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This Issue in Brief

Employment in Ohio in 1929 fluctuated 9.2 per cent from the maximum, as compared with a variation of 13.8 per cent in 1928, 5.9 per cent in 1927, 8.5 per cent in 1926, 9.9 per cent in 1925, and 6.3 per cent in 1924. The industry groups represented in these figures were agriculture, construction, fisheries, manufactures, mining and quarrying, service, wholesale and retail trade, and transportation and public utilities. Data for the various industries, by months are given in an article on page 1.

Workers' productive societies have declined in number in recent years. Data secured by the Bureau of Labor Statistics in connection with its latest study of cooperative societies showed only 20 workers' productive societies in existence at the end of 1929 as compared with 39 in 1925, the date of the bureau's previous comprehensive study of cooperatives, and apparently no new societies have been formed between the two dates. An account of the characteristics, development, policies, and business of these societies is given on page 25.

Wide variations in the output of underground workers in coal mines as between States and even between different counties of the same State are shown in an analysis of coal-mine labor productivity (p. 37). For example, the average output per man per day for underground employees ranged from 1.43 tons in North Carolina to 10.34 tons in North Dakota, while the output for all employees (underground and surface) ranged from an average of 1.25 tons in North Carolina to 7.90 tons in Montana, the average for all States combined being 5.63 tons for underground workers and 4.85 tons for all employees combined. A tabulation of output in the individual counties of Illinois showed variations ranging from 1.51 tons to 21.60 tons, the average for the State being 6.87 tons.

Earnings in rayon and other synthetic textile manufacturing in 1930 averaged 44.1 cents per hour and \$22.14 per week, according to a study by the Bureau of Labor Statistics (p. 150). Average hourly earnings of males were 50.4 cents and of females, 34.4 cents, the corresponding weekly earnings being \$25.75 and \$16.86, respectively. The range in average hourly earnings for males was from 35.4 cents for winders to 58.8 cents for spinning-bath men; for females, the range was from 24.4 cents for truckers and handlers to 50.8 cents for spoolers. Working hours per week for the industry as a whole averaged 50.2, the average for males being 51.1 and for females, 49.

The subject of workmen's compensation was acted upon during 1930 by the legislatures of four States (Louisiana, Massachusetts, New York, and Virginia) and Porto Rico. The study on page 99 analyzes the principal changes made by the legislation of 1930.

The number of manufacturing establishments in the United States increased 3.9 per cent between 1927 and 1929, but decreased 7.1 per cent in the decade 1919 to 1929, according to preliminary figures from the Census of Manufactures for 1929 issued by the United States Bureau of the Census. The average number of wage earners increased 2.4

per cent between 1927 and 1929 but decreased 5 per cent over the 10-year period. Wages, however, showed an increase for both periods of 3.9 and 7.7 per cent, respectively, and the total value of products manufactured increased 9.1 and 10.3 per cent, respectively. Page 52.

A cooperative plan for guaranteeing employment and paying unemployment benefits, entered into by three manufacturing firms of Fond du Lac, Wis., is financed entirely by the companies. Under the terms of the contract employees having at least two years' service are entitled to receive steady employment or, when employment can not be provided by any of the companies included in the agreement or can not be secured elsewhere, to receive cash unemployment benefits for a maximum of 100 working days in any one year. The cash benefits are paid at the rate of 65 per cent of the average earnings during the year preceding the beginning of unemployment. Page 70.

The benefits of standard national and international trade-unions for 1929 amounted to over \$32,242,000, as shown by a tabulation presented to the 1930 convention of the American Federation of Labor. This sum was distributed as follows: Sick benefits, \$2,831,937; death benefits, \$17,598,287; unemployment benefits, \$276,718; old-age pensions, \$4,883,028; disability benefits, \$2,707,188; and miscellaneous benefits, \$3,945,288. One organization alone, the Brotherhood of Railroad Trainmen, disbursed \$7,843,142 in such services in the year under review. Page 106.

Three great problems—disease, poverty, and insufficient insular revenue—faced the administration of the new Governor of Porto Rico, according to his first annual report, for the year ended June 30, 1930. He found the tuberculosis death rate on the island higher than in any other place in the Western Hemisphere, the malaria death rate two and one-half times the rate for continental United States, and some 600,000 islanders suffering from hookworm. The economic conditions in his jurisdiction he describes as equally bad, over 60 per cent of the people being out of employment either all or a part of each year and the average income of the working man or woman ranging from \$150 to \$200 per annum. Page 57.

The Belgian laws on compulsory insurance against old age and premature death for salaried workers and wage earners have recently been amended to correct conditions which five years' experience with the previous laws had shown to be advisable. In general, the groups and classes of workers covered have been extended and the amount of pensions considerably increased, as also the contributions of employers, employees, and the State. An entirely new category of insured persons is included among the compulsorily insured wage earners, comprising a very large number of artisans, farmers, and merchants. Pages 75 and 78.

The 90,731 workers in the River Rouge plant of the Ford Motor Co. range from 18 to 83 years of age, the modal age being 37. Workers under age 50 represent 89.8 per cent of the total employed, while 8.4 per cent are 50 and under 60 years old, and 1.8 per cent are 60 years old and over. Page 55.

MONTHLY LABOR REVIEW

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Fluctuation of Employment in Ohio in 1929 and Comparisons with 1924 to 1928

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REPORTS of 43,160 Ohio establishments are summarized in this study to show the fluctuation of employment of wage earners, clerical employees, and sales people (not traveling) in 1929. This analysis also brings into comparison similar data for the five preceding years, 1924 to 1928. It covers all industry groups with the exception of interstate transportation and governmental activities.

The month of highest employment in 1929 was July, when 1,356,004 persons were reported. The month of highest employment in previous years¹ was October in 1928, June in 1927, September in 1926, October in 1925, and April in 1924. The month of lowest employment in 1929 was December, when 1,230,724 were reported, that number, however, being only 17 below the number in January, 1929. The month of lowest employment in previous years was January in 1928, 1927, 1926, and 1925, and July in 1924.

The variation from the high point of employment for both sexes was 125,280, or 9.2 per cent, in 1929; 177,176, or 13.8 per cent, in 1928; 72,175, or 5.9 per cent, in 1927; 107,586, or 8.5 per cent, in 1926; 119,783, or 9.9 per cent, in 1925; and 71,162, or 6.3 per cent, in 1924.

In one section of this report data concerning fluctuation of employment in 1929 in the eight most populous counties of Ohio are brought into comparison for all industries except mining and quarrying and for manufactures.

A discussion of unemployment of males in Ohio, as indicated by the reports on employment is presented in the last section of this study. It is pointed out that, omitting all undetermined factors, reports from 43,160 establishments show that 132,712, or 12.6 per cent, fewer males were employed in December than in July, 1929, and also that in January, 1929, which was the second lowest month of the year, 110,634, or 10.5 per cent, fewer males were employed than in July.

Sources and Scope of Study

THIS report for 1929 has been compiled from two reports of the division of labor statistics of the Department of Industrial Relations of Ohio, the data for which were furnished, as required by law, by employers in Ohio. These two reports, Statistics of Mines and Quarries in Ohio, 1929, and Rates of Wages, Fluctuation of Employment, Wage and Salary Payments in Ohio, 1929, are now in press.

¹ See Labor Review for April, 1930, pp. 30-62: "Fluctuation of Employment in Ohio, 1924 to 1928," by the same authors. A reprint of that article was also published as Report No. 20, of the division of labor statistics of the Department of Industrial Relations of Ohio.

Statistical information is furnished by all establishments in Ohio regularly employing three or more persons (with only a few failing to report), except those engaged in interstate transportation and the various governmental departments and agencies. A number of establishments employing fewer than three persons report annually, and such reports are included in the tabulations.

The industries covered in this report are agriculture, construction, fisheries, manufactures, mining and quarrying, service, wholesale and retail trade, and transportation and public utilities.

The number of establishments reporting each year 1924 to 1929 within each industry group is shown in Table 1:

TABLE 1.—NUMBER OF ESTABLISHMENTS REPORTING FLUCTUATION OF EMPLOYMENT, 1924 TO 1929

Industry group	Number of establishments reporting each year					
	1924	1925	1926	1927	1928	1929
Agriculture.....	732	910	1,052	1,199	1,329	1,444
Construction.....	7,364	8,407	9,145	9,724	9,942	10,183
Fisheries.....	25	23	22	21	20	21
Manufactures.....	9,125	9,502	9,704	9,880	9,937	10,035
Mining and quarrying:						
Coal mining.....	1,000	889	879	858	714	679
Fire-clay mining.....	108	108	110	105	112	108
Gypsum mining.....	3	3	3	3	3	3
Limestone quarrying.....	116	119	119	114	122	121
Sandstone quarrying.....	49	43	44	46	42	33
Service.....	4,233	5,971	6,761	7,598	8,210	9,335
Trade, wholesale and retail.....	7,689	7,277	7,867	8,526	8,916	9,524
Transportation and public utilities.....	1,271	1,353	1,453	1,561	1,625	1,674
Total.....	31,715	34,605	37,159	39,635	40,972	43,160

¹ A considerable part of the increase in number of establishments in service and of the decrease in trade, as compared with the previous year, is due to change of classification of "offices" from trade to service. This change of course also affects the number of employees.

The returns received do not give a complete picture of agriculture, as comparatively few farms in Ohio regularly employ as many as three persons. Four industry groups (construction, manufactures, service, and trade) include more than 90 per cent of the establishments reporting in 1929. Construction and manufactures have practically the same number of establishments, and there is but little difference in the number in service and the number in trade.

The maximum, minimum, and average number of employees for whom information was furnished in each of the six years are shown in Table 2:

TABLE 2.—NUMBER OF EMPLOYEES COVERED BY REPORTS TO THE DIVISION OF LABOR STATISTICS, DEPARTMENT OF INDUSTRIAL RELATIONS OF OHIO, 1924 TO 1929

Item	1924	1925	1926	1927	1928	1929
<i>Males</i>						
Maximum month.....	891,731	945,843	990,383	953,784	993,705	1,054,154
Minimum month.....	833,115	847,398	898,011	869,457	843,462	921,442
Average of 12 monthly reports.....	857,062	907,167	946,740	921,753	939,567	1,004,283
<i>Females</i>						
Maximum month.....	248,713	266,861	279,275	284,664	301,222	313,416
Minimum month.....	230,147	239,065	253,728	260,958	261,946	287,221
Average of 12 monthly reports.....	238,426	250,612	264,106	272,395	278,974	302,339
<i>Both sexes</i>						
Maximum month.....	1,134,424	1,206,246	1,259,325	1,225,049	1,282,584	1,356,004
Minimum month.....	1,063,262	1,086,463	1,151,739	1,152,874	1,105,408	1,230,724
Average of 12 monthly reports.....	1,095,488	1,157,779	1,210,846	1,194,148	1,218,541	1,306,622

The Monthly Labor Review for April, 1930 (p. 33), contains a discussion relative to the approximate completeness of the material contained in the Ohio statistical reports.

The amount reported paid in wages and salaries in 1929 by the 43,160 establishments covered in this study is shown below. Information concerning superintendents and managers is not included in the tables in this report.

Wage earners.....	\$1, 523, 848, 976
Bookkeepers, stenographers, and office clerks....	282, 709, 980
Sales people (not traveling).....	119, 084, 364
Superintendents and managers.....	134, 705, 187
Total.....	2, 060, 348, 507

Fluctuation of Employment by Industries

TABLE 3 shows for each industry group the number of persons reported employed on the 15th of each month in 1929:

TABLE 3.—NUMBER EMPLOYED ON THE 15TH OF EACH MONTH IN 1929, BY SEX AND INDUSTRY GROUPS

Month	All industries	Agriculture	Construction	Fisheries	Manufactures	Mining and quarrying	Service	Trade, wholesale and retail	Transportation and public utilities
<i>Males</i>									
January.....	943, 520	5, 919	49, 542	295	637, 888	26, 449	82, 090	84, 446	56, 891
February.....	964, 803	5, 953	50, 018	261	657, 172	27, 254	82, 694	84, 631	56, 820
March.....	990, 123	6, 633	58, 130	326	668, 539	27, 557	84, 957	85, 711	58, 270
April.....	1, 016, 233	8, 103	69, 931	409	676, 130	26, 457	87, 895	87, 012	60, 296
May.....	1, 037, 462	8, 333	80, 023	397	683, 544	25, 779	89, 814	87, 757	61, 815
June.....	1, 049, 661	9, 468	88, 829	399	681, 951	26, 519	91, 408	88, 763	62, 324
July.....	1, 054, 154	10, 050	95, 223	337	678, 699	25, 761	91, 247	89, 368	63, 469
August.....	1, 046, 642	9, 211	94, 807	311	668, 389	27, 900	91, 207	90, 137	64, 680
September.....	1, 038, 943	8, 861	91, 017	326	662, 839	28, 520	92, 127	91, 423	63, 830
October.....	1, 026, 051	8, 740	91, 330	335	649, 203	29, 331	90, 266	92, 518	64, 328
November.....	962, 364	7, 415	79, 288	318	602, 460	29, 637	88, 235	91, 940	63, 071
December.....	921, 442	6, 549	64, 790	260	580, 228	28, 796	86, 625	93, 980	60, 214
<i>Females</i>									
January.....	287, 221	727	2, 423	12	146, 522	133	62, 299	55, 458	19, 647
February.....	291, 959	778	2, 443	12	151, 187	133	62, 272	55, 350	19, 784
March.....	295, 890	921	2, 462	12	151, 378	133	63, 173	57, 653	20, 158
April.....	299, 479	1, 178	2, 496	13	151, 709	133	64, 214	59, 142	20, 594
May.....	301, 418	1, 170	2, 531	14	152, 276	133	65, 053	59, 376	20, 865
June.....	303, 776	1, 228	2, 603	14	152, 454	133	66, 301	59, 742	21, 301
July.....	301, 850	1, 345	2, 615	14	152, 524	133	65, 810	57, 928	21, 481
August.....	304, 534	1, 062	2, 625	14	156, 174	133	65, 530	57, 685	21, 411
September.....	311, 985	1, 084	2, 598	14	160, 879	133	66, 378	59, 699	21, 200
October.....	313, 416	1, 007	2, 646	14	159, 731	133	66, 375	62, 600	20, 910
November.....	307, 254	865	2, 616	13	153, 121	133	65, 740	63, 514	21, 252
December.....	309, 282	775	2, 584	13	144, 285	133	65, 598	74, 859	21, 035
<i>Both sexes</i>									
January.....	1, 230, 741	6, 646	51, 965	307	784, 410	26, 582	144, 389	139, 904	76, 538
February.....	1, 256, 762	6, 731	52, 461	273	808, 359	27, 387	144, 966	139, 981	76, 604
March.....	1, 286, 013	7, 554	60, 592	338	819, 917	27, 690	148, 130	143, 364	78, 428
April.....	1, 315, 712	9, 281	72, 427	422	827, 839	26, 590	152, 109	146, 154	80, 890
May.....	1, 338, 880	9, 503	82, 554	411	835, 820	25, 912	154, 867	147, 133	82, 680
June.....	1, 353, 437	10, 696	91, 432	413	834, 405	26, 652	157, 709	148, 505	83, 625
July.....	1, 356, 004	11, 395	97, 838	351	831, 223	25, 894	157, 057	147, 296	84, 950
August.....	1, 351, 176	10, 173	97, 432	325	824, 563	28, 033	156, 737	147, 822	86, 091
September.....	1, 350, 928	9, 945	93, 615	340	823, 718	28, 653	158, 505	151, 122	85, 030
October.....	1, 339, 467	9, 747	93, 976	349	808, 934	29, 464	156, 641	155, 118	85, 238
November.....	1, 269, 618	8, 280	81, 904	331	755, 581	29, 770	153, 975	155, 454	84, 323
December.....	1, 230, 724	7, 324	67, 374	273	724, 513	28, 929	152, 223	168, 839	81, 249

As before stated, the figures for agriculture do not give a complete picture of that industry owing to the fact that the great majority of Ohio farmers who hire help employ fewer than three persons and only a few reports are received from farms regularly employing fewer than three.

Table 4 shows for each industry group the month of maximum and the month of minimum employment and also the variation in number employed:

TABLE 4.—MAXIMUM AND MINIMUM EMPLOYMENT IN 1929 IN EACH INDUSTRY GROUP, BY SEX

Sex and industry group	Maximum		Minimum		Variation from maximum	
	Number	Month	Number	Month	Number	Per cent
<i>Males</i>						
All industries.....	1,054,154	July.....	921,442	December.....	132,712	12.6
Agriculture.....	10,050	do.....	5,919	January.....	4,131	41.1
Construction.....	95,223	do.....	49,542	do.....	45,681	48.0
Fisheries.....	409	April.....	260	December.....	149	36.4
Manufactures.....	683,544	May.....	580,228	do.....	103,316	15.1
Mining and quarrying.....	29,637	November.....	25,761	July.....	3,876	13.1
Service.....	92,127	September.....	82,090	January.....	10,037	10.9
Trade, wholesale and retail.....	93,980	December.....	84,446	do.....	9,534	10.1
Transportation and public utilities.....	64,680	August.....	56,820	February.....	7,860	12.2
<i>Females</i>						
All industries.....	313,416	October.....	287,221	January.....	26,195	8.4
Agriculture.....	1,345	July.....	727	do.....	618	45.9
Construction.....	2,646	October.....	2,423	do.....	223	8.4
Fisheries.....	14	May to October.....	12	January to March.....	(1)	(1)
Manufactures.....	160,879	September.....	144,285	December.....	16,594	10.3
Mining and quarrying.....	(3)	do.....	(2)	do.....	(2)	(2)
Service.....	66,378	September.....	62,272	February.....	4,106	6.2
Trade, wholesale and retail.....	74,859	December.....	55,350	do.....	19,509	26.1
Transportation and public utilities.....	21,481	July.....	19,647	January.....	1,834	8.5
<i>Both sexes</i>						
All industries.....	1,356,004	July.....	1,230,724	December.....	125,280	9.2
Agriculture.....	11,395	do.....	6,646	January.....	4,749	41.7
Construction.....	97,838	do.....	51,965	do.....	45,873	46.9
Fisheries.....	422	April.....	273	February and December.....	149	35.3
Manufactures.....	835,820	May.....	724,513	December.....	111,307	13.3
Mining and quarrying.....	29,770	November.....	25,894	July.....	3,876	13.0
Service.....	158,505	September.....	144,389	January.....	14,116	8.9
Trade, wholesale and retail.....	168,839	December.....	139,904	do.....	28,935	17.1
Transportation and public utilities.....	86,091	August.....	76,538	do.....	9,553	11.1

¹ Not computed owing to small number involved. ² All "office help" and fluctuation not reported.

