 equivalent adult males	4	62.80	58.38
7.5 to 8.49 equivalent adult males	1	48.62	50 09

Of the 11 families reporting on land ownership, one owned 30 mow;[3] the average for the remaining 10 families was 1.73 mow.

The average number of rooms per family reporting on the subject was two and the average number of persons per room, 2.36. The rooms were not actually measured but they were found to be very small.

The percentage distribution of expenditures for the family budget of the 21 families is given in Table 4:

TABLE 4.—ANNUAL EXPENDITURES OF 21 FAMILIES

[Conversions on basis of Mexican dollar=45.9 cents]

Income group	Average percentage expended for—					Average total expenses	Average amount of surplus (+) or deficit (−)
	Food	Clothing	Rent	Fuel and light	Miscellaneous		
Under $45.90	54.85	22.00	------	5.77	17.38	$66.64	−$27.10
$91.80 and under $137.70	55.68	13.45	10.75	6.99	13.13	129.28	−9.42
$137.70 and under $183.60[1]	53.30	18.68	14.64	7.39	12.02	141.99	+11.43
$183.60 and under $275.40	55.45	17.14	10.56	5.38	11.47	202.34	+10.20
$321.30 and under $413.10	59.10	13.24	8.76	5.70	13.20	353.82	+24.46
Average	56.00	16.00	9.00	6.00	13.00	218.58	------

[1] Owing to an evident error in the original report, these percentages for this group are somewhat too high, but the difference is too slight to impair the value of the figures.

For the 14 families for which details on food expenditures were secured, 48.75 per cent of such expenditures was for cereals; 23.58 per cent for vegetables; 12.68 per cent for meat, fish, and eggs; 8.63 per cent for condiments; 1.16 per cent for fruits; and 5.2 per cent for miscellaneous foods. Under the head of miscellaneous expenses the following items were included: Tobacco, wine, tea, candy, towels, soap, barber and other toilet articles, household goods, water, transportation, medical expenses, worship, amusement, entertaining friends, gifts, newspapers, books, education, interest on loans, taxes, and labor-union dues.

[3] One mow=about one-sixth of an acre.

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IMMIGRATION AND EMIGRATION

Statistics of Immigration for December, 1930

By J. J. Kunna, Chief Statistician, United States Bureau of Immigration

THE statistical review for December last shows that 16,378 aliens were admitted to the United States, of whom 6,439 were immigrants and 9,939 nonimmigrants. The outward movement of aliens this month totaled 23,053, less than one-fifth, or 5,450, being classed as emigrants; the remaining 17,603 were nonemigrants leaving after a short stay in this country or going abroad for a temporary visit. In this month the departures exceeded the arrivals by 6,675, this having occurred only twice since July, 1924.

The semiannual period ended December 31, 1930, witnessed the entry of 187,345 aliens (comprising 75,521 immigrants and 111,824 nonimmigrants) and the departure of 167,100 (30,916 emigrants and 136,184 nonemigrants), resulting in a net increase in the alien population of 20,245. This is against a net increase of 104,050 for the corresponding period of 1929, 108,767 for 1928, 119,468 for 1927, and 151,938 for 1926.

Less than one-fourth of the aliens admitted during the six months from July to December last were of the class charged to the quota under the immigration act of 1924, 44,528 being recorded as quota immigrants. The largest number came from Great Britain and Northern Ireland, 11,350 quota immigrants giving these countries as their place of birth, while 8,563 were born in Germany, 6,429 in the Irish Free State, 2,949 in Italy, 2,288 in Poland, 2,109 in Scandinavia, and 8,292 in Russia, Czechoslovakia, and other European countries. Quota immigrants born in Asia numbered 1,108, in Africa 167, in Australia, New Zealand, and other Pacific countries 163, and in the quota regions of the Western Hemisphere 1,010. The returning residents admitted during the same six months numbered 60,595 and visitors for business or pleasure 32,165. Other principal classes under the act of 1924 included 16,679 natives of nonquota countries, 11,313 husbands, wives, and unmarried children of American citizens, and 16,362 aliens passing through the country on their way elsewhere. The last-named group was the only one of the above-mentioned classes that showed an increase over the same six months a year ago. The drop in quota immigrants from 71,096 to 44,528, or 37 per cent, was directly due to the enforcement abroad of the "likely to become a public charge" provision of the immigration act of 1917, in the light of present unemployment in the United States. Practically for the same reason the immigration of natives of nonquota countries declined from 42,881 to 16,679, or 61 per cent; and also of husbands, wives, and children of American citizens from 19,813 to 11,313, or 43 per cent. The smaller decreases of 3,649 visitors to this country

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and 1,998 returning residents was due, in all probability, to economic conditions both here and abroad.

