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U. S. DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

ROYAL MEEKER, Commissioner

MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

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VOLUME II—JANUARY, 1916—NUMBER 1



WASHINGTON
GOVERNMENT PRINTING OFFICE
1916

SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS.

[The publication of the Annual and Special Reports and of the bimonthly Bulletin has been discontinued, and since July, 1912, a Bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These Bulletins are numbered consecutively in each series and also carry a consecutive whole number, beginning with No. 101. A list of the series, together with the individual Bulletins falling under each, is given below. A list of the Reports and Bulletins of the Bureau issued prior to July 1, 1912, will be furnished on application.]

Wholesale Prices.

- No. 1. Wholesale prices, 1890 to 1912. (Bul. No. 114.)
- No. 2. Wholesale prices, 1890 to 1913. (Bul. No. 149.)
- No. 3. Index numbers of wholesale prices in the United States and foreign countries. (Bul. No. 173.)
- No. 4. Wholesale prices, 1890 to 1914. (Bul. No. 181.)

Retail Prices and Cost of Living.

- No. 1. Retail prices, 1890 to 1911: Part I. (Bul. No. 105: Part I.)
Retail prices, 1890 to 1911: Part II—General tables. (Bul. No. 105: Part II.)
- No. 2. Retail prices, 1890 to June, 1912: Part I. (Bul. No. 106: Part I.)
Retail prices, 1890 to June, 1912: Part II—General tables. (Bul. No. 106: Part II.)
- No. 3. Retail prices, 1890 to August, 1912. (Bul. No. 108.)
- No. 4. Retail prices, 1890 to October, 1912. (Bul. No. 110.)
- No. 5. Retail prices, 1890 to December, 1912. (Bul. No. 113.)
- No. 6. Retail prices, 1890 to February, 1913. (Bul. No. 115.)
- No. 7. Sugar prices, from refiner to consumer. (Bul. No. 121.)
- No. 8. Retail prices, 1890 to April, 1913. (Bul. No. 125.)
- No. 9. Wheat and flour prices, from farmer to consumer. (Bul. No. 130.)
- No. 10. Retail prices, 1890 to June, 1913. (Bul. No. 132.)
- No. 11. Retail prices, 1890 to August, 1913. (Bul. No. 136.)
- No. 12. Retail prices, 1890 to October, 1913. (Bul. No. 138.)
- No. 13. Retail prices, 1890 to December, 1913. (Bul. No. 140.)
- No. 14. Retail prices, 1907 to December, 1914. (Bul. No. 156.)
- No. 15. Butter prices, from producer to consumer. (Bul. No. 164.)
- No. 16. Retail prices, 1907 to June, 1915. (Bul. No. 184.) [In press.]

Wages and Hours of Labor.

- No. 1. Wages and hours of labor in the cotton, woolen, and silk industries, 1890 to 1912. (Bul. No. 128.)
- No. 2. Wages and hours of labor in the lumber, millwork, and furniture industries, 1890 to 1912. (Bul. No. 129.)
- No. 3. Union scale of wages and hours of labor, 1907 to 1912. (Bul. No. 131.)
- No. 4. Wages and hours of labor in the boot and shoe and hosiery and knit goods industries, 1890 to 1912. (Bul. No. 134.)
- No. 5. Wages and hours of labor in the cigar and clothing industries, 1911 and 1912. (Bul. No. 135.)
- No. 6. Wages and hours of labor in the building and repairing of steam railroad cars, 1890 to 1912. (Bul. No. 137.)
- No. 7. Union scale of wages and hours of labor, May 15, 1913. (Bul. No. 143.)
- No. 8. Wages and regularity of employment in the dress and waist industry of New York City. (Bul. No. 146.)
- No. 9. Wages and regularity of employment in the cloak, suit, and skirt industry. (Bul. No. 147.)
- No. 10. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1913. (Bul. No. 150.)
- No. 11. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1912. (Bul. No. 151.)
- No. 12. Wages and hours of labor in the lumber, millwork, and furniture industries, 1907 to 1913. (Bul. No. 153.)
- No. 13. Wages and hours of labor in the boot and shoe and hosiery and underwear industries, 1907 to 1913. (Bul. No. 154.)
- No. 14. Wages and hours of labor in the clothing and cigar industries, 1911 to 1913. (Bul. No. 161.)
- No. 15. Wages and hours of labor in the building and repairing of steam railroad cars, 1907 to 1913. (Bul. No. 163.)
- No. 16. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1913. (Bul. No. 168.)
- No. 17. Union scale of wages and hours of labor, May 1, 1914. (Bul. No. 171.)
- No. 18. Wages and hours of labor in the hosiery and underwear industry, 1907 to 1914. (Bul. No. 177.)
- No. 19. Wages and hours of labor in the boot and shoe industry, 1907 to 1914. (Bul. No. 178.)

[See also third page of cover.]

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JANUARY, 1916

ANNUAL REPORT OF THE DEPARTMENT OF LABOR.

RECOMMENDATIONS.

The Secretary of Labor in his annual report for the fiscal year ending June 30, 1915, recommends legislation with reference to the utilization of public lands and the establishment of community credits as aids to the better distribution of labor now carried on by the department. The proposal involves the retention of title to public lands which the Government now holds and the acquisition of such privately owned lands in the different States as may be usefully devoted to the purpose of opening opportunities for employment. It is the purpose of this recommendation to make available for settlement by persons of small means, parcels of land which they may cultivate for their own uses; the land acquired or retained is to be a kind of a reserve fund upon which the unemployed may draw in times when the demand for employment slackens during industrial depression. It is the aim of the scheme to continue the benefits which in the past have been supplied by the old form of homesteading, in relieving the industrial congestion, by opening the idle lands to workers of pioneer spirit and to encourage the setting up of individual homes and to create independent farms in waste places.

“A satisfactory beginning may be made with public lands already available for the purpose in question. But it is necessary that the Government shall not lightly divest itself of title to any lands it may set aside for labor opportunities. Regulation of private tenures created pursuant to this purpose should fit the circumstances of particular cases. It is therefore suggested that private titles to lands set aside for the indicated purpose be so adjusted by the Department of Labor to its work of labor distribution as to prevent inflation of land values. This precaution is of extreme importance. Wherever inflation of land values might enter in, the proposed method of promoting labor distribution would be obstructed.”

A rotary credit fund for providing credit facilities is suggested—that is, an initial fund, to be maintained by the repayment of loans,

from which the Departments of the Interior and Agriculture could make and remake loans through the Department of Labor to competent workers seeking to become farmers, and thus establish a system of community credits based upon ability, opportunity, and character, without demanding commercial collateral. The Department of Agriculture, through its marketing plans, could safeguard borrowers against commercial misfortune in the disposal of crops, and through its labor-distributing functions, the Department of Labor could find the right men for such pioneer work. These cooperative functions should increase the demand for rural labor, reduce labor congestion in industrial centers and develop an economically independent and socially progressive population.

Other recommendations of the department propose that the Interstate Commerce Commission shall be vested with authority to fix special passenger rates to aid in placing persons in seasonal work; that that commission be empowered to regulate the interstate transportation of private troops, police, or armed guards or armed mobs, whether by employers or strikers from one State to another under commercial contracts; and that it be given authority by Congress to regulate the handling of explosives in interstate commerce on water for the protection of the immigrant station at Ellis Island where considerable transshipments of explosives take place.

All employment agencies and labor exchanges engaged in interstate business, it is urged, should be required to take out a Federal license and be placed under the supervision of the department.

The Federal Workmen's Compensation Act of 1908 should be amended so as to expedite claims under it and the Immigration Act should be amended in a similar manner, authorizing other officers than the Secretary and Assistant Secretary of the department to pass upon appeals in their absence.

Attention is also called to the need of positive legislation in respect to Hindu immigration and also to prevent Chinese admitted as members of the exempt classes or their minor sons from becoming laborers in the United States, and to the inefficiency of Chinese exclusion laws and of that part of the Immigration Act which applies particularly to Japanese aliens.

The recommendation made in a former report is renewed, asking that Congress take steps with a view to reforming what seems to be a discrimination in favor of aliens in certain States, against the national interests of the citizens of all the States, and "contrary to the spirit of the naturalization laws," in that in some States aliens are permitted to vote for members of the most numerous branch of the State legislature, thus making it possible for persons who may never become American citizens to vote for electors of the President and Vice President and Members of Congress.

THE YEAR'S WORK.

In two particulars, the Secretary states, the work of the Department of Labor during the fiscal year just closed has been especially important and successful, namely, its work in relation to labor distribution and to mediation in labor disputes.

CONCILIATION WORK.

During the year the good offices of the conciliation division of the Secretary's office were requested in 40 cases, and 2 cases were pending at the beginning of the year. In 26 instances amicable settlements were effected, and in only 10 cases did settlements prove to be impossible. Six cases go over unfinished into the next fiscal year. The 40 cases handled during the year were distributed among different industries as follows: Railroads, 5; Street railways, 2; Machinists, 7; Textile workers, 6; Paper mills, 7; Coal mining, 2; Miscellaneous, 11.

LABOR DISTRIBUTION.

In order to coordinate and to make more effective its work of labor distribution the department arranged for a national conference with such State and municipal officials as in their respective fields are engaged in similar work. This conference, which was held under the auspices of the department at San Francisco, August 2, 1915, has been fully reported in the October issue of the MONTHLY REVIEW. Also in this connection attention may be called to the account in the July issue of the REVIEW concerning the organization and work of the Division of Information and Distribution.

Since its organization July 1, 1907, up to June 30, 1915, 40,538 persons have found actual employment through the division. The number placed during the last fiscal year was far in excess of that of any previous years, being 11,871, or a trifle over one-fourth of the total number placed during a period of seven years.

On account of the special problems, it is stated, which face the department in connection with its harvest help work, and as supplying the reason for the recommendation that the Interstate Commerce Commission be empowered to grant special rates to persons seeking seasonal employment, there is to be noted the suggestion of the department for the institution of so-called "labor vacations." This is explained in the following paragraphs from the report:

Not only is the demand for help in the grain belt great during the harvest season, but in so far as this demand is met from outside the workers usually have no employment to which they may return when the harvest season ends. The problem thus presented might be solved, and other unemployment problems with it, by arrangements with industrial establishments for making their not unusual but irregular suspensions of work at such times and for such periods as would permit their employees to engage in suitable seasonal work. Not only would this assist in solving seasonal problems; it would tend to make steadier the work of the industrial establishments themselves.

To make up for their shortages of output from these seasonal suspensions the industrial establishments would increase their output the rest of the year and therefore their demand for labor. It is true that the seasonal demands for harvesters can not be filled from all kinds of industrial establishments, the physical strain of harvesting being exceptionally severe. But a sufficient supply could be obtained to meet harvesting needs; and by rational organization for the purpose those who went to the harvest could be returned to their regular work at the season's end. For workers incapable of doing heavy harvest work there are other seasonal employments.

Rationally organized, some such system could be made beneficial alike to the employers of both city and country and to the workers themselves. Nor need it be all work and no play. Going to seasonal employments in organized clubs or groups, and under the supervision of competent officials of this department, workers who volunteer would soon find this industrially useful system taking on the better characteristics of "personally conducted" vacation excursions.

OFFICE OF THE SECRETARY.

During the fiscal year ending June 30, 1915, the office of the solicitor handled 6,466 matters of various kinds involving examination as to law and facts; in 3,140 instances these were claims of injured employees under the compensation act and in 2,375 the approval or disapproval of bonds of alien immigrants.

The Division of Publication and Supplies reported an expenditure of its total appropriation of \$115,000, less 15 cents, for printing and binding for the department during the fiscal year.

The total appropriations for the department for the fiscal year 1915 amounted to \$3,940,482. There was reported an unexpended balance of \$78,412.05. Miscellaneous receipts of the department amounted to \$1,768,006.33, of which \$1,279,461 constituted the immigration head tax.

BUREAU OF LABOR STATISTICS.

The report of the Bureau of Labor Statistics for the fiscal year 1915 concerns itself very largely with the matter of its publications. During this fiscal year this bureau published 25 serial bulletins and one nonserial volume.

This bureau has in course of preparation bulletins in continuation of its statistics of prices and wages and hours of labor, but more particularly investigations relating to industrial accidents and accident prevention, industrial diseases and hygiene, morbidity and mortality of wage earners, regularity of employment, unemployment, and employment of street railway labor in the United States, profit sharing, foreign labor legislation, administration of labor laws, effects of compensation legislation, etc.

The report of labor conditions in Hawaii is well under way. In connection with this, it is noted that the commissioner recommends that the department ask that the entire paragraph of the law requiring a report of labor conditions in Hawaii every 5 years be stricken out.

Since the enactment of this law a department of immigration, labor, and statistics has been established in Hawaii, and the necessity, if it ever existed, for reports at stated intervals by the United States Bureau of Labor Statistics upon conditions in these islands no longer exists. The bureau under its general law has entire authority, with the approval of the Secretary of Labor, to make an investigation in the Hawaiian Islands whenever for any reason the commissioner of labor statistics deems it advisable. There is no more reason for this bureau being compelled by law to make an investigation in Hawaii than in Alaska.

In connection with the administration of the compensation act by the Bureau of Labor Statistics, it is reported that 2,983 claims for injury and 95 for death were established, 50 for injury and 10 for death were disallowed, and 24 for injury and 7 for death were pending at the end of the year. The number of accidents reported was 6,709, of which 141 were fatal, thus making 46 fatal accidents and 3,585 injuries which were not subject to compensation.

The Commissioner of Labor Statistics recommends the correction by legislation of certain defects contained in the compensation law such as failure to compensate for injuries of less than 15 days' duration, payment of full pay as compensation for the entire period of incapacity up to one year, failure to recognize permanent partial disability on a different basis from disability from which complete recovery may be expected, limitation of compensation payments to one year's wages, and exclusion of approximately three-fourths of the civilian employees of the Government.

BUREAU OF IMMIGRATION.

The situation created by the war is reported as having reduced immigration to the lowest level in several decades. Thus alien arrivals, both immigrant and nonimmigrant, numbered 434,244 during the year, while for the previous year this number was 1,403,081, a decrease of 968,837 or 69 per cent.

Despite this decrease in number of aliens admitted the net increase in population during the fiscal year, 1915, due to immigration was 50,070, this being a decrease as compared with the preceding fiscal year of 93.5 per cent.

During the year 24,111 aliens were excluded for various causes as compared with 33,041 in 1914, or 5.6 per cent of the total arrivals in 1915, as compared with 2.3 per cent in 1914. The most common cause of rejection has been the likelihood on the part of the alien to become a public charge, 15,596 having been rejected for that reason in 1915 as compared with 15,784 in 1914. Practically the same number in 1915 as in 1914 were rejected by reason of being contract laborers, the numbers being 2,722 and 2,793. In addition to the number who were rejected 2,564 were arrested and expelled from the country, making the total number of deportations for the year 26,675, as compared with 37,651 in the fiscal year 1914.

This bureau has been until 1915 a source of revenue but in the last fiscal year the disbursements have exceeded the revenue by \$2,070,139.08, due to the decline in immigration during the year which reduced the head tax to \$1,279,461, or by practically three-fourths of the amount for the last preceding fiscal year.

BUREAU OF NATURALIZATION.

The Naturalization Bureau is considerably more than self-supporting; thus, exclusive of overhead charges in the Secretary's office, use of public buildings outside of Washington, cost of furniture, and the depreciation of equipment, the disbursements of the bureau for the fiscal year amount to \$363,593, while the receipts came to \$441,764.

Since Federal enforcement of the naturalization law was established in 1906 and down to the close of the fiscal year 1915, 520,898 foreigners were admitted to citizenship and 74,069 petitioners were denied admission out of a total of 594,967 petitions filed. The largest number of denials of petitions for citizenship were for educational deficiencies and ignorance of American institutions.

During the year the bureau, after conference with public-school authorities, effected a plan for cooperation with the public schools for educating the candidates for citizenship.

Since each declarant must wait at least two years after his declaration before being eligible to petition for naturalization under the law, the public-school authorities in his community are advised of his declaration of intention by the bureau, which sends them his name, address, occupation, and nationality. The same information is sent by the bureau to the same authorities concerning petitioners for naturalization. At the same time the bureau advises declarants and petitioners of its action and of the advantages of public-school instruction. The school authorities thereupon endeavor to induce the declarants and petitioners for naturalization to enroll in the public schools.

CHILDREN'S BUREAU.

The staff of this bureau increased during the third year of its operation from 15 to 76 persons and its appropriation from \$25,640 to \$164,640. This bureau as well as practically also the Bureau of Labor Statistics is concerned wholly with scientific research work. The work of the bureau has included a study of administration of child labor laws, preparation of digest and tabular outlines of such laws, inquiries concerning infant mortality, the publication of material relative to baby-saving campaigns, and investigation concerning provision for the mentally defective in the District of Columbia, study of certain phases of the problem of illegitimacy, and the preparation of a compilation and analysis of laws affecting children in the United States, including laws of 1915.

The bureau points out the fact that there is a wealth of statistical material concerning the number of fathers and mothers in the United States, and the number of mothers gainfully employed outside of their homes contained in untabulated material of the Census Office, which is of value to the bureau as primary data for some of its investigations. Until this family data contained in the census reports is tabulated either by the Census Office or by the Children's Bureau it remains useless to the public and for private research which is being increasingly directed toward the economic and social status of the family.

A considerable part of the report is devoted to a statement of the unsolved problems in relation to the work of the bureau, such as "study to determine the mental and physical effect of the various types of occupation upon immature persons," standards for child labor legislation, and problems relating to the physical, economic and social conditions of rural children who, it is pointed out, constitute three-fifths of all children in the United States.

FEDERAL EMPLOYMENT WORK OF THE DEPARTMENT OF LABOR, NOVEMBER, 1915.

Reports furnished by the Division of Information of the department show that, in November, 847 applications for help were received. The number of positions open as indicated by these applications was 4,650. In October the corresponding figures were 1,104 and 5,423, respectively.

The list of branch employment offices reported varies from month to month, only those which report having received applications or assisted in securing employment being included in the list reported for the month.

The table following shows number of applications for positions and number of places filled, with the number of applications for positions per 100 places filled, August to November, 1915:

TOTAL APPLICATIONS MADE TO THE DIVISION OF INFORMATION OF THE BUREAU OF IMMIGRATION, PLACES FILLED, AND NUMBER OF APPLICATIONS PER 100 PLACES FILLED, AUGUST TO NOVEMBER, 1915.

Month.	Applicants for position.	Places filled.	Number applications per 100 places filled.
August.....	17,827	6,757	263.8
September.....	13,334	5,405	246.7
October.....	12,215	5,006	244.0
November.....	11,908	4,146	287.2
Total.....	55,284	21,314	259.4

The table following shows the results of the activities of the division for the month of November, by distributing offices, totals in the various zones, and totals for the entire service:

SUMMARY OF ACTIVITIES FOR THE MONTH OF NOVEMBER, 1915.

Zones and cities.	Opportunities received.		Applications for employment.		
	Applica- tions for help.	Number of persons applied for.	Applica- tions received.	Referred to employ- ment.	Number actually employed.
1. Boston, Mass.	2	2	34		
Portland, Me.	1	3	3	3	3
Total.	3	5	37	3	3
2. New York, N. Y.	116	400	1,250	238	202
Buffalo, N. Y.	9	306	138	85	31
Total.	125	706	1,388	323	233
3. Philadelphia, Pa.	41	281	964	471	428
Pittsburgh, Pa.	15	295	320	68	60
Total.	56	576	1,284	539	488
4. Baltimore, Md.	12	19	191	218	218
5. Norfolk, Va.	11	43	56	41	34
6. Jacksonville, Fla.	6	8	149	8	8
Savannah, Ga.	4	38	35	37	37
Charleston, S. C.	1	20	63	28	21
Birmingham, Ala.			36		
Mobile, Ala.	1	2	1		
Total.	12	68	284	73	66
7. New Orleans, La.	1	1	13	8	1
Gulfport, Miss.	1	12	13		
Total.	2	13	26	8	1
8. Galveston, Tex.			19		
Albuquerque, N. Mex.			7	3	
Amarillo, Tex.			1		
Del Rio, Tex.			1		
Big Spring, Tex.			1		
Total.			28	3	
9. Cleveland, Ohio.	4	6	65	10	8
10. Chicago, Ill.	53	2,035	3,611	2,004	1,995
Indianapolis, Ind.	16	153	283	172	155
Sault Ste. Marie, Mich.	9	25	54	34	24
Detroit, Mich.	15		114	28	28
Total.	93	2,213	4,062	2,238	2,202
11. Minneapolis, Minn.	29	30	19	16	14
12. St. Louis, Mo.	5	5	87	14	11
Kansas City, Mo.	15	97	291	99	89
Total.	20	102	378	113	100
13. Denver, Colo.	2	7	19	14	6
Salt Lake City, Utah.			2		
Total.	2	7	21	14	6
14. Helena, Mont.	1	2	13	4	
Moscow, Idaho.			3	2	
Total.	1	2	16	6	

SUMMARY OF ACTIVITIES FOR THE MONTH OF NOVEMBER, 1915—Concluded.

Zones and cities.	Opportunities received.		Applications for employment.		
	Applica- tions for help.	Number of persons applied for.	Applica- tions received.	Referred to employ- ment.	Number actually employed.
15. Seattle, Wash.....	27	54	1,284	52	50
Aberdeen, Wash.....	6	17	169	17	17
Bellingham, Wash.....	3	12	44	12	12
Everett, Wash.....	2	2	38	3	3
North Yakima, Wash.....	138	290	335	290	290
Spokane, Wash.....	14	21	63	20	20
Tacoma, Wash.....	9	11	58	11	11
Walla Walla, Wash.....	17	19	77	15	15
Total.....	216	426	2,068	420	418
16. Portland, Oreg.....	6	33	154	33	18
17. San Francisco, Cal.....	128	183	1,191	187	150
Fresno, Cal.....	1	1	1	1	1
Total.....	129	184	1,192	188	151
18. Los Angeles, Cal.....			187		
San Diego, Cal.....	126	217	452	213	186
Total.....	126	217	639	213	186
Total for all zones.....	847	4,650	11,908	4,459	4,146

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, NOVEMBER 14 TO DECEMBER 15, 1915.

On the authority contained in the organic act of the department to mediate in labor disputes and to appoint commissioners of conciliation in his discretion, the Secretary of Labor, through the commissioners of conciliation, exercised his good offices in 10 labor disputes between November 14 and December 15, 1915. The employees involved in these controversies, the number affected, and the results secured, so far as available, are shown in the following statement:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, NOV. 14 TO DEC. 15, 1915.

Name.	Workmen affected.		Result.
	Directly.	Indi- rectly.	
Strike, Modern Tool, Die & Machine Co., Columbus, Ohio.....			Amicable adjustment.
Strike, Dunlap Manufacturing Co., Columbus, Ohio.....			Pending.
Strikes, machinists, Dayton, Ohio.....			Do.
Strikes, machinists, Hamilton, Ohio.....			Do.
Strikes, machinists, Trenton, N. J.....			Do.
Controversy, Jos. R. Foster Mill, Philadelphia, Pa.....			Do.
Strike, Saxonia Mills, Philadelphia, Pa.....			Do.
Strike, Cleveland-Canton Spring Co., Canton, Ohio.....	63	200	Amicable adjustment.
Cooper Spring Co., Cleveland, Ohio.....			Pending.
Perfection Spring Co., Cleveland, Ohio.....			Do.

IMMIGRATION DURING SEPTEMBER AND OCTOBER, 1915.

The data furnished by the Bureau of Immigration for September and October, 1915, show that while the number of immigrant aliens admitted was somewhat less than for the corresponding months of the year of 1914, the number of such persons admitted was greater in each of the two months than in the months of July and August of the current year.

The number of immigrant aliens admitted was 15.9 per cent less in September, 1915, and 16.3 per cent less in October, 1915, than in the corresponding months of 1914. If compared with the corresponding months of 1913, the per cent of decrease would be 82 for September and 81 for October.

In the years 1913, 1914, and 1915 the number of aliens arriving at all ports during the month of November was 119,262, 37,436, and 29,667, respectively, according to a preliminary statement of the bureau. These figures show a decline of 75.1 per cent in 1915 as compared with November, 1913, and 20.8 per cent as compared with November, 1914.

During the first 15 days of December the number of aliens arriving was 62,219, 15,208, and 12,900 for the above-mentioned years, respectively. The decrease in immigration for the first 15 days of the current month expressed in percentages is 75.6 and 15.2, respectively, as compared with the same period of 1913 and 1914.

The table which follows shows the percentages of decrease in immigration and emigration in 1915 over 1914, by months. The percentages of decrease in immigration for the months of August to October show a much less decrease because immigration began to decrease during the corresponding period in 1914 by reason of the war.

DECREASE, IN PER CENT, IN IMMIGRATION AND EMIGRATION IN 1915 OVER 1914, BY MONTHS.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
Decrease, in per cent, of immigrant aliens admitted.....	65.4	70.4	79.2	79.5	75.8	68.5	64.4	41.8	15.9	16.3
Decrease, in per cent, of emigrant aliens departing.....	49.6	58.5	42.6	63.5	62.8	71.8	65.5	3.3	121.7	30.7

¹ Increase.

The following table shows the movement of immigration to this country, by races, for the months of September and October, 1914 and 1915:

IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTING FROM THE UNITED STATES DURING SEPTEMBER AND OCTOBER, 1914 AND 1915.

Races.	Admitted.				Departing.			
	September.		October.		September.		October.	
	1914	1915	1914	1915	1914	1915	1914	1915
African (black).....	632	424	776	491	57	77	196	81
Armenian.....	65	51	90	55	.....	283	22	85
Bohemian and Moravian.....	59	96	55	27	7	4	1	2
Bulgarian, Servian, Montenegrin.....	279	294	249	528	88	78	100	23
Chinese.....	349	127	181	311	115	185	165	106
Croatian and Slavonian.....	214	76	83	66	64	14	7	8
Cuban.....	642	525	322	340	78	167	117	69
Dalmatian, Bosnian, Herzegovinian.....	29	4	12	27	.....	1	.....	.....
Dutch and Flemish.....	478	472	501	332	107	56	117	92
East Indian.....	11	5	5	17	34	9	20	9
English.....	4,363	3,516	4,883	3,606	677	732	897	670
Finnish.....	281	335	172	369	34	16	19	52
French.....	1,497	1,588	1,513	1,849	832	188	933	170
German.....	1,913	1,024	1,583	823	253	109	69	103
Greek.....	880	1,759	758	2,219	1,082	636	1,072	703
Hebrew.....	1,358	1,202	999	1,130	51	15	22	27
Irish.....	2,675	2,303	4,466	2,841	178	171	324	150
Italian (North).....	541	532	991	484	731	429	663	225
Italian (South).....	3,041	2,028	3,851	1,958	9,486	16,075	10,167	9,017
Japanese.....	695	654	581	737	43	63	51	80
Korean.....	14	12	5	7	3	1	6	1
Lithuanian.....	112	57	69	36	11	3	15	4
Magyar.....	172	93	115	60	196	52	11	52
Mexican.....	1,384	765	1,367	1,032	78	24	75	57
Pacific Islander.....	.....	.....	.....	.....	.....	.....	.....	.....
Polish.....	420	335	325	199	278	33	236	22
Portuguese.....	398	1,308	233	1,029	85	301	623	126
Roumanian.....	55	67	54	47	46	18	22	14
Russian.....	444	264	368	308	556	302	1,307	393
Ruthenian (Russniak).....	140	215	132	98	34	1	21	.....
Scandinavian.....	3,018	1,729	2,755	1,832	262	204	203	290
Scotch.....	1,699	1,277	1,744	1,284	179	196	250	162
Slovak.....	66	51	62	24	7	11	1	7
Spanish.....	518	698	473	545	396	255	593	157
Spanish-American.....	203	192	128	197	37	44	40	43
Syrian.....	185	72	140	43	27	17	21	5
Turkish.....	18	21	18	7	5	2	25	1
Welsh.....	181	66	185	115	10	25	26	23
West Indian (except Cuban).....	51	91	97	82	33	62	30	69
Other peoples.....	63	185	75	295	20	256	51	101
Not specified.....	.....	.....	.....	.....	2,032	1,041	1,619	679
Total.....	29,143	24,513	30,416	25,450	18,212	22,156	20,046	13,887
Per cent decline, 1915.....	.....	15.9	.....	16.3	.....	21.7	.....	30.7

¹ Increase.