For males April was the month of maximum employment in fisheries; May in manufactures; July in agriculture, in construction, and in all industries; August in transportation and public utilities; September in service; November in mining and quarrying; and December in trade. January was the month of minimum employment in agriculture, in construction, in service, and in trade; February in transportation and public utilities; July in mining and quarrying; and December in fisheries, in manufactures, and in all industries.

For females the month of maximum employment was July in agriculture and in transportation and public utilities; September in manu-

factures and in service; October in construction and in all industries; and December in trade. The month of minimum employment was January in agriculture, in construction, in transportation and public

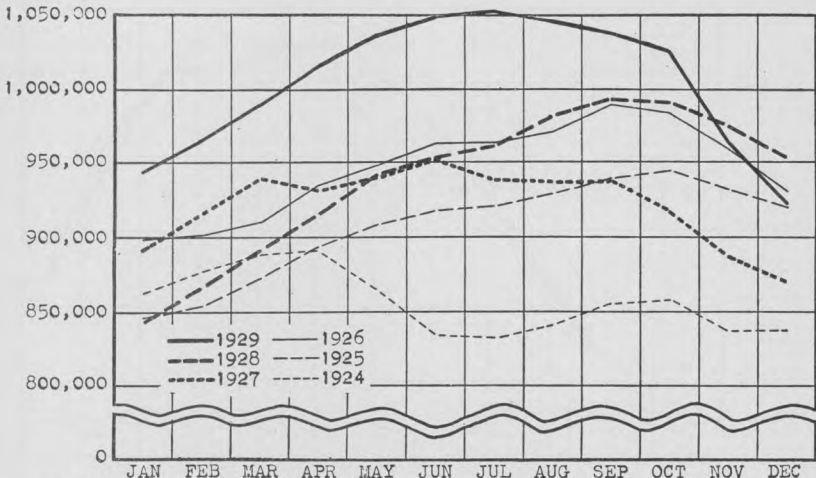


CHART 1.—FLUCTUATION OF EMPLOYMENT OF MALES IN ALL INDUSTRIES, 1924-1929

utilities, and in all industries; February in service and in trade; and December in manufactures.

Charts 1 to 7 show in graphic form the course of employment in 1929 of males and of females in all industries and in each of the industry groups in which large numbers are employed.

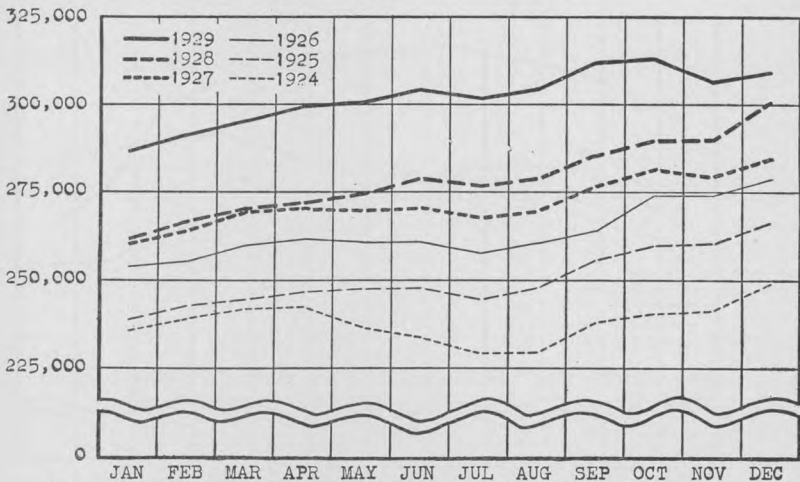


CHART 2.—FLUCTUATION OF EMPLOYMENT OF FEMALES IN ALL INDUSTRIES, 1924-1929

In all industries (the total for all industry groups) males reached the peak of employment in 1929 two months earlier than in 1928 and 1926 and three months earlier than in 1925. After reaching the peak in July in 1929 the course continued downward throughout the

year with very decided declines in November and December. In 1927 the peak was reached one month earlier but held steady through the next three months. In 1924 the peak was reached in March, but

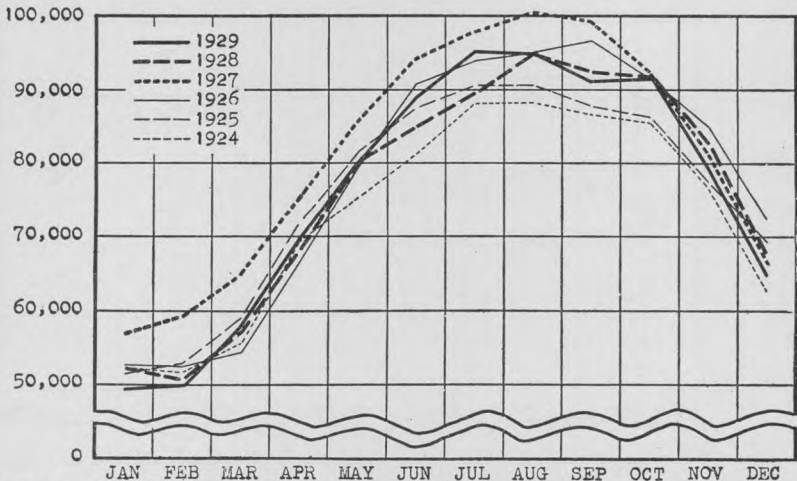


CHART 3.—FLUCTUATION OF EMPLOYMENT OF MALES IN CONSTRUCTION, 1924-1929

following a decline the course of employment was upward during August, September, and October.

In the total for the industry groups, females reached the peak of employment in 1929 in October. In each of the preceding five years the peak was reached in December. An important factor in making

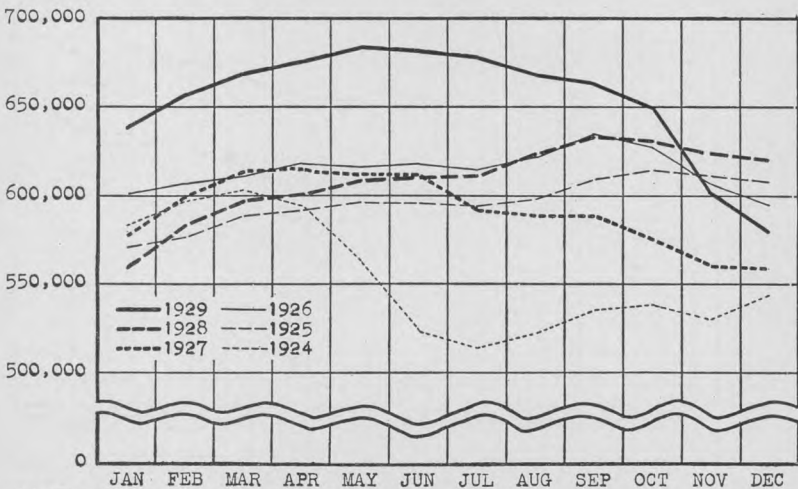


CHART 4.—FLUCTUATION OF EMPLOYMENT OF MALES IN MANUFACTURES, 1924-1929

December the high month is the large increase in the number employed in trade to take care of the holiday business. In 1929 the increase in trade was not sufficient to overcome the larger decrease in employment in manufactures.

Males reached the highest point of employment in construction during 1929 in July. This was one month earlier than in 1928, 1927, 1925, and 1924 and two months earlier than in 1926. The course of

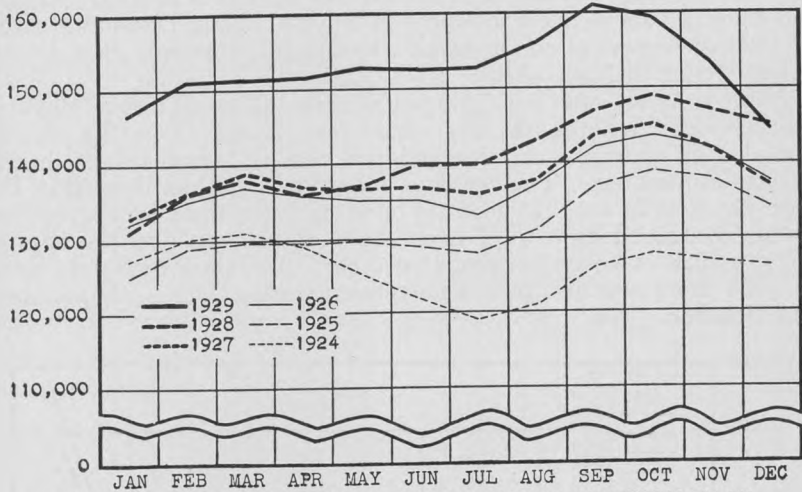


CHART 5.—FLUCTUATION OF EMPLOYMENT OF FEMALES IN MANUFACTURES, 1924-1929

employment continued downward from the peak in each of the six years, 1924 to 1929, except that in October, 1929, there was a slight advance over September.

Manufactures include approximately two-thirds of the males covered in this study (65.1 per cent in 1929 and 64.8 per cent in 1928),

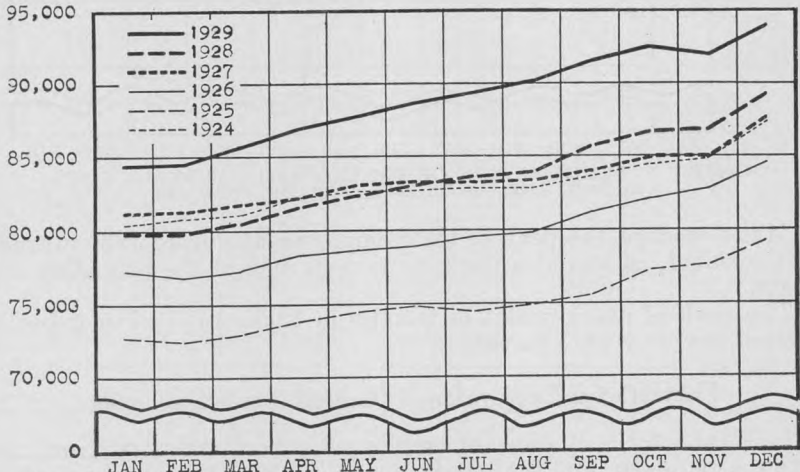


CHART 6.—FLUCTUATION OF EMPLOYMENT OF MALES IN RETAIL AND WHOLESALE TRADE, 1924-1929

and therefore the course of employment in manufactures has a corresponding influence upon the course of employment of males in the total for all industry groups. In 1929 males reached the peak of employment in manufactures in May, which was four months earlier

than in 1928 and 1926 and five months earlier than in 1925. It was one month later than in 1927 and two months later than in 1924. From the high point the course continued downward in 1929 throughout the remainder of the year which was also true in 1927. There was a heavy decline in employment in November and December, 1929. In 1924 the course of employment was upward after July except for a slight decline in November.

Approximately one-half (50.5 per cent in 1929 and 50.4 in 1928) of the females included in this study are found in manufactures. Females in manufactures reached the peak of employment during 1929 in September. This was one month earlier than in each of the four years 1925 to 1928 and six months later than in 1924. The course continued downward from the peak, as was also the case in 1925 to 1928. November and December, 1929, show heavy declines. In 1924 there was an upward movement during August, September, and October.

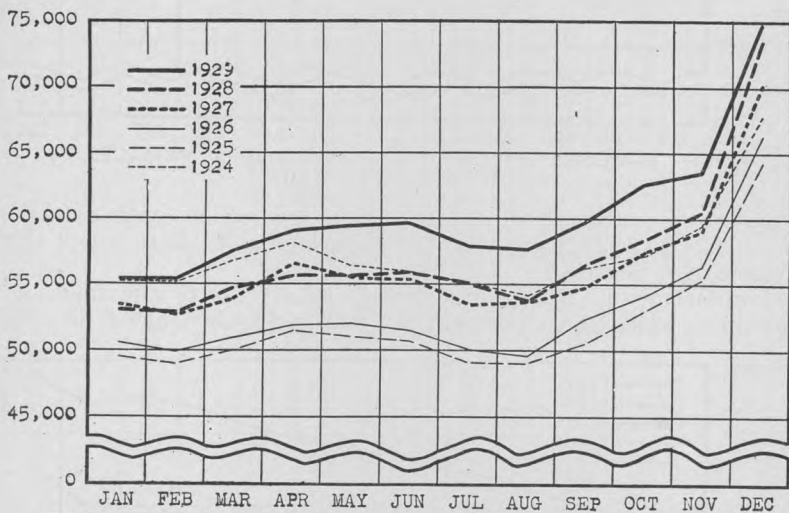


CHART 7.—FLUCTUATION OF EMPLOYMENT OF FEMALES IN RETAIL AND WHOLESALE TRADE, 1924-1929

Males reached the peak of their employment during 1929 in trade in December, as was also the condition in each of the preceding five years.

The peak of employment of females in trade was in December in each of the six years charted.

Fluctuation of Employment, by General Occupation Groups

IN TABLE 5 the number of employees in each industry group are given separately for the three general occupation groups—wage earners; bookkeepers, stenographers, and office clerks; and sales people (not traveling). Males classified as wage earners form 86.5 per cent of all male employees in 1929 and 87 per cent in 1928. Females classified as wage earners form 60.4 per cent of all female employees in 1929 and 60.6 per cent in 1928.

TABLE 5.—NUMBER EMPLOYED ON THE 15TH OF EACH MONTH IN 1929 IN EACH GENERAL OCCUPATION GROUP, BY SEX AND INDUSTRY GROUPS

Wage earners

Sex and month	All industries	Agriculture	Construction	Fisheries	Manufactures	Mining and quarrying	Service	Trade, wholesale and retail	Transportation and public utilities
<i>Males</i>									
January	814,369	5,773	46,214	275	587,670	26,176	55,620	43,909	48,732
February	834,716	5,807	46,635	241	606,354	26,981	55,873	44,213	48,612
March	858,136	6,476	54,671	306	617,301	27,284	57,737	44,444	49,917
April	882,652	7,941	66,419	389	624,612	26,184	60,395	44,898	51,814
May	902,666	8,174	76,461	378	631,767	25,506	61,868	45,197	53,315
June	913,540	9,312	85,235	380	629,524	26,246	63,224	45,852	53,767
July	916,978	9,900	91,578	319	625,695	25,488	62,888	46,275	54,835
August	908,625	9,058	91,117	293	615,211	27,627	62,716	46,701	55,902
September	900,360	8,709	87,306	308	609,799	28,247	63,768	47,163	55,060
October	887,471	8,588	87,685	316	596,424	29,058	62,142	47,662	55,596
November	823,963	7,257	75,640	299	549,889	29,364	60,258	46,875	54,381
December	782,529	6,395	61,204	241	528,032	28,523	58,795	47,837	51,502
<i>Females</i>									
January	174,078	413	132		111,193		38,702	10,226	13,412
February	178,367	421	144		115,576		38,519	10,324	13,383
March	179,648	538	143		115,468		39,230	10,561	13,708
April	181,666	746	149		115,698		39,946	11,136	13,991
May	182,729	761	165		116,039		40,568	11,039	14,157
June	184,145	881	158		115,926		41,600	11,189	14,391
July	182,902	1,015	156		115,614		40,871	10,719	14,527
August	185,625	638	158		118,984		40,546	10,807	14,492
September	191,212	767	172		123,780		41,372	10,888	14,233
October	190,739	678	172		122,612		41,520	11,674	14,083
November	183,626	535	166		116,186		40,823	11,613	14,303
December	175,921	455	159		107,944		40,680	12,446	14,237
<i>Both sexes</i>									
January	988,447	6,186	46,346	275	698,863	26,176	94,322	54,135	62,144
February	1,013,083	6,228	46,779	241	721,930	26,981	94,392	54,537	61,995
March	1,037,784	7,014	54,814	306	732,769	27,284	96,967	55,005	63,625
April	1,064,318	8,687	66,568	389	740,310	26,184	100,341	56,034	65,805
May	1,085,395	8,935	76,626	378	747,806	25,506	102,436	56,236	67,472
June	1,097,685	10,193	85,393	380	745,450	26,246	104,824	57,041	68,158
July	1,099,880	10,915	91,734	319	741,309	25,488	103,759	56,994	69,362
August	1,094,250	9,696	91,275	293	734,195	27,627	103,262	57,508	70,394
September	1,091,572	9,476	87,478	308	733,579	28,247	105,140	58,051	69,293
October	1,078,210	9,266	87,857	316	719,036	29,058	103,662	59,336	69,679
November	1,007,589	7,792	75,806	299	666,075	29,364	101,081	58,488	68,884
December	958,450	6,850	61,363	241	635,976	28,523	99,475	60,283	65,739