Immigration during the six months from July to December, 1930, compared with the corresponding period a year ago, shows a decrease from European countries of 29,830, or 38.2 per cent, the number of immigrant aliens from that source dropping from 78,099 to 48,269. Immigration from Germany declined from 13,802 to 8,735, Great Britain from 15,511 to 7,768, Italy from 12,839 to 8,868, and Irish Free State from 9,713 to 5,781. About two-thirds of the Europeans came from these four countries. Canadian immigration also shows a decrease from 39,684 to 17,521, or 55.8 per cent, while the Mexican shows the largest proportionate decrease, 8,589 immigrants having been admitted from Mexico during the six months from July to December, 1929, as against 2,267 for the corresponding months of the following year, a decline of 6,322, or 73.6 per cent.

The different countries or regions of Central and South America were shown separately for the first time in immigration statistics beginning with the current fiscal year. The compilation for the half-year from July to December, 1930, gives a total of 717 immigrant aliens admitted from Central America. Panama, with 204, contributed the largest number, followed by Guatemala with 104 and Honduras with 101, while Nicaragua sent 98, Costa Rica 99, Salvador 74, British Honduras 19, and Canal Zone 18. In the same period 1,253 immigrants arrived from South American countries, Brazil with 255, Argentina with 220, Chile with 177, Colombia with 166, and Venezuela with 143, contributing over two-thirds of the total. The remaining one-third were scattered, 22 immigrants coming from Bolivia, 60 from British Guiana, 8 from Dutch Guiana, 53 from Ecuador, 1 from Paraguay, 113 from Peru, and 35 from Uruguay. The major portion of the arrivals from British Honduras, British Guiana, and Dutch Guiana entered the United States under the immigration act of 1924 as quota immigrants, and the others as natives of nonquota countries.

The number of persons debarred from entering the United States during the six months from July to December, 1930, was 5,041, of whom 3,532 were males and 1,509 females. At New York, the port of entry for 84.4 per cent of the aliens landing at the seaports, 129,066 aliens sought admission in the said period; of these 394 were debarred, or less than 4 per 1,000, and about 9 of every 10 rejected were males. During the same six months 364 aliens were debarred at the other seaports and 4,283 at points along the international land borders. The principal cause for debarment at all ports continues to be for failure to present a proper immigration visa under the act of 1924.

A total of 8,508 aliens were deported from the country during the period from July to December last, as compared with 8,309 for the corresponding period of 1929, an increase of 199. Of the total deportees, 4,217 were sent to Mexico, 1,145 to Canada, 2,523 to Europe, 345 to China and other Asia, and 278 to other countries.

The statistics covering countries of birth reveal that a number of aliens do not come from their native land direct to the United States. In the six months from July to December last, 30,450 aliens were admitted over the northern land border, over one-half of whom were of European birth, 15,591 having been born in Europe, principally

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England, Scotland, Ireland, Germany, Poland, and Italy; while 1,042 were born in Asia; 676 in Australia, New Zealand, and other Pacific; 110 in Africa; 214 in Mexico and the West Indies; and 84 in Central and South America. The remaining 12,726 gave Canada or Newfoundland as their place of birth. Of these Canadian border arrivals, 5,354 were admitted as quota immigrants and 10,623 as natives of nonquota countries, the others coming in under the act of 1924 as visitors, persons passing through the country, and miscellaneous classes.