AMOUNT OF EMPLOYMENT IN CERTAIN INDUSTRIES IN OCTOBER AND NOVEMBER, 1915.

The amount of authoritative data concerning the ebb and flow of industrial employment in the United States is limited. The necessity for figures on this subject is apparent. Every successful employer must know his own business, and to continue successful he needs to know the condition of the industry of which his establishment is a part, for so closely are industrial affairs related that the

prosperity of any establishment may be affected materially by the conditions of the industry as a whole. To the workmen, the unemployed, and those seeking to relieve unemployment such figures are also of service.

To meet the demand for regular information as to the volume of employment in the country, the Bureau of Labor Statistics has undertaken the task of collecting and publishing monthly data thereon. As a measure of industrial employment, the figures most easily obtained and also most satisfactory, considering the labor of collection involved, are those showing the amount of the pay rolls of industrial establishments and the number of employees. The amount of the pay rolls is the more satisfactory measure, as it takes full account of all short time and of any variations in the intensity of production, neither of which will be indicated by the number of employees because of the common practice during periods of dull business of putting the entire force on short time in preference to laying off employees. It may be admitted that the figures for number of employees would be more satisfactory if they represented the average daily number of employees or the number of employees on a particular date, but this information is much more difficult to obtain.

The data published here represent a comparatively modest beginning in this work. The material was secured on blanks sent to representative establishments asking for figures for one pay period in October. A similar request was made for November data for the same establishments and also for iron and steel plants. Thus far there has been generous and cordial cooperation on the part of the firms addressed. It is hoped that in the coming months it will be possible to secure information from a larger number of establishments and also from other industries.

The data are from pay rolls of varying length; the majority of them are one week pay rolls, but some are for two weeks; one was for a half month and one for a full month. All have been reduced to a weekly basis so as to give as nearly as possible a proper weight to the facts for each establishment. The figures for October were secured to represent the last pay roll of that month, but acting on suggestions received it was decided, beginning with November, to change the time to the pay roll ending nearest the 15th of the month.

The figures as to the number of employees include the persons who worked all or any part of the pay period. The figures as to earnings are the actual pay-roll totals for the same period. Average rates of wages in the several industries can not be computed from these figures, nor is it possible to calculate average full-time earnings per employee, as there is always more or less loss of time on the part of some

employees in a large establishment or in an industry. It should be noted also, where the per cent of increase in earnings is in excess of the increase in number of employees, that it indicates greater average earnings per employee but not necessarily increased rates of wages. The tabulation of the material secured is presented below:

NUMBER OF EMPLOYEES AND AMOUNT OF EARNINGS IN IDENTICAL ESTABLISHMENTS IN CERTAIN INDUSTRIES DURING ONE WEEK OF OCTOBER AND NOVEMBER, 1915.

Industry.	Estab-lish-ments report-ing.	Employees.			Earnings.		
		Number on pay roll in—		Per cent of in-crease (+) or de-crease (-).	Amount of pay roll in—		Per cent of in-crease (+) or de-crease (-).
		October.	November.		October.	November.	
Boots and shoes.....	66	54,517	57,551	+5.6	\$688,724	\$752,578	+9.3
Cotton goods.....	56	44,665	44,518	-.3	338,079	349,371	+3.3
Cotton finishing.....	14	12,422	12,548	+ .1	136,349	138,207	+1.4
Hosiery and underwear.....	57	30,494	30,836	+1.1	274,851	278,690	+1.4
Iron and steel.....	65	.....	104,782	.....	.....	1,664,189	.....

It will be seen from a study of the above table that the number of persons on the pay roll was greater in November than in October in each of the industries listed, except in the manufacture of cotton goods, where there was a slight decrease (0.3 per cent) in the 56 establishments reporting. Despite this lessened number of employees in November for the cotton industry, it will be noted that in this industry, as well as in the other industries reporting, the total disbursements in wages was greater in November than in October. In the cotton industry a few establishments were running part time in October, which tended to cut down their wage disbursements. Hence, although there were more employees on the pay rolls, the actual disbursement in wages for the cotton establishments reporting did not total as high in October as in November. The total amount of money paid to employees in the 56 establishments reporting for the cotton industry was \$338,079 in October and \$349,371 in November, or an increase of 3.3 per cent.

The greatest increase reported was in the manufacture of boots and shoes, where the total number of people employed by the 66 concerns reporting increased 5.6 and the wages paid increased 9.3 per cent. This industry, however, is always somewhat seasonal and an increase in business in November as compared with October is to be regularly expected.

UNEMPLOYMENT IN NEW YORK CITY.

The bureau has just completed the tabulation of the results of unemployment in New York City during September, 1915. The results of an earlier investigation of the subject, made in January and February, 1915, were published in April as Bulletin 172 of the bureau. The earlier report presented the conditions of employment at a season of the year when probably the maximum number of wage earners were out of work. While it was believed that the extent of unemployment at that period was considerably above the normal, there was no way of determining this, as no trustworthy statistics existed as to unemployment in New York City in previous years which could be used as a basis of comparison. In order to determine the falling off in unemployment between the winter season, when the number of wage earners out of work probably reached the highest point, and the summer season, when the number of unemployed under normal conditions would probably be the smallest of the year, the bureau undertook the second survey. The canvas was made in August and September, 1915. The same 104 city blocks were covered as in the earlier investigation, but reports were secured from a somewhat larger number of families. The summary results of the two investigations showing unemployment in February and September, 1915, are shown in comparison in the following table:

SUMMARY OF UNEMPLOYMENT IN FEBRUARY AND SEPTEMBER, 1915.

Items.	February, 1915.	September, 1915.
Number of families scheduled.....	54,849	56,539
Number of families having unemployed wage earners.....	11,723	5,480
Number of persons in families.....	229,428	235,628
Number of wage earners in families.....	95,443	97,741
Number of unemployed wage earners.....	15,417	6,529
Per cent of unemployed wage earners.....	16.2	6.7

A comparison of the figures shows that only 6.7 per cent of the wage earners in the families canvassed in September were unemployed as against 16.2 per cent of those in the February canvass.

On the basis of the figures secured in the former study, it was estimated that the number of wage earners out of employment in the city in February was approximately 398,000, while the number out of work in September, estimated on the same basis, was only about 164,500.

It should be stated in this connection that while there were only 6.7 per cent of the wage earners wholly unemployed in September, there were in addition 8.4 per cent of all wage earners working part time only.

In October, 1915, the Metropolitan Life Insurance Co. also completed a second survey of families in New York City holding industrial

policies in that company. Their investigation was made by agents of the company and conducted in the same manner as a survey made by the company in January, and, while the same districts were covered as in the preceding census, reports were secured for a much smaller number of families.

The results of the earlier survey of the Metropolitan company were published in Bulletin 172 of the bureau, already referred to. A summarization of the figures secured in the two surveys of the Metropolitan company is presented in comparative form in the following table:

UNEMPLOYMENT AMONG WAGE EARNERS IN NEW YORK CITY, AS SHOWN BY A CANVASS OF INDUSTRIAL POLICYHOLDERS OF THE METROPOLITAN LIFE INSURANCE COMPANY, MADE BY ITS AGENTS, JANUARY AND OCTOBER, 1915.

Items.	January, 1915.	October, 1915.
Number of families scheduled.....	155,960	100,951
Number of families having unemployed wage earners.....	37,064	11,408
Number of wage earners in families.....	232,912	141,016
Number of unemployed wage earners.....	45,421	12,865
Per cent of wage earners unemployed.....	18.0	9.1

It will be seen from this table that the per cent of unemployment found in October was 9.1, as against 18 reported in January. The figures for the later date, however, covered less than two-thirds of the families and wage earners included in the earlier investigation. The results of the Metropolitan company's surveys differ somewhat from the surveys of the bureau. It is not possible to state the exact cause of these differences. It is possible that the explanation is in the different periods covered or in the selection of families, due to the fact that in one case all of the families having members who were industrial policyholders were taken, while in the other case all of the families of certain districts were taken. The differences, however, in the percentages of unemployment are so slight as practically to confirm the substantial accuracy of the investigations.

WORK OF STATE AND MUNICIPAL PUBLIC EMPLOYMENT BUREAUS.

The bureau has recently taken steps to secure for publication each month in the MONTHLY REVIEW reports of the operations of the State and municipal public employment bureaus. The figures available for the present issue of the REVIEW include complete returns from only four of the States having more than one such bureau. These States are: Connecticut, Minnesota, New York, and Ohio. The returns available from Illinois and Kentucky cover the work of

the municipal bureau in Chicago and the municipal bureau in Louisville. The work of these bureaus is shown in the first table presented below. Attention may be called also to the annual report of the Ohio Industrial Commission, summarizing the work of the Ohio bureaus, which is digested elsewhere in this REVIEW (p. 65).

In addition to these reports covering operations of the employment bureaus during November, reports have been furnished showing the work of the Richmond, Va., municipal bureau, and the Fort Worth, Tex., municipal bureau for certain months of 1915. These facts are presented in the second of the tables which follow:

REPORT OF OPERATIONS OF STATE AND MUNICIPAL PUBLIC EMPLOYMENT BUREAUS DURING NOVEMBER, 1915.

State and city.	Number of applications from employers.	Number of persons asked for by employers.	Number of persons applying for work.	Number of persons referred to positions.	Number of positions filled.
Connecticut:					
Bridgeport.....	466	466	685	(1)	430
Hartford.....	495	495	735	(1)	360
New Haven.....	426	426	436	(1)	316
Norwich.....	130	130	153	(1)	122
Waterbury.....	182	182	248	(1)	124
Total.....	1,699	1,699	2,257	(1)	1,352
Illinois:					
Chicago.....	342	2,176	5,126	1,874	1,473
Kentucky:					
Louisville.....	123	123	248 ⁴	137	75
Minnesota:					
Duluth.....	(1)	(1)	(1)	1,247	1,247
Minneapolis.....	(1)	(1)	(1)	1,920	1,920
St. Paul.....	(1)	(1)	(1)	1,175	1,175
Total.....	(1)	(1)	(1)	4,342	4,342
New York:					
Albany.....	273	374	681	647	287
Buffalo.....	478	710	686	826	503
New York City (Brooklyn).....	707	1,254	1,420	1,452	635
Rochester.....	649	986	626	932	551
Syracuse.....	428	664	647	793	573
Total.....	2,535	3,988	4,060	4,650	2,549
Ohio:					
Akron.....	(1)	1,569	³ 1,134	1,483	1,156
Cincinnati.....	(1)	1,303	⁴ 1,678	1,444	1,138
Cleveland.....	(1)	6,127	⁵ 3,129	4,857	4,138
Columbus.....	(1)	2,004	⁶ 1,148	1,941	1,551
Dayton.....	(1)	1,073	⁷ 927	985	902
Toledo.....	(1)	2,621	⁸ 1,753	2,409	2,217
Youngstown.....	(1)	1,433	⁹ 812	1,315	1,048
Total.....	(1)	16,130	¹⁰ 10,581	14,439	12,150

¹ Not reported.

² Also 1,158 renewals.

³ Also 2,079 renewals.

⁴ Also 3,504 renewals.

⁵ Also 6,905 renewals.

⁶ Also 2,424 renewals.

⁷ Also 1,460 renewals.

⁸ Also 2,642 renewals.

⁹ Also 1,154 renewals.

¹⁰ Also 20,168 renewals.

REPORT OF THE OPERATIONS OF RICHMOND, VA., AND FORT WORTH, TEX., MUNICIPAL EMPLOYMENT BUREAUS FOR CERTAIN MONTHS OF 1915.

	Number of applications from employers.	Number of persons asked for by employers.	Number of persons applying for work.	Number of persons referred to positions.	Number of positions filled.
Richmond, Va., 1915:					
February.....	89	392	899	325	179
March.....	128	505	851	454	333
April.....	123	240	673	296	254
May.....	113	227	665	316	184
June.....	136	237	659	238	166
July.....	146	254	550	269	158
August.....	218	355	526	367	202
September.....	288	558	615	393	181
October.....	253	514	671	468	181
November.....	204	352	571	354	166
Total.....	1,698	3,634	6,680	3,480	2,004
Fort Worth, Tex., 1914-15:					
December.....	142	168	1,816	177	161
January.....	102	151	1,340	160	145
February.....	55	71	752	79	68
March.....	103	138	1,088	146	133
April.....	74	89	844	94	85
May.....	86	103	876	112	99
June (wheat harvest).....	123	522	974	654	406
July.....	80	259	506	275	199
August.....	115	201	422	220	189
September (cotton picking).....	173	530	1,311	740	405
October.....	132	287	566	305	289
November.....	218	251	552	266	236
Total.....	1,403	2,820	11,047	3,228	2,395

STRIKES AND LOCKOUTS IN THE UNITED STATES FROM JULY THROUGH NOVEMBER, 1915.

According to data compiled by the United States Bureau of Labor Statistics from newspapers and other sources, the number of strikes and lockouts during the five months, July to November, inclusive, was 577; one strike which started in May and 29 strikes and 3 lockouts which started in months not specified, but all of them not previously reported, were also brought to the attention of the bureau during November, making a total of 610 new labor disputes during the five months ended November, 1915. The total number of strikes and lockouts occurring during the 11 months of the calendar year, including the important strikes that began prior to January 1, 1915, but remained unsettled on that date, is 1,268. The total number of strikes and lockouts during the year 1914 was, according to the bureau's data, 1,080.

The following table, which has been corrected for months previous to November as reports have come in during the latter month, shows the number of strikes and lockouts begun in each of the months of July to November, 1915, inclusive. Inasmuch as strikes that start toward the end of the month are sometimes not reported until the following month the number of strikes reported for November is not

complete. The strikes and lockouts were distributed among the months as follows:

NUMBER OF STRIKES AND LOCKOUTS, JULY THROUGH NOVEMBER, 1915, BY MONTHS

	July.	August.	Septem-ber.	October.	Novem-ber.	Total.
Strikes.....	92	136	150	93	72	543
Lockouts.....	5	6	10	8	5	34
Total.....	97	142	160	101	77	577

A brief account of the character of the strikes occurring from July to October may be found in the previous, or December, issue of the MONTHLY REVIEW. The data in the tables which follow relate to 142 strikes and lockouts concerning which information was received by the bureau during the month of November and includes, therefore, strikes and lockouts which occurred in previous months as follows: October, 11; September, 12; August, 6; July, 3; May, 1; and 29 for which the dates of commencement were not reported.

The strikes reported during November were mainly in the north-eastern part of the country, as indicated by the following statement which shows the number of strikes by States for those States in which 10 or more strikes were reported. From this table it is noted that 81 strikes occurred in the Northeastern States, while 14 occurred in Ohio. The table follows:

STATES IN WHICH 10 OR MORE STRIKES OCCURRED DURING NOVEMBER, 1915.

State.	Strikes.	Lockouts.	Total.
Connecticut.....	29	.....	29
Pennsylvania.....	21	.....	21
New York.....	15	2	17
Massachusetts.....	14	.....	14
Ohio.....	11	3	14
Other States.....	41	6	47
Total.....	131	11	142

Five of these strikes and lockouts were confined to women, and four included both men and women; the others were in occupations in which women are not ordinarily engaged. No lockouts were reported in which women were concerned.

The distribution among those occupations for which five or more strikes and lockouts were reported was as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED OCCUPATIONS, REPORTED DURING NOVEMBER, 1915.

Trades.	Strikes.	Lockouts.	Total.
Building trades.....	13	3	16
Clothing.....	8	.....	8
Machinists.....	26	4	30
Metal polishers.....	10	.....	10
All other occupations.....	74	4	78
Total.....	131	11	142

In 68 strikes and lockouts it was stated whether the employees were connected with unions, as follows: In 3, the strikers were not connected with unions; in 2, they were not so connected at the time of striking, but almost immediately organized themselves into unions; in 63, the strikers were union members.

In 110 cases the causes of the strikes and lockouts were given. Of these 64, or 58 per cent, related to questions of wages and hours. Of the strikes 27 or 26 per cent were for an increase in wages and 20, or 19 per cent, for a reduction of hours.

CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING NOVEMBER, 1915.

Cause.	Strikes.	Lockouts.	Total.
Wages.....	27	1	28
Hours.....	20	1	21
Wages and hours.....	14	1	15
Discharge of employees.....	8	2	10
Presence of nonunion men.....	8	1	9
Agreement.....	6	.....	6
Recognition.....	5	.....	5
Other causes.....	15	1	16
Total.....	103	7	110

In 48 of the strikes the number of the persons involved was reported to be 27,471. In 4 of these the number of strikers was 20,700, leaving 6,771 distributed among 44 strikes, or an average of about 154 persons connected with each strike, omitting the 4 largest. In 8 lockouts the number of employees involved was reported to be 2,410. In 1 of these the number was reported to be 1,500, thus making the average number of those involved in the remaining 7 lockouts to be 154.

THE LLANO DEL RIO COOPERATIVE COLONY.

BY HUGH S. HANNA.

The Llano del Rio colony is a cooperative colony now in process of development in the Antelope Valley, Los Angeles County, Cal. It was started about a year and a half ago by a small group of individuals with practically no capital. There are now between 600 and 700 persons resident at the colony and the property owned includes about 8,000 acres of cultivable land.

The colony is still in its pioneer stage. Outwardly, it is, in many ways, raw and crude. Most of its plans are still plans. But as an experiment in cooperative government and cooperative living it has already progressed sufficiently far to merit thoughtful attention. This brief description attempts to sketch the colony as it now exists, with a hint as to its plans and possibilities.

The Antelope Valley is in the southern part of California, about 40 miles northeast of Los Angeles. The valley is a vast semidesert

plain stretching between two mountain ranges. The climate is excellent. The natural vegetation is that of the desert, but with irrigation the ground becomes extremely fertile and is adapted to a large variety of crops, including the culture of certain fruits. The water necessary for irrigation is available, but as yet little use has been made of it.

The colony located itself in the western end of the valley, close against the mountains. The nearest railroad station is distant about 20 miles. Convenient to the colony there are several mountain creeks the water rights of which it has secured. Also, it is in control of the Big Rock irrigation district, which assures to it most of the flow of an important creek. Thus far, for irrigation purposes, the colony has made use of simply the natural flow of water from the mountain creeks, building diversion dams, and constructing ditches as necessary. The supply thus secured is sufficient for a very considerable part of the land now held. By the building of a large dam a water supply sufficient for approximately 20,000 acres can be readily secured. Water power is also available, but has not yet been turned to account.

The Llano colony in its chief aspiration—that of common ownership and cooperative production—is akin to the cooperative experiments of the past; but in its organization and business methods, and to some extent in its aims, it differs in many essentials from any of its predecessors.

It is not based upon any dogma or creed, except the belief in the practicability of cooperation as a business and social principle. Inasmuch as this faith in cooperation is the dominant principle in the enterprise, nearly if not all of the individuals attracted by it are socialists, but there are no requirements as to party affiliation or creed subscription. Nor has the colony attempted to lay down an inflexible program of future action. Thus far its work has been largely experimental, and it is felt that with a few general principles as a basis individual problems can best be attacked as they arise.

Its external organization is similar to that of any corporate business enterprise. It is organized as a corporation under the laws of the State of California, with a capital of \$2,000,000, divided into shares of \$1 each. Every subscriber to the company must take 2,000 shares of stock, payment to be made partly in cash, partly in future labor. There are to be no dividends in the usual sense of the word. The division of all income is on the basis of work done. A day's labor is the unit of measurement. All members are to receive the same income to the extent that they work the same number of days. Thus it is impossible for a subscriber to derive any benefit from his investment unless he is an active worker in the colony. All labor, skilled and unskilled, manual and mental, is regarded as of the same social value and to be rewarded upon the same basis.

Women as well as men may be active members of the colony. Wives need not be subscribers unless they so desire, but, if so, they may participate in regular work upon the same terms as their husbands. Under certain conditions, older children may also become active working members.

All land and all means of production are owned by the company, or, in other words, by the members in association. Complete liberty of ownership exists, however, in all forms of household and personal property. Furthermore, there is no attempt at or idea of communal living. Each family has its own house and arranges its housekeeping and domestic life generally as it sees fit.

Thus far the active work of the colony has been necessarily concentrated upon farming and the housing of its residents. There are at present about 200 tents and small brick houses, in which the families live, and a large central hotel at which the single men are accommodated. Work is now beginning upon the laying out of a permanent town site. If the prepared plans are carried through there will result a modern town, laid out upon scientific lines, substantially and attractively built.

It is the purpose of the colony to be entirely self-sufficient as far as labor is concerned and as industrially self-sufficient as may be possible. From the labor standpoint this aim is substantially realized, the present residents representing practically all the important trades and professions—farmers, carpenters, miners, engineers, teachers, etc.

Farming (including cattle raising, dairying, fruit growing, and poultry raising) is the most important single industry and will probably continue to be such. At present there are about 1,200 acres under cultivation. A very large part of this is in alfalfa, with about 150 acres in garden, 55 acres in young pear trees, two producing orchards and several thousand young fruit trees in nursery. The mechanical equipment consists of one large tractor, 3 motor trucks, and several automobiles. The live stock comprises 75 work horses, 150 head of cattle, and about 200 hogs. In addition, there are large poultry and rabbit departments and several hundred colonies of bees. Most of the branches of farm work are under the management of men of experience in their respective lines.

A fish hatchery with about 60,000 trout has been established at one of the mountain lakes. Arrangements have been made to add a million fish in the near future.

The colony is manufacturing its own brick, running its own planing mill and operating its machine shop. A shoe factory is owned and is in operation but has not yet been moved to the colony property. There is also owned the machinery for a steam laundry and some other manufacturing equipment which has not yet been housed. The plans call for a number of industrial enterprises, such as a can-

nery, a knitting mill, a tannery, and a moving-picture company. The purpose is to produce primarily for consumption but the outside sale of products will, of course, be necessary if the colony is to be fully successful.

The internal affairs of the colony are under the control of all residents, male and female, over 18 years of age, including members of families who may not be stockholders. These, in assembly, elect a commission of 9 members, to which is given general administrative authority over the details of management. The commission appoints managers for the several departments into which the work is divided and each manager appoints the necessary foremen. The managers and foremen meet every evening in a business session. The matter of assigning members to the work which they are to do has so far caused little or no difficulty or complaint.

Two of the most interesting phases of the colony's activities and possibilities are those of education and social life. To some extent the educational system of the colony is tied up with that of the State, but in practice the colony will be almost entirely free to develop such a system of education as it may choose. One of its first acts was the establishment of a Montessori school. It is the intention to associate closely the work of the schools with the industrial work of the community and to develop thus a real system of industrial education.

The matter of social life is strongly emphasized. This is done not only because of the isolation of the colony but because it is regarded as of vital importance to the success of the community idea. It is believed that proper amusement and recreation are almost as necessary to the life of human beings as are their food and clothing and that they should be considered as such in the development of the colony. With this in mind, one of the first activities was the construction of a central meeting hall at which the residents could gather for conversation, to play games, and for general social life. Once or twice a week dances are held at which a large proportion of the residents participate.

It is too soon as yet to judge of the success of the colony, either as a social or as a business organization. As a business organization its success will depend, of course, upon its ability to support itself. At the start it was assumed that the community could not be placed upon a self-supporting basis for five or six years at the least. The management now believes that this end may be attained within a shorter time than originally counted upon as necessary. In the early period of development the difficulties are necessarily very great. An entirely barren desert has to be turned into a farm, a system of irrigation has to be constructed and several hundred people have to be given proper shelter. During the first year the community

was able to produce about 75 per cent of the food it consumed and it is estimated that about 90 per cent is now being produced. Purchases from the outside are comparatively few, because living is as yet upon a simple scale.

CANADIAN INDUSTRIAL DISPUTES INVESTIGATION ACT.

The Canadian Industrial Disputes Act was reviewed and the purpose, administration, and results of the law, and the sentiment toward it were discussed in some detail in bulletins of the Bureau of Labor Statistics No. 76, May, 1908; No. 86, January, 1910; and No. 98, January, 1912. The study contained in the last-named bulletin brought the experience under the act down to and including the Fourth Report of the Registrar under the act, i. e., to March 31, 1911. The present article is intended to cover the entire operations of the act from the date when it became effective, March 22, 1907, to October 31, 1915, a period of somewhat over eight and a half years.

It may be briefly noted that the act applies to all public utilities, including municipal service corporations, transportation companies of all kinds, and occupations (like stevedoring) subsidiary to transportation, and also to coal mines and to metal mines. In these industries and occupations it is unlawful for employers to lock out their workmen or for employees to strike until an investigation of the causes of the dispute has been made by a Government board appointed for this particular case and the board's report has been published. After the investigation is completed and the report made, either party may refuse to accept the findings and start a lockout or a strike. The investigating board usually tries by conciliation to bring the parties to an agreement, so that the functions of the board considerably exceed those of a body appointed solely to procure information.

The law does not aim at compulsory arbitration or to force men to work against their will after all chance of an amicable settlement has disappeared. Neither employer nor employee is compelled to become party to a bargain he does not voluntarily accept. The purpose of the act is limited to discouraging strikes and lockouts in industries which immediately serve the entire public and to preventing the cessation of such industries through the arbitrary or unwarranted acts of either employers or workmen. It seeks to enforce the right of the people who use railways and burn coal, for instance, to know on how just grounds, in case of an industrial dispute, they are deprived of so necessary a service or commodity.

The procedure and machinery for accomplishing this end are not complicated. In the industries in question any proposed change in working conditions affecting hours and wages, whether demanded by employers or workers, must be preceded by a notice of 30 days before

the date on which such changes are to become effective. If such a contemplated change, or if any other point at issue between the parties, threatens to end in a strike or a lockout, either party may apply to the Dominion Labor Department for a board of conciliation and investigation, and may not alter the conditions of work until the dispute has been dealt with by the board.

Application forms are supplied by the labor department, although it is not necessary that applications be made on these forms. The application must be accompanied by a statement setting forth the parties to the dispute; the nature and cause of the dispute; an estimate of the number of persons affected; and a statement of the efforts made by the parties themselves to adjust the dispute. The law requires further that the application should be accompanied by a declaration stating that the necessary authority has been obtained by the declarant for the declaration of a strike in the event of failure to adjust the dispute or to refer it by the minister to a board of conciliation and investigation. In the Parliament of 1909-10 this last provision was so amended (May 4, 1910) as to permit a trade-union committee to exercise such power where a dispute concerned employees in more than one Province, so as to avoid the necessary expense and delay of securing authority from all parties concerned in the dispute.