Bookkeepers, stenographers, and office clerks

<i>Males</i>									
January	80,662	92	2,372	19	42,911	273	19,766	7,963	7,266
February	81,290	93	2,393	19	43,405	273	19,856	7,937	7,314
March	81,974	100	2,435	19	43,760	273	19,922	8,026	7,439
April	82,524	103	2,454	19	44,004	273	19,975	8,119	7,577
May	83,059	98	2,490	18	44,194	273	20,265	8,117	7,604
June	83,873	97	2,514	18	44,703	273	20,473	8,137	7,658
July	84,761	96	2,543	17	45,234	273	20,632	8,228	7,738
August	85,400	99	2,553	17	45,422	273	20,879	8,287	7,870
September	85,208	97	2,584	17	45,266	273	20,815	8,307	7,849
October	84,807	97	2,541	18	45,011	273	20,756	8,333	7,778
November	84,609	98	2,581	18	44,811	273	20,782	8,314	7,732
December	84,189	96	2,552	18	44,413	273	20,772	8,314	7,751
<i>Females</i>									
January	82,076	279	2,242	12	33,720	133	23,083	16,429	6,178
February	82,669	321	2,251	12	34,012	133	23,241	16,357	6,342
March	83,223	346	2,267	12	34,276	133	23,416	16,389	6,384
April	84,091	393	2,291	13	34,377	133	23,721	16,619	6,544
May	84,614	367	2,310	14	34,613	133	23,923	16,608	6,646
June	85,190	310	2,392	14	34,875	133	24,137	16,481	6,848

TABLE 5.—NUMBER EMPLOYED ON THE 15TH OF EACH MONTH IN 1929 IN EACH GENERAL OCCUPATION GROUP, BY SEX AND INDUSTRY GROUPS—Continued

Bookkeepers, stenographers, and office clerks—Continued

Sex and month	All industries	Agriculture	Construction	Fisheries	Manufactures	Mining and quarrying	Service	Trade, wholesale and retail	Transportation and public utilities
<i>Females—Continued</i>									
July.....	86,033	296	2,410	14	35,233	133	24,363	16,693	6,891
August.....	86,391	290	2,410	14	35,521	133	24,410	16,757	6,856
September.....	86,494	284	2,370	14	35,377	133	24,418	16,987	6,911
October.....	86,385	295	2,415	14	35,389	133	24,250	17,119	6,770
November.....	86,644	294	2,390	13	35,237	133	24,315	17,371	6,891
December.....	86,224	282	2,370	13	34,595	133	24,316	17,783	6,732
<i>Both sexes</i>									
January.....	162,738	371	4,614	31	76,631	406	42,849	24,392	13,444
February.....	163,959	414	4,644	31	77,417	406	43,097	24,294	13,656
March.....	165,197	446	4,702	31	78,036	406	43,338	24,415	13,823
April.....	166,615	496	4,745	32	78,381	406	43,696	24,738	14,121
May.....	167,673	465	4,800	32	78,807	406	44,188	24,725	14,250
June.....	169,063	407	4,906	32	79,578	406	44,910	24,618	14,506
July.....	170,794	392	4,953	31	80,467	406	44,995	24,921	14,629
August.....	171,791	389	4,963	31	80,947	406	45,289	25,044	14,726
September.....	171,702	381	4,954	31	80,643	406	45,233	25,294	14,760
October.....	171,192	392	4,956	32	80,400	406	45,006	25,452	14,548
November.....	171,253	392	4,971	31	80,048	406	45,097	25,685	14,623
December.....	170,413	378	4,922	31	79,008	406	45,088	26,097	14,483

Sales people (not traveling)

<i>Males</i>									
January.....	48,489	54	956	1	7,307	-----	6,704	32,574	893
February.....	48,797	53	990	1	7,413	-----	6,965	32,481	894
March.....	50,013	57	1,024	1	7,478	-----	7,298	33,241	914
April.....	51,057	59	1,058	1	7,514	-----	7,525	33,995	905
May.....	51,737	61	1,072	1	7,583	-----	7,681	34,443	896
June.....	52,248	59	1,080	1	7,724	-----	7,711	34,774	899
July.....	52,415	54	1,102	1	7,770	-----	7,727	34,865	896
August.....	52,617	54	1,137	1	7,756	-----	7,612	35,149	908
September.....	53,375	55	1,127	1	7,774	-----	7,544	35,953	921
October.....	53,773	55	1,104	1	7,708	-----	7,368	36,523	954
November.....	53,792	60	1,067	1	7,760	-----	7,195	36,751	958
December.....	54,724	58	1,034	1	7,783	-----	7,058	37,829	961
<i>Females</i>									
January.....	31,067	35	49	-----	1,609	-----	514	28,803	57
February.....	30,923	36	48	-----	1,599	-----	512	28,660	59
March.....	33,019	37	52	-----	1,634	-----	527	30,703	66
April.....	33,722	39	56	-----	1,634	-----	547	31,387	59
May.....	34,075	42	56	-----	1,624	-----	562	31,729	62
June.....	34,441	37	53	-----	1,653	-----	564	32,072	62
July.....	32,915	34	49	-----	1,677	-----	576	30,516	63
August.....	32,518	34	57	-----	1,669	-----	574	30,121	63
September.....	34,279	33	56	-----	1,722	-----	588	31,824	56
October.....	36,292	34	59	-----	1,730	-----	605	33,807	57
November.....	36,984	36	60	-----	1,698	-----	602	34,525	63
December.....	47,137	38	55	-----	1,746	-----	602	44,630	66
<i>Both sexes</i>									
January.....	79,556	89	1,005	1	8,916	-----	7,218	61,377	950
February.....	79,720	89	1,038	1	9,012	-----	7,477	61,150	953
March.....	83,032	94	1,076	1	9,112	-----	7,825	63,944	980
April.....	84,779	98	1,114	1	9,148	-----	8,072	65,382	964
May.....	85,812	103	1,128	1	9,207	-----	8,243	66,172	958
June.....	86,689	96	1,133	1	9,377	-----	8,275	66,846	961
July.....	85,330	88	1,151	1	9,447	-----	8,303	65,381	959
August.....	85,135	88	1,194	1	9,425	-----	8,186	65,270	971
September.....	87,654	88	1,183	1	9,496	-----	8,132	67,777	977
October.....	90,065	89	1,163	1	9,498	-----	7,973	70,330	1,011
November.....	90,776	96	1,127	1	9,458	-----	7,797	71,276	1,021
December.....	101,861	96	1,089	1	9,529	-----	7,660	82,459	1,027

Table 6 shows for 1929 the maximum and minimum employment and also the variation in number employed in each of the three general occupation groups, the data for each occupation group being given by industry groups.

TABLE 6.—MAXIMUM AND MINIMUM EMPLOYMENT IN EACH GENERAL OCCUPATION GROUP, 1929, BY SEX AND INDUSTRY GROUPS

<i>Wage earners</i>						
Sex and industry group	Maximum		Minimum		Variation from maximum	
	Number	Month	Number	Month	Number	Per cent
<i>Males</i>						
All industries.....	916, 978	July.....	782, 529	December.....	134, 449	14. 7
Agriculture.....	9, 900	.....do.....	5, 773	January.....	4, 127	41. 7
Construction.....	91, 578	.....do.....	46, 214	.....do.....	45, 364	49. 5
Fisheries.....	389	April.....	241	February and December.....	148	38. 0
Manufactures.....	631, 767	May.....	528, 032	December.....	103, 735	16. 4
Mining and quarrying.....	29, 364	November.....	25, 488	July.....	3, 876	13. 2
Service.....	63, 768	September.....	55, 620	January.....	8, 148	12. 8
Trade, wholesale and retail.....	47, 837	December.....	43, 909	.....do.....	3, 928	8. 2
Transportation and public utilities.....	55, 902	August.....	48, 612	February.....	7, 290	13. 0
<i>Females</i>						
All industries.....	191, 212	September.....	174, 078	January.....	17, 134	9. 0
Agriculture.....	1, 015	July.....	413	.....do.....	602	59. 3
Construction.....	172	September and October.....	132	.....do.....	40	23. 3
Manufactures.....	123, 780	September.....	107, 944	December.....	15, 836	12. 8
Service.....	41, 600	June.....	38, 519	February.....	3, 081	7. 4
Trade, wholesale and retail.....	12, 446	December.....	10, 226	January.....	2, 220	17. 8
Transportation and public utilities.....	14, 527	July.....	13, 383	February.....	1, 144	7. 9
<i>Both sexes</i>						
All industries.....	1, 099, 880	July.....	958, 450	December.....	141, 430	12. 9
Agriculture.....	10, 915	.....do.....	6, 186	January.....	4, 729	43. 3
Construction.....	91, 734	.....do.....	46, 346	.....do.....	45, 388	49. 5
Fisheries.....	389	April.....	241	February and December.....	148	38. 0
Manufactures.....	747, 806	May.....	635, 976	December.....	111, 830	15. 0
Mining and quarrying.....	29, 364	November.....	25, 488	July.....	3, 876	13. 2
Service.....	105, 140	September.....	94, 322	January.....	10, 818	10. 3
Trade, wholesale and retail.....	60, 283	December.....	54, 135	.....do.....	6, 148	10. 2
Transportation and public utilities.....	70, 394	August.....	61, 995	February.....	8, 399	11. 9

Bookkeepers, stenographers, and office clerks

<i>Males</i>						
All industries.....	85, 400	August.....	80, 662	January.....	4, 738	5. 5
Agriculture.....	103	April.....	92	.....do.....	11	10. 7
Construction.....	2, 584	September.....	2, 372	.....do.....	212	8. 2
Fisheries.....	19	January to April.....	17	July to September.....	2	(¹)
Manufactures.....	45, 422	August.....	42, 911	January.....	2, 511	5. 5
Mining and quarrying.....	(²)	(²).....	(²)	(²).....	(²)	(²)
Service.....	20, 879	August.....	19, 766	January.....	1, 113	5. 3
Trade, wholesale and retail.....	8, 333	October.....	7, 937	February.....	396	4. 8
Transportation and public utilities.....	7, 870	August.....	7, 266	January.....	604	7. 7
<i>Females</i>						
All industries.....	86, 644	November.....	82, 076	January.....	4, 568	5. 3
Agriculture.....	393	April.....	279	.....do.....	114	29. 0
Construction.....	2, 415	October.....	2, 242	.....do.....	173	7. 2

¹ Not computed owing to small number involved. ² Fluctuation for office help not reported.

TABLE 6.—MAXIMUM AND MINIMUM EMPLOYMENT IN EACH GENERAL OCCUPATION GROUP, 1929, BY SEX AND INDUSTRY GROUPS—Continued

Bookkeepers, stenographers, and office clerks—Continued

Sex and industry group	Maximum		Minimum		Variation from maximum	
	Number	Month	Number	Month	Number	Per cent
<i>Females—Continued</i>						
Fisheries.....	14	May to October.	12	January to March.	2	(1)
Manufactures.....	35,521	August.....	33,720	January.....	1,801	5.1
Mining and quarrying.....	(2)	(2)	(2)	(2)	(2)	(2)
Service.....	24,418	September.....	23,083	January.....	1,335	5.5
Trade, wholesale and retail.....	17,783	December.....	16,357	February.....	1,426	8.0
Transportation and public utilities.....	6,911	September.....	6,178	January.....	733	10.6
<i>Both sexes</i>						
All industries.....	171,791	August.....	162,738	January.....	9,053	5.3
Agriculture.....	496	April.....	371	do.....	125	25.2
Construction.....	4,971	November.....	4,614	do.....	357	7.2
Fisheries.....	32	April to June and October.	31	January to March, July to September, November and December.	1	(1)
Manufactures.....	80,943	August.....	76,631	January.....	4,312	5.3
Mining and quarrying.....	(2)	(2)	(2)	(2)	(2)	(2)
Service.....	45,289	August.....	42,849	January.....	2,440	5.4
Trade, wholesale and retail.....	26,097	December.....	24,294	February.....	1,803	6.9
Transportation and public utilities.....	14,760	September.....	13,444	January.....	1,316	8.9

Sales people (not traveling)

<i>Males</i>						
All industries.....	54,724	December.....	48,489	January.....	6,235	11.4
Agriculture.....	61	May.....	53	February.....	8	(1)
Construction.....	1,137	August.....	956	January.....	181	15.9
Fisheries.....	(3)	(3)	(3)	(3)	(3)	(3)
Manufactures.....	7,783	December.....	7,307	January.....	476	6.1
Service.....	7,727	July.....	6,704	do.....	1,023	13.2
Trade, wholesale and retail.....	37,829	December.....	32,481	February.....	5,348	14.1
Transportation and public utilities.....	961	do.....	893	January.....	68	7.1
<i>Females</i>						
All industries.....	47,137	December.....	30,923	February.....	16,214	34.4
Agriculture.....	42	May.....	33	September.....	9	(1)
Construction.....	60	November.....	48	February.....	12	(1)
Manufactures.....	1,746	December.....	1,599	do.....	147	8.4
Service.....	605	October.....	512	do.....	93	15.4
Trade, wholesale and retail.....	44,630	December.....	28,669	do.....	15,961	35.8
Transportation and public utilities.....	66	March and December.	56	September.....	10	(1)
<i>Both sexes</i>						
All industries.....	101,861	December.....	79,556	January.....	22,305	21.9
Agriculture.....	103	May.....	88	July to September.	15	14.6
Construction.....	1,194	August.....	1,005	January.....	189	15.8
Fisheries.....	(3)	(3)	(3)	(3)	(3)	(3)
Manufactures.....	9,529	December.....	8,916	January.....	613	6.4
Service.....	8,303	July.....	7,218	do.....	1,085	13.1
Trade, wholesale and retail.....	82,459	December.....	61,150	February.....	21,309	25.8
Transportation and public utilities.....	1,027	do.....	950	January.....	77	7.5

1 Not computed owing to small number involved.

2 Fluctuation for office help not reported.

3 One male employed throughout year.

The peak of employment for males in all industries (the total for the several industry groups) was reached by wage earners in July; by bookkeepers, stenographers, and office clerks in August; and by sales people (not traveling) in December. The low point of employment during the year was reached by wage earners in December and by each of the other two occupation groups in January.

The peak of employment for females in all industries was reached by wage earners in September; by bookkeepers, stenographers, and office clerks in November; and by sales people (not traveling) in December. The low point of employment during the year was reached in January by the first two occupational groups and in February by sales people (not traveling).

Charts 8 and 9 show in graphic form the fluctuation of employment of male wage earners and of female wage earners in all industries for the six years 1924 to 1929.

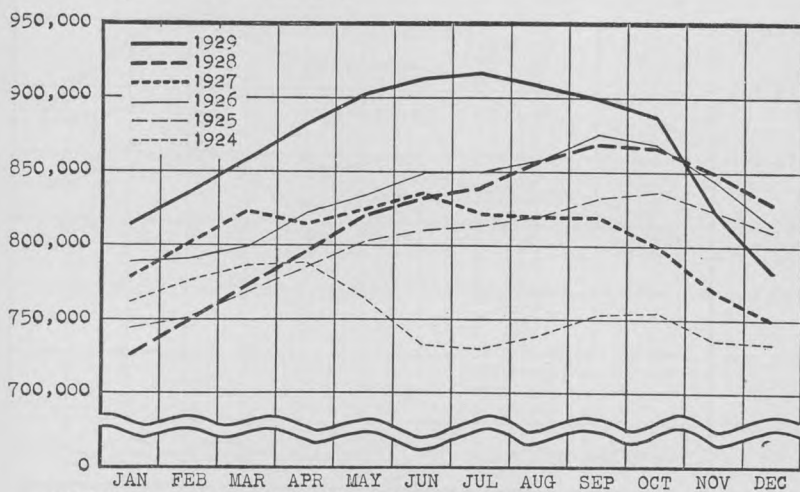


CHART 8.—FLUCTUATION OF EMPLOYMENT OF MALE WAGE EARNERS, 1924-1929

Table 7 presents a comparison of the employment fluctuation for males and females in all industries and in four industry groups which employ large numbers both of males and of females. The comparisons are for each of the three general occupation groups.

TABLE 7.—PER CENT OF VARIATION FROM MAXIMUM EMPLOYMENT OF MALES AND OF FEMALES IN GENERAL OCCUPATION GROUPS, 1929, BY SPECIFIED INDUSTRY GROUPS

Industry group	Wage earners		Bookkeepers, stenographers, and office clerks		Sales people (not traveling)	
	Males	Females	Males	Females	Males	Females
	All industries.....	14.7	9.0	5.5	5.3	11.4
Manufactures.....	16.4	12.8	5.5	5.1	6.1	8.4
Service.....	12.8	7.4	5.3	5.5	13.2	15.4
Trade, wholesale and retail.....	8.2	17.8	4.8	8.0	14.1	35.8
Transportation and public utilities.....	13.0	7.9	7.7	10.6	7.1	(¹)

¹ Not computed owing to small number involved.

Among wage earners a decidedly greater per cent of fluctuation of employment is shown for males than for females in all industries, in manufactures, in service, and in transportation and public utilities. Females show twice as great a fluctuation in employment in trade as do males.

Among bookkeepers, stenographers, and office clerks, the per cent of variation is practically the same for males and for females in all industries, in manufactures, and in service. Females show a decidedly greater fluctuation than do males in employment in trade and in transportation and public utilities.

In the nontraveling sales group, the females show a greater per cent of fluctuation of employment than do males in each of the industry groups. The difference is very marked in trade and also in all industries. This difference in trade is due largely to the great increase in the number of saleswomen employed for the holiday busi-

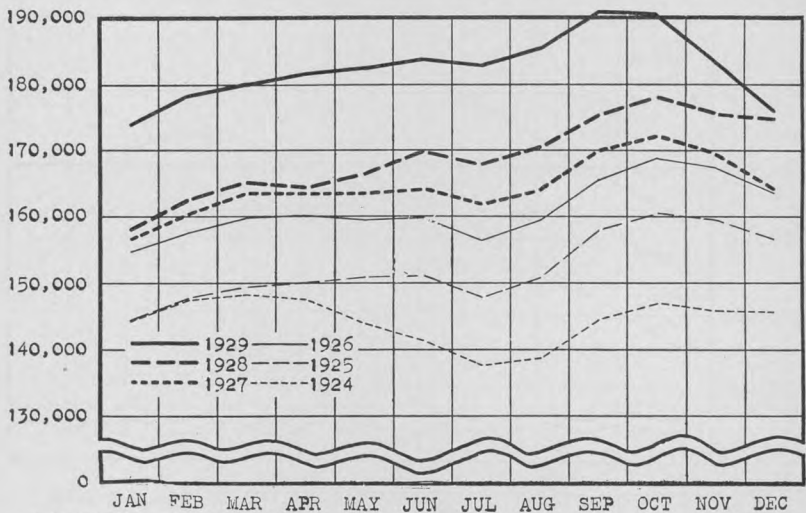


CHART 9.—FLUCTUATION OF EMPLOYMENT OF FEMALE WAGE EARNERS, 1924-1929

ness. If December be omitted from consideration the variation during the first 11 months of 1929 was 11.6 per cent for salesmen and 17 per cent for saleswomen.