Of the 128,672 aliens admitted at the port of New York during the six months—July to December, 1930—112,542 were born in Europe, 3,387 in Asia, 2,531 in Canada, 2,606 in the British West Indies, 2,332 in South America, and 5,274 in Cuba, Mexico, and other countries. While the bulk (94.5 per cent) of the quota immigrants entering the country during these six months were born in Europe, only 35,774, or 80.3 per cent, of the total landed at New York, and 3,232, or 7.3 per cent, at the other seaports. Of the remaining quota immigrants, 5,354, or 12 per cent of the total, came in over the northern land border, and 168 via the Mexican border. During the same six months, New York was the port of arrival for 49,774, or 82.1 per cent of the returning residents; 27,819, or 57.3 per cent, of the visitors and transits; and 10,228, or 90.4 per cent, of the husbands, wives, and unmarried children of American citizens. This port was also credited with the examination of 1,703, or 10.2 per cent, of the immigrants entering under the act of 1924 as natives of nonquota countries.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1 TO DECEMBER 31, 1930

Period	Inward					Aliens debarred from entering [1]	Outward					Aliens deported after landing [2]
	Aliens admitted			United States citizens arrived	Total		Aliens departed			United States citizens departed	Total	
	Immigrant	Non-immigrant	Total				Emigrant	Non-emigrant	Total			
1930												
July	13,323	16,466	29,789	38,822	68,611	881	4,818	22,588	27,406	55,366	82,772	1,440
August	14,816	19,724	34,540	69,957	104,497	837	5,245	29,166	34,411	88,372	122,783	1,208
September	17,792	29,359	47,151	80,900	128,051	929	5,100	24,604	29,704	56,526	86,230	1,552
October	13,942	23,304	37,246	40,702	77,948	854	5,352	22,938	28,290	32,988	61,278	1,526
November	9,209	13,032	22,241	22,381	44,622	734	4,951	19,285	24,236	24,420	48,656	1,405
December	6,439	9,939	16,378	28,535	44,913	806	5,450	17,603	23,053	21,140	44,193	1,377
Total	75,521	111,824	187,345	281,297	468,642	5,041	30,916	136,184	167,100	278,812	445,912	8,508

[1] These aliens are not included among arrivals, as they were not permitted to enter the United States.
[2] These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

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PUBLICATIONS RELATING TO LABOR

Official—United States

ALASKA.—Governor. *Annual report to the Secretary of the Interior for fiscal year ended June 30, 1930. Washington, Department of the Interior, 1930. 139 pp.; charts, illus.*

Includes data on wages and labor conditions in Alaska. The wages reported for 1929–30 are the same as shown for 1928–29 in the July, 1930, issue of the Labor Review (pp. 162–164).

COLORADO.—Bureau of Labor Statistics. *Twenty-second biennial report, December, 1928, to July, 1930. Denver, 1930. 57 pp.*

Contains wage data for various occupations in many industries in Colorado in 1930.

ILLINOIS.—Board for Vocational Education. *Bulletin No. 50: Annual directory and program of agricultural education, 1930–31. Springfield, 1930. 42 pp.; maps, illus.*

——— *Bulletin No. 51: Annual report, July 1, 1929, to June 30, 1930. Springfield, 1930. 47 pp.; maps.*

Contains detailed data concerning classes and schools established. Statistics on industrial education for the year under review, taken from the report, are given in this issue of the Labor Review.

IOWA.—Bureau of Labor. *Report for the biennial period ending June 30, 1930. Des Moines, 1930. 16 pp.*

Includes accident and employment statistics. The ready acquiescence of industrial employers in complying with the orders and recommendations of the bureau's inspection force is reported as one of the outstanding features of the present administration of that office.

—— Bureau of Mines. *Report for the biennial period ending December 31, 1929. Des Moines, 1930. 86 pp.*

The report, which relates almost entirely to coal mines, contains data on production, employment, and accidents, and the text of the 1928–1930 agreement between the Iowa Coal Operators' Association and the United Mine Workers of District No. 13.

MARYLAND.—Board of Labor and Statistics. *The older worker in Maryland. Baltimore, 1930. 68 pp.*

A summary of this study was published in the Labor Review for February, 1931 (p. 30).

MASSACHUSETTS.—House of Representatives. *No. 301: Special report of the Department of Labor and Industries relative to the relation of employer and employee in cooperative shoe shops and to the purchase of stock by employees. Boston, 1930. 17 pp.*

Reviewed in this issue.

NEVADA.—Inspector of Mines. *Biennial report, 1929–1930. Carson City, 1931. 71 pp.*

Includes statistics of accidents and of production.

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NEW YORK.—Department of Labor. *Special bulletin No. 167: Unemployment in Buffalo, November, 1930. Albany, 1930. 72 pp.; charts.*

Some of the data obtained in this survey were published in the Labor Review for January, 1931 (pp. 33–46).