In order that both parties to the dispute may be made acquainted with the proceedings taken under the act at the earliest moment possible and all unnecessary delay prevented, the applicant for a board is required to send to the other party concerned a copy of the application at the time it is transmitted to the department, and the second party to the dispute is similarly required to prepare without delay a statement in reply and to forward this to the department and to the other party to the dispute.

Upon the receipt of the application the minister of labor or his deputy appoints a board of three members, one upon the recommendation of the employers, another upon the recommendation of the workers, and a chairman selected either by the first two members of the board, or, in case they fail to agree, by the Government. If the workers or the employers, either through indifference or in order to block an investigation, refuse to recommend a representative for appointment, the minister of labor selects at his discretion a suitable person to fill the place. The members of the board are paid for the time they serve and for the necessary traveling expenses incurred. The Government also provides for necessary clerical expenses and for the fees of witnesses called for either party.

Each board controls its own procedure, which varies greatly under different chairmen and in different cases. Usually the most informa-

tion is obtained and the quickest settlements are made where the board discusses informally with committees representing both sides in joint session the various points at issue without laying much stress on technical evidence. Such informal meetings are apt to reveal sentiment, air grievances, and explain misunderstandings. But some boards, on account either of the judicial training of their members or of the technical character of the points at controversy, have conducted their proceedings like a law court. If the board succeeds in bringing the parties to an agreement, it embodies the terms of this agreement in its findings. But if it is unable to end the controversy it presents a report, or majority and minority reports, describing the conditions that cause the dispute and usually recommending what appear fair terms of settlement. The report or reports are at once published by the Government, and the employers and employees involved, if unable to agree, may then resort to the last measures of industrial warfare.

The penalty for causing a lockout before the board has reported is a fine upon the employer ranging from \$100 to \$1,000, and the penalty for striking, under like conditions, is a fine of from \$10 to \$50 upon each striker. Prosecutions are brought by the aggrieved party, not by a public officer.

During 1915 it was proposed to amend the entire act. The minister of labor prepared copies of a draft bill for distribution among those interested in order that he might receive the benefit of criticisms of it. The proposed revision of the law contemplates a consolidation of the Conciliation Act of 1906 and the Industrial Disputes Act of 1907, with all amendments and additions which may have been made since those dates.¹

The bill submitted by the department of labor aims to remove objectionable features and to remedy certain defects contained in the 1907 act. New matter relating to industrial agreements and more particularly to false representation has been added. Thus provision is made for registering industrial agreements. This requirement together with the prohibition against instigating strikes or lockouts in public utilities, where agreements are in force, are perhaps the most noteworthy changes proposed. It is, however, true that any party to such an agreement may be relieved from its operation by the report of a board acting under the law.

Making or publishing any verbal agreements, or false statements as to the opportunities for employment, the state of the labor market, the existence or nonexistence of any labor dispute, or as to anything else respecting any industry or employment which may, it is stated,

¹ The Labor Gazette, issued by the Department of Labor. Ottawa. September, 1915. pp. 304-328.

encourage any person to emigrate to Canada or to move from one part of the country to another to work in any industry, or to prevent any person from so doing, is forbidden under the proposed law under a penalty not exceeding \$1,000.

The latest report of the operations under the act declares that "many evidences reach the department of the continued and widespread interest taken in the operations of the Industrial Disputes Investigation Act, particularly by publicists and students of sociological problems."

During the period the act has been in force 187 applications were made under it and boards were granted in 165 cases. In 22 cases "adjustments have been effected without boards, in some cases after procedure for boards had been initiated." The following table shows the number of applications made, the number of boards appointed, and the number of cases in which adjustment was effected without a board, by calendar years, March 22, 1907, to October 31, 1915:

NUMBER OF APPLICATIONS MADE AND BOARDS GRANTED IN LABOR DISPUTES, AND RESULTS OF PROCEEDINGS HAD UNDER THE CANADIAN INDUSTRIAL DISPUTES, INVESTIGATIONS ACT, MAR. 22, 1907, TO OCT. 31, 1915.

Items.	1907 (9 mos.)	1908	1909	1910	1911	1912	1913	1914	1915 (10 mos.)	Total.
Number of applications.....	25	27	22	28	21	16	18	18	12	187
Number of boards granted.....	22	25	21	23	16	16	15	18	9	165
Number of disputes in which adjustments have been effected without boards.....	1	1	4	4	4	3	1	1	3	22

This table takes into consideration only the number of applications received during the year, and therefore will not in every case agree with the annual reports which include disputes carried over from the previous year.

The largest number of applications for the intervention of boards was made during the year 1910, while the largest number of boards granted during any year was in 1908. From 1910 there has been a somewhat steady decrease in the number of applications for boards in each year, followed by a proportionate decrease in the number of boards granted. For the year 1914 boards were granted in response to all applications made. This is the only year in which this occurred. During the whole period the per cent of boards granted of the number of applications has been 88.

The table which follows summarizes operations under the act from March 22, 1907, to October 31, 1915:

NUMBER OF BOARDS GRANTED, EMPLOYEES AFFECTED, STRIKERS IN ILLEGAL STRIKES AND IN LEGAL STRIKES, AND METHODS OF SETTLEMENT, BY INDUSTRIES, MAR. 22, 1907, to OCT. 31, 1915.

[Source: Reports of the registrar of boards of conciliation and investigation; the Labor Gazette, issued by the Canadian Department of Labor. In all cases reporting persons affected or involved as ranging from a minimum to a maximum, the median number has been used in computation. There were 2 disputes in railways, and 2 in other industries in which the number affected was not reported.]

Industries.	Disputes reported.			Boards granted.		Strikes.			
	Number.	Persons involved.		Number.	Persons involved.	Unlawful.		Not unlawful.	
		Directly.	Indirectly.			Number.	Persons involved.	Number.	Persons involved.
Coal mining.....	42	43,188	1,475	37	39,888	² 7	² 15,545	4	6,330
Metal mining.....	13	3,075	2,470	13	6,525	.....	.....	4	2,820
Railways.....	72	76,506	77,863	58	142,966	3	17,800	4	11,539
Street railways.....	19	7,667	4,492	18	11,709	.....	.....	2	753
Shipping.....	10	6,560	1,855	10	8,415	2	2,100	.....	.....
Telegraph and telephone operating.....	4	1,340	1,100	3	2,120	1	320	.....	.....
Municipal utilities.....	10	2,353	1,662	9	3,765	.....	.....	.....	.....
Light and power.....	3	266	2,514	3	2,780	.....	.....	.....	.....
Freight handling (railroad).....	2	950	.....	2	950	2	950	.....	.....
Teaming.....	1	300	.....	1	300	.....	.....	.....	.....
Other.....	11	3,284	4,780	11	8,064	.....	.....	3	2,700
Total.....	187	145,489	1,97,211	165	227,482	² 15	² 36,715	17	24,142

Industries.	Method of settlement.					
	By boards.		Amicably.		Other.	
	Number.	Persons affected.	Number.	Persons affected.	Number.	Persons affected.
Coal mining.....	³ 27	24,598	10	7,560	4	5
Metal mining.....	8	2,600	2	2,490	5	3
Railways.....	³ 46	92,887	21	42,438	6	5
Street railways.....	10	6,575	5	1,086	7	4
Shipping.....	⁸ 8	7,415	2	1,000	.....	.....
Telegraph and telephone operating.....	2	1,520	1	600	9	1
Municipal utilities.....	8	3,728	2	287	.....	.....
Light and power.....	2	2,750	1	30	.....	.....
Freight handling (railroad).....	2	950	.....	.....	.....	.....
Teaming.....	1	300	.....	.....	.....	.....
Other.....	11	8,064	.....	.....	.....	.....
Total.....	¹⁰ 125	151,387	44	55,491	¹⁰ 18	¹⁰ 35,822

¹ An indefinite number in 1 dispute.
² Including one lockout.
³ No report received of acceptance of board's recommendations in 1 dispute.
⁴ Including 1 dispute settled by minister of labor; 1 mine closed down for lack of orders; 2 mines closed down as a result of strike after board reported; 1 mine went into liquidation; 7,910 persons were involved directly and, in 1 dispute, an indefinite number indirectly.
⁵ Including: 1 dispute, recommendations of board not accepted by employees, strike followed; 1 dispute, recommendations of board not accepted by employers, strike followed; 1 dispute, operations ceased.
⁶ Including 2 disputes settled by Government intervention, 1 by minister of labor, 1 method not reported, and 1 pending.
⁷ Including 2, method not reported: 1 through efforts of citizens' committee, and in 1 case the board was restrained by injunction. One dispute involved nearly all industrial workers in Port Arthur and Fort William, number of persons affected not reported.
⁸ One dispute settled by board in conjunction with fair-wages officer.
⁹ Through department conferences between interested parties.
¹⁰ See notes to details.

According to the above table 32 strikes have occurred during the period the act has been in operation, of which 15 were unlawful, having been begun either before or pending an investigation by the board; in 14 of the 17 cases which were not unlawful the recommendations of the boards were not acceptable and in 3 the strikes were begun in industries in which it is not unlawful to strike. In 125 disputes settlement was effected through the recommendations of the boards, and strikes or further cessation of work were therefore averted. The Government, the minister of railways, and the department have each effected a settlement after a board has been granted.

The operation of railways continues to exceed all other industries in making use of the act. Of the total number of disputes reported to the department 38.5 per cent were from this industry, while 35.2 per cent of the whole number of boards granted was due to these disputes. Of the entire number of persons directly or indirectly affected by disputes in which boards were granted 62.8 per cent were engaged in railway operations.

In the earlier years the coal-mine industry assumed importance next to the railways, but in recent years very few disputes in this industry have been referred to the department for action. In both of these industries, as well as in shipping, telegraph and telephone service, and in freight handling unlawful strikes have taken place.

SCIENTIFIC MANAGEMENT AND LABOR.¹

Under this title Robert Franklin Hoxie, assistant professor of political economy, University of Chicago, presents the results of his investigation conjointly with Robert C. Valentine for the employers and John P. Frey for the employees, which was conducted for the Commission on Industrial Relations. The final report of the commission summarizes the results of this investigation, and the conclusions of this summary are briefly stated in the digest of that report, published in the November issue of the MONTHLY REVIEW. The investigation took more than a year, but the 35 establishments studied in detail were covered during the period from January through April, 1915. This study was supplemented by interviews with scientific management leaders, experts, employers, and laboring men.

The investigation aimed primarily to ascertain what scientific management meant in actual operation. Its scope, it is pointed out, is to be determined by what is found actually to exist in shops where it is applied, as compared with what may be presumed theoretically to characterize the system. The possible benefits of the system are

¹ Scientific Management and Labor, by Prof. Robert Franklin Hoxie. New York, D. Appleton & Co., 1915. vii, 302 pp.

emphasized, and its actual results and its relations to labor welfare are considered in detail. An effort is made to present in a concise manner the main points at issue between scientific managers and organized labor.

The contrasting claims of organized labor and scientific management are presented in two appendixes; six other appendixes present the conclusions resulting from the investigation; the labor claims of scientific management as presented by Messrs. Taylor, Gantt, and Emerson; and the trade-union objections to scientific management. The questionnaire on which the investigation was based covers some 100 pages of the report. The report proper covers 139 pages. The whole volume contains 302 pages.

Because the Taylor system of scientific management is recognized as the original basic system, and because it is the system that organized labor has most generally and most vigorously opposed, Mr. Taylor's statement of the nature of scientific management and its relation to labor is taken as a standard for the purpose of the investigation.

The contrast in the claims as to benefits to be derived from the adoption of the system is best shown, perhaps, by the general definition of scientific management which each party accepts. Thus the advocates of the system claim that—

Scientific management is a system devised by industrial engineers for the purpose of subserving the common interests of employers, workmen, and society at large, through the elimination of avoidable wastes, the general improvement of the processes and methods of production, and the just and scientific distribution of the product.

On the other hand—

Organized labor understands by the term "scientific management" certain well-defined "efficiency systems" which have been devised by individuals and small groups under the leadership and in imitation of men like Frederick W. Taylor, H. L. Gantt, and Harrington Emerson, by whom this term has been preempted. Organized labor makes a clear distinction between "scientific management" thus defined and "science in management." It does not oppose savings of waste and increase of output resulting from improved machinery and truly efficient management. It stands, therefore, definitely committed to "science in management," and its objections are directed solely against systems devised by the so-called "scientific management" cult.

The proponents of scientific management claim (1) that it rests on the fundamental economic principle that harmony of interests exists between employers and workers and that high general wages and improved conditions of employment are compatible with low labor costs; (2) that it attempts to substitute in the relations between employers and workers the rule of exact knowledge in place of guesswork, and seeks to establish a code of natural laws equally binding upon employers and workmen; (3) that it is therefore both scientific

and democratic, for it has discovered and developed accurate scientific methods by which the laws governing the easiest and most productive movements of men at work are registered, and makes possible the rehiring of each workman on the basis of his efficiency; (4) "it substitutes the rule of law for arbitrary decisions of foremen, employers, and unions, and treats each worker as an independent personality"; thus scientific management democratizes industry by giving voice to both parties concerned and by substituting joint obedience of employees to fact and law for obedience to personal authority; (5) that it means greater productive efficiency, increasing output and improving qualities; (6) that it makes for labor welfare in that it sets each man at the highest task for which his physical and intellectual capacity fits him and tends to prevent the degradation and displacement of skilled labor, rewards men for helpful suggestions and improvements in methods of work, and encourages self-reliance. It raises wages and shortens the hours of labor, increases security and continuity of employment, lessens the rigors of shop discipline, promotes friendly feeling between the management and the men, and finally renders collective bargaining and trade unionism unnecessary as a means of protection to the workman. Thus "it tends to prevent strikes and industrial warfare and to remove the causes of social unrest."

Organized labor objects (1) that scientific management in its relation to labor welfare is a device employed for the purpose of increasing production and profits; (2) that it tends to eliminate consideration for the character, rights, and welfare of the employees. "In spirit and essence it is a cunningly devised speeding up and sweating system, which puts the premium upon muscle and speed rather than brains, and forces individuals to become 'rushers and speeders'"; (3) that it intensifies the modern tendency toward specialization of the work and the task; (4) that it tends to set the task on the basis of the records of the strongest and swiftest workers without due allowance for the human element or legitimate delay; (5) that it establishes a rigid standard of wages and offers no guaranty against rate cutting; (6) that it tends to lengthen the hours of labor and shorten the tenure of service, lessening the certainty and continuity of employment, tending to undermine the worker's health. "It puts into the hands of employers at large an immense mass of information and methods which may be used unscrupulously to the detriment of the workers, creates the possibility of systematic blacklisting, and offers no guaranty against the abuse of its professed principles and practices."

In its relation to industrial democracy labor claims that (7) scientific management is undemocratic in that it gathers up and transfers to the employing management all the traditional knowledge, judgment, and skill of the workers, monopolizing the skill of the workers in

connection with their work, by allowing the workmen ordinarily no voice in hiring or discharging, the setting of the task, and determining the wage rate or the general conditions of employment; by intensifying discipline; by tending to prevent the presentation of grievances on the part of the men and to increase the number of shop offenses and the amount of docking and fining; by refusing to deal with the workers collectively, thereby being destructive of collective bargaining.

Part II of Prof. Hoxie's book is devoted to a critical examination of scientific management in its relations to labor. Three general subjects are presented: (1) Possible benefits of scientific management to labor and to society, (2) Scientific management in practice, and (3) Scientific management and labor welfare.

Under the first head the author concludes that scientific management at its best affords opportunities for lower costs and increased production without adding to the burden of the workers in exhausting effort, long hours, or inferior working conditions, and thus creates real and substantial benefits to labor and to society.

It is also stated that scientific management, as set forth in theory by Mr. Taylor and as realized in practice, means the improvement and standardizing of the material equipment and productive organization of the plant before an attempt is made to apply its methods.

It is further asserted that scientific management points the way toward raising the standard of living for all classes of labor and for society at large and is in fact "efficient management" to which organized labor stands committed. Despite the fact that labor is inclined to evade the issue by declaring that these features belong not to scientific management but to "science in management," "the system at its best," declares the writer, "is not only a search for scientific productive methods, but is broad enough to include all that science in management demonstrates to be productively most efficient."

SCIENTIFIC MANAGEMENT IN PRACTICE.

Prof. Hoxie introduces the second division of Part II, "Scientific management in practice," by declaring that scientific management shops in organization and methods, contrary to the common assumption, do not conform to all the ideals and models presented by the leaders. No single shop was found which represented fully and faithfully, in matters of detail or in the more essential features, either the Taylor, Gantt, or Emerson system. This diversity was found to begin with the initial act of installation and to extend throughout the entire application of the system in use.

The system in practice is discussed by the author under the heads of (1) Functional foremanship; (2) Methods employed in the selection and hiring of workmen; (3) The character, extent, and results of attempts at adaptation, instruction, and training of the workers;

(4) Time study and task setting, their purposes, methods, and results; (5) Rate making; (6) Protection of workers from overexertion and exhaustion; (7) Opportunities for advancement and promotion; (8) Modes of discipline; (9) Modes of discharge and length of service; (10) Scientific management and industrial democracy; (11) Causes of the shortcomings of scientific management in practice.

FUNCTIONAL FOREMANSHIP.

Under the system of scientific management so-called functional foremanship is substituted for a military type of organization, i. e., bosses are appointed to supervise the tasks and duties of the men in connection with their particular job as distinguished from bosses which look after gangs of men under the old form of factory management. The author found that some shops had not seriously attempted the installation of functional foremanship, and in many instances where it had been adopted it was in such a modified form as to weaken materially the claim that scientific management treats every workman as an independent personality, substituting "joint obedience to fact and law for obedience to personal authority."

METHODS EMPLOYED IN THE SELECTION AND HIRING OF WORKMEN.

No evidence was found to justify the claim that scientific management makes possible the scientific selection of the workers. In fact, the methods of selecting and hiring employees in shops of this kind were found to differ in no essential respect from those which are characteristic of the ordinary run of industrial establishments.

CHARACTER, EXTENT, AND RESULTS OF ATTEMPTS AT ADAPTATION, INSTRUCTION, AND TRAINING OF THE WORKERS.

The claim that scientific management solves completely the problem of adaptation and adequate training of the workers was not substantiated by the investigation, which showed that scientific management in practice varies with the special conditions found in different industries and with the special motives and exigencies which determine the policies of different shops. The system eliminates apprenticeship it is claimed, for scientific managers declare a preference for the one-job man or machine specialist over the all-round workman. However, all workers in scientific management shops are not narrow specialists, nor is it the design to have them so.

TIME STUDY AND TASK SETTING: THEIR PURPOSES, METHODS, AND RESULTS.

Time study and task setting constitute one of the vital points in the controversy between scientific management and organized labor, and in order to make the matter intelligible a detailed account of the normal method of making time studies is presented:

After the job or task in question has been standardized, it is analyzed by the time-study man into its elementary parts or motions. These are set down in sequence

in which the movements or elementary operations are to be performed with spaces after each in which to record the actual time taken in a succession of tests. One or more workers are then selected for timing and instructed to do the work or job in accordance with the sequence of elementary operations or movements thus established and at a certain general rate of speed. The job is thus done, the time-study man, watch in hand, observing and setting down the time taken for each element. This process is repeated until the time-study man is satisfied that enough readings or performances of the operation have been observed and recorded for the purpose in hand. The successive readings or amounts of time taken in the case of each elementary operation are then studied and a final figure determined and set down which is called the "necessary time" for the element or the time which "should be taken." These "necessary" elementary times are added and the total is the "necessary time" for the whole operation. This, however, is not all the actual time allowed. To it are now added one or more "allowances." If the operation is strictly a hand job, one allowance only will probably be made to cover "fatigue," "necessary delays," "human necessities," and possible errors in the work of the observer. If the work is a machine job, a second allowance may be made to cover machine delays, breakdowns, etc. The final time set as the result of the study, to stand as the task time, or as representing 100 per cent efficiency, is the "necessary time" plus the allowance or allowances.

"Far from being the invariable and purely objective matters that they are pictured," the author asserts, "the methods and results of time study and task setting are, in practice, the special sport of individual judgment and opinion, subject to all the possibilities of diversity, inaccuracy, and injustice that arise from human ignorance and prejudice." Proceeding with the general statement that time study may be used primarily for the study, improvement, and standardization of the methods of doing work under observation, altogether without reference to a standard time for its accomplishment, or it may have for its main or sole purpose the fixing of a definite task time or efficiency scale, it is pointed out that great possibilities of advantage both to the employer and the workman exist in time study employed for the purpose first named. However, in a large number of shops time study for this purpose had been practically neglected. In connection with the second purpose—setting of task time or efficiency scale—great variations were noted, and especially the part which individual judgment and individual prejudice may and do play. The author lists 17 different factors wherein the judgment of employers, time-study men, or the workers may be exercised so as to produce variations that will alter the task itself.

Summarizing the results of the investigation so far as this subject is concerned, the author reaches the conclusion that time study and task setting, although carefully and liberally applied, seem bound to be a source of considerable injustice and irritation to the worker, and that under present conditions there is little reasonable ground for the sweeping labor claims of scientific management based on time study as a method of task setting and efficiency rating.

RATE MAKING, MODES OF PAYMENT, AND THE MAINTENANCE OF RATES.

The author calls this question "the storm center" of the scientific management movement.

Scientific management claims that the current methods of determining and paying wages are unscientific, unjust, and destructive of efficiency. Two distinct matters are presented for consideration in this connection. Systems of wage payment under scientific management involve two elements: The base rate, sometimes called "day wage," and the added "efficiency payment." The former constitutes the minimum earnings and indicates the general wage level for a group of workers, while the latter represents additional rewards for special efficiency. The base rate is either the day rate or a piece rate established for an occupation, operation, or group of workers. To be scientific and just the base rate, whether a time rate or a piece rate, must equal the value of the product created by the worker, or it must reward all workers in exact proportion to the skill and energy which they expend. But there appears no way of determining how the value and energy expended by the blacksmith, for instance, upon his work in relation to the capital by which he is aided compares with that expended by a school-teacher in relation to the capital by which the latter is aided. Economic science has not solved that problem, nor does scientific management offer any solution, the author declares.

Three systems of rate making are discussed by the author in this connection, namely: (1) The differential piece-rate system of Taylor; (2) The task and bonus system of Gantt; (3) the Emerson system, establishing an efficiency scale paralleled by a bonus scale. The differential piece-rate system gives a higher rate of wages to the worker when he is able to cut down the time required to turn out the required number of pieces of work. Workers who fail to reach the standard set are paid by the piece for what they do, just as in the case of the ordinary piece-rate system. But when a worker attains or exceeds the task set a new and higher rate becomes operative. The task or bonus system of Gantt also establishes a definite task on the basis of a time-study and a job analysis. The worker who makes the task does not have his piece rate raised directly, but receives an additional reward in the form of a bonus, in proportion to his ability to attain or surpass the standard set. A minimum day wage is guaranteed, which means a current wage for those who fail to make the task. Under both the Taylor and the Gantt systems the workman receives no additional bonus unless he actually attains the standard set.

It is this latter feature which the Emerson system of a minutely graded efficiency scale aims to correct. Under his system the so-called actual efficiency of the worker, and so the premium to which he is entitled, is determined by comparing the standard time, already

determined by a time study and a job analysis, for turning out a given amount of work with the actual time taken to do the work. The formula is: Standard hours ÷ actual hours = efficiency per cent.

A careful analysis of all these systems by the author indicates that they do not reward the worker in proportion to his efficiency, as is claimed. In the Taylor system there was found to be a sharp variation in payment for a slight variation in efficiency; the same was true of the Gantt system, and less so of the Emerson system. None of them propose any scientific method of determining the current day wage or basic rate. In all, the efficiency standard or task set is fixed quite arbitrarily.

Such are the systems of payment devised by the leaders of the schools of scientific management under consideration. None of them, except the differential piece rate, makes it clear that scientific management intends to purchase labor by specification. All of them definitely belie the claim that scientific management pays workers in exact proportion to their efficiency. One of them has the obvious intent of weeding out the lower grade of workers, while the other two are so constituted as to make such workers very unprofitable to the employers. Two of them may lend themselves to the exploitation of mediocre workers—those who can deliver a medium output, but can not attain to a standard task set high. All of them furnish a strong stimulus to high efficiency and output, but in themselves furnish no apparently effective check on overspeeding and exhaustion.

THE PROTECTION OF WORKERS FROM OVEREXERTION AND EXHAUSTION.

It is claimed by scientific management that protection to workers from overexertion and exhaustion is offered by various means, among which may be mentioned standardization of equipment and performance, substitution of exact knowledge of men and of machines for guesswork in the setting of the task and the determination of the hours and other conditions of work, careful studies of fatigue, maintenance of the best method of performing work, the best tools and materials at the proper time and place, instruction of the workers in the most economical and easiest methods of performing operations, institution of rational rest periods and modes of recreation during working hours, and surrounding the workers with the safest and most sanitary shop conditions. The investigation, however, showed that in practice most of these claims are unfounded. For example, it was found that scientific management has not materially affected the length of the working day; that the plan of scientific fatigue studies was not found in operation in a single shop.

Concluding, the author declares that the facts in no wise justify the assumption that scientific management offers any effective guaranty against overspeeding and exhaustion of workers, and that there appears to be "nothing in the special methods of scientific management to prevent speeding up where the technical conditions make it possible and profitable, and there is much in these methods to induce it in the hands of unscrupulous employers."

OPPORTUNITIES FOR ADVANCEMENT AND PROMOTION.

Claims to this effect are only partially true, it was found, although there is a basis for the claim, when the principle is ideally applied, which would justify the conclusion that "it seems reasonable to conclude that, fully and properly applied, scientific management surely and speedily separates the efficient from the inefficient workers, and affords speedier and more certain promotion and advancement to the former than management of the ordinary kind."

MODES OF DISCIPLINE.

The author thinks that scientific management does lessen the rigors of discipline as compared with other shops where the management is autocratic, on the ground that each worker is set a simple and definite task and is stimulated by the method of payment to do his best in the prospect of individual gain. Conditions in the shops visited seemed to favor the scientific-management contention.

METHODS OF DISCHARGE AND THE LENGTH OF SERVICE.

Little evidence was gathered to show that the situation as respects methods of discharge and length of service is different from that existing in shops which have not adopted scientific management. It is indicated, however, that the unions have a legitimate basis for complaining that discharge is generally a matter of arbitrary managerial authority. General industrial conditions rather than scientific management, perhaps, determine continuity of service.

SCIENTIFIC MANAGEMENT AND INDUSTRIAL DEMOCRACY.

On this point the following summary is quoted:

In practice, scientific management generally tends to weaken the competitive power of the individual worker and thwarts the formation of shop groups and weakens group solidarity; moreover, scientific management generally is lacking in the arrangements and machinery necessary for the actual voicing of the workers' ideas and complaints, and for the democratic consideration and adjustment of grievances. Collective bargaining has ordinarily no place in the determination of matters vital to the workers, and the attitude toward it is usually tolerant only when it is not understood. Finally, unionism, where it means a vigorous attempt to force the viewpoint and claims of the workers, is in general looked upon with abhorrence, and unions which are looked upon with complacency are not the kind which organized labor in general wants, while the union cooperation which is invited is altogether different from that which they stand ready to give. In practice, scientific management must, therefore, be declared autocratic; in tendency, a reversion to industrial autocracy, which forces the workers to depend upon the employer's conception of fairness and limits the democratic safeguards of the workers.