In this general occupation group the taking on of the large extra force of saleswomen in December also accounts for a considerable part of the difference between males and females in all industries, as 93.2 per cent of the saleswomen reported in 1929 were in trade and only 67.2 per cent of the salesmen were in that industry group.

Fluctuation of Employment, by Counties

THIS section deals with fluctuation of employment in 1929 in the eight most populous counties of Ohio. Mining and quarrying are not included in the county data, but with those exceptions the industries covered are the same as in the preceding sections of this study—agriculture, construction, fisheries, manufactures, service, trade, and transportation and public utilities. Table 8 shows the

number of establishments reporting from each of the eight counties. The principal cities in the eight counties are Cleveland in Cuyahoga, Columbus in Franklin, Cincinnati in Hamilton, Toledo in Lucas, Youngstown in Mahoning, Dayton in Montgomery, Canton in Stark, and Akron in Summit.

TABLE 8.—NUMBER OF ESTABLISHMENTS REPORTING FLUCTUATION OF EMPLOYMENT IN EIGHT SPECIFIED COUNTIES, 1929 (FOR ALL INDUSTRIES EXCEPT MINING AND QUARRYING)

County	All industries except mining and quarrying	Manufactures	County	All industries except mining and quarrying	Manufactures
Cuyahoga.....	7,464	2,005	Mahoning.....	1,277	186
Franklin.....	2,699	538	Montgomery.....	1,740	476
Hamilton.....	5,000	1,536	Stark.....	1,395	309
Lucas.....	2,233	567	Summit.....	1,708	329

Table 9 shows the number employed on the 15th of each month in 1929 in each of the eight counties. These figures, which are presented by sex, are the totals for the seven industry groups previously enumerated.

TABLE 9.—NUMBER EMPLOYED ON THE 15TH OF EACH MONTH IN EIGHT SPECIFIED COUNTIES, 1929, BY SEX (ALL INDUSTRIES EXCEPT MINING AND QUARRYING)

Sex and month	Cuyahoga County	Franklin County	Hamilton County	Lucas County	Mahoning County	Montgomery County	Stark County	Summit County
<i>Males</i>								
January.....	204,530	45,421	114,997	73,349	41,482	48,750	37,167	74,766
February.....	211,981	46,056	115,214	78,377	41,772	50,396	38,567	76,294
March.....	219,543	47,320	118,294	77,564	43,159	52,223	39,899	77,931
April.....	224,717	48,690	120,481	79,682	43,428	54,043	40,936	79,814
May.....	230,877	50,007	122,345	78,197	44,980	56,295	41,993	81,426
June.....	231,840	50,387	123,184	76,412	45,778	57,311	42,052	83,418
July.....	232,402	50,444	123,835	74,682	45,694	57,460	42,193	83,223
August.....	230,919	50,551	123,731	68,536	46,418	56,581	41,865	80,846
September.....	230,932	50,778	124,870	68,878	45,566	55,190	39,833	78,398
October.....	228,798	50,005	124,118	65,762	44,853	55,112	39,921	76,391
November.....	212,533	47,330	121,604	60,136	37,982	52,978	36,868	72,048
December.....	204,307	46,524	117,184	58,948	37,213	49,702	35,609	69,454
<i>Females</i>								
January.....	74,563	19,771	48,835	20,643	7,560	15,882	7,710	21,686
February.....	75,858	20,109	49,371	20,958	7,601	16,227	7,901	22,073
March.....	77,296	20,578	48,804	21,256	7,770	16,889	8,123	22,504
April.....	78,677	20,608	48,750	21,570	7,886	17,054	8,419	23,239
May.....	79,049	20,682	48,317	21,979	8,051	17,295	8,611	23,552
June.....	79,559	20,463	48,263	21,381	8,284	17,360	8,694	23,927
July.....	79,019	20,052	48,246	21,458	8,059	17,286	8,765	23,644
August.....	80,069	20,199	50,209	20,678	7,906	17,141	8,687	23,198
September.....	82,716	20,543	51,235	20,945	7,961	17,440	8,684	22,932
October.....	83,636	21,005	51,929	20,461	8,044	17,714	8,759	22,849
November.....	81,820	21,171	51,848	19,312	8,029	17,687	8,525	21,160
December.....	83,577	21,905	49,512	19,017	8,293	17,759	8,784	21,097
<i>Both sexes</i>								
January.....	279,093	65,192	163,832	93,992	49,042	64,632	44,877	96,452
February.....	287,839	66,165	164,585	99,335	49,373	66,623	46,468	98,367
March.....	296,839	67,898	167,098	98,820	50,929	69,112	48,022	100,435
April.....	303,394	69,298	169,231	101,252	51,314	71,097	49,355	103,053
May.....	309,926	70,689	170,662	100,176	53,031	73,590	50,604	104,978
June.....	311,399	70,850	171,447	97,793	54,062	74,671	50,746	107,345
July.....	311,421	70,496	172,081	96,140	53,753	74,746	50,958	106,867
August.....	310,988	70,750	173,940	89,214	54,324	73,722	50,552	103,984
September.....	312,798	71,321	176,105	89,823	53,527	72,630	48,517	101,310
October.....	312,434	71,010	176,047	86,223	52,897	72,826	48,680	99,240
November.....	294,353	68,501	173,452	79,448	46,011	70,665	45,393	93,208
December.....	287,884	68,429	166,696	77,965	45,506	67,461	44,453	90,551

The maximum and minimum employment in each of the eight counties, the months in which these extremes occurred, and the per cent of variation from the maximum are shown in Table 10 for all industries except mining and quarrying. The average number employed in each county as computed from the 12 monthly reports given in the preceding table, are also shown.

TABLE 10.—MAXIMUM, MINIMUM, AND AVERAGE EMPLOYMENT IN EIGHT SPECIFIED COUNTIES, 1929, BY SEX (ALL INDUSTRIES EXCEPT MINING AND QUARRYING)

Sex and county	Maximum		Minimum		Variation from maximum		Average of 12 monthly reports
	Number	Month	Number	Month	Number	Per cent	
<i>Males</i>							
Cuyahoga.....	232,402	July.....	204,307	December..	28,095	12.1	221,877
Franklin.....	50,778	September..	45,421	January....	5,357	10.5	48,626
Hamilton.....	124,870	.....do.....	114,997	.....do.....	9,873	7.9	120,821
Lucas.....	79,682	April.....	58,948	December..	20,734	26.0	71,710
Mahoning.....	46,418	August.....	37,213	.....do.....	9,205	19.8	43,194
Montgomery.....	57,460	July.....	48,750	January....	8,710	15.1	53,837
Stark.....	42,193	.....do.....	35,669	December..	6,524	15.5	39,747
Summit.....	83,418	June.....	69,454	.....do.....	13,964	16.7	77,834
<i>Females</i>							
Cuyahoga.....	83,636	October....	74,563	January....	9,073	10.8	79,653
Franklin.....	21,905	December..	19,771	.....do.....	2,134	9.7	20,591
Hamilton.....	51,929	October....	48,246	July.....	3,683	7.1	49,610
Lucas.....	21,979	May.....	19,017	December..	2,962	13.5	20,805
Mahoning.....	8,293	December..	7,560	January....	733	8.8	7,954
Montgomery.....	17,759	.....do.....	15,882	.....do.....	1,877	10.6	17,144
Stark.....	8,784	.....do.....	7,710	.....do.....	1,074	12.2	8,472
Summit.....	23,927	June.....	21,097	December..	2,830	11.8	22,648
<i>Both sexes</i>							
Cuyahoga.....	312,798	September..	279,093	January....	33,705	10.8	301,530
Franklin.....	71,321	.....do.....	65,192	.....do.....	6,129	8.6	69,217
Hamilton.....	176,105	.....do.....	163,832	.....do.....	12,273	7.0	170,431
Lucas.....	101,252	April.....	77,965	December..	23,287	23.0	92,515
Mahoning.....	54,324	August.....	45,506	.....do.....	8,818	16.2	51,148
Montgomery.....	74,746	July.....	64,632	January....	10,114	13.5	70,981
Stark.....	50,958	.....do.....	44,450	December..	6,508	12.8	48,219
Summit.....	107,345	June.....	90,551	.....do.....	16,794	15.6	100,482

The peak of employment for males in all industries (not including mining and quarrying) was in April in Lucas County; in June in Summit; in July in Cuyahoga, Montgomery, and Stark; in August in Mahoning; and in September in Franklin and Hamilton. The low point of employment was in January in Franklin, Hamilton, and Montgomery Counties and in December in Cuyahoga, Lucas, Mahoning, Stark, and Summit.

The peak of employment for females was in May in Lucas County; in June in Summit; in October in Cuyahoga and Hamilton; and in December in Franklin, Mahoning, Montgomery, and Stark. The low point of employment was in January in Cuyahoga, Franklin, Mahoning, Montgomery, and Stark Counties; in July in Hamilton; and in December in Lucas and Summit.

For males the per cent of variation from maximum employment was highest (26 per cent) in Lucas County, Mahoning County being next highest (19.8 per cent), lowest (7.9 per cent) in Hamilton County, and second lowest (10.5 per cent) in Franklin County.

Lucas County also showed the highest variation for females, 13.5 per cent; Stark County the second highest, 12.2 per cent; Hamilton County the lowest, 7.1 per cent; and Mahoning County the second lowest, 8.8 per cent.

The order of the eight counties with respect to average number of employees of both sexes in 1929 in all industries (not including mining and quarrying) was Cuyahoga, Hamilton, Summit, Lucas, Montgomery, Franklin, Mahoning, and Stark.

In Table 11 the number employed on the 15th of each month in each county is given for the three general occupation groups—wage earners; bookkeepers, stenographers, and office clerks; and sales people (not traveling):

TABLE 11.—NUMBER EMPLOYED ON THE 15TH OF EACH MONTH IN EACH GENERAL OCCUPATION GROUP IN EIGHT SPECIFIED COUNTIES, 1929, BY SEX (ALL INDUSTRIES EXCEPT MINING AND QUARRYING)

Wage earners

Sex and month	Cuyahoga County	Franklin County	Hamilton County	Lucas County	Mahoning County	Montgomery County	Stark County	Summit County
<i>Males</i>								
January.....	170,816	36,661	93,768	64,078	36,522	41,334	32,993	65,313
February.....	178,045	37,229	93,891	68,960	36,743	42,811	34,399	66,764
March.....	185,039	38,221	96,777	68,055	38,057	44,656	35,621	68,291
April.....	189,610	39,363	98,888	70,042	38,243	46,510	36,594	69,996
May.....	195,435	40,564	100,630	68,432	39,743	48,653	37,603	71,577
June.....	195,935	40,872	101,410	66,563	40,468	49,604	37,632	73,367
July.....	196,283	40,950	101,814	64,839	40,341	49,638	37,706	73,007
August.....	194,446	41,010	101,558	58,757	41,051	48,665	37,327	70,662
September.....	193,543	41,125	102,413	59,086	40,155	47,246	35,288	68,242
October.....	192,265	40,326	101,687	55,928	39,461	47,211	35,380	66,283
November.....	175,940	37,648	99,062	50,382	32,659	45,087	32,388	62,157
December.....	167,515	36,667	94,539	49,153	31,934	41,816	31,201	59,511
<i>Females</i>								
January.....	43,967	11,683	30,794	12,626	3,767	9,302	3,737	14,797
February.....	44,967	11,965	31,572	12,859	3,773	9,628	3,831	15,154
March.....	45,974	12,212	30,504	12,962	3,808	10,101	3,948	15,384
April.....	46,588	12,172	30,488	13,133	3,864	10,188	4,191	16,000
May.....	47,088	12,302	29,804	13,257	3,971	10,310	4,297	16,184
June.....	47,461	12,018	29,751	12,780	4,052	10,357	4,349	16,475
July.....	46,954	11,687	29,782	12,825	3,936	10,338	4,357	16,251
August.....	47,956	11,912	31,485	12,046	3,900	10,151	4,308	15,856
September.....	50,181	12,016	32,310	12,205	3,946	10,410	4,290	15,549
October.....	50,855	12,238	32,952	11,590	3,916	10,542	4,289	14,957
November.....	48,652	12,333	32,568	10,547	3,893	10,352	4,054	13,872
December.....	47,953	12,133	29,172	10,448	3,931	9,876	3,911	13,119

Bookkeepers, stenographers, and office clerks

Sex and month	Cuyahoga County	Franklin County	Hamilton County	Lucas County	Mahoning County	Montgomery County	Stark County	Summit County
<i>Males</i>								
January.....	22,776	4,908	13,365	5,391	3,239	4,753	2,713	6,764
February.....	22,886	4,940	13,431	5,544	3,273	4,859	2,706	6,808
March.....	23,141	4,974	13,514	5,598	3,290	4,821	2,763	6,867
April.....	23,369	5,008	13,579	5,615	3,330	4,858	2,783	6,934
May.....	23,563	5,050	13,687	5,642	3,330	4,867	2,802	6,966
June.....	23,860	5,068	13,795	5,701	3,377	4,939	2,819	7,033
July.....	24,110	5,058	13,948	5,718	3,438	5,028	2,870	7,180
August.....	24,357	5,084	14,027	5,645	3,442	5,092	2,903	7,262
September.....	24,256	5,094	14,095	5,679	3,453	5,101	2,906	7,197
October.....	24,218	5,078	13,978	5,696	3,449	5,022	2,902	7,110
November.....	24,206	5,126	14,098	5,626	3,356	4,996	2,889	6,994
December.....	24,052	5,171	14,035	5,619	3,317	4,944	2,873	6,891

TABLE 11.—NUMBER EMPLOYED ON THE 15TH OF EACH MONTH IN EACH GENERAL OCCUPATION GROUP IN EIGHT SPECIFIED COUNTIES, 1929, BY SEX (ALL INDUSTRIES EXCEPT MINING AND QUARRYING)—Continued

Bookkeepers, stenographers, and office clerks—Continued

Sex and month	Cuyahoga County	Franklin County	Hamilton County	Lucas County	Mahoning County	Montgomery County	Stark County	Summit County
<i>Females</i>								
January.....	23, 212	5, 779	13, 988	6, 026	2, 476	4, 714	2, 800	4, 971
February.....	23, 458	5, 887	13, 956	6, 062	2, 479	4, 749	2, 828	5, 006
March.....	23, 613	5, 934	14, 059	6, 126	2, 500	4, 783	2, 843	5, 075
April.....	23, 984	5, 991	14, 005	6, 243	2, 526	4, 845	2, 873	5, 169
May.....	24, 018	5, 977	14, 203	6, 289	2, 544	4, 941	2, 905	5, 248
June.....	24, 127	6, 035	14, 290	6, 280	2, 606	4, 986	2, 934	5, 310
July.....	24, 409	6, 046	14, 458	6, 363	2, 609	4, 998	3, 004	5, 334
August.....	24, 558	6, 045	14, 619	6, 331	2, 591	5, 038	3, 033	5, 289
September.....	24, 540	6, 154	14, 608	6, 308	2, 557	4, 963	2, 990	5, 278
October.....	24, 433	6, 142	14, 522	6, 334	2, 575	4, 991	2, 998	5, 247
November.....	24, 447	6, 154	14, 592	6, 222	2, 575	5, 066	2, 972	5, 144
December.....	24, 374	6, 283	14, 625	6, 192	2, 583	5, 065	2, 930	5, 077

Sales people (not traveling)

<i>Males</i>								
January.....	10, 938	3, 852	7, 864	3, 880	1, 721	2, 663	1, 461	2, 689
February.....	11, 050	3, 887	7, 892	3, 873	1, 756	2, 726	1, 462	2, 722
March.....	11, 363	4, 125	8, 003	3, 911	1, 812	2, 746	1, 515	2, 773
April.....	11, 738	4, 319	8, 014	4, 025	1, 855	2, 675	1, 559	2, 884
May.....	11, 879	4, 393	8, 028	4, 123	1, 907	2, 775	1, 588	2, 883
June.....	12, 045	4, 447	7, 979	4, 148	1, 933	2, 768	1, 601	3, 018
July.....	12, 009	4, 436	8, 073	4, 125	1, 915	2, 794	1, 617	3, 036
August.....	12, 116	4, 457	8, 146	4, 134	1, 925	2, 824	1, 635	2, 922
September.....	12, 283	4, 559	8, 362	4, 113	1, 958	2, 843	1, 639	2, 959
October.....	12, 315	4, 601	8, 453	4, 138	1, 943	2, 879	1, 639	2, 998
November.....	12, 387	4, 556	8, 444	4, 128	1, 967	2, 895	1, 591	2, 897
December.....	12, 740	4, 686	8, 610	4, 176	1, 962	2, 942	1, 595	3, 052
<i>Females</i>								
January.....	7, 384	2, 309	4, 053	1, 991	1, 317	1, 866	1, 173	1, 918
February.....	7, 433	2, 257	3, 843	2, 007	1, 349	1, 850	1, 242	1, 913
March.....	7, 709	2, 432	4, 241	2, 168	1, 462	2, 005	1, 332	2, 045
April.....	8, 105	2, 445	4, 167	2, 194	1, 496	2, 021	1, 355	2, 070
May.....	7, 943	2, 403	4, 220	2, 433	1, 536	2, 044	1, 409	2, 120
June.....	7, 971	2, 410	4, 222	2, 321	1, 626	2, 017	1, 411	2, 142
July.....	7, 656	2, 319	4, 006	2, 270	1, 514	1, 950	1, 404	2, 059
August.....	7, 555	2, 242	4, 105	2, 301	1, 415	1, 952	1, 346	1, 993
September.....	7, 995	2, 373	4, 317	2, 432	1, 458	2, 067	1, 404	2, 085
October.....	8, 348	2, 625	4, 455	2, 537	1, 553	2, 181	1, 472	2, 645
November.....	8, 721	2, 684	4, 688	2, 543	1, 561	2, 269	1, 499	2, 144
December.....	11, 250	3, 489	5, 715	2, 377	1, 779	2, 818	1, 943	2, 901

Table 12 shows for each of the eight counties the maximum and minimum employment and the variation in each of the three general occupation groups.