NORTH CAROLINA.—Child Welfare Commission. *Biennial report, July 1, 1928, to June 30, 1930.* [*Raleigh, 1930?*] *163 pp.; map, charts, illus.*

The report presents data showing that during the biennium covered the situation in regard to child labor steadily improved. There was a gradual elimination from industry of children who had not completed the fourth grade in school, a marked decrease in the employment of children under 16 years old, a definite downward trend in the employment of children of any age in the major industries and the substitution of adults in their places, a marked improvement in the health standards of children in North Carolina as compared with those in some other States, and a still further improvement in the program of supervision of boys in street trades, from which trades girls are excluded entirely.

OHIO.—Department of Education. Bureau of Vocational Rehabilitation. *Vocational rehabilitation for physically disabled in Ohio. Columbus,* [*1930?*]. *57 pp., illus.*

The financial results of the rehabilitation program in Ohio in the period 1921–1930 are summarized as follows:

Total number of disabled persons rehabilitated	4,715
Total earning power after rehabilitation	$5,822,558
Total cost of rehabilitation service to State	$706,841
Net gain to people in Ohio in increased earning power of rehabilitants	$5,115,717

PENNSYLVANIA.—Committee on Unemployment. *Alleviating unemployment. Harrisburg, 1931. 73 pp.*

Reviewed in this issue.

VERMONT.—Office of Commissioner of Industries. *Biennial report, for the two years ending June 30, 1930. Barre, 1930. 39 pp.*

That part of the report covering the experience under the workmen's compensation law is reviewed in this issue.

UNITED STATES.—Civil Service Commission. *Application of the merit system in the United States Civil Service: Articles and addresses of members of the United States Civil Service Commission. Washington, 1930. 105 pp.*

—— —— *Forty-seventh annual report, for the fiscal year ended June 30, 1930. Washington, 1930. 90 pp.; charts.*

There were 608,915 employees in the entire executive civil service on June 30,1930, a net increase of 21,250 over the previous year. The number employed in the District of Columbia was 68,510. The Postal Service had 316,995 employees, or 52.06 per cent of the total, a net increase of 2,200 employees over the previous year.

—— Congress. House of Representatives. Committee on Immigration and Naturalization. *Exclusion of immigration from the Philippine Islands. Hearings on H. R. 8708 (71st Cong., 2d sess.). Washington, 1930. 300 pp.*

—— —— —— Committee on the Judiciary. *To provide for the establishment of a national employment system and for cooperation with the States in the promotion of such system, and for other purposes. Washington, 1930. 18 pp. House report No. 2033 (71st Cong., 2d sess.).*

—— —— Senate. *Document No. 260 (71st Cong., 3d sess.): Employment survey made by agents of the Metropolitan Life Insurance Co. Washington, 1931. 9 pp.*

The report of the survey is reproduced in this issue.

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UNITED STATES.—Department of Agriculture. *Circular No. 144: Farmers' experiences and opinions as factors influencing their cotton-marketing methods, by T. B. Manny. Washington, 1931. 62 pp.*

An account of the results of interviews with 1,081 farmers of Alabama and North Carolina, of whom 366 were members of cooperative cotton-marketing associations, 228 were ex-members, and 487 had never belonged to such an organization.

—— Department of Commerce. Bureau of Navigation. *Merchant marine statistics, 1930 (No. 7). Washington, 1930. 111 pp.*

Data on wages of seamen on American and foreign vessels, taken from this report, are given in this issue of the Labor Review.

—— Department of Labor. Bureau of Labor Statistics. *Bulletin No. 525: Wages and hours of labor in the Portland cement industry, 1929. Washington, 1931. 62 pp.*

Summary data from this survey were published in the Labor Review for August, 1930 (pp. 157–173).

—— —— —— *Bulletin No. 526: Wages and hours of labor in the furniture industry, 1910 to 1929. Washington, 1931. 59 pp.*

Summary figures from this survey were published in the Labor Review for April, 1930 (pp. 152–158).

—— —— —— *Bulletin No. 527: Safety code for the use, care, and protection of abrasive wheels. Washington, 1930. 30 pp.*

—— —— —— *Bulletin No. 528: Labor legislation, 1929. Washington, 1930. 126 pp.*

—— —— —— *Bulletin No. 532: Wages and hours of labor in the cigarette manufacturing industry, 1930. Washington, 1931. 24 pp.*

Summary data from this survey were published in the Labor Review for October, 1930 (pp. 163–169).