CAUSES OF THE SHORTCOMINGS OF SCIENTIFIC MANAGEMENT IN PRACTICE.

These, the author points out, are in substance as follows:

- (1) The persistent attempt on the part of experts and managers to apply scientific management and its methods outside of their natural sphere.

(2) It offers its wares in the open market, but has developed no means by which it can control the use of these by the purchaser. In efforts to systematize industry the arbitrary will of the employer and the law of economy often operate to handicap the systematizer in carrying out his plan and purposes and contribute to the existing diversity, incompleteness, and crudity of scientific management as it is practiced.

(3) The existence and practice of self-styled scientific management experts, systematizers, and time-study experts who lack in most respects the ideals and training so essential to fit them for the work which they claim to be able to do.

(4) On the whole, and barring some notable exceptions, the sponsors and adherents of scientific management—experts and employers alike—are profoundly ignorant of very much that concerns the broader humanitarian and social problems which it creates and involves especially as these touch the character and welfare of labor.

In the concluding section of the report the author discusses the problem of scientific management and labor welfare and concludes that scientific management furthers the modern tendency toward specialization of the workers; that the system tends to break down existing standards of uniformity set up by the workmen and to prevent the establishment of suitable conditions of work and play; that if fully and properly applied it inevitably tends to a constant breakdown of the established crafts and craftsmanship and the elimination of skill except for the lower orders of workmen; that it makes possible the breakdown of the basis of present-day unionism in its dominant form and renders collective bargaining as now practiced impossible in any effective sense; that the system seems to be making the relatively unskilled more efficient than ever before, but, although unskilled labor may be receiving greater earnings than ever before under it, the gathering up and systematization of the knowledge formerly in possession of the workmen has a tendency to add to the strength of capitalism; that scientific management can not be said to make for the avoidance of strikes and the establishment of industrial peace.

What is really needed is not so much repression and direct control as social supplementation and increased knowledge. The main demands are for a frank recognition of the trend of events and for some method of putting back into the worker's life the content which he is losing as the result of increased specialization and the abandonment of the old apprenticeship system. The development of such a method will, of course, take time. In the meanwhile we need more thorough study and general publicity concerning the true character, policies, and methods of scientific management, its possibilities, responsibilities, and limitations; concerning the real character, intelligence, and spirit of those engaged in its application, the qualities and qualifications required by the best social standards for the exercise of this power and responsibility, and the progressive education of scientific management experts and employers, labor and the public, to the needs and requirements of the situation.

The conclusions resulting from the investigation, signed by Messrs. Valentine and Frey, as well as the author, and submitted to the Commission on Industrial Relations, embrace the following:

Two essential points stand forth. The first point is that scientific management, at its best and adequately applied, exemplifies one of the advanced states of the indus-

trial revolution which began with the invention and introduction of machinery. Because of its youth and the necessary application of its principles to a competitive state of industry, it is in many respects crude, many of its devices are contradictory of its announced principles, and it is inadequately scientific. Nevertheless, it is to date the latest word in the sheer mechanics of production and inherently in line with the march of events.

Our industries should adopt all methods which replace inaccuracy with accurate knowledge and which systematically operate to eliminate economic waste. Scientific management, at its best, has succeeded in creating an organic whole of the several departments of an institution, establishing a coordination of their functions which had previously been impossible, and in this respect it has conferred great benefits on industry. The social problem created by scientific management, however, does not lie in this field. It is in its direct and indirect effects upon labor that controversy has arisen, and it was in this field that the investigation was principally made. For the present, the introducers and appliers of scientific management have no influences to direct them, except where labor is thoroughly organized, other than their ideals, personal views, humanitarianism, or sordid desire for immediate profit with slight regard for labor's welfare.

The second point is that neither organized nor unorganized labor finds in scientific management any adequate protection to its standards of living, any progressive means for industrial education, any opportunity for industrial democracy by which labor may create for itself a progressively efficient share in management. And, therefore, as unorganized labor is totally unequipped to work for these human rights, it becomes doubly the duty of organized labor to work unceasingly and unswervingly for them, and if necessary to combat an industrial development which not only does not contain conditions favorable to their growth, but in many respects is hostile soil.

Your investigator and his official experts are of the opinion that all the data focus in these two points, each in its own way equally vital, equally indestructible, and equally uncompromising. On the one hand, the right of investigation, perpetual desire and experiment to find new ways of doing things, knowledge, science, efficiency—all these—advance in the apparent nature of our world, sometimes with a beneficent front, sometimes as a Frankenstein, temporarily destructive of human rights. On the other hand, these very human rights are unquenchable, for in the long run they contain the very life of true efficiency itself.

RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION AND INDUSTRIAL ACCIDENTS.

CALIFORNIA.

The report of the California Industrial Accident Commission for the year 1913 and from January 1 to June 30, 1914, reviews the results of the operations of the law commonly known as the Roseberry Act (chapter 399 of the Laws of 1911) for the calendar year 1913, and also of the superseding act of 1913, known as the Workmen's Compensation, Insurance, and Safety Act, from the time it took effect, January 1, 1914, to June 30, 1914.

During the first six months following the passage of the new act 26,958 persons under its protection sustained injuries of greater or less degree. All of these injuries were compensable, at least to the extent of receiving medical and surgical treatment, but of this number only 3,438 persons were entitled to disability indemnity in addition to their medical and surgical treatment. A significant fact is that of these 3,438 who were entitled to indemnity there were only 323 instances in which controversies arose.

The number of controversies referred to the industrial accident commission (successor to the industrial accident board under the Roseberry Act) was a little more than 10 per cent of the compensable cases. This the commission regards as a very high average and constitutes, probably, double the percentage of controverted cases that will be encountered when employers and employees have come to know thoroughly their rights and obligations under the act. The commission hopes within two years, as a result of a thorough familiarization on the part of employer and employees with the terms of the act, to reduce the percentage of controverted cases to 2 per cent of the compensable cases.

The attitude of the commission with regard to certain points of trial procedure and evidence raised by practicing attorneys is frankly stated. Sometimes members of the bar in the State are unable to reconcile themselves to a procedure wholly different from that which characterizes trials in courts. They feel that unless they are permitted to conduct a case before the commission exactly as they would before a court they and their clients are unjustly and tyrannically treated. However, the commission holds that it is not a court and that hearings before it are not trials, but are in fact, as the term implies, "hearings," conducted by the commissioner or referee, at

which attorneys are given opportunity to bring out any material fact which in the course of the inquiry may not have been elicited from witnesses. Perhaps in 75 per cent of the cases there is no occasion for any attorney to be present on either side. In short, the commission desires to afford an object lesson as to how to determine issues of minor consequence with reasonable certainty, speedily, and without burdensome expenditure. But in issues of great importance the advice of attorneys will be welcomed.

The statute particularly provides that the commission shall not be bound by the technical rules of evidence in conducting its hearings. The commission permits itself to hear evidence that no court would permit a jury to hear, because it has faith in its ability to value such evidence, whether hearsay or not, at its true worth. The commissioners expect to be convinced by such evidence as in the common and practical affairs of everyday life would produce conviction in the minds of reasonable men and this is the standard that has been set for determining all issues. If the courts and the legislature will permit the commission to pursue this policy, it believes that substantial justice will be reached in practically all cases, with a minimum cost in time and money on the part of the State, employer, and employee.

The Workmen's Compensation, Insurance, and Safety Act defines permanent total disability and provides that in all cases of permanent partial disability the percentage of such partial disability to total disability must be determined by taking into account the nature of the physical injury or disfigurement, the occupation of the injured employee, and his age at the time of the injury.

The problem of devising a schedule or series of tables to be used in determining these percentages or ratings was intrusted to the permanent disability rating department, which after extensive investigation, inquiry, and research evolved a schedule that will answer practically all questions. In case of permanent injury it is possible to obtain a rating by consulting the schedule after determining three items: (1) The exact nature of the physical injury or disfigurement; (2) the occupation; and (3) the age of the worker at the time of the injury. The schedule is easy to apply and has apparently solved the problem of making settlements without the formality of hearings for the adjustment of claims before the industrial accident commission. (There are not more than two pages of explanations and almost any person can be instructed in its use in a few moments.) Instead of placing a fixed valuation on the different members of the body, the schedule actually considers the effect of the loss of earning capacity of the individual by including in the method of determination a discussion of all the vital factors which are capable of measurement, namely, the items of physical loss, occupation, and age.

In devising the schedule, an occupation and an age were adopted as standards by which to judge all other ages and occupations. The

ordinary unskilled laborer and the age 39 were taken as the standards. This occupation was taken because of the simple nature of the physical requirements placed upon different parts of the body by reason of the work performed. The age 39 was taken because statistical records show this to be the approximate average age of persons injured in California. In the study of functional loss and loss of competing ability, a list of some 300 permanent injuries was drawn up and submitted to the various State commissions and to prominent medical men in California, with a request for estimates of the effect of these injuries on the earning capacity of the standard man. With all of this material on hand a standard rating was created.

The permanent disability rating department exists to-day for the twofold purpose: (1) Of collecting and distributing further information concerning permanent disability, and (2) of approving permanent disability ratings which are made by parties concerned and submitted to the commission for approval. The department has investigated further classification of injury groups and some 800 new occupations, which information is now available to all who may apply.

Upon request by the industrial accident commission, a medical department was developed, partly to conduct the medical business of the commission, and partly to contribute to the smooth operation of the act by assisting organizations and individuals outside of the commission in medical matters pertaining to the law. While the commission has adopted a comprehensive "schedule of disabilities," it found it practically impossible to make any schedule complete, since the possible combinations of disability are almost unlimited. It was necessary in a large proportion of cases to have special consultations regarding the disability and to rate each case upon its merits.

The published rates for compensation insurance in California are roughly estimated at two and one-half times the former rates for employers' liability insurance. But in this comparison the commission directs attention to the fact that the rates for the latter form were based upon standard limits of \$5,000 for injury or death of one person, and \$10,000 for any one accident involving injuries or death of two or more persons, while the rates for compensation insurance provide covering for the unlimited liability of the employer. In estimating the real difference in the cost of liability and compensation insurance, account should be taken of all economies under compensation, such as increase in efficiency, saving of time and attorneys' fees, and the employers' proportion of expensive litigation. When all advantages under compensation are considered, the commission doubts whether there is any material difference, as compared with liability insurance, in the ultimate and actual cost to the employer.

The State compensation insurance fund as created in California competes with other licensed insurance carriers. It operates under the jurisdiction of the industrial accident commission, but conducts its business in a similar manner to other insurance carriers. The fund began business on January 1, 1914, with an appropriation of \$100,000 by the legislature. An additional sum of \$68,000 was appropriated for the use of the commission in defraying the initial expenses of the fund should it be unable to write a sufficient volume of business to pay this expense out of premiums received. However, the premium writings far exceeded the business expected.

The cost under policies of the fund is indicated in the financial statement by the amount expended for compensation and for medical and surgical attention, and by the liberally estimated cost of cases on which payments are still to be made. In California the theoretical pure premium cost is loaded about 30 per cent for medical aid. A suggested method of basing this charge more equitably is one involving accident frequency rather than the pay roll, as the cost of treating a worker earning \$5 per week averages the same as that for treating a worker earning \$20 per week.

The financial statement of the fund follows:

Statement of assets and liabilities June 30, 1914, of State compensation insurance fund.

ASSETS.	
Cash—	
State treasury	\$120,932.08
Bank	3,666.30
Office.....	75.00
	124,673.38
Bonds	294,425.00
Accrued interest.....	4,996.55
Premiums in course of collection.....	8,971.32
	8,971.32
Total assets.....	\$433,066.25
LIABILITIES.	
Estimated cost of compensation and statutory medical payments for accidents reported ¹ ..	45,494.50
Unearned premiums	193,959.22
Bills unpaid.....	1,008.27
Return premiums unpaid	74.69
	74.69
Total liabilities.....	240,536.68
Surplus.....	192,529.57
Appropriation, chapter 180, statutes 1913	100,000.00
Accumulated surplus 6 months ending June 30, 1914 ¹	92,529.57
	92,529.57
Total surplus	192,529.57

¹ If the statutory reserve (required for an annual report) of 72 per cent of earned premiums is used, the legal reserve would be increased to \$104,130.63. This would reduce the accumulated surplus for the six months to \$33 893.44, and the total net surplus, including appropriation, to \$133 893.44.

Statement of cash receipts and disbursements, January 1, 1914, to June 30, 1914, of State compensation insurance fund.

RECEIPTS.

Net cash actually received for premiums.....		\$370,305.70
Less—		
Premiums in course of collection.....	\$8,971.32	
Return premiums paid.....	2,944.49	
Return premiums unpaid.....	74.69	
	<hr/>	11,990.50
Net cash actually received for premiums.....		370,305.70
Interest received.....		325.00
Appropriation, chapter 180, statutes 1913.....		100,000.00
	<hr/>	
Net receipts.....		470,630.70

DISBURSEMENTS.

General—		
Expense.....	\$6,350.30	
Salaries.....	13,033.05	
	<hr/>	19,383.35
Claims department—		
Compensation.....	\$8,783.38	
Medical.....	12,844.50	
	<hr/>	21,627.88
Salaries and expenses.....	7,670.30	
	<hr/>	
Total.....		29,298.18
Net disbursements.....		48,681.53
Excess net receipts over net disbursements.....		421,949.17

The Workmen's Compensation, Insurance, and Safety Act gives the industrial accident commission power, under sections 51 to 72, inclusive, to make and enforce safety orders, rules and regulations, to prescribe safety devices, to fix safety standards, and to order the reporting of accidents. The same sections also provide for the review of the safety orders of the commission by the courts and for the establishment of museums of safety. More than 100 exhibits are on display in the safety museum established in San Francisco.

In providing safe conditions of employment in the mining industry the United States Bureau of Mines cooperated with the industrial accident commission. Forty-eight mines were visited during the six months, January 1 to June 30, 1914, and 282 safety suggestions made, affecting approximately 3,601 employees.

The reporting of accidents during 1913, as required by the industrial accident board, extended only to those which caused disability lasting more than seven days, and not including employees engaged in horticulture, farming, and similar pursuits. Accidents to the number of 12,031 were reported during 1913, of which 890 resulted in permanent injury and 555 resulted in death. Indemnity for temporary injuries amounted to \$395,824.83; for permanent injuries to

\$144,911.63, and for fatal injuries to \$183,546.15, making the total paid to employees \$724,282.61, or \$60.20 for each case reported. The expenditure for medical aid was \$147,700.99.

The average age of those killed was 39 years, and the average wage was \$18.78 per week. Figures as to average medical and compensation costs are not given, because information concerning payments of claims, medical, and burial expenses is not available in the majority of death cases.

Of the 698 cases of permanent injury, 381 were of such character as not to involve reduced earning capacity and were compensable on the basis of time lost in the same manner as temporary injuries. The average loss of time was 40 days. Settlements made in 240 cases amounted to \$40,564.39, or an average of \$169 per case. Medical expense in 258 cases amounted to \$15,357.77, or an average of \$59.52 per case. Of the 25,991 cases of temporary injury, only 3,438, or 13.23 per cent, were compensable cases, i. e., cases in which the disability extended beyond 14 days. Compensation paid in 2,991 cases amounted to \$110,511.25, or an average of \$36.94 per case.

Since January 1, 1914, 3,019 farmers, 484 employers of domestic labor, and 344 employers of casual labor have voluntarily accepted the provisions of the workmen's compensation, insurance, and safety act, bringing under its protection about 30,000 laborers.

Beginning January 1, 1914, the reporting of accidents as required by the industrial accident commission (successor to the industrial accident board) has extended to every employer of labor in the State, including domestic, farm, and casual labor, and including accidents causing disability lasting one day or more. The employer is required to make report within 7 days from date of accident, the attending physician within 10 days, and the insurance company within 14 days. A supplemental or final report is required of the employer and insurance company, but not from the physician except in case of death. The first supplemental report is due from the employer within 30 days after the accident and every 60 days thereafter until disability ends, at which time a final report is required from the insurance company.

During the six months ending June 30, 1914, 26,958 industrial accidents were reported to the commission. Of this number 5,837 were compensable, and compensation was allowed or paid in 3,250 cases, involving a total of \$187,183.53 paid by employers and casualty companies. This is an average of \$57.59 per case compensated. Medical aid amounting to \$155,157.87 was paid in 9,363 cases, or an average per case of \$16.57, and this does not include 7,135 cases where medical attention was provided by contract or company doctors. Of the total number of accidents reported, 25,991 resulted in temporary injury, 698 in permanent injury, and 269 in death.

MASSACHUSETTS.¹

The Massachusetts Legislature of 1914 by its resolve, chapter 160, provided for the appointment of a commission "to investigate the practices of insurance companies and their rates in workmen's compensation insurance and other insurance, with a view to determining whether or not any monopoly or combination exists in the insurance business; also whether the rates charged by insurance companies for workmen's compensation insurance and other insurance are reasonable, and to what extent government regulation of insurance rates is desirable."

Owing to limitations of time and funds, the commission confined its activities to a consideration of the subjects named in so far as they relate only to workmen's compensation insurance. The report is embodied in a pamphlet of some 90 pages, and discusses chiefly the questions of monopoly, reasonableness, and government regulation. A brief account is given of the underlying principles of workmen's compensation, and of the movement which resulted in the enactment of a law on this subject in Massachusetts. As originally drafted, and passed by the lower house of the State legislature, the insurance contemplated by the act was to be written exclusively by a mutual insurance corporation under the name of the Massachusetts Employees Insurance Association. The senate, however, amended the act so as to permit all liability insurance companies to write compensation insurance. At the date of the report (Apr. 22, 1915) there were 28 insurance companies authorized to write compensation insurance in the State. Though the act is elective, 85 per cent of the persons nonfatally injured between July 1, 1913, and June 30, 1914, were within the act, while of those fatally injured 72½ per cent were within the act. The experience on which the report is chiefly based is under the act as originally passed, an amendment which went into effect October 1, 1914, making changes which increased the benefits approximately 40 per cent over the provisions of the original act. This, of course, considerably affects the premium rates necessary to maintain a safe margin of insurance.

Taking up first the question of monopoly, the commission found that in the sense that a single company or a group of companies transacted all the business of this kind in the State, there was no such thing as monopoly, and yet found that there was an agreement between nearly all the stock companies writing insurance in the State "giving one man full authority to change compensation rates in Massachusetts alone for competitive purposes—a situation which is indefensible." It was found that practically all the companies were

¹ Report on Workmen's Compensation Insurance of the Commission to Investigate Practices and Rates in Insurance. Boston, 1915. 92 pp.

members of the Workmen's Compensation Service Bureau of New York, the others following the rates made by it, the sole exception being the Massachusetts Employees Insurance Association. The history of this service bureau is briefly traced, as well as the methods used in arriving at the rates promulgated by it. These methods were, in the absence of statistical data, necessarily experimental and subject to revision when the accumulation of material should enable a more accurate determination of rates.

As a result of disagreement over rates the members of the New York bureau authorized a single man to make such revision in Massachusetts as he should approve. Under this grant of authority changes affecting about 800 classifications were made and rates reduced, on the whole, about 15 per cent. Four series of rates have been in effect at different times under the Massachusetts law, one providing for the inception of business July 1, 1912; a revision in effect February 15, 1913; one in effect July 1, 1913; and the present rates as revised by the single insurance official effective on or before February 2, 1914. A table showing some of the principal classifications and rates at each of these periods discloses the very considerable reductions that have been made, though it is concluded that in some cases the reduction has been too extensive to meet safely the liabilities established by the amended law. On the basis of \$160 pay roll the rates for the respective dates named above were, for boot and shoe manufacturers, 80 cents, 56 cents, 40 cents, and 30 cents; for cotton and wool spinners and weavers they were 90 cents, 56 cents, 45 cents, and 35 cents; for street railway companies, electric (not interurban), \$6.75, \$5.06, \$4.50, and \$2.20. Not all the reductions were so striking or continuous, carpenters on construction work being rated at \$3.50 originally and at \$2.62 for each succeeding period; contractors, wooden residences, etc., \$2.50 originally and \$1.87 for each succeeding period, etc. The rates of the Massachusetts Employees Insurance Association were originally drawn for it by an independent authority, but on February 15, 1913, these were withdrawn and rates similar to those adopted by the stock companies on that date were also filed by it. As matters now stand, most of the rates charged by this association are higher than those charged by stock companies. Being on a mutual or participating basis, a part of the premiums may be returned if the actual cost of the insurance permits it.

The question of reasonableness, next discussed, necessarily involves the elements of cost and the margin for expenses and profit. The elements entering into cost are considered and the method of computation is taken up, with considerable attention to the question of expense and particularly with reference to that of getting business. On the latter point it is concluded that inasmuch as insurance is

practically compulsory, and nearly every employer stands ready to secure insurance without solicitation, the services of canvassing agents merely as such are of small value and that the usual allowance of 17½ per cent commission is unnecessarily large. It is said that the premium rates have in the past been obviously unreasonable, but that under the present terms of the law it is not so much a general reduction that is needed as an equalization of rates, so that each industry may contribute its proper proportion and none be excessively taxed. It developed from the evidence taken by the commission that employers in Massachusetts have saved over \$200,000 in premiums as a result of the rate reduction of February 2, 1914, and these are substantially the rates in effect today. It was also shown that the premiums earned by the insurance companies as a whole have been sufficient to pay all losses and provide for future contingencies and expenses.

It is maintained that the State has full power to regulate rates, a decision by the United States Supreme Court being cited in which the State's authority over fire insurance rates was broadly sustained, though it did not appear that the court would take the position that a company would be under obligations to write insurance at rates which it believed to be inadequate. The necessity of State supervision and regulation is affirmed with positiveness.

A portion of the report is devoted to consideration of a number of topics, as rate making, schedule rating, reserves, statistics, accident prevention, and reinsurance. The original dearth of data for accurate rate making is felt to be rapidly finding relief by reason of the wide experience afforded by such large industrial States as New York and others, although local conditions and special State provisions must always be given due consideration. A central rating bureau for the State is recommended, with power to (1) make the basic rates for all classifications of industries in the manual, approximately 1,500; (2) make inspections of individual risks, both for the determination of a proper classification and the assigning of a final rate on the basis of favorable or unfavorable facts disclosed by the inspection; (3) prevent discrimination in rates; and (4) hear appeals from employers dissatisfied with their rates. Emphasis is laid on the importance of schedule or merit rating, the uniform application of which is regarded as the most important function of a rate-making bureau. The principal aim of a workmen's compensation law is stated to be the prevention of injuries rather than their compensation, for the accomplishment of which schedule rating, uniformly applied, is declared the most powerful instrument. Testimony before the commission led to the conclusion that fully 50 per cent of accidents in Massachusetts and in the country at large can be prevented. One instance of a remarkable result in a highly developed campaign for

accident prevention is specifically cited, showing that in three years, 1911 to 1913, inclusive, 6,308 employees were saved from serious injury, representing a gross saving in casualty expense of \$4,775,-692.64. The expenditures for safety work during this period were \$2,003,712.29, making a net saving to the corporation of \$2,771,980.35. Other cases are given in which the saving in casualty expense has been from 22 to 70 per cent. The question of reserves is only tentatively discussed, the conclusion being that until experience accumulates the subject can not be definitely acted upon, though the tendency hitherto is found to have been toward underestimates. The importance of uniform statistics, and the practical necessity of reinsurance of catastrophe hazards, are touched upon. An outline is given as to what are regarded as essentials in a statistical presentation of the operations of workmen's compensation laws.

The concluding portion of the report presents a series of six bills recommended for enactment for the accomplishment of the purposes found by the commission to be desirable. These relate to the establishment of a rate-making bureau by the companies writing compensation insurance in the State, the supervision of such bureaus by State authorities, the approval of the forms of compensation insurance policies by the State insurance commissioner, the filing of liability rates and classifications with the commissioner, the prohibition of discrimination between insurers, and the reinsurance of compensation risks in other companies than those authorized to transact business within the State. So far as is known at the date of this publication but one of these recommendations resulted in the enactment of a law, that requiring that the forms of workmen's compensation insurance policies shall be subject to approval by the State insurance commissioner.

WASHINGTON.

The third annual report of the Washington Industrial Insurance Department for the 12 months ending September 30, 1914, reviews, in a pamphlet of 125 pages, the operations of the Workmen's Compensation Act from the day it took effect, October 1, 1911, to September 30, 1914. The report is made up of reports by the secretary of the three commissioners (constituting the industrial insurance department) and the chiefs of the audit, claim, medical, and statistical divisions.

The report of the chief medical advisor, constituting about 30 pages of the department's report, gives in text form the data with regard to 12,586 claims adjudicated under the terms of the act for the year ending September 30, 1914, and also discusses "peculiar claims with findings and results," "appeal cases," and "partial list of rejections."

During the year ending September 30, 1914, there were 15,089 accidents reported to the commission. Of this number 807 were found

to have no basis for compensation as provided under the act. The number so rejected, and the reasons therefor, are as follows:

- 197. Disability not result of accident.
- 188. Where the employment was in nonhazardous occupations not under the act.
- 165. Where the time loss was less than 5 per cent.
- 161. No proof that accident occurred in the course of employment.
- 66. Accidents received while not in the course of employment.
- 15. Claim not filed within the time limit of 1 year.
- 10. Compensated in full for time loss by employer.
- 5. Not paid because claimant settled with third party.

With a word of explanation, the foregoing second and third reasons for rejecting a claim may be better understood.

The act itself states that there is a hazard in all employment, but certain employments have come to be recognized as being inherently constantly dangerous, and it enumerated a list which, it states, is intended to embrace all such hazardous works and occupations, termed in the act "extra hazardous." What the list is may be seen from the financial statement showing condition of the accident fund to April 1, 1915 (p. 51). The act further states that if there be or arise any extra hazardous occupation or work other than those enumerated, it shall come under the act, and its rate of contribution to the accident fund, until fixed by legislation, shall be determined by the industrial insurance department.

As to compensation, the act states that none shall be paid unless "the loss of earning power shall exceed 5 per cent." In practice, the commission has interpreted this to mean 1½ days, i. e., 5 per cent or one-twentieth of a month of 30 days.

The table following presents the principal figures compiled from the chief medical adviser's report concerning the 12,586 claims allowed for temporary total disability during the year ending September 30, 1914:

CLAIMS ALLOWED INVOLVING TEMPORARY TOTAL DISABILITY, AVERAGE DURATION OF DISABILITY, AND AWARDS, UNDER THE WORKMEN'S COMPENSATION ACT FOR THE YEAR ENDING SEPTEMBER 30, 1914.

Injury.	Claims allowed.	Permanent disability.		Average disability duration (days).	Average time loss award.
		Number of cases.	Total awards.		
Fractures.....	1,455	284	\$81,612.50	65.4	\$39.54
Amputations.....	461	461	107,862.50	43.6	62.58
Infections.....	743	45	6,837.50	20.7	27.96
Scalds and burns.....	286	9	5,925.00	21.7	30.88
Cuts.....	2,542	192	36,131.25	18.2	25.17
Sprains.....	1,234	28	5,250.00	23.2	33.12
Puncture wounds.....	503	18	7,837.50	14.8	21.06
Bruises.....	4,285	111	25,875.00	19.6	27.41
Multiple injuries.....	574	135	47,275.00	56.7	76.22
Dislocations.....	153	25	6,000.00	45.6	64.30
Unclassified.....	350	170	73,850.00	39.2	59.75
Total.....	12,586	1,478	406,456.25	28.4	39.42

This table, which does not show total disability duration or total time loss awards, includes all injuries which have been paid under the act, but does not include death claims and pensions. These 12,586 compensated injury cases represent a loss of 357,010 working days, or an average of 28.4 per case. The allowance for time loss aggregated \$496,154.43, or an average of \$39.42 per claim. There were 1,478 permanent disability cases during the year, with a disability award of \$406,456.25, or an average per claim of \$275. The total amount paid, including time loss and permanent disability awards, was \$902,610.68, or an average of \$71.72 per claim for the entire year. For the year ending September 30, 1913, the total average per claim was \$70.92, or only 80 cents less per claim. The permanent disability award for the fiscal year 1913 averaged \$287.49 per claim, or \$12.49 less in 1914 than in 1913.