TABLE 12.—MAXIMUM AND MINIMUM EMPLOYMENT IN EACH GENERAL OCCUPATION GROUP IN EIGHT SPECIFIED COUNTIES, 1929, BY SEX (ALL INDUSTRIES EXCEPT MINING AND QUARRYING)

Wage earners

Sex and county	Maximum		Minimum		Variation from maximum	
	Number	Month	Number	Month	Number	Per cent
<i>Males</i>						
Cuyahoga.....	196,283	July.....	167,515	December..	28,768	14.7
Franklin.....	41,125	September..	36,661	January....	4,464	10.9
Hamilton.....	102,413	do.....	93,768	do.....	8,645	8.4
Lucas.....	70,042	April.....	49,153	December..	20,889	29.8
Mahoning.....	41,051	August.....	31,934	do.....	9,117	22.2
Montgomery.....	49,638	July.....	41,334	January....	8,304	16.7
Stark.....	37,706	do.....	31,201	December..	6,505	17.3
Summit.....	73,367	June.....	59,511	do.....	13,856	18.9
<i>Females</i>						
Cuyahoga.....	50,855	October.....	43,967	January....	6,888	13.5
Franklin.....	12,333	November....	11,683	do.....	650	5.3
Hamilton.....	32,952	October.....	29,172	December..	3,780	11.5
Lucas.....	13,257	May.....	10,448	do.....	2,809	21.2
Mahoning.....	4,052	June.....	3,767	January....	285	7.0
Montgomery.....	10,542	October.....	9,302	do.....	1,240	11.8
Stark.....	4,357	July.....	3,737	do.....	620	14.2
Summit.....	16,475	June.....	13,119	December..	3,356	20.4

Bookkeepers, stenographers, and office clerks

<i>Males</i>						
Cuyahoga.....	24,357	August.....	22,776	January....	1,581	6.5
Franklin.....	5,171	December....	4,908	do.....	263	5.1
Hamilton.....	14,098	November....	13,365	do.....	733	5.2
Lucas.....	5,718	July.....	5,391	do.....	327	5.7
Mahoning.....	3,453	September..	3,239	do.....	214	6.2
Montgomery.....	5,101	do.....	4,753	do.....	348	6.8
Stark.....	2,906	do.....	2,706	February..	200	6.9
Summit.....	7,262	August.....	6,764	January....	498	6.9
<i>Females</i>						
Cuyahoga.....	24,558	August.....	23,212	January....	1,346	5.5
Franklin.....	6,283	December....	5,779	do.....	504	8.0
Hamilton.....	14,625	do.....	13,956	February..	669	4.6
Lucas.....	6,363	July.....	6,026	January....	337	5.3
Mahoning.....	2,609	do.....	2,476	do.....	133	5.1
Montgomery.....	5,066	November....	4,714	do.....	352	6.9
Stark.....	3,033	August.....	2,800	do.....	233	7.7
Summit.....	5,334	July.....	4,971	do.....	363	6.8

Sales people (not traveling)

<i>Males</i>						
Cuyahoga.....	12,740	December....	10,938	January....	1,802	14.1
Franklin.....	4,686	do.....	3,852	do.....	834	17.8
Hamilton.....	8,610	do.....	7,864	do.....	746	8.7
Lucas.....	4,176	do.....	3,873	February..	303	7.3
Mahoning.....	1,967	November....	1,721	January....	246	12.5
Montgomery.....	2,942	December....	2,663	do.....	279	9.5
Stark.....	1,639	September and October.....	1,461	do.....	178	10.9
Summit.....	3,052	December....	2,689	do.....	363	11.9
<i>Females</i>						
Cuyahoga.....	11,250	December....	7,384	January....	3,866	34.4
Franklin.....	3,489	do.....	2,257	February..	1,232	35.3
Hamilton.....	5,715	do.....	3,843	do.....	1,872	32.8
Lucas.....	2,543	November....	1,991	January....	552	21.7
Mahoning.....	1,779	December....	1,317	do.....	462	26.0
Montgomery.....	2,818	do.....	1,850	February..	968	34.4
Stark.....	1,943	do.....	1,173	January....	770	39.6
Summit.....	2,901	do.....	1,913	February..	988	34.1

For males the peak of employment for wage earners in each of the counties came from one to three months earlier than it did for bookkeepers, stenographers, and office clerks. The maximum for salesmen was reached in December in six of the eight counties.

For females the peak of employment for wage earners for seven of the eight counties came one or two months earlier than it did for bookkeepers, stenographers, and office clerks. The maximum for saleswomen was reached in December in seven of the eight counties.

For both male and female wage earners the highest per cent of variation occurred in Lucas County. The lowest per cent for male wage earners was in Hamilton and for female wage earners in Franklin County.

For bookkeepers, stenographers, and office clerks the highest per cent of variation for males was in Stark and Summit and for females in Franklin County. The lowest per cent for males was in Franklin and for females in Hamilton County.

For sales people (not traveling) the highest per cent of variation for males was in Franklin and for females in Stark County. The lowest per cent both for males and for females was in Lucas County.

Table 13 shows the number employed in manufactures on the 15th of each month in 1929 in each of the eight counties:

TABLE 13.—NUMBER EMPLOYED ON THE 15TH OF EACH MONTH IN MANUFACTURES IN EIGHT SPECIFIED COUNTIES, 1929, BY SEX

Sex and month	Cuya-hoga County	Franklin County	Hamil-ton County	Lucas County	Maho-ning County	Mont-gomery County	Stark County	Summit County
<i>Males</i>								
January	138,564	23,353	68,707	53,898	32,651	35,352	28,828	59,957
February	144,583	23,988	69,077	58,739	32,680	37,101	30,159	61,232
March	148,352	24,069	69,775	57,370	33,767	38,314	30,881	62,091
April	149,462	24,460	69,928	57,774	33,696	39,229	31,365	62,911
May	150,730	25,241	70,643	55,450	34,711	41,193	32,089	63,912
June	149,867	24,862	70,784	52,671	34,975	41,982	31,811	65,014
July	150,349	24,709	71,244	50,126	34,950	41,848	31,866	64,533
August	148,743	24,571	71,389	43,455	35,233	40,694	31,486	62,106
September	147,635	24,976	72,332	43,980	34,316	39,484	29,473	60,099
October	146,013	24,393	71,688	41,126	33,799	39,110	29,555	58,288
November	132,625	22,956	70,516	36,679	27,505	37,065	27,053	55,078
December	127,595	22,866	67,287	36,931	27,597	34,757	26,344	53,546
<i>Females</i>								
January	34,652	7,768	25,742	11,240	2,372	8,801	3,670	14,380
February	35,868	8,131	26,598	11,547	2,358	9,194	3,752	14,668
March	36,576	8,227	25,298	11,510	2,360	9,573	3,890	14,954
April	36,809	8,137	25,024	11,559	2,388	9,623	4,102	15,370
May	37,070	8,194	24,426	11,690	2,478	9,814	4,202	15,590
June	37,264	7,951	24,220	11,175	2,484	9,807	4,243	15,765
July	37,282	7,854	24,522	11,223	2,389	9,793	4,272	15,643
August	38,510	8,029	26,530	10,569	2,435	9,587	4,279	15,289
September	40,286	8,136	27,043	10,630	2,475	9,756	4,220	14,973
October	40,647	8,021	27,409	9,953	2,436	9,868	4,233	14,201
November	38,437	8,171	27,048	8,781	2,501	9,572	3,985	13,271
December	37,401	7,865	23,432	8,588	2,444	9,012	3,802	12,449
<i>Both sexes</i>								
January	173,216	31,121	94,449	65,138	35,023	44,153	32,498	74,337
February	180,451	32,119	95,675	70,286	35,038	46,295	33,941	75,900
March	184,928	32,296	95,073	68,880	36,127	47,887	34,771	77,045
April	186,271	32,597	94,952	69,333	36,084	48,852	35,467	78,281
May	187,800	33,435	95,069	67,140	37,189	51,007	36,291	79,502
June	187,131	32,813	95,004	63,846	37,459	51,789	36,054	80,779
July	187,631	32,563	95,766	61,349	37,339	51,641	36,138	80,176
August	187,253	32,600	97,919	54,024	37,608	50,281	35,765	77,395
September	187,921	33,112	99,375	54,610	36,791	49,240	33,693	75,072
October	186,660	32,414	99,097	51,079	36,235	48,978	33,788	72,489
November	171,062	31,127	97,564	45,460	30,006	46,637	31,088	68,349
December	164,996	30,731	90,719	45,519	30,041	43,769	30,146	65,995

Comparisons of maximum and minimum employment in manufactures are shown for the eight counties in Table 14:

TABLE 14.—MAXIMUM AND MINIMUM EMPLOYMENT IN MANUFACTURES IN EIGHT SPECIFIED COUNTIES, 1929, BY SEX

Sex and county	Maximum		Minimum		Variation from maximum	
	Number	Month	Number	Month	Number	Per cent
<i>Males</i>						
Cuyahoga.....	150,730	May.....	127,595	December..	23,135	15.3
Franklin.....	25,241	do.....	22,866	do.....	2,375	9.4
Hamilton.....	72,332	September..	67,287	do.....	5,045	7.0
Lucas.....	58,739	February....	36,679	November..	22,060	37.6
Mahoning.....	35,233	August.....	27,505	do.....	7,728	21.9
Montgomery..	41,982	June.....	34,757	December..	7,225	17.2
Stark.....	32,089	May.....	26,344	do.....	5,745	17.9
Summit.....	65,014	June.....	53,546	do.....	11,468	17.6
<i>Females</i>						
Cuyahoga.....	40,647	October....	34,652	January....	5,995	14.7
Franklin.....	8,227	March.....	7,768	do.....	459	5.6
Hamilton.....	27,409	October....	23,432	December..	3,977	14.5
Lucas.....	11,690	May.....	8,588	do.....	3,102	26.5
Mahoning.....	2,501	November..	2,358	February....	143	5.7
Montgomery..	9,868	October....	8,801	January....	1,067	10.8
Stark.....	4,279	August.....	3,670	do.....	609	14.2
Summit.....	15,765	June.....	12,449	December..	3,316	21.0
<i>Both sexes</i>						
Cuyahoga.....	187,921	September..	164,996	December..	22,925	12.2
Franklin.....	33,435	May.....	30,731	do.....	2,704	8.1
Hamilton.....	99,375	September..	90,719	do.....	8,656	8.7
Lucas.....	70,286	February....	45,460	November..	24,826	35.3
Mahoning.....	37,668	August.....	30,006	do.....	7,662	20.3
Montgomery..	51,789	June.....	43,769	December..	8,020	15.5
Stark.....	36,291	May.....	30,143	do.....	6,148	16.9
Summit.....	80,779	June.....	65,995	do.....	14,784	18.3

In manufactures in 1929 the peak of employment for males was reached in February in Lucas County; in May in Cuyahoga, Franklin, and Stark; in June in Montgomery and Summit; in August in Mahoning; and in September in Hamilton. Minimum employment for males occurred in November in Lucas and Mahoning and in December in the other six counties.

The peak of employment for females in manufactures was reached in March in Franklin; in May in Lucas; in June in Summit; in August in Stark; in October in Cuyahoga, Hamilton, and Montgomery; and in November in Mahoning. Minimum employment for females occurred in January in Cuyahoga, Franklin, Montgomery, and Stark Counties; in February in Mahoning; and in December in Hamilton, Lucas, and Summit.

Lucas County had the highest per cent of fluctuation both for males and for females in manufactures, Mahoning stood second highest for males and Summit for females. Hamilton County had the lowest per cent of fluctuation for males and Franklin County for females.

Unemployment of Males in Ohio as Measured by Fluctuation of Employment, 1929

THE REPORT to which reference was previously made,¹ covering the years 1924 to 1928, presents a discussion of the measurement of unemployment of males in Ohio derived from the figures showing fluctuation of employment for the five years. This section of the present report will carry forward the discussion of unemployment of males for the year 1929.

This report covers for 1929 practically all establishments in Ohio regularly employing three or more persons as well as a number employing fewer than three, in all industry groups in the State except interstate transportation and governmental agencies. The industry groups included are manufactures, construction, mining and quarrying, service, wholesale and retail trade, transportation and public utilities, agriculture, and fisheries. The total number of establishments included is 43,160.

The general occupation groups covered are wage earners; bookkeepers, stenographers, and office clerks; and sales people (not traveling). For practically all men in these general occupation groups, who are physically and mentally fit, work is generally an economic necessity. Some skilled wage earners will make but little effort to secure work during the dull season in their particular trade, but the great majority of men, physically and mentally fit, who earn their living as wage earners, clerks, or salesmen are employed either full time or part time, or are involuntarily idle.

The peak of employment for males in Ohio in 1929 in the eight industry groups covered by this report came in July. At that time the 43,160 establishments reported 1,054,154 males employed. The same establishments reported 132,712, or 12.6 per cent, fewer males employed in December. January was the month of second lowest employment for males when the number was 110,634, or 10.5 per cent, less than the maximum.

The reports from the 43,160 establishments cover for each month all wage earners; bookkeepers, stenographers, office clerks; and salesmen (not traveling).

The *opportunities* for work for these 132,712 males in December would seem to come within the following possibilities:

(a) To secure work with the same firms as traveling salesmen, superintendents or managers which are occupations not covered in this report.

(b) To secure work in establishments employing fewer than three persons. Comparatively few of these small establishments are included in this report.

(c) To secure work in interstate transportation which is not covered by this report.

(d) To secure work in a governmental department or agency which as a group is not covered by this report.

(e) To go into business on their own account.

(f) To secure work outside of Ohio.

¹ See Review for April, 1930, pp. 30-62: "Fluctuation of Employment in Ohio, 1924 to 1928," by the same authors. A reprint of that report was also published as Report No. 20, of the division of labor statistics of the Department of Industrial Relations of Ohio.

The *probabilities* of securing work in December in the enumerated lines would be as follows:

(a) The tendency was probably to reduce, rather than to increase, the number of traveling salesmen, superintendents, and managers during the period of the year when the employment of wage earners, bookkeepers, stenographers, office clerks, and salesmen (not traveling) was at the lowest point.

(b) The course of employment within establishments employing fewer than three persons probably follows rather closely the course in larger establishments; therefore few, if any additional, males could secure work in these small establishments.

(c) According to monthly reports of the Interstate Commerce Commission² covering Class I steam railroads in the United States, employment was 8.1 per cent lower in December than in July, 1929. Only one month in the year, January, shows lower employment. Interstate transportation by water would be practically closed during December.

(d) Governmental departments and agencies generally hire their professional and clerical employees on a more or less permanent basis and there is seldom any rapid increase during periods of minimum employment in industry. The number of wage earners on Government undertakings would probably be at, or near, the minimum in December.

(e) Comparatively few of the workers covered in this report could go into business for themselves except in some house to house canvassing venture.

(f) It is probable that employment generally reaches its minimum in near-by industrial States at about the same period as it does in Ohio.

An analysis of the possibilities and of the probabilities of securing work seems to establish rather conclusively that the great majority of males who worked in the 43,160 establishments in the eight industry groups during the busy months of 1929, and who were not employed by these establishments in December, were unemployed.

Examination of conditions in July (the month of maximum employment during 1929) indicates that probably a considerable number were unemployed even at that peak. It is impossible, of course, in this brief report to make any detailed analysis of localities or of firms. The industry group figures shown in Table 3 give some indication of conditions. In the industry groups the following conditions are shown:

(1) In manufactures, 4,845 fewer males were employed in July than in May; (2) in mining and quarrying, 3,876 fewer males were employed in July than in November; (3) in service, 880 fewer males were employed in July than in September; (4) in trade, 4,612 fewer males were employed in July than in December; (5) in transportation and public utilities, 1,211 fewer males were employed in July than in August; and (6) in fisheries, 72 fewer males were employed in July than in April.

Only two industry groups, construction and agriculture, reached their maximum employment in July even though for all industries it represented the peak of employment for the year. It seems

² See Labor Review for September, 1930, p. 192.

probable that some of the 15,496 males enumerated above in the other six industry groups were unemployed at the highest point for the year, July.

In conclusion we may omit undetermined factors such as the number unemployed in December in interstate transportation and on outside governmental activities and the number unemployed by reason of inability to shift from one plant to another, from one industry to another, or from one locality to another, and the number who were unemployed for one reason or another in July in the eight industry groups covered by this report.

We have, however, definite reports for the year 1929 from 43,160 establishments which form practically a complete census of all establishments employing three or more persons in Ohio in manufactures, construction, mining and quarrying, service, trade—wholesale and retail, transportation and public utilities, agriculture, and fisheries. The only groups omitted from this census are establishments employing fewer than three person, interstate transportation, and governmental departments and agencies.

The definite reports for 1929 and for the five preceding years may be summarized as follows:

In 1929, 43,160 establishments reported 132,712, or 12.6 per cent, fewer males employed in December than in July, and an average for the year (see Table 2) which was 49,871, or 4.7 per cent, less than the maximum.