—— —— Women's Bureau. *Bulletin No. 80: Women in Florida industries. Washington, 1930. 113 pp.; charts.*

Reviewed in this issue.

—— —— —— *Bulletin No. 82: The employment of women in the pineapple canneries of Hawaii, by Caroline Manning. Washington, 1930. 28 pp.; charts, illus.*

In addition to dealing with the work, conditions of employment, wages, and earnings of women working in the pineapple canneries, the report gives a brief account of the occupations open to women in Hawaii, of the extent to which they are industrially employed, and of the industries in which they are found.

—— Employees' Compensation Commission. *Fourteenth annual report, July 1, 1929, to June 30, 1930. Washington, 1930. 130 pp.*

Reviewed in this issue.

—— Federal Board for Vocational Education. *Bulletin No. 133, Vocational rehabilitation Series No. 17: Vocational rehabilitation of the disabled—what it is and what it means. Washington, 1930. 12 pp. (Revised 1930)*

In addition to outlining in brief the problems involved in rehabilitation, and the economic significance of this service, such subjects are discussed as rehabilitation methods, typical cases, returns on public funds invested in the work, and the experience of the disabled after they are rehabilitated.

—— —— *Fourteenth annual report, 1930. Washington, 1930. 129 pp.*

Reviewed in this issue.

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Official—Foreign Countries

BUDAPEST (HUNGARY).—Kommunal-Statistisches Amt. *Die sozialen und wirtschaftlichen Verhältnisse der Arbeiter in Budapest. Budapest, 1930. 1143 pp.*

Contains a detailed review of labor conditions in Budapest up to 1929, including number of wage earners by industries and occupations, housing, hours of labor, wages, employment service, unemployment, cost of living, industrial disputes, labor organizations, cooperation, legislation, etc.

CANADA.—Department of Labor. *The employment of children and young persons in Canada. Ottawa, 1930. 139 pp.*

A study intended to give information as to the extent of the employment of children and young persons in all the Provinces of Canada, and the laws regulating such employment. Part I gives an analysis of the statistical data on the subject contained in the census reports of 1921. Part II deals with accidents to young persons in the course of their employment, and Part III gives the laws of the different Provinces as to school attendance, and as to the regulation of the labor of children and young people in different classes of employment.

—— —— *Prices in Canada and other countries, 1930. Ottawa, 1931. 29 pp.*

Data from the report are published in this issue of the Labor Review.

FRANCE.—Bureau de la Statistique Générale de la France. *Annuaire statistique, 1929. Paris, 1930. [Various paging.]*

The French Statistical Yearbook for 1929 includes statistics relating to vocational education, production in different industries, wages, hours of labor, savings, insurance, and industrial accidents. Statistics are also given for the French colonies.

—— Commission Supérieure de la Caisse Nationale des Retraites pour la Vieillesse. *Rapport sur les opérations et la situation de cette caisse, 1928. Paris, 1930. 112 pp.*

Report of the operations of the French National Old-Age Retirement Fund for the year 1928.

GREAT BRITAIN.—Board of Trade. *Statistical tables relating to British and foreign trade and industry, 1924–1930. Part I—General tables. London, 1930. 377 pp. (Cmd. 3737.)*

Includes data on retail and wholesale prices, unemployment, and wages.

—— Industrial Health Research Board. *Report No. 61: The nervous temperament, by Millais Culpin and May Smith. London, 1930. 46 pp.*

The purpose of the study was to find out the incidence of nervous symptoms in various occupational groups and the manner in which such nervous conditions affect efficiency.

—— Mines Department. Safety in Mines Research Board. *Paper No. 62: The ignition of firedamp by the heat of impact of hand picks against rocks, by M. J. Burgess and R. V. Wheeler. London, 1930. 21 pp., illus.*

—— —— —— *Paper No. 63: The propagation of combustion in powdered coal, by H. E. Newall and F. S. Sinnatt. London, 1930. 58 pp.; diagrams.*

—— Ministry of Labor. *Report on an inquiry into remuneration, hours of employment, etc., in the catering trade in 1929. London, 1930. xxxii, 207 pp.*

The employees studied included those employed in hotels, inns, public houses, and beer houses, in restaurants, catering and eating and coffee houses, in lodging and boarding houses, and in clubs, excluding sports clubs. The number of insured workpeople in these services in July, 1929, was 329,000, and conditions of employment varied widely as to hours, wages, tips, kind of service demanded, and other particulars. The report gives in much detail statistics dealing with these conditions, and with the sex and age distribution of the employees.