The table following shows the number and per cent of the 12,586 cases of temporary total disability lasting each classified number of weeks:

NUMBER AND PER CENT OF TEMPORARY TOTAL DISABILITY CASES LASTING EACH CLASSIFIED NUMBER OF WEEKS, FOR THE YEAR ENDING SEPT. 30, 1914.

Duration of disability (weeks).	Temporary total disability cases.		Duration of disability (weeks).	Temporary total disability cases.	
	Number.	Per cent. ¹		Number.	Per cent. ¹
Under 1 week.....	1,816	14.8	15 and under 16.....	41	0.4
1 and under 2.....	3,138	24.9	16 and under 17.....	27	.2
2 and under 3.....	2,175	17.4	17 and under 18.....	118	.9
3 and under 4.....	1,262	10.0	18 and under 19.....	26	.2
4 and under 5.....	1,164	9.2	19 and under 20.....	29	.2
5 and under 6.....	555	4.4	20 and under 21.....	10	.1
6 and under 7.....	469	3.7	21 and under 22.....	77	.6
7 and under 8.....	277	2.2	22 and under 23.....	23	.2
8 and under 9.....	349	2.7	23 and under 24.....	19	.1
9 and under 10.....	150	1.1	24 and under 25.....	15	.1
10 and under 11.....	157	1.1	25 and under 26.....	74	.6
11 and under 12.....	91	.7	26 and over.....	201	1.6
12 and under 13.....	225	1.8			
13 and under 14.....	47	.4	Total.....	12,586	100.0
14 and under 15.....	51	.4			

¹ These percentages are taken from the report, and while they total 100 per cent, they are not accurate in individual cases.

There were 324 death claims filed for compensation for the year ending September 30, 1914. Of these, 87 were due to injuries to the head; 59 to injuries to the body, mangled or crushed; 37 to fracture of the spine; 28 to traumatic shock; 25 to drowning; 41 to hemorrhage and internal injuries; and the remainder to various other causes. Seventy-four claims from the previous year were unadjusted, making a total of 398 death claims. Of this number, 51 remained undisposed of on September 30, 1914. Pensions were awarded in 172 cases, which include 13 cases acted upon in the previous year and reopened. Thirty-two cases were rejected for cause and 156 were suspended because there were no dependents or they could not be found.

Apart from the department's annual report, the commission has issued a 40-page folder showing the condition of the accident fund from October 1, 1911, to April 1, 1915. Slightly condensed, the financial statement is as follows:

STATEMENT OF INDUSTRIAL INSURANCE COMMISSION OF THE STATE OF WASHINGTON, SHOWING CONDITION OF THE ACCIDENT FUND FROM OCTOBER 1, 1911, TO APRIL 1, 1915.

Industry.	Class.	Number of firms.	Number of workmen (estimated).	Total amount paid in.	Total amount paid out. ¹	Balance in fund.	Deaths requiring pensions.	Basic rate (per cent).	Average rates per annum per \$100 of pay roll for the 3 years 1912 to 1914.
Construction.									
Sewers and tunnels....	1	235	5,317	\$127,864.68	\$64,667.06	\$63,197.62	8	(²)	(³)
Bridges and towers....	2	138	2,512	70,114.37	52,163.00	17,951.37	7	(²)	(³)
Pile driving.....	3	90	643	28,775.51	26,753.14	2,022.37	3	(²)	(⁴)
General construction..	5	2,734	19,581	338,153.37	290,885.44	47,267.93	35	(²)	(⁵)
Electric, gas, and water works.....	6	370	4,702	197,582.99	118,814.47	78,768.52	26	(²)	(⁵)
Railroads.....	7	340	10,252	445,408.47	412,186.89	33,221.58	69	5.0	\$2.78
Street and road work..	8	710	18,523	195,930.35	133,883.06	62,047.29	17	(²)	(⁶)
Shipbuilding.....	9	20	542	30,863.95	20,610.79	10,253.16	2	(²)	(⁷)
Operations.									
Lumber, milling, etc..	10	1,972	63,282	2,010,052.82	2,002,671.18	7,381.64	243	2.5	1.875
Dredging.....	12	17	294	16,472.21	5,361.99	11,110.22	.....	5.0	1.39
Electric systems.....	13	143	2,815	84,182.7 ²	61,324.01	22,858.73	12	4.0	2.33
Street railway.....	14	27	3,645	88,308.50	69,885.50	18,423.32	7	3.0	.75
Telephone and telegraph.....	15	70	478	27,242.49	19,365.83	7,876.66	4	3.0	1.50
Coal mining.....	16	52	6,905	394,812.95	384,640.87	10,172.08	54	3.0	2.167
Quarries and metal mines.....	17	220	2,268	85,914.01	87,329.14	⁸ 1,415.13	13	3.0	1.83
Smelters.....	18	7	848	39,085.17	36,656.54	2,428.63	1	3.0	1.50
Gas works.....	19	12	476	12,820.79	7,646.02	5,174.77	1	3.0	.75
Steam.....	20	5	60	3,644.86	2,508.98	1,135.88	1	3.0	1.75
Grain elevators.....	21	226	2,227	33,700.05	30,354.38	3,345.67	1	2.0	.56
Laundries.....	22	179	2,935	20,021.68	18,777.99	1,243.69	1	2.0	.33
Waterworks.....	23	150	1,637	16,875.12	11,924.56	4,950.56	3	2.0	1.17
Paper mills.....	24	4	686	33,293.56	30,132.19	3,161.37	3	2.0	1.67
Garbage works.....	25	8	145	5,147.42	2,445.65	2,701.77	.....	2.0	.83
Factories.									
Woodworking.....	29	309	4,550	139,286.20	121,877.40	17,408.80	4	2.5	1.25
Cement manufacturing	31	108	1,350	38,133.66	35,321.66	2,812.00	7	2.5	1.46
Fish canneries.....	33	48	5,972	55,439.87	28,794.20	26,645.67	3	3.0	1.00
Steel manufacturing foundries.....	34	660	5,016	109,838.91	107,129.88	2,709.03	9	2.0	.78
Brick manufacturing..	35	52	1,410	19,506.16	13,421.76	6,084.40	3	2.0	.50
Breweries.....	37	83	1,067	30,042.69	17,497.42	12,545.27	1	2.0	.83
Textile manufacturing.	38	157	1,929	15,174.12	9,482.48	5,691.64	2	1.5	.375
Foodstuffs.....	39	106	1,796	11,449.61	11,260.83	188.78	1	1.5	.375
Creameries.....	40	108	736	5,869.53	2,793.58	3,075.95	.....	1.5	.21
Printing.....	41	370	2,275	12,873.62	7,285.17	5,588.45	.....	1.5	.10
Miscellaneous.									
Longshoring.....	42	90	2,593	86,389.80	83,892.20	2,497.60	7	3.0	2.25
Packing houses.....	43	33	594	19,833.94	12,155.85	7,678.09	1	2.5	.83
Ice manufacturing....	44	63	405	11,380.05	6,476.30	4,903.75	.....	2.0	1.00
Theater employees....	45	24	147	2,076.76	297.10	1,779.66	.....	1.5	.50
Powder works.....	46	5	181	1,248.38	13,841.66 ⁸	12,593.28	9	10.0	.....
Creosoting works.....	47	9	176	5,753.38	3,930.40	1,822.98	.....	2.5	1.39
Nonhazardous elective.	48	57	717	7,160.42	6,821.88	338.54	1	1.35	.56
Total.....		10,011	181,687	4,877,725.16	4,372,768.13	504,957.03	559	.....	.....

¹ This column is a consolidation of three columns shown in the statement, viz: Claims paid, with a total of \$2,872,213.64; reserve to pay pensions, with a total of \$1,464,670.99; and refund of excess contributions, i. e., to employers retiring permanently from business, total \$35,883.50.

² Various.

³ 61.11 per cent of basic rate provided in the act. Assessed rates are so expressed in this class because different rates are required on the several kinds of work listed.

⁴ 80.56 per cent of basic rate provided in the act. See note 3.

⁵ 55.56 per cent of basic rate provided in the act. See note 3.

⁶ 55.55 per cent of basic rate provided in the act. See note 3.

⁷ 41.67 per cent of basic rate provided in the act. See note 3.

⁸ Overdraft deducted from total cash balance. Act effective Oct. 1, 1911. Basic rates charged on full pay roll for October, November, and December, 1911.

The Washington State insurance plan is costing the Washington employers approximately \$1,000,000 annually, every cent of which goes to injured workmen or their dependents. It is costing the general taxpayers approximately 7 per cent of this amount annually to have the law administered. Liability companies admit that it costs them from 40 to 60 per cent to do business, the increased cost being due to agents' commissions, salaries, rents, etc. The difference in cost of doing business must of necessity be borne either by the employer in increased premiums or by the injured workman in decreased compensation.

The total number of accidents reported to April 1, 1915, was 49,256, disposed of as follows:

Final settlements (not including 550 claims reopened for additional awards).....	36,127
Fatal cases.....	1,038
Total permanent disabilities.....	31
Rejections for cause.....	2,221
Suspensions, various reasons.....	8,790
Claims in process of assembly and adjustment.....	764
Continued monthly payment.....	260
Partial payments on account of reduced earning power.....	25

During the same period the average award for nonfatal claims was \$75.60; the number of firms operating under the act was 10,011, these firms employing 181,687 persons.

Some amendments to the Workmen's Compensation Act were passed by the 1915 legislature, of which the following is a synopsis:

All delinquent payments to bear 12 per cent interest.

Every employer who shall enter into business on any intermediate day or who shall resume operations after final adjustment of his pay roll has been made shall furnish the department with an estimate of his pay roll before commencing such operations. Failure to comply with this provision subjects him to a severe penalty.

Attending physician may be compelled to testify before the court on appeal cases.

Commission may require claimants to submit themselves for medical examination. Refusal on the part of the claimant to submit to such an examination is sufficient cause for suspension of his claim.

Court is empowered to enforce the attendance of witnesses and the production and examination of books, papers, and records before the department.

Failure to comply with any rule of the department subjects the offender to a fine of \$250.

Report of accident must be made at once to the employer and to the industrial insurance commission.

Commission has the power to divide, rearrange, or consolidate any class or classes, making such adjustment or transfer of funds as it may deem proper.

The commission has ruled, effective June 1, 1915, that the operations of retail lumber yards, fuel yards, storage warehouses, or warehouses in connection with a mercantile establishment, transfer companies employing teamsters, truck drivers, handlers of freight, auto-truck drivers and helpers be declared within the scope of the act and listed in class 21 at a basic rate of 2 per cent.

WISCONSIN.

The Wisconsin statutes provide that every insurance company operating under the Workmen's Compensation Act shall make and file with the industrial commission an annual statement of its business and accident experience. The law also provides for the filing of various other reports. In addition, the commission requires a quarterly report of accident and compensation experience from employers carrying their own risk. A bulletin¹ has been compiled from these records and is also part of the commission's fourth annual report on workmen's compensation.

Some 12,000 employers, with approximately 160,000 workmen, are insured under the Wisconsin compensation act. These numbers represent 96 per cent of all employers and about two-thirds of all employees subject to the act. Insurance companies during 1914 collected approximately \$1,834,000 of compensation premiums and assumed liability for \$927,000 of compensation and medical aid—about three-fourths of all benefits paid or payable under the act.

The cost of compensation insurance to most employers is determined by insurance rates and comprises compensation benefits, including indemnity for accidental injuries and medical care of injured workmen, and the expenses of management or overhead cost of doing business. This form of insurance exists for the purpose of taking care of work injuries. The expenses of management are simply the middleman's cost of carrying indemnity and medical aid for injured workmen and their families.

The report emphasizes the economical management of mutual companies in the State. Five such companies organized under the laws of Wisconsin transacted 20 per cent of the total compensation insurance in 1914. These mutual companies provided insurance at actual cost, and the excess of premiums over compensation benefits and management expenses, amounting to 22 per cent, was returned to the policyholders. Their combined expense ratio in 1914 was 18

¹ Industrial Commission. Workmen's Compensation Insurance. Bulletin, issued June 1, 1915. 47 pp.

per cent of earned premiums. The greatest saving in expense as compared with other companies was effected in the adjustment of claims and in the selling cost. Claim adjusters received but 1 cent on the dollar of benefits, while those connected with stock companies received 12 cents. This, however, did not affect the prompt settlement of claims. Only 26 per cent of the indemnity incurred during the year was outstanding on December 31, as compared with 45 per cent for stock companies. Saving in selling cost was more noteworthy. Stock companies as a whole spent 18 per cent of premiums for agents' commissions alone, whereas one mutual company with a selling cost of only 4 per cent of premiums wrote more Wisconsin business by 50 per cent than any stock company. The commission expresses the belief that employers can solve the problem of economical insurance for themselves. Had all compensation insurance during 1914 been carried in Wisconsin mutuals it is stated that the net saving to employers would have been over \$500,000 of the premiums actually paid.

Stock or old-line companies wrote the great bulk—about 78 per cent—of compensation insurance in Wisconsin in 1914. Of 26 such companies, 20 were associated in the so-called bureau (formerly called "conference"), a combination which maintains uniform rates and uniform merit rating among its members. The bureau also provides joint statistical, actuarial, and engineering service for the purposes of rate making and accident prevention. Their combined expense ratio was 38 per cent of earned premiums and 79 per cent of compensation benefits.

Four interinsurance companies, commonly called "exchanges," operated during 1914. The subscriber at such an exchange receives insurance to a stated amount and becomes liable to a limited assessment, commonly twice the amount of his annual premium. Any excess of ordinary premiums over what is required to cover compensation claims and expenses of management is returned to the subscribers. But the subscribers (policyholders) have little or no voice in the management of the exchange and no control over the cost of operation. Business is transacted through a self-appointed manager, called attorney in fact, whose pay is a stipulated commission, usually 30 per cent of all premiums collected. His services consist mainly in soliciting subscriptions. The combined expense ratio of these exchanges in 1914 was 42 per cent of earned premiums.

The table following is presented as showing for each group of companies just what became of the employer's dollar.

RATIO OF EXPENSE, BENEFITS TO WORKMEN, AND SURPLUS OF EACH SPECIFIED GROUP OF INSURANCE COMPANIES IN WISCONSIN, 1914.

Company.	Adjustments.	Agents.	Other expenses.	Benefits to workmen. ¹	Surplus to policyholders.	Total per cent.
Wisconsin mutuals.....	8	4	6	60	22	100
Stock.....	6	18	14	48	2 14	100
Interinsurers.....	5	(³)	437	39	19	100
Foreign mutuals.....	4	(³)	433	66	6 3	100

¹ Includes indemnities and medical aid.

² To stockholders.

³ Included in "other expenses."

⁴ Including per cent chargeable to "agents."

⁵ Deficit.

Under section 2394-24-2 of the Wisconsin statutes an employer may obtain exemption from the insurance requirement of the compensation act by making proper showing of his financial ability to carry his own risk. During the year 1914, 525 employers availed themselves of this provision. They employed 81,232 workmen, with an aggregate pay roll of \$53,461,687. The total cost of compensation for all classes together averaged 60 cents per \$100 pay roll. Making liberal allowance for merit rating, mentioned in the following paragraph, the net saving to these employers as compared with the cost of compensation insurance otherwise obtained exceeded \$500,000. In connection with this low cost of compensation insurance to employers carrying their own risk, the report notes that the bulk of the pay roll is represented by a relatively small number of large employers, and these latter, without exception, have through thorough safety organizations reduced accidents to the minimum. Under the Wisconsin law compensation for partial disability is 65 per cent of loss of earning power. Thus an employer who carries his own risk often finds it advantageous to put an injured man at some lighter task and pay him full wages before he is able to do full work at his regular occupation.

There are wide differences in hazard as between different establishments in the same industry. A modern planing mill, in thorough repair, with up-to-date equipment, safeguarded according to the most approved standards, with a live safety organization and a management interested in accident prevention, has a very much lower hazard than a planing mill which reverses these characteristics. Merit rating takes account of these facts. In lieu of one flat rate for an entire industry, it seeks to adjust the rate of each employer to the hazard of his particular establishment. This is done by a regular schedule of charges and credits for conditions which tend to produce or prevent accidents, thus through the insurance rates penalizing the careless employer and rewarding the careful one. The system was introduced in Wisconsin in the latter part of 1913.

In connection with merit rating the report mentions one bad practice that has grown up. Investigations made by the commission disclosed that liberal credits had been granted for superior orderliness, cleanliness, and safety organizations in plants where conditions exactly the reverse obtained. Merit rating on the whole operated to reduce insurance premiums, because the credits greatly exceeded the charges. The average reduction upon all risks, including contractors and others not subject to merit rating, was about 10 per cent.

As to insurance rates in Wisconsin, the law, recognizing the obligation of the State to protect employers against excessive charges and unfair discrimination, requires that every insurance company shall file with the industrial commission its risk classifications and premium rates, forbids the writing of insurance except in conformity with the classifications and rates so filed, and prohibits discrimination between insured in the same class and degree of hazard. Since the mere filing of these rates with the commission was of little practical value to employers, actual publicity was given them by the distribution of comparative tables and by correspondence in reply to inquiries. In order that the commission might be assured that the rates were being adhered to, it required a detailed report of every policy issued. These reports were checked with the rates on file, and 45 discrepancies were ordered corrected. As a result of this system, refunds ranging in individual amounts from a few dollars to \$4,000 were directed. It was found that there had been a great want of uniformity in the classification of like industries by the same insurance companies. To remedy this condition, and in conformity to law, the commission issued numerous rulings interpreting insurance classifications. One such ruling, for example, required that the employees in a lumber yard connected with a sawmill should take the lumber yard rate. It was found difficult to determine accurately, because of insufficient statistical experience, the relative hazards of different industries in order that rates might be proportioned justly. Rates discriminatory in themselves are forbidden by law, and the commission found it necessary to issue rulings remedying this condition in several instances. In general, the effect of these rulings was to reduce the rate on most classes of retail stores by $33\frac{1}{3}$ per cent and the rate on agricultural machinery manufacturing from \$2.96 to \$1.79.

The table following gives figures with regard to compensation incurred and premium rates.

WISCONSIN COMPENSATION INSURANCE EXPERIENCE ON AUDITED POLICIES BY INDUSTRY CLASSES, 1914.

Industry class.	Audited pay roll.	Earned premium.	Compensation incurred.	Number of accidents.	Premium rate collected.	Pure premium.	Bureau base rate.
Mining and quarrying.....	\$757,100	\$34,817	\$15,734	255	\$4.59	\$2.04	\$6.26
Chemical manufacturing.....	767,900	10,105	4,881	143	1.32	.64	1.59
Earth and stone working.....	1,834,400	27,104	13,291	582	1.48	.73	2.01
Food, beverages, and tobacco manufacturing.....	9,452,200	127,383	62,486	1,808	1.35	.66	1.70
Leather working.....	5,212,100	48,729	19,450	885	.94	.37	.70
Metal working.....	15,904,800	230,934	122,112	6,699	1.46	.77	1.72
Paper manufacturing.....	5,879,200	103,034	58,322	2,389	1.75	.99	1.93
Textile manufacturing.....	4,557,100	27,419	8,854	420	.60	.19	.....
Vehicle manufacturing.....	1,886,500	21,289	6,480	854	1.13	.34	.95
Woodworking.....	16,935,500	390,401	230,190	5,925	2.30	1.36	3.70
Miscellaneous manufacturing.....	4,768,200	55,076	16,679	889	.....	.....	.....
Construction.....	12,323,700	391,578	193,416	2,792	3.17	1.57	3.54
Public utilities.....	744,000	29,543	15,620	177	3.97	2.10	4.89
Transportation.....	5,302,700	121,354	78,737	1,316	2.29	1.48	2.65
Trade.....	12,852,200	112,101	50,453	1,381	.87	.39	.73
Miscellaneous industries:							
Clerical office work.....	9,312,465	24,442	932	80	.26	.01	.09
Collectors and salesmen.....	803,900	4,703	6,583	36	.59	.82	1.17
Farming.....	647,800	8,539	4,466	92	1.32	.69	1.57
Gardening.....	232,500	3,264	718	16	1.40	.31	.92
Hotels and restaurants.....	1,151,200	12,158	4,155	121	1.06	.36	.67
Ice harvesting.....	130,700	4,150	1,535	98	3.18	1.18	4.90
Janitor work.....	1,877,900	19,802	7,526	118	1.05	.40	1.40
All industries.....	113,498,500	1,730,510	1,926,323	126,520	1.53	.82	1.90

¹These totals are correct for all industries, but are not the totals of the items because some minor industry classes are included which are not shown separately.

This table shows the completed experience by industry classes on policies which were issued in 1913, and on which, consequently, a full year had elapsed December 31, 1914. Employers carrying their own risks were not included. The pay rolls and earned premiums were determined by actual audits. The compensation incurred was determined as of February 1, 1915. Only 15 per cent of the compensation incurred was reported as outstanding on that date. Hence the cost of compensation ought not to be materially affected by subsequent developments. The table was made up from individual policy reports and both the compensation cost and the classifications were checked with other records of the commission.

In column 3 the total compensation incurred includes both the indemnity and medical benefits paid or to be paid on account of accidents which occurred while these policies were in effect. The total accidents reported include all those reported to the insurance companies by the insured. About two-thirds of these accidents caused more than one day's loss of time (tabulatable accidents) and about one-third caused disability for more than 1 week (compensable accidents). These figures are not of much value for comparison of accident rates because some employers are much more careful than others to report all accidents and some insurance companies are careless in filling out the number of accidents on each policy.

The interesting and important feature of this table is the difference between the average pure premium—that is, the actual cost of

compensation per \$100 of pay roll—and the average bureau base rate, the former being 82 cents and the latter \$1.90. The commission thinks it is fair to assume some underestimate of outstanding liabilities on the part of insurance companies, which would increase the pure premium to perhaps 85 cents; also that merit rating would probably reduce the actual bureau rates to an average of about \$1.70. This would leave a margin of 85 cents, or 50 per cent of net premiums, for management expenses, underwriting profit, and catastrophe reserves. Expenses and profits should not exceed 50 per cent of compensation, or 33½ per cent of net premiums. Thus, even assuming an average pure premium of 90 cents, an average base rate of \$1.50 should be ample, in the opinion of the commission, to cover all legitimate costs after making full allowance for merit rating reductions.

The premiums collected (column 5) average substantially less than the bureau base rates (column 7), not only on account of merit rating reduction, but also because more than 40 per cent of the total volume of insurance was carried by mutual and nonbureau stock companies.

In the following table are presented the accidents reported by insurance companies during 1914, classified by nature and extent of injuries. With all injuries represented by 100, the per cent of tabulatable injuries (those causing more than one day's loss of time) and of compensable injuries is given; with the tabulatable injuries represented by 100, the per cent of compensable injuries and of all injuries is given, and with compensable injuries represented by 100, the per cent of all injuries and of tabulatable injuries is given:

COMPENSATION INSURANCE ACCIDENT CLAIMS REPORTED UNDER THE WISCONSIN WORKMEN'S COMPENSATION ACT, 1914, BY NATURE AND EXTENT OF INJURY.

Line number.	Nature of injury.	Number of claims.	Per cent of permanent partial.	Per cent of all claim notices.	Per cent of tabulatable injuries.	Per cent of compensable injuries.
1	All injuries.....	30,651	.....	100.0	153.0	315.0
2	Tabulatable injuries ¹	20,191	.....	66.0	100.0	208.0
3	Compensable injuries ²	9,720	.....	31.7	48.2	100.0
4	Fatal.....	121	.....	.4	.6	1.2
5	Permanent.....	528	.....	1.7	2.6	5.4
6	Temporary ³	19,525	.....	64.0	97.0	201.0
7	Undetermined.....	17	.....	.05	.08	.17
8	Fatal, with dependents.....	82	.....	.27	.4	.84
9	Fatal, without dependents.....	39	.....	.13	.19	.4
10	Permanent total.....	2	.....	.....	.01	.02
	Permanent partial.....	526	100.0	.....	.....	.....
11	Enucleation of one eye.....	10	1.9	.....	.....	.....
12	Blindness of one eye.....	30	5.7	.....	.....	.....
13	Deafness of one ear.....	2	.4	.....	.....	.....
14	Facial disfigurement.....	1	.2	.....	.....	.....
	Loss of:					
15	Arm at shoulder.....	4	.8	.....	.....	.....
16	Arm at elbow.....	5	1.0	.....	.....	.....
17	Hand.....	7	1.3	.....	.....	.....
18	Palm.....	1	.2	.....	.....	.....
19	Thumb and metacarpal.....	5	1.0	.....	.....	.....
20	Thumb at proximal.....	12	2.3	.....	.....	.....

¹ Tabulatable injuries are those which cause disability extending beyond the day, shift, or turn on which the accident occurs.

² Compensable injuries, under the law, are those in which disability extends over more than 7 days.

³ This is a total of lines 49 to 51.

COMPENSATION INSURANCE ACCIDENT CLAIMS REPORTED UNDER THE WISCONSIN WORKMEN'S COMPENSATION ACT, 1914, BY NATURE AND EXTENT OF INJURY—Con.

Line number.	Nature of injury.	Number of claims.	Per cent of permanent partial.	Per cent of all claim notices.	Per cent of tabulatable injuries.	Per cent of compensable injuries.
	Loss of—Concluded.....					
21	Thumb at second.....	32	6.1			
22	Index and metacarpal.....	2	.4			
23	Index at proximal.....	27	5.1			
24	Index at second.....	34	6.5			
25	Index at distal.....	63	12.1			
26	Middle finger and metacarpal.....	3	.6			
27	Middle finger at proximal.....	8	1.5			
28	Middle finger at second.....	32	6.1			
29	Middle finger at distal.....	44	8.3			
30	Ring finger and metacarpal.....	8	1.5			
31	Ring finger at proximal.....	13	2.5			
32	Ring finger at second.....	27	5.1			
33	Ring finger at distal.....	25	4.7			
34	Little finger and metacarpal.....	6	1.1			
35	Little finger at proximal.....	8	1.5			
36	Little finger at second.....	11	2.1			
37	Little finger at distal.....	15	2.8			
38	All fingers of one hand.....	4	.8			
39	Leg at knee.....	6	1.1			
40	Foot.....	4	.8			
41	Great toe and metatarsal.....	2	.4			
42	Great toe at proximal.....	1	.2			
43	Great toe at second.....	2	.4			
44	Lesser toe and metatarsal.....	3	.6			
45	Lesser toe at proximal.....	5	1.0			
46	Lesser toe at second.....	2	.4			
47	All toes of one foot.....	1	.2			
48	Permanent partial, not otherwise classified ¹	61	11.5			
49	Temporary total, over 1 week.....	9,039		29.5	44.8	92.9
50	Temporary partial, over 1 week.....	15		.05	.07	.15
51	Temporary total, not over 1 week ²	10,471		34.1	51.7	107.7
52	Nontabulatable.....	10,460		34.0	52.0	107.0

¹ These are injuries causing permanent partial disability other than injuries specifically enumerated in the Wisconsin Workmen's Compensation Act.
² These are tabulatable but are noncompensable. They require medical aid only.