In 1928, 40,972 establishments reported 150,243, or 15.1 per cent, fewer males employed in January than in September, and an average for the year which was 54,138, or 5.4 per cent, less than the maximum.

In 1927, 39,635 establishments reported 84,327, or 8.8 per cent, fewer males employed in December than in June, and an average for the year which was 32,031, or 3.4 per cent, less than the maximum.

In 1926, 37,159 establishments reported 92,372, or 9.3 per cent, fewer males employed in January than in September, and an average for the year which was 43,643, or 4.4 per cent, less than the maximum.

In 1925, 34,605 establishments reported 98,445, or 10.4 per cent, fewer males employed in January than in October, and an average for the year which was 38,676, or 4.1 per cent, less than the maximum.

In 1924, 31,715 establishments reported 58,616, or 6.6 per cent, fewer males employed in July than in April, and an average for the year which was 34,669, or 3.9 per cent, less than the maximum.

For the 6-year period, 1924-1929, the month of minimum employment for males in the industry groups covered in this report showed an average of 10.5 per cent below the month of maximum employment, and the average employment for the year was 4.3 per cent less than the maximum.

Workers' Productive Associations in the United States in 1929¹

THE number of workers' productive societies in the United States has decreased in recent years. At the time of the bureau's cooperative study made in 1925 there were 39 associations of this type. One association was organized later that same year, but so far as the bureau is aware, none has been formed since that time. On the other hand, 17 have gone out of business and 2 are no longer cooperative in any respect. Thus there are only 20 productive associations left.

Various fields of industry have been entered, from time to time, by workers' cooperative enterprises. These include the manufacture of cigars, window glass, stoves, knit goods, cloth, shingles and lumber products, clothing (gloves, suits, shoes, hats), sanitary pottery, boxes, and bakery goods, the operation of coal mines, the canning of fish, laundry operation, etc.

Many of the societies were formed because of some motivating circumstance, without adequate study of the field which it was proposed to enter. In fact the field has often been such as to mean an inevitably dwindling business for the cooperative enterprise. The manufacture of articles by hand, in industries which if not wholly mechanical are rapidly becoming so, is a highly precarious undertaking. Thus, of the many cooperative plants manufacturing hand-blown window glass none remain, while only three factories manufacturing cigars by hand are still in operation. In other instances groups of miners have taken over from the owners unprofitable mines and have worked them—in some instances successfully—but when the vein gave out the society was at an end. Other groups have entered highly competitive businesses where conditions were unusually difficult. Of the numerous shingle mills on the Pacific coast only a few remain, and these must compete not only with other shingle manufacturers, but also with the manufacturers of patent and fireproof roofings.

That some of these cooperative groups have attained a considerable degree of success, however, must be put down to their credit. One such instance is that of a group of shoe workers which started its own factory 15 years ago. Each year has shown an expansion in business, until now it employs in the business an average of 270 persons, does a business of nearly a million and a half dollars a year, and has accumulated a surplus of nearly \$300,000. This success, in an industry as competitive and as subject to fluctuations of style as the manufacture of shoes, shows a high quality of management.

In many instances the cooperative business was started as a result of a strike or lockout in the industry in which the men were employed, and the cooperative enterprise was looked upon as a means of giving employment to some of the members and possibly, also, as an added factor in bringing to terms the employer against whom the strike was directed. When a satisfactory settlement was obtained there was in some cases a loss of interest in the cooperative enterprise.

¹ This is the fifth of a series of articles on the cooperative movement in the United States in 1929. The previous articles were given in the *Labor Review*, as follows: Wholesale societies, May, 1930 (pp. 108-110), gasoline filling stations, September, 1930 (pp. 11-18); consumers' societies, October, 1930 (pp. 21-34); and credit unions, November, 1930 (pp. 1-11).

Workers' societies may be handicapped by business inexperience and lack of knowledge of salesmanship and of market conditions. They may therefore be at a disadvantage when it comes to disposing of their product.

Mistakes in judgment may also result disastrously, as in the case of a society which after several years of profitable operation had built up a considerable surplus, which it used toward the purchase of an expensive building which was much larger than needed. Shortly after it had assumed this burden, a business depression occurred, sales fell, and the society, having used up its surplus and being unable to meet its obligations, had to close.

Lack of adequate capital is another handicap and probably there have been many societies which have collapsed in adverse times but which could have succeeded if they had had funds enough to enable them to absorb some loss and tide over until conditions changed for the better.

Internal difficulties may also present added problems. Some reports have spoken bitterly of the shortsightedness of the members in wanting to draw out all of the profits for immediate use and failing to see the importance and necessity of building up adequate reserves. Others have complained of the difficulty of maintaining harmonious relations among the members. One man who was one of the mainstays of a cooperative enterprise for the 25 years of its operation states his opinion that—

Cooperative plans or institutions may sound ideal in theory but they are impossible in practice, because if the leader of such a group is sufficiently talented as to make the business a success, he can not and will not allow himself to be subjected to the indignities and unjust criticisms, not to speak of the remuneration which is invariably denied to him.

In some instances outside factors which the organization was powerless to control have meant failure to the enterprise. Thus the exhausting of natural gas in some parts of Indiana where cooperative plants had been started put an end to many of these. In other instances failure was due to high prices of materials and an unstable market after the close of the World War; loss of factory by fire; the increasing competition of machine-made products, etc.

Uncertain as the outlook is for this type of cooperation, it is possible that much could be done for such organizations through a central educational association such as is found in the consumers' cooperative movement. The workers' productive associations operate in various lines of business, it is true, but they all have common problems of capitalization, merchandising, accounting, organization of production, etc., upon which valuable information would be obtainable through some central body organized for this purpose. Such central organizations have been formed in those foreign countries in which workers' productive enterprises have attained any degree of development.

General Characteristics of Cooperative Workshops

THE "ideal" workers' productive society is composed of workers in the shop who have contributed all the capital of the enterprise and do all the work, the business being managed by men elected by and from the members. The worker-owners work on a wage basis,

but receive in addition any profits made from the business, these being divided among the members by various methods.

The cooperative workshop, however, is exposed to a temptation not present in other forms of cooperation. In the consumers' society, for instance, it is to the interest of the members to enlarge the membership, for each new member increases the business of the society. The increased volume of business in turn reduces the percentage of overhead expense and increases the savings made in the business and therefore, also, the benefits accruing to each member. In the workers' societies the situation is exactly reversed. Every additional member increases the number who must share in the profits, though not necessarily increasing the business done or the amount of profits to be shared. Each new member, therefore, is likely to be looked upon as reducing the profits of the others. Especially if the society achieves business success, there may develop an increasing tendency among the members to limit their numbers so as to retain all the savings from the business for themselves, and, if additional workers are needed, to secure these as employees, not as members. The impetus to such an attitude is also all the greater in a workers' productive organization, inasmuch as the society represents the members' livelihood; and as the matter is a serious one to them an exclusive membership policy is understandable and excusable. In direct proportion as this occurs, however, the society loses its cooperative character.

Some unavoidable limitation upon membership is, of course, imposed by the nature of the business or work carried on and this becomes greater with the degree of skill required. If the principle that all the members are to be workers in the business is observed, then obviously in a highly specialized undertaking, such, for instance, as the manufacture of shoes or hand-made window glass, only persons skilled in the various processes can be admitted to the society as members.

The present study has disclosed varying degrees of cooperativeness among the workers' productive societies. Some of these cooperative companies are in reality more of the nature of trade-union or even joint-stock enterprises than of cooperative workshops and this fact is recognized by the companies themselves. In some cases the greater part of the capital has been furnished by the local trade-union of the members' craft and in some of these only unionists are eligible for membership in the company. One of the most successful fish cannery societies has reached the point of being more nearly a profit-sharing than a cooperative society, as only a small proportion of the workers are stockholders and of the employees only the actual producers—the fishermen—share in the profits.

These societies could not, therefore, be measured by the same strict standard as the consumers' societies. In the consumers' movement, while material benefits from the enterprise are desired, there is usually also a certain amount of idealism, a vision of something above and beyond the shopkeeping activities, with shopkeeping simply a first step toward a better ordering of society to be striven for patiently but hopefully in the interest of all consumers. This may not be true of each individual cooperator nor of each individual soci-

ety, for many have material benefit as their main and only object, but it is true of the consumers' cooperative movement as a whole.

This wider vision seems to be less characteristic of the workers' productive societies.

Geographical and Industrial Distribution

OF THE 20 societies of producers which were in operation at the end of 1929, 11 have furnished data for the present report.

The table below shows the geographical distribution of the societies in 1925 and in 1929, and of those which furnished data for the present report.

TABLE 1.—GEOGRAPHICAL DISTRIBUTION OF WORKERS' PRODUCTIVE SOCIETIES, 1925 AND 1929

State	Number in existence		Number reporting, 1929	State	Number in existence		Number reporting, 1929
	1925	1929			1925	1929	
Alaska.....	1			Ohio.....	4	2	1
Illinois.....	2			Oregon.....	5	2	2
Indiana.....	2	2	1	Pennsylvania.....	1	1	
Massachusetts.....	3	3	1	Washington.....	11	7	5
Michigan.....	1			West Virginia.....	2		
Minnesota.....	3	1		Wyoming.....	1		
Missouri.....	1	1	1	Total.....	39	20	11
New Jersey.....	1	1					
New York.....	1						

The following table shows the distribution in 1929, by kind of business carried on:

TABLE 2.—TOTAL NUMBER OF WORKERS' PRODUCTIVE ASSOCIATIONS AND NUMBER REPORTING, 1929

Type of society	Total	Number reporting	Type of society	Total	Number reporting
Box factories.....	1		Shingle mills.....	4	3
Cigar factories.....	3	2	Shoe factories.....	3	1
Coal mining.....	2		Veneer factories.....	1	1
Enameling plants.....	1		Total.....	20	11
Fish canneries.....	2	2			
Laundries.....	3	2			

Year of Establishment

THE societies reporting have been in existence, on the average, 12 years and 10 months, although they range from 4 years and 8 months to 33 years and 2 months. One association was formed in 1896, 3 in 1915, 2 in 1920, and 1 each in 1916, 1919, 1921, 1922, and 1925.

Membership Policies

AS ALREADY stated, a number of the societies limit their membership to trade-unionists in general, or to members of the particular craft of the society. Others make no specific limitation, admission

being open to anyone who purchases a share of stock, though, except in a society doing work requiring no particular skill or training, this could hardly be carried out cooperatively, as unqualified persons could not be employed in the business.

In one or two cases some of the stock is held by local labor organizations which are in sympathy with the cooperative project.

One association provides that—

No person shall become or remain a stockholder in this company unless he is actively engaged in working in some capacity in and about or for the company, devoting his entire time, energy, and attention to the promotion and conduct of the business of the company, and shall remain a stockholder only so long as he continues in such connections and employment of the company unless excused for a fixed period by a majority vote of the trustees of the company.

Employment and Wage Policies

How far these societies have attained the state in which the working force and the owners are identical is shown by the following table:

TABLE 3.—NUMBER OF MEMBERS AND OF EMPLOYEES OF WORKERS' PRODUCTIVE SOCIETIES, 1925

Society	Shareholders		Nonshareholder employees	Society	Shareholders		Nonshareholder employees
	Number	Number employed in business			Number	Number employed in business	
Society No. 1.....	65	24	-----	Society No. 7.....	73	73	68
Society No. 2.....	603	162	108	Society No. 8.....	8	8	28
Society No. 3.....	68	13	-----	Society No. 9.....	16	16	18
Society No. 4.....	94	15	4	Society No. 10.....	55	26	9
Society No. 5.....	215	1	1	Total ¹	1,405	421	236
Society No. 6.....	208	83	-----				

¹ 1 society did not report on these points.

It is seen that in three of the societies the shareholders are identical with the workers; in two of these, however, there are more nonmember employees than there are shareholders (in one three times as many), while the third society employs nearly as many. Three societies are unable to give employment to all the shareholders, but they have no outsiders working in the business. One society has more than 200 stockholders but operates only part of the year and uses the services of only one person, although the policy of the association is to give employment to the members as fast as the condition of the business permits. Society No. 9 provides in its by-laws that "All stockholders of this company must be workers for the company, unless excused from such service for good and sufficient reasons," and this provision is evidently put into practice.

Table 4 shows the number of shareholders and employees, by kind of business carried on.

TABLE 4.—NUMBER OF SHAREHOLDERS AND OF EMPLOYEES, BY KIND OF BUSINESS DONE

Kind of business	Number of societies reporting	Shareholders		Nonshareholder employees
		Number	Number employed in business	
Cigar factories.....	2	162	28	4
Fish canneries.....	2	423	84	1
Laundries.....	1	65	24	—
Shingle mills.....	3	79	50	55
Shoe factories.....	1	603	162	108
Veneer factories.....	1	73	73	68
Total.....	10	1,405	421	236

¹ Not including 1 society which did not report on these points.

All but one of the societies work an 8-hour day; that society has a working-day of 8 hours and 40 minutes.

In seven of the associations the workers are paid union rates and two report that the "current rate" is paid. In one society the men work on a piece-rate basis.

Capitalization and Business

THE value of the shares runs higher in the workers' productive associations than in the consumers' societies. Common amounts are \$50 and \$100, while one society has shares of \$600 each.

Three societies place no limit to the amount of stock that may be held by any member. One association, however, limits the amount to 1 share, 1 association to 3 shares, 1 to 12 shares, 1 to 20 shares, 1 to one-fifth of the total stock, and 1 to \$10,000. One organization provides that "no member of this company shall own more shares of stock than any other member."

The working capital and amount of business done by these societies in 1929 are shown in the table following:

TABLE 5.—CAPITALIZATION AND 1929 BUSINESS OF WORKERS' PRODUCTIVE SOCIETIES, BY KIND OF BUSINESS

Kind of business	Number of societies reporting	Paid-in share capital	Surplus and reserves	Amount of business, 1929	Average business per society
Cigar factories.....	2	\$39,463	\$3,220	\$55,106	\$27,553
Fish canneries.....	2	199,124	1,407,349	801,646	400,823
Laundries.....	2	56,743	—	160,174	80,087
Shingle mills.....	3	118,100	87,900	629,425	209,808
Shoe factories.....	1	102,800	293,670	1,354,818	1,354,818
Veneer factories.....	1	292,000	8,000	846,497	846,497
Total.....	11	808,230	800,139	3,847,666	349,788

¹ 1 society only.

The amount of business done by these societies during each of the 10 years, 1920 to 1929, is shown in the table following:

TABLE 6.—BUSINESS DONE BY WORKERS' PRODUCTIVE SOCIETIES OF EACH TYPE, 1920 TO 1929

Year	Cigar factories (2)	Fish canneries (2)	Laundries (2)	Shingle mills (3)	Shoe factory	Veneer factory	Total
1920	¹ \$17,345	¹ \$1,019,054	¹ \$132,643	(?)	\$175,000	-----	\$1,344,042
1921	¹ 28,231	¹ 601,298	¹ 96,142	¹ \$216,613	(?)	-----	942,284
1922	¹ 43,499	¹ 632,812	¹ 95,729	³ 375,811	363,000	\$536,854	2,047,705
1923	¹ 51,446	¹ 723,043	¹ 111,495	³ 421,542	451,000	924,812	2,683,338
1924	¹ 44,998	¹ 650,756	¹ 146,711	³ 440,544	627,000	712,275	2,622,284
1925	¹ 37,170	¹ 749,192	¹ 145,985	³ 470,300	796,000	743,535	2,942,182
1926	76,543	¹ 740,774	¹ 32,955	538,416	1,092,697	(?)	2,481,385
1927	81,500	869,750	¹ 35,689	532,691	1,264,561	(?)	2,784,191
1928	61,282	762,531	¹ 34,838	527,608	1,374,413	(?)	2,760,672
1929	55,106	801,646	160,174	629,425	1,354,818	846,497	3,847,666

¹ 1 society only.

² No data.

³ 2 societies only.

Amount and Division of Profits

IN ADDITION to the wages paid, the stockholder employees receive a share of any profits made by the business. The basis of division of profits varies in the different societies. Of the 11 reporting, 6 divide the profits on the basis of the stock held by the individual, just as in the ordinary stock company. Two of the organizations divide the profits equally among the shareholder employees, while one-half of the profits are so divided in another. A somewhat different method is used by the two fish canneries. One pays 6 per cent interest on the capital stock; of the remaining profits 25 per cent is put into a sinking fund while the remaining 75 per cent is divided among the fishermen who deliver their catch to the association. In the other company, 50 per cent of the profits goes into a surplus fund upon which the shareholders receive interest at the rate of 3 per cent (this fund being regarded as loan capital), the other 50 per cent being divided among the fishermen in proportion to the amount of fish each one has delivered; interest at the rate of 2 per cent is paid on the share capital.

The table below shows the number of societies reporting a profit or loss on the 1929 business, its amount, and the amount returned to the shareholders:

TABLE 7.—PROFITS AND LOSSES OF WORKERS' PRODUCTIVE SOCIETIES, AND AMOUNT DIVIDED AMONG MEMBERS

Kind of business	Number reporting profit or loss	Amount of profit	Amount divided among members
Cigar factories	1	¹ \$760	\$250
Fish canneries	1	30,192	-----
Laundries	2	² 2,951	³ 2,915
Shingle mills	3	49,711	³ 4,500
Shoe factories	1	47,937	15,420
Veneer factories	1	75,210	25,550
Total	9	⁵ 166,001	48,635

¹ Loss.

² 1 society; the other reported a loss of \$4,871.

³ 1 society.

⁴ 1 society; 1 had a loss of \$7,000, and the third a loss the amount of which was not reported.

⁵ Not including losses reported, aggregating \$12,631.