—— Registry of Friendly Societies. *Report for the year 1930. Part 4: Trade-unions. Section II, Directory and summaries. London, 1931. 33 pp.*

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LUXEMBURG.—Office de Statistique. *Note statistique—extrait de L'Annuaire Officiel 1930. Luxemburg, 1930. 94 pp.*

The statistics are mainly for the year 1928, and include figures on production and wages, strikes and lockouts, cost of living, and savings and insurance.

NETHERLANDS.—Centrale Commissie voor de Statistiek. *Jaarverslag over het jaar 1929. The Hague, 1930. 64 pp.*

Annual report on the personnel, organization, and activities of the Central Commission on Statistics of the Netherlands for 1929.

NETHERLAND EAST INDIES.—Departement van Landbouw, Nijverheid en Handel. Centraal Kantoor voor de Statistiek. *Statistical abstract for the Netherland East Indies, 1929. Weltevreden, 1930. 556 pp.*

Includes data on labor, production, prices, cost of living, and cooperative societies. Figures showing wages of workers in the sugar industry of Java, taken from the volume, are given in this issue of the Labor Review.

NEW ZEALAND.—Department of Labor. *Report [for the year ending March 31, 1930]. Wellington, 1930. 26 pp.*

Includes data relating to employment and to industrial disputes.

QUEENSLAND (AUSTRALIA).—Department of Labor. *Report of the Director of Labor and Chief Inspector of Factories and Shops, for the year ended June 30, 1930. Brisbane, 1930. 51 pp.*

Data relating to unemployment, taken from this report, are given in this issue of the Labor Review.

SOVIET UNION (U. S. S. R.).—Office of State Labor Publications. *Science in the service of labor protection. Moscow, 1930. 96 pp. (In Russian.)*

Contains a report on the activities and achievements of the State Scientific Institute for Labor Protection in the Soviet Union up to 1930.

UNION OF SOUTH AFRICA.—*Office of Census and Statistics. Statistics of migration, 1929. Pretoria, 1930. xv, 51 pp., charts.*

Unofficial

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE. *The Annals, Vol. 153: The coming of industry to the South. Philadelphia, January, 1931. 296 pp.; diagrams, illus.*

AMERICAN FEDERATION OF LABOR. Railway Employees Department. *Official proceedings, eighth convention, April 28 to May 1, 1930, Chicago, Ill. Chicago, [1930?]. 139 pp.*

The program for stabilization of railroad shop employment, adopted at this convention, was published in the August, 1930, issue of the Labor Review.

ASSOCIATION OF CASUALTY AND SURETY EXECUTIVES. *Some points about monopolistic State fund insurance of workmen's compensation. New York, 1 Park Avenue, 1930. 96 pp.*

The contents are divided into two parts: 1. Some points against monopolistic State insurance funds. 2. Some arguments for monopolistic State insurance funds answered.

CHIN-CHUN, TSING. *Le mouvement ouvrier en Chine. Paris, Librairie Orientaliste, 1929. 176 pp.*

In the judgment of the author, the development of trade-unions in China and their line of conduct in the future will not only exercise an influence on China itself but may have international reactions.

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CIVIL SERVICE ASSEMBLY OF THE UNITED STATES AND CANADA AND THE BUREAU OF PUBLIC PERSONNEL ADMINISTRATION. *Technical bulletin No. 3: The essentials of a comprehensive personnel program, by Fred Telford. Chicago, 923 E. 60th St., 1930. 15 pp.*

The conclusions in this pamphlet are largely the outgrowth of seven years' experience of the staff of the Bureau of Public Personnel Administration in assisting legislative bodies and committees, financial and executive officers, personnel administrators, and others interested in good government to develop, inaugurate, and administer new public personnel systems and to make improvements in existing systems.

COLE, G. D. H. *Gold, credit, and employment. London, George Allen & Unwin (Ltd.), 1930. 165 pp.*

Four essays, reprinted from various sources, the first two dealing with the financial question, and the others directly with unemployment and possible ways of meeting it.