The following is a condensed statement of the business of insurance companies in Wisconsin under the workmen's compensation law. These totals do not necessarily agree with those in the table on page 57, for the reason that this table is made up from reports filed with the commission, while the other table includes only audited policies.

STATEMENT OF INSURANCE COMPANIES UNDER WISCONSIN WORKMEN'S COMPENSATION ACT, 1914.

Insurance companies.	Net premiums.	Earned premiums.	Compensation and expenses incurred.							Per cent of earned premium.	
			Compensation.				Expenses.				
			Indemnity. ¹	Medical benefits. ¹	Total. ¹	Per cent of earned premiums.	Amount.	Per cent of earned premiums.	Per \$1 of compensation.		Total.
Wisconsin mutuals	\$382,755	\$348,854	\$134,900	\$73,616	\$208,516	60	\$62,096	18	0.30	\$270,612	78
Interinsurers and foreign mutuals...	75,056	60,444	21,169	10,069	31,238	52	24,052	40	.77	55,290	92
Stock companies...	1,349,457	1,424,278	472,506	215,172	687,678	48	540,674	38	.79	1,228,352	86
Total.....	1,807,268	1,833,576	628,575	298,857	927,432	51	626,822	34	.67	1,554,254	85

¹ Includes both the amount paid and that outstanding.

The fourth annual report of the operation of the Wisconsin Workmen's Compensation Act, issued by the industrial commission of that State and covering the period from July 1, 1914, to June 30, 1915, shows that the number of workers voluntarily placing themselves under the act during the year was approximately 13,000. It also states that the number of employers under the protection of the act exceeded 250,000.

Of the industrial accidents occurring during the year in establishments employing 4 or more persons, 99.5 per cent were subject to compensation. During the year 11,191 accidents were reported, and 11,377 cases settled—10,534 directly between the parties, 804 after hearing by the commission, and 39 cases were carried to the courts. The aggregate paid out as benefits and medical treatment was \$1,254,654, of which \$945,045 was for indemnity and \$309,609 was for medical aid. The cost of administration for the year was \$13,771, or \$1.21 per case settled, being a little over 1 per cent on the amount of benefits paid. In 1914 the total cost, including insurance premiums, to employers was \$2,150,000, approximately 63 per cent of which was paid as compensation and medical care. Thus it cost employers \$795,346 to pay \$1,354,654 in indemnities and medical benefits, or an expense of 58.7 cents for every dollar of compensation.

The report cites a few typical cases showing the awards made by the commissioners during the year.

The table following is a summary of the operations of the compensation act for the year:

OPERATIONS OF THE WISCONSIN WORKMEN'S COMPENSATION LAW FOR THE FISCAL YEAR ENDING JUNE 30, 1915.

Compensated accidents.

Result of injuries.	Accidents reported.	Cases settled. ¹	Cases pending.	Compensation paid.		Medical aid furnished.			Total compensation paid.	
				Amount.	Average per case.	Amount.	Average per case.	Per cent of all benefits.	Amount.	Average per case.
Death.....	165	200	49	\$296,084	\$1,485	\$11,220	\$56	4	\$307,304	\$1,537
Major permanent disability.....	81	139	16	167,933	1,210	27,560	198	14	195,493	1,408
Minor permanent disability.....	378	432	68	83,369	193	15,481	36	16	98,850	228
Temporary disability over 7 days.....	10,382	10,606	1,573	397,659	37	255,348	24	39	653,007	61
Total.....	11,006	11,377	1,706	945,045	83	309,609	27	31	1,254,654	110

Compensation in case of death, permanent disability, and disfigurement.

Deaths with dependents.....	88	137	31	\$296,084	\$2,161	\$4,836	\$35	2	\$300,920	\$2,196
Deaths without dependents.....	77	63	18	.....	.....	6,384	101	100	6,384	101
Permanent total disability.....	2	5	1	16,452	3,290	2,250	450	12	18,702	3,740
Facial disfigurement.....	3	5	1	1,263	253	687	137	35	1,950	390

¹ Including cases pending July 1, 1914.

OPERATIONS OF THE WISCONSIN WORKMEN'S COMPENSATION LAW FOR THE FISCAL YEAR ENDING JUNE 30, 1915—Concluded.

No compensation, but medical aid.

Temporary disability under 8 days.....	13,435				\$74,000	\$6	100	\$74,000	\$6
No disability.....	16,388				26,000	2	100	26,000	2
Total.....	29,823				100,000	3	100	100,000	3

Industrial Accidents, July 1, 1912, to December 31, 1914, is the title of the bulletin issued by the Wisconsin Industrial Commission under date of August 1, 1915. The report is a pamphlet of 52 pages, devoted almost entirely to accident statistics for the period named. Twenty-four thousand accidents classified as causing death, permanent injury, or disability for more than one week are analyzed. Previous publications of the commission have analyzed the accidents occurring in particular industries or due to particular causes, and the present report brings this experience together so that it may be studied as a whole. The material is presented in 23 tables, in which compensable accidents are classified by number, industry, severity, nature and location of injury, duration of disability, wage groups of workmen injured, ages of workmen injured, ability of those injured to speak and understand English, length of experience at place of employment, number of hours worked on day of injury, cause of accident and nature of injury, and cause of accidents grouped by industries.

The mere number of accidents, even when compared with the extent of exposure, does not give a true index of the hazard. The number of compensable accidents per \$100,000 of pay roll was 6 in foods, beverages, and tobacco, and 10.7 in construction work. But the latter group, with nearly the same total pay roll, included 27 fatal and 18 serious permanent injuries, as compared with 7 fatalities and 5 permanent disabilities in the former.

It was thought desirable, therefore, to obtain a single expression which should combine the number and severity of injuries. For this purpose a day's time loss was selected. A death or permanent total disability evidently entails a time loss equivalent to the workman's expectancy of working life at the time of his injury. At the age of 30 years the expectancy of working life was taken as 25 years, or 7,500 working days. Therefore, since the average age of workmen injured in Wisconsin is stated in the report to be not far from 30 years, each death or permanent total disability represents 7,500 days of lost time. A permanent partial disability represents a fraction of 7,500 days proportionate to the degree of disability. In this way the commission obtained an expression for the total importance (or gravity)

of accidents occurring in a particular industry or due to a particular cause.

The report includes two appendixes. Appendix I is a table of weights of fatal and serious injuries (12 in number), for expressing an injury in terms of working days lost to the community.

Appendix II gives a classification of the causes of accidents. This classification has grown out of the commission's safety work, and it naturally emphasized those causes of accidents which are of frequent occurrence in Wisconsin. Railway accidents are not considered, because interstate railways are not within the jurisdiction of the commission. Likewise, farm accidents and those in establishments employing less than 4 people are not included.

The following is a statement of all compensable injuries reported to the industrial commission for the year 1914, showing severity of injury, time lost (computed as explained on the preceding page), and pay roll exposed, under each specified industry group:

COMPENSABLE ACCIDENTS REPORTED FOR THE YEAR 1914 UNDER THE WISCONSIN WORKMEN'S COMPENSATION ACT.

Industry.	Pay roll exposed.	Severity of injury.					Time lost (days).	
		Fatal.	Major permanent.	Minor permanent.	Temporary.	Total.	Temporary injuries.	All injuries.
Mining and quarrying	\$2,800,000	16	2	10	375	403	10,000	136,000
Earth and stone working	1,500,000	2	1	2	86	91	3,000	20,000
Food, beverages, and tobacco manufacturing	11,500,000	7	5	15	667	694	18,000	83,000
Leather working	7,700,000	2	.....	17	258	277	6,000	25,000
Metal working	30,700,000	15	119	102	1,850	1,986	43,000	212,000
Paper working	7,100,000	8	4	29	894	935	21,000	95,000
Textile working	5,700,000	1	1	2	108	112	3,000	14,000
Vehicle manufacturing	5,700,000	.....	5	19	282	306	7,000	23,000
Woodworking	23,200,000	47	122	135	2,723	2,926	81,000	513,000
Other manufacturing	5,800,000	.....	3	11	257	271	6,000	27,000
Construction	11,900,000	27	18	21	1,207	1,273	36,000	281,000
Public utilities and transportation	15,700,000	32	18	21	1,203	1,263	36,000	308,000
Miscellaneous industries	34,800,000	9	2	12	594	617	17,000	91,000
Total	164,100,000	166	² 91	396	10,504	² 11,157	² 284,800	² 1,800,000

¹ Including 1 permanent total disability.

² These totals are not the correct sum of the items, but they are as given in the bulletin of the commission.

OFFICIAL REPORTS RELATING TO LABOR.

UNITED STATES.

California.—*Commission of Immigration and Housing. An A B C of housing.* [Sacramento], 1915. 15 pp.

This pamphlet is intended to serve as a primer on housing. It is in no way a technical treatise on this complex subject, nor is it proposed as an outline for a housing ordinance. The commission publishes this material in the hope that it will enable an industrious few to survey and study the general housing evils and problems peculiar to any one community. The commission invites correspondence concerning the subject matter of this pamphlet and, on request, offers to send without cost to a community a detailed plan of directions for making a complete housing survey of a city or town, and will supply a housing expert to conduct such survey.

The subject is presented under three heads: (1) The survey; (2) The city plan; (3) Housing regulations (construction and sanitation).

Illinois.—*Bureau of Labor Statistics. Laws governing free employment offices and private employment agencies in Illinois. As amended and in force on and from July 1, 1915.* Springfield, 1915. 15 pp.

Contains the texts of the two laws in force governing free employment offices and private employment agencies in the State.

——— *Industrial Board. Bulletin No. 1.* [Springfield, Ill., 1915.] 222 pp.

As stated on the title page this issue of the bulletin is devoted exclusively to opinions in cases arising under the workman's compensation act, decided by the industrial board of Illinois, from the date of its organization July 1, 1913, to July 1, 1915. A review of these decisions will appear in a future number of the REVIEW.

Iowa.—*Industrial Commissioner. First biennial report, period ending June 30, 1914.* Des Moines, 1915. 50 pp.

A discussion of the various schemes of insurance against industrial accidents, and a reproduction of the report of the labor bureau in 1914 on "Iowa Industrial Accidents." A summary of the report will appear in a future number of the REVIEW.

Massachusetts.—*Bureau of Statistics. Labor Bibliography, 1914. September 1, 1915.* Boston, 1915. 105 pp. (*Labor Bulletin No. 111; being Part VIII of the annual report on the statistics of labor for 1915.*)

According to the prefatory note this volume constitutes the fourth annual publication of this character by the Massachusetts bureau. It includes among its entries both books and articles in periodicals, having reference to the subject of labor in its broad aspect, which appeared during the calendar year 1914. It includes also the more important titles which have appeared in English, French, and German and, so far as obtainable, those in other languages.

The bibliography is classified under 29 principal headings.

Previous bibliographies, in addition to the annual volumes, similar to the one under review, published by the Massachusetts bureau of labor statistics include old-age pensions, magazine articles on labor topics, 1906 and 1907, homesteads for workmen, and home work.

— *Bureau of Statistics. Seventh annual report of labor organizations for the year 1914. Boston, 1915. 63 pages (Labor bulletin No. 112; being Part IX of the annual report of the statistics of labor for 1915.)*

The present report is the seventh of the series of annual reports on the subject of labor organizations issued by the bureau, beginning with the report in 1908. The statistics contained in the report cover the calendar year 1914 and have reference to the number and membership of labor organizations in the State at the close of the year and the unemployment of organized workmen, data for previous years being presented for comparative purposes.

The data presented were secured in answer to inquiries contained in schedules which were received from union officials believed to be well qualified to furnish the requisite information.

The following summary is abstracted from the report, pages 7, 8:

Number and membership of local trade-unions.—At the close of 1914 the total number of local organizations in the Commonwealth was 1,392, showing a decrease of 11 organizations during the year, 80 new local unions having been organized during the year, while 91 disbanded or were amalgamated with some other union. The aggregate trade-union membership at the close of 1914 was 234,266, showing a decrease of 7,460, or 3.1 per cent, as compared with the aggregate (241,726) at the close of 1913. The aggregate for 1914 included 205,347 males and 28,919 females, as compared with 211,213 males and 30,513 females at the close of 1913, showing for males a decrease of 2.8 per cent and for females a decrease of 5.2 per cent.

Unemployment.—The percentages of unemployed for all causes of the aggregate number of trade-union members for whom reports were received, for the close of the quarters ending on the dates March 31, June 30, September 30, and December 31, were, respectively, 12.9, 9.9, 11, and 18.3. The corresponding percentages unemployed for lack of work were, respectively, 9.2, 6.9, 8.5, and 14.9. The unemployment appeared to be greater at the close of each quarter in 1914 than at the close of the corresponding quarter in 1913, the percentages unemployed for all causes in 1913 having been, for the respective quarters, 11.3, 6.4, 6.8, and 10.4, and for lack of work 7.3, 4.3, 4.3, and 7.3 for the respective quarters.

Wages and hours of labor.—Notwithstanding the large amount of unemployment observed in nearly all of the more important organized trades in Massachusetts in 1914, the union scale of wages and hours of labor in Massachusetts in 1913 appeared to be quite generally maintained during the year 1914, and not infrequently in certain occupations which were not, to any great extent, affected adversely by the industrial depression, increases in the rate of wages and decreases in the hours of labor were secured through the efforts of organized labor.

— *Commission of Economy and Efficiency. Functions, organization, and administration of the departments in the executive branch of the State government. Boston, 1914. 513 pages.*

The purpose in this report is to make available information about each department of State service. Most of the information contained therein, it is stated, is not found in any other public document, many facts being of a character not contained in the departmental reports. The information contained in it was first sought for by means of a set of questions sent out in August, 1913.

The first chapters of the report describe some noteworthy features of the functions and organization of the departments with which the report is concerned. They also contain a chart of the executive branch of the State government as a whole, and a map showing the location of State institutions, reservations, and other State property. The latter and larger part of the report is devoted to detailed descriptions of the work and organization of State departments. Among the departments covered by the report are to be noted the State board of labor and industries, the industrial accident board, the general board for prevention of industrial accidents and diseases, the

State board of conciliation and arbitration, the minimum wage commission, and the homestead commission.

The volume is supplied with a somewhat detailed index.

Montana.—*Industrial Accident Board. Report for the three months ending September 30, 1915, Workmen's Compensation Act, in effect July 1, 1915.* [Helena, 1915.] 224 pp.

This constitutes the report under the Workmen's Compensation Act for the first three months of its operation, July 1 to September 30, 1915. A summary of this will appear in a future number of the REVIEW.

New York—**NEW YORK CITY.**—*Joint Board of Sanitary Control in the Cloak, Suit, and Skirt and the Dress and Waist Industries. Five years' work and progress of the Joint Board of Sanitary Control of the Cloak, Suit, and Skirt and the Dress and Waist Industries; an experiment in industrial self-control. October 31, 1910–October 31, 1915. New York City. 15 pp. (Bulletin No. 7.)*

The Joint Board of Sanitary Control, not, of course, an official body, was established on October 31, 1910, as a result of a strike in the cloak, suit, and skirt industry in the summer of that year, and exists by reason of an agreement which was then entered into. This brief pamphlet constitutes a brief outline of its work in the first five years of its existence, indicating the organization of the board, sanitary inspections made under its authority, complaints investigated, as well as its work in fire protection, for education, and in medical aid. An account of the organization of the board and an analysis of its constitution and work may be found in Bulletin 98 of this Bureau, pp. 203–272.

Ohio.—*Industrial Commission. Work of the free labor exchanges of Ohio for the year ending June 30, 1915. Columbus, 1915. 88 pp. (Department of investigation and statistics. Report No. 15.)*

Free public employment exchanges were established by law in Ohio in 1890 because of the abuses and frauds perpetrated by private employment agencies. So limited appears to have been their success, however, that proposals were made by the commissioner of labor for their abolishment in 1908, but beginning about the year 1909 or 1910 a very remarkable increase took place in the number of persons applying for work and of employers applying for help. On September 1, 1913, the supervision of the 5 public employment offices in the State passed into the hands of the industrial commission; but not until March, 1914, was the work of organizing them seriously undertaken. A system of record cards has since then been adopted similar to those in use by the Massachusetts public employment offices.

The commissioner in charge of employment agencies declares that—

At the present time the Ohio public employment offices are doubtless performing their work in a more efficient manner than are those of any other State. With the large appropriations made for the work and the experience which has been gained by the officials in charge of this work, the coming year should show even greater results than those attained during the past year and recorded in the statistical tables of this report. If the mistakes of the past are avoided, and the administration of these offices is left free from political control, and officials who have shown their efficiency in management are undisturbed, there can be little doubt that Ohio will serve as an example to other Commonwealths in the way of efficient management of a system of public employment offices, as she led the way in 1890 in the establishment of such offices.

The following summary table shows the results of the operation of the exchanges for the period 1909 to 1915. The column "Positions secured" shows the number of persons referred to positions, as in many cases reports from employers were not received. Of the 73,523 persons referred to positions in 1914–15, it is definitely known that 62,237 places were filled.

Prior to April 1, 1915, there were 5 exchanges; since that date 7 exchanges have been in operation.

66 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

OPERATIONS OF THE OHIO PUBLIC EMPLOYMENT OFFICES, 1909-1915.

Year.	Males.			Females.			Totals.			Per cent positions secured are of total applications for—	
	Situations wanted.	Help wanted.	Positions secured.	Situations wanted.	Help wanted.	Positions secured.	Situations wanted.	Help wanted.	Positions secured.	Situations.	Help.
1909.....	18,214	15,404	14,372	12,644	14,980	11,313	30,858	30,384	25,685	83.2	84.5
1910.....	30,614	31,063	29,963	18,821	21,534	18,764	52,597	52,597	48,727	98.6	92.6
1911.....	27,846	25,776	25,474	22,305	23,907	22,102	49,683	49,683	47,576	94.9	95.8
1912.....	34,541	34,116	33,950	19,798	21,402	19,609	55,518	55,518	53,559	98.6	96.5
1913.....	43,027	42,763	42,620	24,943	26,392	24,864	69,155	69,155	67,484	99.3	97.6
1914 (Jan. 1-June 30).....	14,238	9,486	9,304	11,619	13,223	10,762	22,709	22,709	20,066	77.6	88.4
1915.....	266,364	44,143	45,329	70,484	31,697	28,194	336,848	75,840	73,523	21.8	96.9

Of the 39,390 male persons reported actually placed during the year 1915, 22,640 were laborers, 6,279 dayworkers, 2,352 in skilled occupations in the building trades, 1,314 in farm, dairy, and garden work, and 1,133 in skilled metal trades. Of the 22,847 female persons reported actually placed 15,240 were dayworkers, including laundresses; 2,806 in general housework; 1,463 in hotel and restaurant work, and 1,381 factory workers. In no other occupation did the number of either sex placed in positions exceed 900.

Pennsylvania.—*Bureau of Industrial Statistics. Forty-first report of the Bureau of Industrial Statistics. Harrisburg, 1915. 125 pp. (Annual report of the secretary of internal affairs, 1915, Part III).*

The creation of a department of industry and labor in Pennsylvania in 1914, which among other functions assumes also those of the bureau of industrial statistics in the department of internal affairs, terminates the activities of this bureau. For this reason the present and final report of the bureau of industrial statistics varies considerably in its contents. To avoid duplication much statistical matter has been omitted. Whatever general statistics are presented in the report pertain to select subjects or matters especially investigated for the benefit of those who have asked for information of that nature; and as a part of that work the bureau has compiled some occupation statistics pertaining to Pennsylvania as found in the Federal Census of 1910. The rest of the volume is given over to articles on welfare work and cooperation as a means to create more cordial industrial relations, illustrated by discussion of several welfare work plans, model villages and homes as a means of uplift, etc.

— **PHILADELPHIA.**—*Emergency Aid Committee. Special report of the Bureau of Employment of the Home Relief Division of the Emergency Aid Committee. Philadelphia [1915]. 21 pp.*

The Bureau of Employment of the Home Relief Division of the Emergency Aid Committee of Philadelphia was opened on January 7, 1915, for giving temporary work to men out of employment or securing for them permanent positions. It cooperates with many other agencies, such as the Philadelphia branch of the Federal Division of the Department of Labor and the Juvenile Workers Bureau of the city.

From January 7, to September 2, 1915, permanent positions were found for 2,396 applicants for work; 2,046 men found temporary work. In the women's department 1,216 applications were received and 861 were placed in permanent work.

West Virginia.—*State Road Bureau (Department of Agriculture). Rules for prison camps, surveys and records, and a list of standard forms.* Charleston, 1915. 37 pp. (*Joint Bulletin No. 17, 1915.*)

This bulletin gives the legislation of West Virginia as to employment of convicts on public roads and the rules adopted by the State road bureau for the government of prison camps.

— *Workmen's Compensation Fund. [Report, July 1, 1913 to June 30, 1914. Charleston, 1915.]* 210, iii, pp. (*Public Service Commission. First annual report, Pt. 3.*)

This part of the first annual report of the Public Service Commission of West Virginia covers the work of the commission as the administrative board of the workmen's compensation fund. A summary of the report will appear in a future number of the REVIEW.

United States.—*Bureau of Foreign and Domestic Commerce (Department of Commerce). Commercial organizations in Switzerland and the Swiss Department of Commerce.* Washington, 1915. 23 pp. (*Special agents series No. 101.*)

This report constitutes one of a series of similar monographs relating to commercial organizations in France, Germany, and the United Kingdom. It relates to commercial organizations in Switzerland and includes a discussion of the character and functions of chambers of commerce and a somewhat detailed account of the development and present activities of the federal department of Switzerland having charge of commercial matters.

Three chambers of commerce have been organized for Switzerland having the objects and purposes usual for such organizations. They have, however, gradually assumed the character of employers' organizations, and their activities in that regard, it is stated by the report, have been generally limited to efforts at mediation between employers and employees. The chambers with official backing may act as courts of arbitration at the request of parties, but they have no initiative of their own in that respect.

The Swiss industrial association (*Schweizerischer Gewerbe-Verein*) is an association for the furtherance of the interests of crafts and trades and aims to be of assistance to artisans and tradesmen. It was founded in 1879 and received a subsidy of 20,000 francs (\$3,860) from the Federal Government. It is frequently called upon by the Government to give expert opinion on subjects relating to the interests of artisans and tradesmen. It maintains a course of lectures on subjects of interest to its members.

— *Bureau of Foreign and Domestic Commerce. (Department of Commerce.) The Women's muslin-underwear industry. Report on the cost of production of women's muslin underwear in the United States.* Washington, 1915. 184 pages. (*Miscellaneous series, No. 29.*)

This is the first of a series of reports to be issued by the Bureau of Foreign and Domestic Commerce concerning the cost of production in different branches of the clothing industry. The investigation was undertaken in accordance with the act of August 23, 1912. The report contains information concerning the cost of production, imports and exports, working conditions, factory equipments, selling methods, and other trade conditions of interest in connection with the women's muslin-underwear industry, together with some practical suggestions with regard to efficient factory management, based on interviews with manufacturers and on the personal observations of the special agents of the bureau.

It is stated that the industry under review has practically no foreign competition in the United States. The estimated value of the product in the United States is from \$30,000,000 to \$40,000,000 per year, and the value of the importations is about \$300,000 a year.

In the investigations reports were received from 65 establishments located in nine States, said to be fairly representative of the industry. Their aggregate sales, during their last business period, usually one year, amounted to \$14,619,518.

Concerning employees and wages in the industry, the following summary is abstracted from page 32 of the report:

In most establishments the busy season includes the months of February, March, April, May, September, October, and November; the dull season January, June, July, August, and December. The total number of employees in the 65 establishments reporting was 8,989 during the busy season and 7,769 during the dull season.

Of establishments having about the same amount of net sales, those in New York City have much fewer employees than the establishments elsewhere. The great difference indicates that the products of the factories in New York City are made of finer materials and sell for higher prices than the products of factories elsewhere.

Of workers 16 years and over, the females largely outnumbered the males in both the busy and dull seasons, but in greater proportion during the busy season. The average of all establishments during the busy season was 13 for males and 123.7 for females; in the dull season, 12.1 for males and 105.8 for females. Most of the males are time-workers and most of the females are pieceworkers.

The number of employees that were under 16 years was 106 in the busy season and 103 in the dull season. All of these children were employed in establishments outside of New York City. Of the total 106 children in the busy season, 72 were time-workers and 34 pieceworkers; all were females except 3.

In the muslin-underwear industry there are many employees who work only during the busy season. Statistics collected by agents of the Bureau of Labor Statistics, Department of Labor, show that in two of the largest establishments which manufacture muslin underwear in New York City, the average time worked by the 1,150 employees on direct labor operations was 27.41 weeks in the year, from April, 1913, to March, 1914, inclusive.

The data secured from these establishments showed that in 1913-14 the weekly earnings of such employees averaged \$8.77 in one establishment, \$9.66 in the other, and \$9.18 in both. These averages, however, were not on the full-time basis of 50 hours a week, but on the basis of the time actually worked. In one establishment where more complete data could be secured the actual earnings averaged \$8.77, but if the earnings had been computed on the full-time basis they would have averaged \$10.09 a week.

Chapter 6 (pp. 143-151) of the report presents some details as to working conditions in the industry, the number and distribution of employees, character of work, wages, safety appliances, and welfare work.

— *Bureau of Mines (Department of the Interior). Report of the Selby Smelter Commission. Washington, 1915. 528 pp. illus., maps, plates, diagrams.*

The Selby smelter commission was a body organized for the determination of questions of fact and other matters concerned with certain injunction proceedings at issue between the people of the State of California and the Selby Smelting & Lead Co. It was authorized by the superior court of Solano County, Cal., which was called upon to deal with an injunction case growing out of complaints by the residents of the city of Benicia, Cal., asking for an injunction to restrain the Selby Smelting & Lead Co. from permitting the smoke from its smelter to blow over the city or its tributary territory.

This report presents the findings of the commission, based upon the evidence and upon a series of scientific experiments made for the purpose of determining the facts in the case. The papers included in the report contain a detailed discussion of the effect of smelter smoke on organic life. "As here assembled the report of the Selby commission is published by the Bureau of Mines (whose director was head of the commission) as a contribution to the literature of metallurgical smoke in its relation to plant growth and to public health and comfort, and is an example of what is believed to be a satisfactory method of dealing with local controversies from the damage inflicted by mining and metallurgical establishments" (p. xviii).

Pages 503-520 consist of a bibliography on the effect of sulphur dioxide on vegetation and animal life.

— *Children's Bureau (Department of Labor), Child-welfare exhibits: Types and Children. Washington, 1915. 58 pp., 8 plates, diagram. (Miscellaneous series number 4, Bureau Publication No. 14.)*

This bulletin on welfare exhibits has been prepared in answer to inquiries from organizations and individuals desiring to hold child-welfare exhibits of various kinds. The exhibit as a means of widespread publication of facts, it is stated, has proved important in recent years, particularly so in relation to child and infant welfare. The bulletin discusses matters relating to the scope of an exhibit which it may be desired to undertake, the use of traveling exhibits, the small infant welfare exhibit, the organization of children's health conference exhibits, exhibits on children's interests such as may be held in connection with the playground, settlement, school, or Sunday-school organizations; also community child-welfare exhibits, which are much larger in their scope and include community problems and health recreation and other aspects of child welfare.