Business Methods and Management

THE final control of the society lies in the general meeting of stockholders. In all but two of the associations reporting, each shareholder has but one vote irrespective of his investment in the organization. Proxy votes are prohibited in five societies but the other six allow this method of voting.

The actual conduct of the business rests upon the board of directors and the manager. The latter receives his position by election, by the board of directors in three societies and by the stockholders in five societies. Once elected, however, he has authority over the workers—both members and nonmember employees—except that usually a stockholder may not be discharged except by vote of the general meeting. One association specifies in its by-laws that "each stockholder shall perform any kind of work in or about the plant to which he may be assigned, in a creditable manner, and shall not work for his personal interest but for the interest of all concerned."

Regular audits of the books are made in all of the 10 societies which reported, and all but one of these employs a professional auditor for the purpose. In this exceptional society the accounts are audited by a committee appointed from among the stockholders. In one organization the audits are made monthly, in another quarterly, and in a third, yearly.

Other Benefits

ONE society has established a compensation fund from which a member who is incapacitated for work receives benefits at the rate of \$15 a week for the first four days and \$20 a week thereafter. In case of accident while at work the member receives \$2 a day (except for Sundays and holidays) during the time he is absent from work, subject to a maximum of 90 days' benefit, which period may, however, be extended by a majority vote of the members. In case of death the society pays a death benefit of \$200.

Development from 1925 to 1929

THE statement below compares the returns in 1925 with those in the present study. It shows that the sales, share capital, surplus and reserves, and net profit per society were larger in 1929 than in 1925. More of the profit was retained in the business in 1929, however, and a smaller amount was returned to the stockholders.

TABLE 8.—DEVELOPMENT OF WORKERS' PRODUCTIVE SOCIETIES, 1925 AND 1929

Item	1925	1929	Item	1925	1929
Number of societies reporting.....	21	11	Business:		
Shareholders:			Amount.....	\$4, 573, 329	\$3, 847, 666
Number.....	2, 438	1, 405	Average per society...	238, 596	349, 788
Number employed....	465	421	Profits:		
Nonshareholder employ-			Amount.....	¹ 229, 458	¹ 153, 370
ees.....	807	236	Average per society...	16, 390	30, 674
Share capital:			Amount returned to		
Amount.....	\$1, 025, 509	\$808, 230	shareholders.....	109, 470	48, 635
Average per society...	51, 275	73, 475	Average per society...	27, 368	9, 727
Surplus and reserves:					
Amount.....	653, 590	800, 139			
Average per society...	72, 621	100, 007			

¹ Net, after deducting losses.

PRODUCTIVITY OF LABOR

Ratio of Value of Production to Wages and Their Purchasing Power in Manufacturing Establishments, 1849 to 1929

By ETHELBERG STEWART, UNITED STATES COMMISSIONER OF LABOR STATISTICS

THIS study of the relative share of wage earners in the product of their labor, together with the relation between the purchasing power of the wages paid to labor and the value of the products of that labor, has been developed from an analysis of the basic figures as shown by the United States Census over a period of 80 years. These basic figures are presented in Table 1.

The first part of this table presents the basic data, which are copied from the Statistical Abstract of the United States (1929) and from Census of Manufactures advance reports for 1929. The averages and percentages shown in the second part of the table have been computed by the Bureau of Labor Statistics. To these have been added index numbers of wholesale prices from 1849 to 1929 on the basis of 1926. Index numbers of retail prices of food back to 1909 on the same base are also given. Unfortunately a dependable index of retail prices of food prior to 1909 is not available.

TABLE 1.—EARNINGS AND OUTPUT IN MANUFACTURING INDUSTRIES AND WHOLESALE AND RETAIL PRICES IN SPECIFIED YEARS, 1849 TO 1929

Kind of factories and year	Number of establishments	Wage earners (average for year)	Wages (in millions)	Cost of materials, supplies, fuel, and power (in millions)	Value of products (in millions)	Value added by manufacture (in millions)
Factories and hand and neighborhood industries:						
1849.....	123,000	957,000	\$237	\$555	\$1,019	\$464
1859.....	140,000	1,311,000	379	1,032	1,886	854
1869.....	252,000	2,054,000	620	1,991	3,386	1,395
1879.....	254,000	2,733,000	948	3,397	5,370	1,973
1889.....	355,000	4,252,000	1,891	5,162	9,372	4,210
1899.....	512,000	5,306,000	2,321	7,344	13,000	5,656
Factories, excluding hand and neighborhood industries and establishments with products valued at less than \$500:						
1899.....	208,000	4,713,000	2,008	6,576	11,407	4,831
1904.....	216,000	5,468,000	2,610	8,500	14,794	6,294
1909.....	268,000	6,615,000	3,427	12,143	20,672	8,529
1914 ¹	273,000	7,024,000	4,068	14,359	24,217	9,858
Factories, excluding establishments with products valued at less than \$5,000:						
1914.....	177,000	6,895,000	² 4,067	14,267	23,975	9,708
1919.....	214,000	8,998,000	² 10,460	37,197	62,000	24,803
1921.....	196,000	6,944,000	8,200	25,292	43,619	18,327
1923.....	196,000	8,777,000	11,008	34,684	60,530	25,846
1925.....	187,000	8,382,000	10,727	35,897	62,668	26,771
1927.....	192,000	8,350,000	10,849	35,133	62,718	27,585
1929.....	199,000	8,550,000	11,271	³ 37,358	68,453	³ 31,096

¹ Includes data for "Poultry killing and dressing" industry.

² Includes data for all establishments reporting products valued at \$500 or more. These items were not tabulated separately for establishments reporting products valued between \$500 and \$5,000.

³ Less cost of mill or shop supplies.

TABLE 1.—EARNINGS AND OUTPUT IN MANUFACTURING INDUSTRIES AND WHOLE-SALE AND RETAIL PRICES IN SPECIFIED YEARS, 1849 TO 1929—Continued

Kind of factories and year	Average yearly earnings	Value of product per wage earner	Value added per wage earner	Per cent value added is of value of product	Per cent wages are of value of product	Per cent wages are of value of product added	Index numbers of wholesale prices (1926=100)	Index numbers of retail prices of food (1926=100)
Factories and hand and neighborhood industries:								
1849.....	\$248	\$1,065	\$485	45.5	23.3	51.1	60.1	-----
1859.....	289	1,439	651	45.3	20.1	44.4	61.0	-----
1869.....	302	1,648	679	41.2	18.3	44.4	93.5	-----
1879.....	347	1,965	722	36.7	17.7	48.0	58.8	-----
1889.....	445	2,204	990	44.9	20.2	44.9	57.4	-----
1899.....	437	2,450	1,066	43.5	17.9	41.0	52.2	-----
Factories, excluding hand and neighborhood industries and establishments with products valued at less than \$500:								
1899.....	426	2,420	1,025	42.4	17.6	41.6	52.2	-----
1904.....	477	2,706	1,151	42.5	17.6	41.5	59.7	-----
1909.....	518	3,125	1,289	41.3	16.6	40.2	67.6	55.2
1914.....	579	3,448	1,403	40.7	16.8	41.3	68.1	63.8
Factories, excluding establishments with products valued at less than \$5,000:								
1914.....	590	3,477	1,408	40.5	17.0	41.9	68.1	63.8
1919.....	1,162	6,890	2,757	40.0	16.9	42.2	138.6	115.8
1921.....	1,181	6,282	2,639	42.0	18.8	44.7	97.6	95.4
1923.....	1,254	6,896	2,945	42.7	18.2	42.6	100.6	91.1
1925.....	1,280	7,476	3,194	42.7	17.1	40.1	103.5	98.1
1927.....	1,299	7,511	3,304	44.0	17.3	39.3	95.4	96.8
1929.....	1,318	8,006	3,637	45.4	16.5	36.2	96.5	97.6

¹ Includes data for "Poultry killing and dressing" industry.

It will be seen from this computation that in 1849 the average yearly earnings of persons employed as wage earners in the manufacturing industries covered by the United States census was \$248. The value of the manufactured product per wage earner was \$1,065. The value added to the raw material by the manufacturing process per wage earner in 1849 was \$485. The wage earner thus received in wages 23.3 per cent of the value of the finished product and 51.1 per cent of the value added to the raw material by reason of his labor.

Fifty years later, in 1899, the average worker in manufacturing establishments was receiving, on the same census basis, \$437 a year. However, the census basis changed in that year and on the new basis he was receiving \$426 per year, which was 17.6 per cent of the value of the goods produced and 41.6 per cent of the value added by manufacture.

By 1929 the average worker was receiving \$1,318 in wages, the value of the goods produced had risen to \$8,006 per capita of workers employed, and the value added to the raw material by reason of his labor had increased to \$3,637 per capita worker. However, in 1929 the worker received 16.5 per cent of the value of the product as against 23.3 per cent in 1849, and 36.2 per cent of the value of the product added as against 51.1 per cent in 1849.

For a better view of the entire situation, index numbers of the figures here considered have been computed on an 1849 base. The results are presented in Table 2.

TABLE 2.—INDEX NUMBERS OF EARNINGS AND OUTPUT IN MANUFACTURING INDUSTRIES AND OF WHOLESALE PRICES, IN SPECIFIED YEARS, 1849 TO 1929

[1849=100.0]

Kind of factories and year	Average yearly earnings	Value of product per wage earner	Value added per wage earner	Per cent value added is of value of product	Per cent wages are of value of product	Per cent wages are of value of product added	Wholesale prices
Factories and hand and neighborhood industries:							
1849	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1899	176.2	230.0	219.8	95.6	76.8	80.2	86.9
Factories excluding hand and neighborhood industries and establishments with products valued at less than \$500:							
1899	171.8	227.2	211.3	93.2	75.5	81.4	86.9
1904	192.3	254.1	237.3	93.4	75.5	81.2	99.3
1909	208.9	293.4	265.8	90.8	71.2	78.7	112.5
1914	233.5	323.8	289.3	89.5	72.1	80.8	113.3
Factories excluding establishments with products valued at less than \$5,000:							
1914	237.9	326.5	290.3	89.0	73.0	82.0	113.3
1919	468.5	646.9	568.5	87.9	72.5	82.6	230.6
1921	476.2	589.9	544.1	92.3	80.7	87.5	182.4
1923	505.6	647.5	607.2	93.8	78.1	83.4	167.4
1925	516.1	702.0	658.6	93.8	73.4	78.5	172.2
1927	523.8	705.3	681.2	96.7	74.2	76.9	158.7
1929	531.5	751.7	749.9	99.8	70.8	70.8	100.6

From Table 2 it will be seen that the average yearly earnings in manufacturing industries were 76.2 per cent greater in 1899 than they had been 50 years before, that the value of the product per wage earner was 130 per cent greater, that the value added to the raw material as the result of manufacture was 119.8 per cent greater, that the per cent that wages bore to value of product had decreased 23.2 per cent, the per cent that wages were of value of product added had decreased 19.8 per cent, and wholesale prices had decreased 13.1 per cent.

In 1929, or 30 years later, the average yearly earnings had increased over 1849, 431.5 per cent, the value of products per wage earner had increased 651.7 per cent, the value added by manufacture per wage earner had increased 649.9 per cent. The per cent that wages were of the value of the product had decreased 29.2 per cent, and the per cent that wages were of value added had decreased by the same amount, while prices had increased 60.6 per cent.

Comparison of 1909 with 1929

It may well be argued that conditions in 1849 were so different in every respect that comparisons based on that year may be in the main meaningless. Therefore for a shorter-range view and for a view within a range of years where conditions have not been radically changed index numbers of the census and price figures have been computed upon the basis of 1909, and are shown in Table 3. Another advantage which this adjustment gives us is that it affords an opportunity to add the index numbers of retail prices of food in addition to the general index numbers of wholesale prices.

TABLE 3.—INDEX NUMBERS OF EARNINGS AND OUTPUT IN MANUFACTURING INDUSTRIES AND OF WHOLESALE AND RETAIL PRICES IN SPECIFIED YEARS, 1909 TO 1929

[1909=100.0]

Kind of factories and year	Average yearly earnings	Value of product per wage earner	Value added per wage earner	Per cent value added is of value of product	Per cent wages are of value of product	Per cent wages are of value of product added	Wholesale prices	Retail prices of food
Factories excluding hand and neighborhood industries and establishments with products valued at less than \$500:								
1909.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1914.....	111.8	110.3	108.8	98.5	101.2	102.7	100.7	115.6
Factories excluding establishments with products valued at less than \$5,000:								
1914.....	113.9	111.3	109.2	98.1	102.4	104.2	100.7	115.6
1919.....	224.3	220.5	213.9	96.9	101.8	105.0	205.0	209.8
1921.....	228.0	201.0	204.7	101.7	113.3	111.2	144.4	172.8
1923.....	242.1	220.7	228.5	103.4	109.6	106.0	148.8	165.0
1925.....	247.1	239.2	247.8	103.4	103.0	99.8	153.1	177.7
1927.....	250.8	240.4	256.3	106.5	104.2	97.8	141.1	175.4
1929.....	254.4	256.2	282.2	109.9	99.4	90.0	142.8	176.8

In 1914 the census again revised the classification, and furnishes us with two sets of figures for the same year, but taking the readjusted figures for 1914 on the basis of 1909 equaling 100 we find that five years later the average yearly earnings had increased 13.9 per cent; the per cent wages are of value of product had increased 2.4 per cent; wholesale prices had increased seven-tenths of 1 per cent, while retail prices of food had increased 15.6 per cent.

Comparing the 20-year period between 1909 and 1929 the average yearly earnings in the manufacturing industries had increased 154.4 per cent, the value of product per wage earner had increased 156.2 per cent, the value added by manufacture per wage earner had increased 182.2 per cent, the per cent wages are of value of product had fallen six-tenths of 1 per cent, while the per cent wages are of value of product added had fallen 10 per cent; wholesale prices had increased 42.8 per cent while retail prices of food had increased 76.8 per cent.

If it be contended that the wholesale price index of the Bureau of Labor Statistics which is used in these tables is so heavily weighted with agricultural commodities as not to be indicative of price trends in manufactured goods, the answer will be found in Table 4, which gives index numbers of wholesale prices of nonagricultural commodities, that is of precisely the same products, so far as they go, that are covered in the Census of Manufactures; and to facilitate comparisons four different bases for computation are presented.

TABLE 4.—INDEX NUMBERS OF WHOLESALE PRICES OF NONAGRICULTURAL COMMODITIES IN SPECIFIED YEARS, 1914 TO 1929

Year	1926=100.0	1913=100.0	1914=100.0	1909=100.0
1914.....	66.8	96.8	100.0	100.2
1919.....	131.6	190.7	197.0	197.4
1921.....	100.1	145.1	149.8	150.1
1923.....	100.9	146.2	151.0	151.3
1925.....	101.4	147.0	151.8	152.1
1927.....	94.4	136.8	141.3	141.6
1929.....	94.4	136.8	141.3	141.6

An Analysis of Coal-Mine Labor Productivity

By ETHELBERT STEWART, UNITED STATES COMMISSIONER OF LABOR
STATISTICS

THERE are a number of difficulties in the way of arriving at satisfactory figures as to the productivity, measured on the basis of output per man per day, in the coal mines of this or any other country.

In the United States the output is generally given in tons per day for the entire force, consisting of both underground and surface labor. As it is only the miners themselves who actually produce the coal, the question of their output is of course entirely covered up by "other labor."

A report by the United States Bureau of Mines enables us to segregate this labor in such a way as to show the average output in tons per man per day, not by occupations it is true, but nevertheless by groups of workers in the coal mines. English statistics are sometimes segregated so as to show the output of the coal hewers or coal getters, and this is followed in the English reports by "all other labor."

In the report of the Bureau of Mines we are able to segregate the miners, loaders, and shot firers, which correspond with the English term "coal getters." These are the men who directly pick, blast, or cut the coal from the natural seam and produce the commercial coal. Besides their work, there is simply the matter of handling and transporting the coal and of keeping the mine in working condition for handling and transporting it.

The four groups of workers which we are able to segregate from the Bureau of Mines report are: (1) Those named above; (2) haulage and track employees; (3) all other underground employees; and (4) surface employees. For these two totals are given, the first total being for all employees underground and the other for all employees. Table 1 shows the productivity of labor in the coal mines according to these groupings. In this, as in all other tables presented in this article, mines producing less than 1,000 tons of coal per year are excluded.