COMMITTEE ON THE COSTS OF MEDICAL CARE. *Publication No. 7: Capital investment in hospitals, by C. Rufus Rorem. Washington, 910 Seventeenth St. NW., 1930. 40 pp.*

This is a digest of the book, The Public's Investment in Hospitals. It deals with the amounts invested in hospitals, methods of financing, and the place of "fixed charges" in hospital financing and costs.

DENNISON, HENRY S. *Organization engineering. New York, McGraw-Hill Book Co., 1931. 204 pp.*

A study of the essential principles involved in dealing with a productive organization in order to secure smooth and efficient operation of the enterprise.

DEUTSCHE HYGIENE MUSEUM. *Das Deutsche Hygiene-Museum und die Internationale Hygiene-Ausstellung Dresden 1930. Dresden, 1930. 180 pp., illus.*

A report on the International Hygiene Exposition in Dresden in 1930 and on the German Hygiene Museum, consisting of various articles by a number of authors, including such subjects as hygiene and social insurance, legislation relating to industrial hygiene, industrial diseases, etc.

DUPLAN, J. L. *Sa majesté la machine. Paris, Payot, 1930. 159 pp.*

A discussion of the effect of machine production on economic and cultural conditions.

EMMERSON, H. C., AND LASCELLES, E. C. P. *A guide to the unemployment insurance acts. New York, Longmans, Green & Co., 1930. 262 pp. (Third edition.)*

The first British unemployment insurance act was passed in 1911, and up to 1919 had been amended only once. Since then, however, amending acts have been frequent and the situation has become so complicated that there is real need for a clear and reliable summary of the plan. This is provided in this handbook, which states clearly and concisely the position after the passage of the act of 1930, and gives under each head a detailed explanation of the working of that provision.

GRAS, N. S. B. *Industrial evolution. Cambridge, Mass., Harvard University Press, 1930. 259 pp., illus.*

ILLUMINATING ENGINEERING SOCIETY. *Code of lighting: Factories, mills, and other work places. American standard, approved August 18, 1930, by American Standards Association. New York, 29 West 39th Street, 1930. 42 pp., illus.*

INTERNATIONAL MIGRATION SERVICE. *Migrants, 1930: New standards of international practice. Geneva, 1930. 95 pp.*

A collection of articles, by the chief of the International Migration Service, the directors of that service in the United States, Germany, and Greece, and others

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LABOR PARTY (GREAT BRITAIN). *What the Labor Government has done. London, Labor Publications Department, 1930. 32 pp.*

A convenient summary of the leading measures relating to foreign policy, unemployment, social welfare, etc., passed since the Labor Party came into office, or at present before Parliament.

ORCHARD, JOHN E. (with collaboration of Dorothy Johnson Orchard). *Japan's economic position. The progress of industrialization. New York, McGraw-Hill Book Co. (Inc.), 370 Seventh Ave., 1930. 504 pp.; charts, illus.*

This volume is based principally upon an investigation made in the Orient in 1926 and 1927. Among the subjects of special interest to labor are the following: The measure of industrialization, the progress of factory development, capital and mechanical skill, the labor supply, the efficiency of labor, the development of the labor movement, and the changing status of labor. In the discussion of the outlook for the future the author declares that "an industrial system based upon decentralization rather than upon concentration would seem to be better suited not only to Japan but to all Oriental countries."

STEWART, BRYCE M. *Unemployment benefits in the United States—the plans and their setting. New York, Industrial Relations Counselors, 1930. 727 pp.; charts.*

This report deals with all types of unemployment insurance plans that have been set up in the United States. The details of each plan are given. Some data from the volume appear in an article on "Unemployment benefits and stabilization policies in the United States" in this issue of the Labor Review.

TRADES AND LABOR CONGRESS OF CANADA. *Report of the proceedings of the 46th annual convention, held at the city of Regina, Saskatchewan, September 8 to 12 (inclusive), 1930. [Ottawa?], 1930. 218 pp.*

A brief summary of these proceedings was published in the December, 1930, issue of the Labor Review.

WEISSAUER, LUDWIG. *Verbot der Lohnarbeit verheirateter Frauen? Eine Studie über Lohnarbeiterin und Mutter der Familie. Munich, 1929. 151 pp.*

Deals with the industrial employment of married women, its causes and development, extent, hazards and consequences of the employment of mothers, international measures for protection of mothers, etc.

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