The comprehensive exhibit may serve to secure community aims and purposes through tables and report publications and should combine both the appeal to the parent and to the citizen, using each to reinforce the other. "In this respect it offers a peculiarly democratic approach to the problems involved in the welfare of the child since it takes as point of departure not the 'poor child' nor the 'bad boy,' but all children, leading the parent to that interest in community action through which alone his own child may be safeguarded, and the citizen to a knowledge of the individual problems of heredity, ignorance, and poverty, on the adequate solution of which depends the community's future."

The report contains as an appendix a list of child-welfare exhibits owned by State departments, January, 1915; a copy of the record blank used by the children's health conference conducted by the Children's Bureau in the Panama Pacific Exposition; a table of weights and measures used as a standard of comparison for the children's health conference; the announcement and entry form of the Seattle Junior Exhibition and a brief account of the exhibit of the Children's Bureau at the Panama Pacific Exposition. There are also affixed copies of a series of 6 wall panels used in connection with the exhibits of the bureau at the Panama Exposition.

FOREIGN COUNTRIES.

Canada.—*Census and Statistics Office. The Canada Yearbook, 1914. Ottawa, 1915. XVI, 698 pp. Map and illustrations.*

This yearbook contains articles and statistics classified under the following headings: (1) Constitution and Government of Canada; (2) Physical characteristics of Canada; (3) Area and population; (4) Education; (5) Climate and meteorology; (6) Production; (7) Trade and commerce; (8) Transportation and communication; (9) Labor; (10) Finance; (11) Administration; (12) Principal events of the year 1914; and (13) Extracts from the Canada Gazette.

The statistics relative to labor show: (1) Time losses on account of labor disputes, by industries, in working days, 1901-1914; (2) Number of disputes, establishments, employees and time losses, 1901-1914; (3) Disputes, classified by industries, 1901-1914; (4) Relative wholesale prices (index numbers) of all commodities by groups, 1890-1914; (5) Relative wholesale prices (index numbers) by groups of commodities from month to month, 1914; and (6) Typical weekly expenditure for a family of 5 persons having an income of \$800 per annum.

Summaries of many of these topics have been presented in the MONTHLY REVIEW, as reports on them were received from time to time.

- Denmark.**—*Arbejderforsikrings-Raadet. Beretning fra Arbejderforsikrings-Raadets Industriafdeling for Aaret 1914. Copenhagen, 1915. 63 pp.*
 ———— *Beretning fra Arbejderforsikrings-Raadets Søfartsafdeling for Aaret 1914. Copenhagen, 1915. 47 pp.*
 ———— *Beretning fra Arbejderforsikrings-Raadets Fiskeriafdeling for Aaret 1915. Copenhagen, 1915. 52 pp.*
 ———— *Beretning fra Arbejderforsikrings-Raadets Landbrugsafdeling for Aaret 1914. Copenhagen, 1915. 241 pp.*

The publications listed above constitute the reports for the calendar year 1914 of the State Insurance Council of Denmark concerning the operations of the various accident insurance laws of that country. In the order named these reports relate to: (1) Accident insurance of industrial workers; (2) seamen; (3) fishermen, and, (4) agricultural laborers. The law covering the first named group of workers was enacted in 1898; that covering seamen in 1905; fishermen and others in 1900; and agricultural laborers in 1906. All of these are compulsory insurance laws, with a voluntary feature connected with that covering agricultural labor. A somewhat full account of the provisions of these laws and their operation up through the years 1908 may be found in the twenty-fourth annual report of this bureau, 1909, volume 1, chapter 3. For an account of the effort now being made to consolidate and amend these enactments reference may be made to the December issue, page 83, of this REVIEW.

Two tables are here presented, summarizing the operations of these laws for the year 1914, with comparative data for the years 1913 and 1912

SUMMARY OF ACCIDENT INSURANCE STATISTICS FOR DENMARK, 1914.

Insured occupations.	Deaths.		Compensation to survivors.	Cases of temporary incapacity.	Cases of permanent incapacity.	Compensation for permanent incapacity.
	Number.	With survivors.				
Industrial workers.....	57	38	\$32,189.48	245	640	\$126,848.15
Fishermen, etc.....	33	30	11,765.20	19	33	5,325.70
Seamen.....	84	24	13,212.40	24	46	10,175.42
Agricultural laborers:						
Compulsory insurance.....	77	33	20,046.40	333	504	87,864.34
Voluntary insurance.....	8	6	4,020.00	55	33	12,629.23
Total.....	259	131	81,233.48	676	1,309	242,842.84

STATISTICS OF ACCIDENT INSURANCE IN DENMARK, 1912-1914.

	Industries.			Fishermen.		
	1912	1913	1914	1912	1913	1914
Cases reported to council.....	2,926	3,280	3,150	116	102	122
Cases decided:						
Number rejected.....	429	470	473	15	19	11
Not subject to compensation.....	1,779	1,940	1,964	51	36	51
Permanent disability—						
25 per cent.....	568	582	560	35	20	32
26 to 50 per cent.....	83	75	67	1	1	4
51 to 100 per cent.....	20	21	13	—	—	—
Deaths with survivors.....	30	40	38	29	16	30
Deaths without survivors.....	16	21	19	2	4	3
Cases reviewed.....	115	80	78	—	1	3
Total.....	3,040	3,229	3,212	134	97	134
Compensation for disability.....	\$142,983	\$143,754	\$126,848	\$4,554	\$2,817	\$5,326
Compensation for death.....	23,048	33,121	32,189	14,954	9,728	11,765
Compensation for cases reviewed.....	8,988	6,098	7,566	—	—	—

STATISTICS OF ACCIDENT INSURANCE IN DENMARK, 1912-1914—Concluded.

	Seamen.			Agricultural laborers.		
	1912	1913	1914	1912	1913	1914
Cases reported to council	517	578	545	2,614	2,671	2,753
Cases decided:						
Number rejected	34	43	45	314	316	354
Not subject to compensation	364	368	402	1,591	1,678	1,719
Permanent disability:						
25 per cent.	49	47	39	545	516	513
26 to 50 per cent.	6	5	4	86	63	56
51 to 100 per cent.	1	1	3	23	28	18
Deaths with survivors	20	27	24	32	22	39
Deaths without survivors	64	57	60	34	38	45
Cases reviewed	9	9	3	39	86	78
Total	547	557	580	2,664	2,747	2,823
Compensation for disability	\$10,626	\$10,111	\$10,175	\$122,562	\$111,830	\$100,494
Compensation for death	12,810	14,311	13,212	19,350	13,186	24,066
Compensation for cases reviewed	1,013	394	225	3,618	7,038	5,663

Great Britain.—*Board of Education. Economy in food: Some suggestions for simple and nourishing meals for the home. London, 1915. 31 pp. (Circular 917.)*

A pamphlet suggestive of various ways in which, it is stated, with a little care and forethought, simple and nourishing meals can be prepared at a small cost with a view to saving money, consuming less meat, and being more careful about food in general. It is not intended to give instruction in the principles of cookery but rather to show by a few illustrations how meat can be used to the best advantage and also how a number of meals can be prepared which do not contain meat and which are nourishing and pleasant to the taste. This pamphlet forms one of the means of conducting a campaign in Great Britain looking toward a greater economy in the consumption of food.

— *Board of Trade. Railway accidents. Summary of accidents and casualties during three months ending March 31, 1915. London, 1915. 143 pp.*

This volume presents a summary statement relative to accidents for the first three months of 1915, and reports of investigations made concerning various accidents.

— **BRADFORD, ENGLAND.**—*Education Committee. Juvenile employment special subcommittee. Report for the year ended July 31, 1915. Bradford, 1915. 17 pp.*

By a system of cooperation between the teacher, the medical officer, and the employers, the mental and physical capabilities as well as the predispositions of the boys and girls who leave school early for taking up industrial work are studied and taken into consideration in connection with the opportunities offered for positions in industrial life. The juvenile employment office aims to place its boys and girls in suitable occupations and to encourage attendance at evening classes. Through a system of district committees it aims to keep in touch with all children leaving school up to the age of 17 years. The juvenile exchange is conducted in connection with the local labor exchange which is connected with the larger system of exchanges under the control of the National Board of Trade.

Three months before each child leaves school a card is sent to the education office giving a record of its health and school career and offering suggestions as to the kind of employment most suitable for that particular child. A member of the district committee then calls upon the parents of the child and frequently suggests a course of study at the night school or makes suggestions concerning the possibility of employment for the child. The work of the bureau is not limited to children leaving school but it frequently gives reconsideration to the cases of those who have become dissatisfied and unsuccessful in their positions.

It is stated that the medical reports concerning the child furnished to the bureau have been of great value in advising parents respecting suitable employment for their children. In some instances the physical defects were not mentioned by the parents but were brought out by expert medical examination.

The report declares that employers perhaps make more frequent use of the services of the bureau than do the children themselves.

During the year ended July 31, 1915, a total of 1,214 children (875 boys and 339 girls) registered at the bureau. Employers notified the bureau of 877 vacancies (648 for boys and 229 for girls) of which 568 were filled (412 with boys and 156 with girls). The members of the district committees made personal visits during the year in 8,437 instances. Their work in recommending attendance of evening classes has been highly successful, attendance in these classes showing an increase of 1,480 students over the previous session.

— *Census office. Census of England and Wales. 1911. Summary tables: Area, families or separate occupiers and population; also population classified by ages, condition as to marriage, occupations, tenements, birthplaces, and infirmities. London, 1915. vi, 424 pp.*

Consists of summary tables of the results of the census of England and Wales in 1911. The report contains no text or brief summary table. That part of it relating to occupations and industries is contained in 20 tables which classify employees by sex, age, and conjugal condition according to industry groups and occupations; also by geographical districts of various kinds.

— *COUNTY OF LONDON.—Area, families or separate occupiers and population, etc. London, 1914. 258 pp.*

In this report data compiled from the general census of 1911 are shown for the County of London and in each Metropolitan borough. In the administrative county in 1911 there were found 324,987 children aged 10 and under 14 years. Of this number 161,059 were males, of whom 2,878, or 18 per 1,000, were engaged in occupations, and 163,928 were females, of whom 246, or 2 per 1,000, were so engaged.

The total population of the County of London in 1911 was 4,521,685, comprising 1,033,861 families or separate occupiers, "private" or other, while the total number of private families was 1,023,951, consisting of 4,252,402 persons. The number of persons in 121,591 tenements with more than 2 occupants per room was 758,438, of whom 289,802 were under 1 year of age. The percentage of the population in private families living more than 2 occupants in one room was 17.8.

— *Foreign office. Further correspondence respecting contract labor in Portuguese West Africa. In continuation of Africa, No. 1, 1914, cd. 7279. London, 1915. vi, 87 pp. (Africa No. 1, 1915.) Cd. 7960.*

A collection of correspondence between British consular officers and the British foreign office which sheds light on the present conditions surrounding colored contract labor in Portuguese West Africa. Up to the enactment of the law of May 27, 1911, colored contract laborers, so-called "serviçaes," recruited in the Portuguese possessions on the mainland of Africa for work in the islands of São Thomé and Príncipe were virtually in a state of slavery. They were contracted out to planters by their native chiefs as punishment for "crimes," transported in chains, and never returned to their native villages. Through the intervention of the British Government the Portuguese Government has enacted legislation which has brought about considerable improvement in the conditions of these contract laborers. While under the old system the colored natives had no knowledge of the conditions of their contract of hire, they are now recruited by authorized agents and brought before a curator appointed by the Government in whose presence they sign their labor contract by means of thumb prints. Before signing the contract the "serviçaes" are closely questioned by the

curator as to whether they fully understand all the conditions of the contract, and if this is not the case the curator explains these conditions to them at great length. After the signing of the contracts the natives are put under no restraint and move about freely until a steamer carries them to their destination. During the time of the contract the laborers receive only a part of their wages, while the balance is retained and handed over to them by the authorities of their native district to which they are repatriated by the Government on the expiration of their labor contract. According to a memorandum of the Portuguese minister of foreign affairs the repatriation of those "serviçaes" who have been for a long time in the islands of São Thomé and Príncipe is effected with great difficulty for the reason that many of these "serviçaes" are now old and incapable of earning their own subsistence, that the natives refuse to be lodged at the villages prepared for the repatriated, that they soon spend the money they bring with them, and having spent their money they are left destitute and give themselves up to vagabondage and robbery. There is, moreover, great lack in transportation facilities, the only steamship company so far available refusing to carry more "serviçaes" than can be accommodated as deck passengers.

— *Home Department. Workmen's compensation. Statistics of compensation and of proceedings under the Workmen's Compensation Act of 1906 and the Employers' Liability Act, 1880, during the year 1914. London, 1915. 17 pp.*

It is stated that in consequence of the war it has been necessary to omit this year the usual introductory analysis of the figures and to curtail the tables relating to proceedings in the courts. The statistics of compensation paid under the act of 1906 relate to 7 groups of industries—mines, quarries, railways, factories, harbors and docks, construction work, and shipping. For these industries returns were received from 129,925 employers, of whom 105,491 were included in the collective returns supplied by employers' associations, mutual indemnity societies, etc. These collective reports accounted for 71 per cent of the fatal cases, 70.8 per cent of the compensation in such cases, and 71.2 per cent of the disability cases, and 75.7 per cent of the compensation in the latter, in the 7 industries. Separate returns from 24,961 employers were received, and of these 22,293 reported that there had been no cases of compensation under the act. The number of persons coming within the provision of the act who were employed in the industries above indicated amounted to a little over 7,000,000, or less by one-half a million than the figures for the preceding year, explained as due to recruiting for the army. On the other hand, the total amount of compensation paid shows an increase over the figure for the preceding year, which is explained as due to the occurrence of a single coal-mine accident, resulting in the loss of 440 lives, and to the growing accumulation of long-standing cases, in which payments are continued from year to year.

For 1913 it is estimated that the total charge upon the 7 industries including the cost of management, commissions, legal and medical expenses amounted to about \$5,000,000 (\$24,332,500). It was probably not less in 1914, it is stated.

The table which follows shows the number of cases and the amounts of the payments during the year 1909 to 1914:

Year.	Number of cases.			Payments for compensation.		
	Fatal cases.	Nonfatal cases.	Total.	Fatal cases.	Nonfatal cases.	Total.
1909.....	3,341	332,612	335,953	\$2,501,673	\$8,565,906	\$11,067,579
1910.....	3,510	378,340	381,850	2,617,179	10,523,952	13,141,131
1911.....	4,021	419,031	423,052	3,017,984	11,858,006	14,875,990
1912.....	3,539	424,406	428,005	2,759,826	12,686,936	15,446,762
1913.....	3,743	476,920	480,668	2,895,626	13,463,844	16,359,470
1914.....	4,216	437,900	432,116	3,307,916	13,556,263	16,864,179

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The number of persons employed in each industry and the amounts paid for compensation in 1914 and the amount per person employed was as follows:

Industry.	Number employed.	Total compensation.	Compensation per person employed.	
			1914	1913
Shipping.....	251,880	\$993,228	\$3.93	\$3.60
Factories.....	4,995,668	6,320,737	1.26	1.22
Docks.....	124,708	768,201	6.14	5.84
Mines.....	1,046,357	7,279,904	6.96	5.90
Quarries.....	82,709	229,874	2.78	2.47
Construction work.....	90,061	327,637	3.63	3.22
Railways.....	465,728	944,598	2.03	2.03
Total.....	7,057,111	16,864,179	2.37	2.17

In the table which follows cases of compensation are classified for each of the seven industries as to the duration of compensation. In this table cases terminated by the payment of a lump sum are not taken into account, and as a consequence the proportion of cases of disability of long duration will be higher than the figures here indicate, inasmuch as the lump sum cases are usually those in which disability lasts for a considerable period.

Industry.	Percentage of cases terminated in 1914 in which compensation had lasted—					
	Less than 2 weeks.	2 weeks and less than 3.	3 weeks and less than 4.	4 weeks and less than 13.	13 weeks and less than 26.	26 weeks and over.
Shipping.....	4.68	16.65	16.90	46.99	10.39	4.39
Factories.....	9.29	31.15	19.62	35.63	3.40	1.91
Docks.....	7.63	23.21	18.53	42.41	5.73	2.49
Mines.....	6.54	36.40	19.42	32.54	3.30	1.80
Quarries.....	10.13	32.36	18.99	32.40	3.71	2.41
Construction work.....	13.44	27.62	17.60	35.49	4.54	1.31
Railways.....	16.47	30.36	17.11	30.40	3.82	1.84
Average.....	8.48	32.94	19.29	34.28	3.55	1.46

The 437,900 cases of disability included 41,494 continued from 1913. During the year 398,343 cases were terminated, leaving 39,557 outstanding. Of the total number of disability cases, 28,213 were settled by payment of a lump sum, and of this number 565 were cases of industrial diseases, for which £30,924 (\$150,492) was paid in compensation. In the remaining 27,648 cases there was paid £764,346 (\$3,719,690) in lump-sum compensation.

During the year there were reported 43 fatal cases due to industrial diseases, in which compensation to the amount of £7,099 (\$34,547) was paid and 9,622 cases of disability, due to the same cause, in which compensation was paid to the amount of £182,551 (\$888,384). Of the disability cases resulting from industrial diseases, 92.4 per cent occurred in the mining industry, and were due chiefly to nystagmus, beat hand, and beat knee, and the remaining 5.6 per cent were cases of lead poisoning.

A fuller survey of the history and operations of workmen's compensation in Great Britain may be found in the twenty-fourth annual report of this bureau, 1909, Volume II, pp. 1495-1695, and a shorter survey of accident statistics and compensation under the act is contained in Bulletin 157 also of this bureau, pages 120-126.

— Local Government Board. *Disabled sailors and soldiers. Report of the committee appointed by the president of the Local Government Board upon the provision of employment for sailors and soldiers disabled in the war. London, 1915. 8 pp.*

This committee, appointed February 16, 1915, to consider and report upon the methods to be adopted for providing employment for sailors and soldiers disabled in the war, submitted its report on May 15.

The deliberations of the committee resulted in the following recommendations: (1) The care of the sailors and soldiers disabled in the war is a duty which should be assumed by the State; (2) this duty should include: (a) the restoration of the man's health where practicable; (b) the provision of training facilities, if he desires to learn a new trade; (c) the finding of employment for him, when he stands in need of such assistance; (3) for the discharge of these duties a central committee should be appointed and empowered to act, either through the agency of the appropriate public department or independently, as the case may be; (4) the central committee should have the assistance of subcommittees for Ireland and Scotland and local committees in any part of the United Kingdom, as may be necessary.

Concerning an enlarged use of these committees the report declares: "It has been suggested to us that an organization so created might ultimately be utilized for the purpose of dealing with the employment of ex-sailors and ex-soldiers of all kinds, whether able-bodied or disabled. The numerous agencies at present engaged on this work in different parts of the country and the complexity of their operations make it highly desirable that some step should be taken to coordinate their activities and to prevent overlapping." (p. 7.)

— *National Health Insurance Commission (Scotland). Handbook for the use of insurance committees in Scotland. 1st October, 1915. Edinburgh, 1915. 256 pp.*

This handbook, it is stated in the introduction, is intended primarily for the assistance of members of insurance committees and does not profess to be an exhaustive or technical exposition of the powers and duties of committees. The general scheme of administration of the national insurance act in Scotland in force in so far as it relates to health insurance is briefly summarized. Unemployment insurance, which is administered through the board of trade in connection with the labor exchanges controlled by that department, is not dealt with. The handbook is merely a manual for the use of administrative officers under the health insurance act. In the appendix are found a list of the acts and principal regulations and orders relating to health insurance, the constitution and organization of insurance committees, model rules for the administration of medical benefit, a list of local medical committees organized for practice by the commissioners, and a copy of the medical record card, etc.

— *Report of the Departmental Committee appointed to inquire into the conditions prevailing in the coal-mining industry due to the war. London, 1915. Part I. Report (54 pp.); Part II. Minutes of evidence and index (iv, 248 pp.).*

The MONTHLY REVIEW of July (vol. 1, No. 1) carried the official summary of this report from the Board of Trade Labor Gazette. Seven specific suggestions are made relative to hours of labor, employment of women and of boys, reorganization in the mines, restriction of export, economy in the use of coal, and cooperation between employers and employees. These recommendations are followed by statistical reports showing for the United Kingdom and by coal-mining districts the amount of coal produced, number of persons employed, days of operation, absenteeism of miners, 1913-14, 1914-15, and number of persons employed at coal mines who have been called to military duty. Part II consists entirely of evidence presented to the committee relative to the subject under investigation.

Italy.— *Ministero di Agricoltura, Industria e Commercio. Direzione Generale del Credito e della Previdenza. Infortuni sul lavoro; Giurisprudenza giudiziaria nell'anno 1911. Rome, 1915, 345 pp. (Annali del credito e della previdenza, Series II, vol. 9.)*

Contains a compilation of decisions relating to accident insurance rendered in 1911 by courts of justice, civil courts, courts of appeal and courts of cassation; also an analytical index of the decisions reported.

Italy.—*Ministero di Agricoltura, Industria e Commercio. Le Migrazioni periodiche interne dei lavoratori agricoli (Principali movimenti migratori nel 1913) Rome, 1914, 118 pp. (Supplemento al Bollettino dell' Ufficio del lavoro, No. 25).*

This volume presents statistical data of the periodical internal migrations of agricultural laborers in Italy during the year 1913. The individual chapters deal with migration for the hulling and harvesting of rice (May, June); migration to the Provinces of Foggia (May to July and August to December), Potenza (May to July), Rome (May to July and August to December) and Grosseto (August to December). For each of these forms of migration are shown the number of emigrants, by sex; the days of absence and of work; the means of transportation used; the districts to which the emigration was directed; the earnings of the emigrants (total and per day); the number of immigrants, days of absence from work and days of labor as well as the daily wages current in the various districts. There is no summary statement for all industries combined.

New Zealand.—*Department of Labor. Twenty-fourth annual report of the Department of Labor, 1915. Wellington, 1915. 43, 10, 5 pp. Folded diagrams.*

This report covers the period from April 1, 1914, to March 31, 1915, and gives data, with summary statistics from 1891 to 1915, on the following matters: Conditions of trade and employment; employment of workers wounded in the war; census of factories and factory workers; wage statistics; overtime worked; certificates of fitness issued to boys and girls to work in factories; accidents in factories; enforcement of the shops and offices act; strikes; conciliation and arbitration; registration of industrial unions and associations; recovery of arrears of wages due to workers; enforcement of compensation act, scaffolding inspection act, servants' registry act, shearers and agricultural laborers accommodation act, and wages protection and contractors' lien act; women's employment offices; workers' dwellings; departmental publications; and cost of living index numbers.

When the war broke out in August the effect was disastrous to industries and employment throughout the Dominion, the report declares. The panic which followed lasted until toward the end of October, when, with the advance of spring, rapid recovery was made to normal conditions.

During the winter and the first few months of the war the department cooperated with the municipalities in most of the chief and secondary towns in an endeavor to provide employment for local workers. Representative committees were organized which did valuable work in this connection.

It was realized that as the outcome of the war, one of the many problems to be faced would be that of finding suitable employment for workers wounded in the war who return to New Zealand unable to follow their former occupations. The report announces that proposals for measures for the training of such persons in new methods of handling tools will shortly be submitted.

The number of men for whom employment was found by the Men's Bureau in the 10-year periods and individual years indicated was as follows:

Period.	Number of male applicants placed in—		
	Government work.	Private work.	Total.
1891-1901.....	17,140	9,708	26,848
1901-1911.....	32,657	25,276	57,933
1911-12.....	2,285	3,450	5,735
1912-13.....	2,143	3,705	5,848
1913-14.....	2,140	3,505	5,645
1914-15.....	3,842	3,673	7,515
Total.....	60,207	49,317	109,524

The number of domestic servants and other women workers (generally) assisted to employment by women's employment branches during the year totals 2,165, an increase of 2 over the previous year.

There was expended by the department in the payment of fares for persons to their places of work since the year 1910 the sum of £11,665 (\$56,768) of which 97 per cent had been repaid. The number of factories and factory workers for specified years was as follows:

Year.	Factories.	Factory personnel. ¹
1904-95.....	4,109	29,879
1904-5.....	9,123	67,713
1913-14.....	13,469	87,517
1914-15.....	13,937	88,812

¹ Inclusive of employers, managers, etc., whose total number for the year 1914-15 was 15,031 or, as may be calculated from other parts of the report, about 17 per cent of the total.

During the year ending March 31, 1914, £7,264,029 (\$35,350,397) were paid out to factory workers in wages. A considerable increase (60,788 hours) in the overtime worked in factories is reported for this year as compared with the preceding year when the overtime hours totaled 274,888 as against 335,676 for the year just ended. There is again reported a decrease in the number of certificates of fitness granted to workers under 16 years of age to work in factories. Last year certificates were granted to 937 boys and 1,251 girls or a total of 2,188. This year the figures are 952 boys and 1,136 girls, a total of 2,088, showing a decrease of 100.

The number of accidents reported in 1914-15 was 967 or 10.88 per 1,000 workers employed in factories which is much less than for the previous year (12.61).¹ Only 4 strikes, all of minor importance, were reported for the year just ended as against 35 for the preceding year. The registration of industrial unions and associations shows that 403 unions of workers with 73,991 members and 149 employers' associations with 5,819 members existed in New Zealand on December 31, 1914, while on December 31, 1913, the number of workers' unions was 372 and that of employers' associations 134, with a membership of 71,544 and 4,700, respectively. Under the Factory Act, 21 prosecutions were taken before the court as against 64 in 1913, and under the Shops and Offices Act 115 as against 252 for the preceding year. Convictions were obtained in all cases relating to the Factory Act and in 103 cases relating to the Shops and Offices Act. Under the Workers' Dwellings Acts of 1905 and 1910 a total of 548 dwellings have so far been erected which are being paid for on easy payment plans by the workmen purchasing them. The average weekly installment inclusive of fire insurance, but excluding taxes, is 13s. 10d. (\$3.36) for 4-room dwellings and 14s. 11d. (\$3.63) for 5-room dwellings.

The expenditures of the department of labor during the year ending March 31, 1915, exclusive of the salaries of the judges and members of the court of arbitration, amounted to £28,141 17s. 5d. (\$136,952.41).

Norway.—*Beretning om de norske jernbaners drift, 1. July, 1913-30. June, 1914, Christiania, 1915, 328 pp. (Norges officielle statistik, VI, 37).*

Contains statistics of railways in Norway for the fiscal year ending June 30, 1914. The total mileage reported at the beginning of the year was 3,085.5 kilometers (1,917.2 miles); and at the end of the year it was 3,164.7 kilometers (1,966.4 miles). Of this mileage 2,710.5 kilometers (1,684.2 miles) constituted State roads, and 454.2 kilometers (282.2 miles) were owned by private companies. The State roads are of two kinds,

¹ If these rates were calculated on the basis of the number of employees properly speaking, i. e., excluding employers, superintendents, etc., the rates for these years would be 13.11 and 15.33 per 1,000 workers, respectively.

those wholly owned and operated by the State, and those which the State operates but in which it owns a share, private companies and municipalities being part owners. In the case of this latter type of State road the Government is forbidden to purchase the shares of the private companies or municipalities except in the case of one line, which is made a special exception. Of the State mileage indicated above, 739.4 kilometers (459.4 miles) constituted lines wholly owned and operated by the State and 1,971.1 kilometers (1,224.8 miles) consisted of lines in which the State was a part owner.

On June 30, 1914, the permanent employees of the roads in Norway numbered 7,479, of whom 5,946 were employed on the State roads, 1,089 on the Capital Line (*Hovedbanen*) classed as a privately owned company and operated jointly by the State and by its English owners, and 444 employed on other private roads.

Until June 25, 1914, only the higher grade of employees were members of the pension relief fund organized for the State railroad system of the country, but after that date the employees of the operating department were required to become members.

At the end of the fiscal year 1913 the fund had a balance of 10,096,367.68 crowns (\$2,705,826.54), while at the end of the fiscal year June 30, 1914, this had increased to 10,796,875.89 crowns (\$2,893,562.7). Statistics of the pension fund for the State railroads for the fiscal years 1910 to 1914 follow:

STATISTICS OF THE PENSION FUND FOR THE NORWEGIAN STATE RAILROAD SYSTEM, 1910-1914.

Fiscal years ending June 30.	Number of members.	Average number in receipt of pensions.		Amount paid in pensions (nearest dollar).	Average pension.	
		Number.	Per cent of total members.		Amount.	Per cent of average annual earnings.
1910.....	4,648	321	6.9	\$47,449	\$147.94	37.3
1911.....	5,009	335	6.7	50,049	149.28	38.7
1912.....	5,326	363	6.8	55,000	151.42	39.2
1913.....	5,059	383	6.7	61,964	161.87	42.1
1914.....	6,115	402	6.6	70,678	175.81	38.6

— *Departementet for Sociale Saker, Handel, Industri og Fiskeri. Arbeidsledighet og Arbeidsledighetskasser. Christiania, 1915. 71 pp. (Norges officielle statistik, VI:34).*

This report on unemployment and unemployment relief funds was prepared by the department of social welfare, commerce, industries, and fisheries of the Norwegian Government and has already appeared as part of a report of a special committee of the department appointed to inquire into the advisability of amending existing laws on State subsidies for unemployment insurance. This edition of it appears as a separate one in the general series of Norwegian official statistics. For the report of the above-mentioned committee reference may be made to the summary of it which appeared in the October issue of this REVIEW (pp. 101, 102). As to the scope and nature of the statistics contained in the report reference may also be made to the same number of the REVIEW, which presented an outline of the scope of unemployment statistics in foreign countries (pp. 71, 72).

— *Kirke- og Undervisningsdepartementet. Fagskolestatistik 1911/12-1913/14. Christiania, 1915. 71 pp. (Norges officielle statistik, VI:40).*

Contains statistics of industrial schools in Norway as of the years 1911-12 to 1913-14. Data give number of schools, number of instructors, number of pupils (classified as to age and occupation in some instances), finances, expenses and receipts, etc., shown separately for each group of institutions without a summary presentation.

— *Statistiske Centralbyraa. Husholdningsregnskaper for handelsfunktionærer m. v. Utgitt av det Statistiske Centralbyraa. Christiania, 1915. 44 pp.*

Contains an analysis of 19 family budgets, collected generally from persons of small incomes, during the year 1912, which had been kept by office and commercial

employees, one of whom was a Government postman. Nine of the families resided in Copenhagen. The report consists of a summary in French, a presentation of the different items of expenditures and receipts classified by income groups for each separate family of the 19 included, followed by an account of family expenditures and incomes, kept by a civil-service employee of small means during the years 1898 to 1914, and an analysis of a single budget of a family having an income somewhat above the limit included in the general study. The report shows for each family its income and expenditures, the number of persons, and the occupation of the head of the family. Expenditures by different items of expenditure are shown for each family as a whole and the average for each individual. For the purposes of the inquiry not the actual number in the family was taken, but a theoretical number of units of consumption as calculated on the basis of the ascertained amount of food necessary to maintain an individual in proportion to his age and sex. This unit taken was that of an adult man, 19 years of age and over, and other members of the family were given a value in proportion to the amount ascertained as necessary to meet the requirements of the adult man. These proportions were as follows:

An adult woman.....	0.8	Boy, 15 and 16.....	0.7
Children:		Girl, 15 and 16.....	.6
3 years and under.....	.1	Boy, 17 and 18.....	.9
4 to 6 years.....	.2	Girl, 17 and 18.....	.7
7 to 9 years.....	.3		
10 to 12 years.....	.4		
13 to 14 years.....	.5		

These are the standards accepted by previous Swedish and Finnish investigations of a similar kind. They differ slightly from those of the American or Atwater standard.

The following table presents a summary of the average annual expenditures, classified by different items of expenses, of all the 19 families included in the investigation:

AVERAGE EXPENDITURES OF 19 FAMILIES, BY ITEMS, 1912.

Items of expenditure.	Average expenditure per family having an income of—			Unit persons in family having an income of—			Per cent of expenditure per family having an income of— ¹		
	3,000 kr. (\$804) or less per annum.	Over 3,000 kr. (\$804) per annum.	All income classes.	3,000 kr. (\$804) or less per annum.	Over 3,000 kr. (\$804) per annum.	All income classes.	3,000 kr. (\$804) or less per annum.	Over 3,000 kr. (\$804) per annum.	All income classes.
Food.....	\$176.08	\$295.34	\$220.03	\$83.35	\$98.36	\$90.05	31.10	24.13	28.53
Spirituuous liquors.....	5.36	23.59	12.06	2.41	8.04	4.82	.95	2.26	1.44
Tobacco.....	4.82	5.09	4.82	2.41	1.61	1.88	.84	.49	.71
Clothing.....	77.72	157.85	107.20	36.99	52.53	43.95	13.86	12.92	13.51
Rent and housing.....	85.49	161.87	113.63	40.47	54.14	46.63	14.93	13.49	14.40
Fuel and light.....	27.34	43.68	33.50	12.86	14.74	13.67	4.84	3.70	4.42
Laundry, cleaning.....	13.13	28.41	18.76	6.16	9.38	7.77	2.30	2.66	2.43
Furniture.....	25.73	42.61	32.16	12.33	14.20	13.13	4.89	3.39	4.34
Medical care and medicine.....	5.63	14.20	8.84	2.68	4.82	3.48	1.02	1.16	1.07
Insurance.....	12.86	23.59	16.88	6.16	7.77	6.97	2.11	1.91	2.04
Taxes.....	23.05	53.06	34.04	10.99	17.68	13.94	4.06	4.49	4.22
Books, postage, stationery.....	10.18	15.54	12.06	4.82	5.09	5.09	1.65	1.41	1.56
Care of real estate.....	.54	11.26	4.56	.27	3.75	1.88	.16	.90	.43
Interest, etc.....	26.80	83.08	47.46	12.60	27.60	19.56	3.93	6.50	4.88
Savings.....	2.14	2.41	2.41	1.07	.80	1.07	.34	.15	.27
Miscellaneous.....	71.29	234.77	131.59	33.77	78.26	53.87	12.49	19.66	15.13
Garden expenses.....	1.07	.54	.80	.54	.27	.27	.18	.04	.13
Sundries.....	2.14	8.31	4.29	1.07	2.68	1.88	.35	.74	.49
Total.....	571.37	1,205.20	805.09	270.95	401.72	329.91	100.00	100.00	100.00

¹ As given in the report. When based on the figures here given they vary somewhat from those given in the original source.

Ontario.—*Bureau of Mines, Twenty-fourth annual report, 1914. Toronto, 1915. 25 pp.*

Report of mining operations in the Province of Ontario for the calendar year 1914. Part I contains statistical review, 1911–1914; mining accidents; productive area; geological and metallogenetic epochs in the Pre-Cambrian period. Part II contains data relating to oil and gas wells.

The number of serious accidents reported for 1914 in and about mines, quarries, etc., subject to the mining act, was 359, resulting in the death of 38 persons and injury to 328 other persons; in metallurgical work 104 accidents, causing 5 deaths and 101 injuries; and in quarries, clay and gravel pits 30 accidents, causing 15 deaths and 16 injuries to persons.

Of fatal mine accidents, 7.9 per cent were due to falls of ground, 26.3 to shaft accidents, 26.3 to explosives, 15.8 miscellaneous underground accidents, and 23.7 to accidents at the surface. The following table shows the number of fatal accidents in mines, metallurgical works, and quarries for the period 1901–1905, 1906–1910, and by years 1911, 1912, 1913, and 1914, with the number of persons employed, and number of fatal accidents per 1,000 employed persons.

	1901-1905	1906-1910	1911	1912	1913	1914	Total.
Persons killed in metallurgical works and mines.....	46	177	49	43	64	58	437
Number of persons employed....	22,250	45,664	14,543	15,108	16,293	15,861	129,819
Number of deaths due to accidents per 1,000 employees.....	2.02	3.88	3.37	2.84	3.93	3.66	3.37

Detailed descriptions of the different methods adopted in the organization of safety departments in various mines and the results of that work are given. An amendment to the mining law, regulating the construction of cages and skips so as to afford greater safety became operative January 1, 1915.

The Russian Yearbook for 1915, compiled and edited by N. Peacock. London [1915]. 623 pp.

Although this is a private publication, it has been listed here by reason of its usefulness as a source of information concerning a country whose language is rather inaccessible and because it contains a special chapter relating to labor matters in Russia.

The volume contains the usual information found in books of this sort, presenting data concerning such topics as governmental administration, commercial law, population, education, agriculture, mining, transportation, trade and commerce, customs duties, finances, etc. There are also special chapters on peasant industries, public health, economic development in Siberia, and on labor. This latter chapter contains a summary of the labor laws in force in Russia, some statistics regarding factories and employees, industrial accidents, average earnings of labor, employment of women and children, cooperation and credit associations, and agricultural labor.

A statement of the principal events of the present war is given in a separate chapter, together with a statement concerning the temperance legislation in Russia connected therewith.

The volume is supplied with a somewhat full index in addition to the table of classified contents.

Sweden.—*Kommerskollegium. Textil och beklädnadsindustrien. Specialundersökning av Kommerskollegium. Stockholm, 1914. vii, 476, viii, 168 pp.*

This volume constitutes the first of a series of nine special investigations proposed to be undertaken by the Swedish Board of Trade regarding conditions in the leading industries of Sweden. The investigation which is here reported was undertaken November 22, 1912, and relates to the textile and clothing industries. The report is an extremely detailed, historical, and descriptive survey of the industry, with particular reference to conditions prevailing in 1912. The first 58 pages are devoted to a discussion of the economic significance of the factory system, the relations of the State to industry, the growth of large-scale production, and a survey of recent developments in the cotton, woolen, and other textile industries. Pages 59-230 comprise a historical and statistical account of the textile industry in Sweden down to 1912. The principal part of the volume, however, namely, pages 231-476, presents detailed statistics of the textile and clothing industry in 1912. An appendix of 168 pages contains a directory of Swedish clothing manufactures for 1913, giving their names, addresses, capital invested, number of persons employed, number of power machines operated, product manufactured, and the value of the product for the year, and in connection with each firm an illustrated cut of its trade-mark is shown.

The investigation adopts as the unit of its inquiry, not the ordinary establishment or plant, but rather an industrial enterprise as a whole for which a single set of account books are kept. If, however, the undertaking consists of several establishments located in different places, each group of establishments is enumerated as a separate undertaking. The inquiry, furthermore, relates to factory establishments as distinguished from household and hand industries. It includes only those industries turning out annually a product valued at 10,000 crowns (\$2,680) and over.

For the textile industry proper 278 establishments reported out of a possible total of 288. The largest number, or 98, were engaged in the manufacture of woolen products, and the next largest, or 48, manufactured cotton products. For the clothing industry 124 out of a total of 144 were included in the inquiry, and of the number reported 38, or the largest portion, were engaged in the manufacture of clothing proper; 33, or the next largest portion, were engaged in the manufacture of hats and caps; while 32 were engaged in the manufacture of white goods of various kinds.

The following two tables present the statistics of the working force employed in the textile and clothing industries of Sweden as reported for the year 1912:

DISTRIBUTION OF EMPLOYEES AND WAGES PAID IN THE CLOTHING INDUSTRIES IN SWEDEN, 1912.

Branches of industry.	Factory workers.				Home workers.	
	Number of employees, including foremen.	Foremen.		Wages paid.	Number.	Wages paid.
		Not participating in actual work.	Participating in the work.			
Hat and cap manufacture.....	1,778	28	48	\$361,076.40	89	\$12,450.74
Clothing manufacture, proper.....	3,527	18	250	597,851.72	2,385	323,624.74
White goods, etc., manufacture....	2,029	16	44	328,385.76	313	20,211.76
Shoddy, waste, etc., manufacture..	311	.....	15	53,047.12	.....	.....
Umbrella, etc., manufacture.....	142	6	23,929.45
Not specified.....	190	5	6	57,133.31
Total.....	7,977	67	369	1,421,423.76	2,787	356,287.24

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DISTRIBUTION OF EMPLOYEES AND WAGES PAID IN SWEDISH TEXTILE INDUSTRY, 1912.

Branches of industry.	Factory workers.			Home workers.	
	Number of employees including foremen.	Number of foremen.	Wages paid.	Number.	Wages paid.
Woolen mills:					
Spinning	226	13	\$41,549.92		
Yarn spinning	947	58	157,168.33		
Weaving	1,425	42	208,988.12	20	\$1,567.80
Spinning and weaving	8,569	352	1,714,434.59	160	10,318.27
Total	11,167	470	2,182,140.96	180	11,886.07
Cotton mills:					
Cotton yarn	442	21	85,483.42		
Spinning	1,477	39	249,313.97		
Weaving	3,573	103	612,739.66	278	17,114.48
Spinning and weaving	8,036	266	1,585,920.55		
Total	13,528	429	2,533,457.60	278	17,114.48
Linen mills:					
Weaving	211	7	29,922.20	210	2,144.00
Spinning and weaving	1,754	43	323,486.99		
Total	1,965	50	353,409.19	210	2,144.00
Jute mills	1,533	19	272,900.11	215	4,118.36
Hosiery mills	4,030	76	677,502.93	1,509	90,314.66
Curtains, tapes, etc., mills	1,290	50	236,559.31		
Rope, cord, etc.	412	24	78,404.20		
Dyeing, finishing, etc.	908	37	204,641.05		
Total textiles	34,833	1,155	6,539,015.35	2,392	125,577.57

Switzerland.—Zentralstelle schweizerischer Arbeitsämter. Zehnter Geschäftsbericht für das Jahr 1914. Zürich, 1915. 41 pp.

This is a report of the central office of the Swiss public employment bureaus as to the activities of the affiliated local bureaus during the year 1914. In the report are included 15 employment bureaus which in 1914 placed 62,952 applicants for positions as against 54,868 in 1913. The Federal Government subsidized these bureaus to an amount of 55,662 francs (\$10,743). Article 6 of the Federal act relating to the promotion of public employment bureaus provides that under certain conditions Federal subsidies may also be granted to employment bureaus organized by trade associations. This provision was applied for the first time in practice when a subsidy was granted to an employment bureau of the Swiss printing trades conducted jointly by the employers and employees.

The table which follows shows the number of applications for work made to the federated bureaus during the years 1911 to 1914, inclusive, and the number of applicants per 100 vacancies reported.

Month.	Number of applicants.				Number of applicants per 100 vacancies reported.			
	1911	1912	1913	1914	1911	1912	1913	1914
January.....	14,225	17,609	19,454	20,301	303	332	358	392
February.....	12,497	16,222	16,343	18,575	264	248	262	314
March.....	12,441	14,992	17,566	19,372	159	171	215	216
April.....	12,223	15,504	18,648	18,161	172	187	215	182
May.....	13,995	16,034	18,906	18,581	178	184	225	213
June.....	12,534	14,792	18,353	17,850	167	187	231	215
July.....	15,129	16,609	20,113	19,343	211	198	235	242
August.....	16,397	16,306	19,607	24,069	216	214	279	349
September.....	16,070	17,322	20,138	16,052	202	210	257	257
October.....	17,908	18,011	20,929	15,525	252	237	271	252
November.....	16,928	17,742	20,833	16,164	291	298	378	285
December.....	14,967	15,829	18,995	17,076	343	366	416	289
Total.....	175,314	196,972	229,890	221,069	220	234	276	252

The following table shows the number of applicants per 100 vacancies and the number of nonregistered applicants (applicants not residing within the district of employment bureaus):

Month.	Number of applicants per 100 vacant situations.		Number of non-registered applicants.	Month.	Number of applicants per 100 vacant situations.		Number of non-registered applicants.
	Male.	Female.			Male.	Female.	
January.....	198	84	12,675	July.....	127	73	11,266
February.....	162	79	11,713	August.....	217	176	9,386
March.....	123	74	9,847	September.....	160	133	5,564
April.....	114	68	8,305	October.....	165	155	5,043
May.....	129	72	9,092	November.....	190	155	5,443
June.....	128	71	8,787	December.....	188	126	6,429

An attempt begun August 1, 1914, to place urban workmen in the country districts proved a failure. According to the report the public employment bureaus received thousands of applications from workers willing to go to the country, but all efforts to place them were, with a few exceptions, without avail. The expected large demand for agricultural workers was not realized, and it has now become evident that the rural population does not sympathize with these attempts of the federated employment bureaus. The reason for this attitude in the rural districts is explained as due to the strong sense of independence on the part of the farmers and their distrust of urban workmen, who were declared to be unfamiliar with the work in the country. It is hoped, however, inasmuch as their failure to place agricultural help in the country was not due to the faulty organization of the bureaus, that this unsuccessful experience will not detain the bureaus from continued energetic endeavor to place urban workmen in agricultural districts.

To relieve unemployment the Federal government decided to expend a certain amount for public works, and in connection therewith, as all government construction work is done by private contract, it gave instructions on October 29, 1914, that all contractors secure their labor as far as possible through the cantonal and municipal bureaus subsidized by the state.

In discussing the conditions of the labor market the report declares that industrial conditions were generally depressed at the beginning of 1914; that conditions in the building trades and like industries slightly improved in the spring but declined again the latter part of the year; that the embroidery industry suffered from the decrease of exports, and that the watch industry suffered through disturbances of various kinds.

The outbreak of the war caused a cessation of railroad traffic in-general as well as closing up exports. The building industry practically ceased operation. Unemployment prevailed largely among hotel and restaurant employees. The situation was relieved, however, by the demand for agricultural laborers and for mechanics in the countries at war.

Victoria.—*Registrar of Friendly Societies. Report for the year 1914. Melbourne, 1915. 7 pp.*

This is the twenty-fifth report of the Registrar of Friendly Societies made in pursuance of the Friendly Societies act and the Trade Union act, both of 1890. These are voluntary societies organized to provide relief of various kinds for their members in case of sickness, old age, disability, or by reason of other infirmity. They are subject to a certain amount of government control which involves an audit of their expenses and valuation of their property from time to time, but they are not considered as incorporated societies. Their activity was somewhat extended by a special act in 1914, which permitted them to make contributions for war relief to their members out of their sick benefit and funeral funds. Also subject to the supervision of the Registrar of Friendly Societies are the operations of building societies, provident societies, and trade unions.

The following statistics are reported for the year 1914:

Friendly Societies registered.....	4
Branches of Friendly Societies.....	49
Provident Societies registered.....	5
Building Societies.....	1

No comparative statistics for preceding years are presented, nor is there any summary of the total number of societies of various kinds in existence at the close of the year.

PERIODICAL PUBLICATIONS RELATING TO LABOR.

LABOR DEPARTMENTS AND BUREAUS.

Canada.—*The Labour Gazette issued by the Department of Labour by order of Parliament. Ottawa.*

November, 1915.—Notes on current matters of industrial interest; Industrial and labour conditions during October, 1915; Reports of local correspondents; Reports of women correspondents; Operations under the industrial disputes investigation act, 1907, during October, 1915; Report of the United States Commission on Industrial Relations; Labour legislation in Nova Scotia; Trade union membership in Great Britain in 1914; Annual convention of the Canadian Federation of Labour; Reports of employment bureaus; Changes in wages and hours of labour during the third quarter of 1915; Bulletin of the United States Bureau of Labor Statistics on index numbers of wholesale prices in the United States and foreign countries; Prices—wholesale and retail, Canada, October, 1915; Fair wages schedules in government contracts, October, 1915; Trade disputes, October, 1915; Industrial accidents, October, 1915; Immigration and colonization; Building permits, October, 1915; Recent industrial agreements; Notes on official reports; Recent legal decisions affecting labour.

Denmark.—*Statistiske Efterretninger udgivet af det Statistiske Departement. Copenhagen.*

October 30, 1915 (No. 22).—Land sales and valuations, 1914; Mortgage and other credit institutions, 1914; Production of peat in Denmark; Retail prices, October, 1915; Municipal tax rates; Trade unions in Denmark, 1914; Unemployment, August, 1915; Automobile statistics; Index numbers of the Economist; Brief notices.

November 17, 1915 (No. 23).—Use of power in Danish industry; Savings and other banks during the second half year of war; Index numbers of the Economist.

France.—*Bulletin du Ministère du Travail et de la Prévoyance Sociale. Paris.*

July, August, 1915.—Social movement—France: Inquiry concerning industrial and commercial activities, July, 1915; Strikes, July, August, 1915; Mine labor, June, July, and August, 1915. Work of the mixed commissions in the departments for the adjustment of employment; National unemployment fund; Central office for placing refugees and the unemployed; Progress of cooperative credit societies, January 1, 1914; Economic situation expressed in index numbers, second quarter, 1915. Foreign countries—Germany: Labor market, May and June; Unemployment since the outbreak of the war; Compulsory coal syndicate; Cost of living in Berlin. Austria: Unemployment among trade unions, February to May, 1915; Employment office reports; Unemployment, 1914; Cost of living in Vienna; Collective agreements, 1912. United States: Monthly Review of the Bureau of Labor Statistics; Results of the thirteenth census. Great Britain: Review of the labor market, June and July; Strikes; Employment reports; Old age pensions, 1909-1914; Employees in munition factories; Mines and quarries, 1914. Italy: Inquiry concerning returned immigrants and unemployment resulting from the war. Norway—Unemployment, 1914. Switzerland: Swiss federation of labor, 1913, 1914. Miscellaneous: Reports of the industrial courts (*Conseils de prud'hommes*) second quarter, 1915; Foreign commerce with France, January to July, 1915; Wholesale prices, July, August, 1915. Laws, decrees, orders, circulars, etc., on matters of interest to labor; Legislative program; Court decisions.

Germany.—*Reichsarbeitsblatt, herausgegeben vom Kaiserlichen Statistischen Amte, Abteilung für Arbeiterstatistik. Berlin.*

October, 1915.—Labor market in Germany, October, 1915; Labor market in foreign countries (Great Britain, Switzerland, British Colonies); Employment offices and unemployment; Unemployment in German trade unions, third quarter, 1915; Unemployment in foreign countries (Netherlands, July, 1915; New York State, first six months, 1915); Economic conditions during the war: Cooperative stores during the war; Agricultural war measures in France; Welfare work for disabled soldiers; Woman and child labor in the United States; Wage statistics of the Leipsic Local Sick Fund. Social Insurance: Welfare work of the State Invalidity Insurance Institute of the Hanse Towns; Care in invalid homes; Activity of the workmen's accident insurance institute for the Kingdom of Bohemia, 1889-1915; Activity of the industrial and commercial courts; Labor market statistics.

Great Britain.—*The Board of Trade Labor Gazette. London.*

November, 1915.—Employment chart. The labor market in October. Reserved occupations committee. Special articles on the war and employment in France; Employment in Germany in September; Retail food prices in the United Kingdom, October, 1915, and in Berlin and Vienna; Rise in the cost of living in Christiania; Profit sharing in the United Kingdom in 1914-15; Produce of corn and hay crops in England and Wales; The replacement of men clerks of military age; Home production of food; Trade unions in New York State in 1914; Commonwealth of Australia: Quarterly statistics; Reports on employment in the principal industries; Labor in the Dominions; Labor in foreign countries; Board of Trade labor exchanges. Statistical tables: Trade disputes; Changes in rates of wages; Prices of wheat, flour, and bread; Diseases of occupations; Fatal industrial accidents; Unemployment insurance; Pauperism; Foreign trade; Distress committees; Passenger movement to and from the United Kingdom. Legal cases, official notices. etc.

Italy.—*Bollettino dell' Ufficio del Lavoro, Ministero di Agricoltura, Industria e Commercio. Rome. (Semimonthly.)*

November 1, 1915.—Investigations and provisions relative to unemployment; Labor market, by localities and industries; Labor disputes; Retail prices, September, 1915; Employers and employees associations; Congresses and conventions; Labor legislation: Royal decree of May 2, 1915, creating the Roman Cooperative Institute (Istituto Romano dei Consumi); Decree of September 23, 1915, providing that the validity of deliberations of consultative councils or committees instituted in the Ministry of agriculture, commerce, and industry shall not be impeded by the absence of members on account of military service. Decree of September 30, 1915, providing for the functioning of industrial courts and conciliation commissions during the war; Activities of the office; Application of labor laws; Employees in public transportation service; Decisions of courts.

Netherlands.—*Maandschrift van het Centraal Bureau voor de Statistiek. The Hague. October, 1915.*

October, 1915.—Review of the labor market, third quarter, 1915, and for October, 1915 (dock labor and fishing); Employment of interned soldiers in the Netherlands, October 23; Unemployment among trade union members, September, 1915; Reports of labor exchanges, September, 1915; Strikes and lockouts, September, 1915; Collective agreements; Minimum wages and maximum hours of labor on government work, October, 1915; Miscellaneous reports concerning labor; Trade-union activities; Wholesale and retail prices, October, 1915; Maximum prices as fixed by government decree; Passports issued, September, 1915; Court decisions, etc.; Miscellaneous reports of social and economic import (building activities, dock labor, invalidity premiums, industrial accidents, housing, war measures, cooperation, etc.); Foreign countries

and the war; Reports from foreign countries on the labor market, employment exchanges, industrial accidents, strikes, and lockouts, prices, etc.; Statistical tables on the labor market, employment exchanges, prices, building and housing, factory licenses, industrial diseases, State revenues, etc.; Laws, general regulations, ministerial decrees and circulars relating to the conditions of service for railroad employees, workmen's housing, the State budget, survivors' insurance, etc.

New South Wales.—*Industrial Gazette issued by the Department of Labor and Industry. Sydney.*

October, 1915.—Introductory matter. The industrial situation, September, 1915: Industrial arbitration and the war; Emergency legislation; Dislocations in industries; Employment and unemployment. The statute law of industrial import in the State of New South Wales; Index of factories registered, August 31, 1915, by provincial districts; Opinions of the department upon industrial arbitration laws. Judicial and quasi-judicial proceedings (relative to industrial arbitration, very largely). Departmental records, September, 1915: Chief inspector of factories' office; Gas examiner's office; Industrial registrar's office; Investigation office; Labor exchanges. Records of industrial boards; Industrial agreements as of October 13, 1915; Industrial arbitration awards as of October 13, 1915. Labor exchange supplement No. 7.

New York.—*The Bulletin, issued monthly by the New York State Industrial Commission. Albany, N. Y.*

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Canada and France; Proposed law of Argentina regulating employment on Street railways; Law exempting definite portions of the wages, salaries, annuities, etc., of laborers from proceedings of attachment, execution, or seizure; Postal savings law.

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