TABLE 1.—COAL-MINE OUTPUT PER MAN PER DAY, 1929

[Computed from Bituminous Coal Tables (preliminary), 1929, United States Bureau of Mines]

State	Average tons per man per day					All employees
	Underground employees				Surface employees	
	Miners, loaders, and shot firers	Haulage and track employees	All other employees	All employees underground		
<i>Bituminous</i>						
Alabama.....	5.08	26.23	23.95	3.61	20.90	3.08
Alaska.....	11.56	57.82	24.09	6.88	8.50	3.81
Arizona.....	2.24	36.98	36.98	2.00	36.98	1.90
Arkansas.....	4.00	28.18	36.74	3.19	17.46	2.70
California, Idaho, Nevada, and Oregon.....	3.97	30.45	15.22	2.85	9.13	2.17
Colorado.....	6.65	43.24	43.27	5.08	32.69	4.40
Georgia.....					1.68	1.68
Illinois.....	9.32	54.09	50.67	6.87	50.07	6.06

TABLE 1.—COAL-MINE OUTPUT PER MAN PER DAY, 1929—Continued

State	Average tons per man per day					
	Underground employees				Surface employees	All employees
	Miners, loaders, and shot firers	Haulage and track employees	All other employees	All employees underground		
Indiana.....	12.05	66.04	68.32	8.87	33.10	7.00
Iowa.....	4.02	33.20	31.38	3.22	40.35	2.98
Kansas.....	5.11	55.86	85.32	4.44	19.58	3.63
Kentucky.....	7.55	35.90	37.81	5.35	35.05	4.64
Maryland.....	4.96	27.26	29.75	3.68	29.75	3.28
Michigan.....	4.13	22.62	24.08	3.05	31.17	2.77
Missouri.....	6.35	54.19	48.74	5.09	16.31	3.87
Montana.....	13.60	59.50	89.25	9.85	39.89	7.90
New Mexico.....	5.82	35.02	41.69	4.46	25.43	3.79
North Carolina.....	1.67	20.07	20.07	1.43	10.03	1.25
North Dakota.....	12.56	105.42	131.06	10.34	20.08	6.84
Ohio.....	6.66	48.07	56.31	5.30	37.24	4.64
Oklahoma.....	5.38	30.16	34.42	4.03	20.04	3.36
Pennsylvania.....	7.11	45.29	42.85	5.38	39.67	4.73
South Dakota.....	3.17	—	—	3.17	—	3.17
Tennessee.....	4.86	26.08	31.40	3.62	22.05	3.11
Texas.....	5.87	40.56	49.45	4.64	26.62	3.95
Utah.....	11.78	52.37	75.72	8.53	41.31	7.09
Virginia.....	7.87	29.87	25.83	5.02	37.70	4.24
Washington.....	6.14	33.35	32.10	4.46	24.30	3.77
West Virginia.....	9.45	35.09	39.28	6.26	36.52	5.34
Wyoming.....	9.89	46.35	57.38	7.14	38.66	6.02
Total, bituminous.....	7.74	40.75	41.85	5.63	35.41	4.85
<i>Anthracite</i>						
Pennsylvania.....	4.24	21.99	12.85	2.78	9.75	2.17
Grand total.....	7.01	36.79	32.83	4.99	26.84	4.21

From this table we are enabled to analyze more closely the figures of production. For instance, take the mines of Illinois. The figures show that the average output per man per day in the coal mines of that State is 6.06 tons, while the average output per miner or coal getter per day is 9.32 tons. The table shows that the average output in Indiana for all employees is 7 tons, or not much more than the output in Illinois, while the productivity of the coal getters is 12.05 tons, and that this is covered up in the general average largely by the fact that the surface employees handle 50.07 tons per man per day in Illinois while in Indiana they handle but 33.1 tons per employee per day. In Utah we find a general average for all employees of 7.09 tons, with an average for the actual miners of 11.78 tons.

In Table 2 there is an attempt to show the relation of the number of persons in each of the other groups to the number employed in the group of miners, loaders, and shot firers. For instance, for each actual coal getter in Illinois there is seventeen-hundredths of a man employed in haulage and track work; there is eighteen-hundredths of a man employed in other underground labor; there is nineteen-hundredths of a man employed on the surface. In Indiana, while the underground labor is practically the same, the surface labor is nearly twice as great in proportion to the actual productive force as it is in Illinois.

TABLE 2.—NUMBER OF PERSONS EMPLOYED IN EACH OTHER GROUP FOR ONE MAN EMPLOYED AS A MINER, LOADER, OR SHOT FIRER

State	Underground employees			Surface
	Miners, loaders, and shot firers	Haulage and track	Other	
<i>Bituminous</i>				
Alabama.....	1.00	0.19	0.21	0.24
Alaska.....	1.00	.20	.48	1.36
Arizona.....	1.00	.06	.06	.06
Arkansas.....	1.00	.14	.11	.23
California, Idaho, Nevada, and Oregon.....	1.00	.13	.26	.43
Colorado.....	1.00	.15	.15	.20
Georgia.....				(1)
Illinois.....	1.00	.17	.18	.19
Indiana.....	1.00	.18	.18	.36
Iowa.....	1.00	.12	.13	.10
Kansas.....	1.00	.09	.06	.26
Kentucky.....	1.00	.21	.20	.22
Maryland.....	1.00	.18	.17	.17
Michigan.....	1.00	.18	.17	.13
Missouri.....	1.00	.12	.13	.39
Montana.....	1.00	.23	.15	.34
New Mexico.....	1.00	.17	.14	.23
North Carolina.....	1.00	.08	.08	.17
North Dakota.....	1.00	.12	.10	.63
Ohio.....	1.00	.14	.12	.18
Oklahoma.....	1.00	.18	.16	.27
Pennsylvania.....	1.00	.16	.17	.18
South Dakota.....	² 1.00			
Tennessee.....	1.00	.19	.15	.22
Texas.....	1.00	.14	.12	.22
Utah.....	1.00	.22	.16	.29
Virginia.....	1.00	.26	.30	.28
Washington.....	1.00	.18	.19	.25
West Virginia.....	1.00	.27	.24	.26
Wyoming.....	1.00	.21	.17	.26
Total, bituminous.....	1.00	.19	.18	.22
<i>Anthracite</i>				
Pennsylvania.....	1.00	.19	.33	.43
Grand total.....	1.00	.19	.21	.26

¹ All surface—102 employees.² 32 miners, loaders, and shot firers only.

The great variation in productivity of labor in the various groups is even more accentuated when we divide the States into their own coal-producing counties. Table 3 gives the average tons per man per day in the coal-mining counties of the State of Illinois:

TABLE 3.—COAL-MINE OUTPUT PER MAN PER DAY IN ILLINOIS COAL MINES, 1929, BY COUNTIES

[From Bituminous Coal Tables (preliminary), 1929, United States Bureau of Mines]

County	Average tons per man per day					All employees
	Underground employees				Surface employees	
	Miners, loaders, and shot firers	Haulage and track employees	All other employees	All employees underground		
Bond and Clinton.....	9.23	44.93	54.63	6.71	48.08	5.88
Bureau.....	2.78	21.28	31.92	2.28	10.64	1.89
Cass, Greene, Morgan, and Scott.....	3.82	28.65	28.65	3.02	28.65	2.73
Christian.....	10.29	92.60	88.12	8.38	97.13	7.72
Edgar, Logan, and Macon.....	3.62	27.95	22.36	2.80	27.43	2.54
Franklin.....	10.61	43.38	39.93	7.03	57.91	6.25
Fulton.....	10.40	95.36	116.14	8.68	38.55	7.08
Gallatin.....	4.07	53.82	44.04	3.48	25.49	3.04
Grundy.....	6.53	32.64	24.87	4.46	46.08	4.06
Hancock.....	3.67	18.34	18.34	2.62	18.34	2.30
Henry.....	6.25	72.73	61.54	5.26	8.99	3.31
Jackson.....	34.10	120.81	115.13	21.60	27.26	12.08
Jefferson and White.....	5.09	33.41	41.12	3.99	24.30	3.45
Knox.....	5.35	27.55	56.82	4.15	56.82	3.87
La Salle.....	3.86	40.72	27.84	3.13	31.36	2.84
Livingston.....	4.58	25.67	32.08	3.47	18.33	2.92
McDonough.....	1.75	22.72	22.72	1.51	22.72	1.42
Macoupin.....	10.67	69.17	43.99	7.64	89.53	7.04
Madison.....	8.23	54.08	55.97	6.33	51.14	5.62
Marion.....	14.36	40.77	35.13	8.15	40.01	6.76
Marshall.....	3.37	20.20	20.20	2.52	40.39	2.37
Menard.....	3.89	67.29	33.64	3.32	33.64	3.03
Mercer.....	3.73	49.78	74.68	3.32	24.89	2.93
Montgomery.....	10.67	56.44	43.40	7.44	71.97	6.73
Peoria.....	5.97	43.91	46.61	4.72	50.76	4.38
Randolph.....	16.97	108.05	122.27	13.10	28.29	8.96
Rock Island.....	8.32	56.28	72.76	6.59	85.23	6.11
St. Clair.....	4.19	32.45	32.45	3.33	21.64	2.89
Saline.....	9.40	56.15	49.96	6.93	48.56	6.07
Saline.....	8.13	35.57	68.78	6.04	48.88	5.36
Sangamon.....	6.22	65.77	67.02	5.24	84.30	4.92
Schuyler.....	2.18	31.94	31.94	1.92	47.91	1.84
Shelby.....	3.26	61.13	20.45	2.67	30.68	2.45
Stark.....	2.32	39.45	39.45	2.08	39.45	1.97
Tazewell.....	5.72	57.31	61.84	4.80	46.08	4.33
Vermilion.....	8.35	60.87	33.59	6.03	47.16	5.33
Wabash.....	3.55	21.27	21.27	2.66	21.27	2.36
Warren.....	2.47	29.60	29.60	2.11	29.60	1.98
Washington.....	6.26	103.98	27.36	4.86	37.13	4.29
Will and Woodford.....	19.76	275.05	210.33	16.95	19.12	8.98
Williamson.....	10.80	52.41	46.42	7.51	47.61	6.49
Total.....	9.32	54.09	50.67	6.87	50.07	6.06

Methods of Mining

NATURALLY the productivity of the coal getter is determined largely by the extent to which machinery is employed. Here again the Bureau of Mines comes to our aid in the following table:

TABLE 4.—PERCENTAGE OF TOTAL OUTPUT, BY SPECIFIED METHODS OF MINING BITUMINOUS COAL, 1929

[From Bituminous Coal Tables (preliminary), 1929, United States Bureau of Mines]

State	Production (net tons)	Per cent mined by each method					Total
		Cut by machines	Mined by hand	Shot off the solid	From strip pits	Not speci- fied	
Alabama	17,943,923	66.3	10.4	21.4	1.8	0.1	100.0
Alaska	100,610		10.0	90.0			100.0
Arizona	10,132		19.3	80.7			100.0
Arkansas	1,695,108	48.8	.2	46.2	4.7	.1	100.0
Colorado	9,920,741	56.2	36.8	6.8		.2	100.0
Georgia	44,636				100.0		100.0
Illinois	60,657,641	76.1	2.3	12.5	8.9	.2	100.0
Indiana	18,344,358	54.7	4.9	9.7	30.6	.1	100.0
Iowa	4,241,069	30.2	11.5	57.0		1.3	100.0
Kansas	2,975,971	8.8	4.8	50.6	34.4	1.4	100.0
Kentucky:							
Eastern	46,025,452	92.7	5.2	2.1			100.0
Western	14,437,148	90.1		7.1	2.8		100.0
Maryland	2,649,114	24.4	74.1	1.2		.3	100.0
Michigan	804,869	97.9		2.1			100.0
Missouri	4,030,311	27.7	8.8	13.1	49.3	1.1	100.0
Montana	3,407,526	49.9	.3	13.0	35.8	1.0	100.0
New Mexico	2,622,769	21.9	48.7	29.4			100.0
North Carolina	52,180		39.0	61.0			100.0
North Dakota	1,862,130	38.3	1.2	9.8	46.3	4.4	100.0
Ohio	23,689,477	88.6	2.1	1.1	7.5	.7	100.0
Oklahoma	3,774,080	67.5		19.3	13.1	.1	100.0
Pennsylvania	143,516,241	69.9	26.9	2.7	.5		100.0
South Dakota	12,854					100.0	100.0
Tennessee	5,405,464	60.3	12.1	26.7	.9		100.0
Texas	1,100,668	2.1	22.5	47.2	28.2		100.0
Utah	5,160,521	78.7	1.7	19.6			100.0
Virginia	12,748,306	85.7	1.4	12.9			100.0
Washington	2,521,327	27.7	42.7	29.5		.1	100.0
West Virginia	138,518,855	85.7	12.8	1.3	.1	.1	100.0
Wyoming	6,704,790	70.0	9.7	19.2	1.1		100.0
Other States	10,322			100.0			100.0
Total	534,988,593	75.4	13.9	6.8	3.8	.1	100.0

Taking the entire industry, the percentage of coal cut by machines in 1929 was 75.4 per cent, as against 50.7 per cent in 1913 and 73.8 per cent in 1928. Machine cutting, however, is only part of the story. The increase in mechanical loaders as between 1928 and 1929 has been 75.6 per cent for the country as a whole, 161.8 per cent in the State of Illinois, 57.9 per cent in the bituminous fields of Pennsylvania, 35.8 per cent in Kentucky, and 23.2 per cent in West Virginia.

The mechanization of the coal mines, including in this term not only the cutting and loading machines but the installation of electric engines and larger cars for hauling the coal from the face of the working to the mouth of the pit, is responsible for most of the increase in output in the coal mines during the past 40 years. Some of it, of course, is due to the entirely different method of securing the coal, such as the practice of blasting from the solid, which means that there is no mining done in the old sense of the term. A hole is drilled with electric power into the solid seam of coal, and an explosive is fitted

into this hole and ignited, tearing the coal from the seam without further human energy. That this is a most wasteful and destructive process is not a part of the present story.

The output in the bituminous coal fields of the United States per man per day in 1890, all employees considered, was 2.56 tons, or an average of 579 tons per man per year. In 1929 the average output for the entire country, all employees considered, was 4.85 tons per day, or 1,064 tons per year. In anthracite the increase has been from 1.85 tons per man per day, or 369 tons per year in 1890, to 2.17 tons per day, or 487 tons per year; and this in spite of the fact that in 1890 a miner's workday was practically 10 hours on the average, while in 1929 with comparatively few exceptions it was 8 hours.

Unfortunately, the reported time used in these figures is not always upon a uniform or upon a very satisfactory basis. In many instances the mines still report "tipple time" instead of the actual mine operating time; that is to say, the old method of reporting the mine in operation if at any time during the day the tipple was working still continues in some places. Tipple time means the time during which coal is being dumped from the mine cars through the tipple into railroad cars for shipment. It may mean only that the coal hoisted the day before is loaded into the railroad cars, or it may mean that the hoisting machinery and the tipple are operating while the mine itself is not; that is to say, there is no coal actually being mined from the seams at the working faces. It may also mean that only a part of the mine was being operated.

This more or less seriously affects the accuracy of the reported days in operation as they relate to the actual working of the mine. Again it is true, as the report of the Bureau of Mines cautions, that: "Many of the smaller operators do not even average the pay roll for the year, but rather set down the number of employees shown by the last pay roll," with the result that the figures represent the "number of men commonly dependent on the mines for employment."¹ However, the material used is the best available, and doubtless the accuracy of the basic data improves from year to year.

The tendency of all these possible errors in basic data would be unduly to increase the reported number of employees and the operating time, and hence to decrease the average output per man-hour.

¹ U. S. Bureau of Mines. Mineral Resources of the United States, 1925, Part II, pp. 428, 429.

INDUSTRIAL AND LABOR CONDITIONS

Labor Conditions of Dock Workers¹ in the Port of Liverpool

AT THE request of the Lord Mayor of Liverpool the British Minister of Labor appointed a special investigator to "inquire into the casual labor problem of the Merseyside area," which includes the entire water front of the port of Liverpool. The inquiry began in January, 1930, and the results were recently made public. Of the 162 pages which make up the body of the report,² 87 pages are devoted to labor conditions of the dock workers in Liverpool. The following article is based on the material contained in the report.

Decasualization of the Port of Liverpool

LIVERPOOL was the first large port to inaugurate an organization of dock labor for the purpose of decasualizing the port. The plan was put into effect in July, 1912, and has since been known as the "Liverpool docks scheme." Prior to 1912 the Liverpool docks, like the docks in all other ports, were subject to a large influx of workers from other industries who for one reason or another could not maintain their jobs in their own occupations. As a consequence the regular dock workers were subjected to severe competition in their search for work in an industry which is noted for its irregularity of employment. The "Liverpool docks scheme" was introduced with the object (1) of limiting the supply of dock workers to a number sufficient to meet the necessary fluctuations of the work, and (2) of restricting the work to those persons who may be said to follow genuinely the trade of dock workers.

Organization of the "Liverpool Docks Scheme"

WITH this objective in view the water front of Liverpool was divided into six areas, with a clearing house in each area. The six clearing houses were organized into one central clearing house for the whole port of Liverpool. Each area clearing house, as well as the central clearing house, is administered by the board of trade with the cooperation of a joint committee consisting of representatives of employers and of the trade-union of the dock workers. It is interesting to note that when the plan was first inaugurated the trade-union organization was definitely hostile to the "scheme" to the extent of actually calling a strike against it. At present the trade-union is actively participating in the management of the "scheme" and favors it to the extent of being ready to call a strike should somebody try to stop its operation.

¹ The occupation of dock worker in Great Britain corresponds to that of longshoreman in the United States.

² Hanham, F. G. Report of Inquiry into Casual Labor in the Merseyside Area. Liverpool, 1930. 190 pp.

All the dock workers were required to register in their respective areas during the two weeks' period from July 1 to July 15, 1912. Every registered dock worker was given a work card or a tally which entitled him to work on the water front. After July 15, no worker without a tally from the clearing houses was permitted to work for the shipping and stevedore companies which were members of the "scheme."

Number of Dock Workers in Port

THE actual number of dock workers in the port of Liverpool at the time of the organization of the "docks scheme" was not known, but it was estimated that a register of 25,000 should prove sufficient for the maximum needs of the port. By the end of March, 1913, however, 31,300 tallies had been issued. In 1922 this number was reduced to 24,300 and at the present time the total number of tallies issued is slightly less than 21,500.

The total number of tallies issued does not, however, represent the actual number of men ready at any time to take up the job of dock worker. It also includes the sick workers as well as those who temporarily turned in their tallies in order to work for companies which are not members of the "docks scheme" or who have left the water front for other occupations. The average number of tallies in active circulation is, therefore, more representative of the actual number of workers active on the water front and the report shows that in 1929 there were 20,041 tallies outstanding. But even this number has proved to be considerably larger than the maximum number of workers actually employed on any one day by all the docks of Liverpool. During the four weeks between February 24 and March 17, 1930, an enumeration took place of the total number of individual workers who were employed and paid weekly wages, the results being as follows:

	Number of workers paid wages
Week ending February 24.....	13, 976
Week ending March 3.....	13, 421
Week ending March 10.....	13, 703
Week ending March 17.....	13, 510
Average for 4 weeks.....	13, 652

The records of the clearing houses show that the average number of dock workers paid wages each week during the last seven years was 15,120 per year, the range being from 14,544 (in 1929) to 16,139 (in 1925).

These figures show unmistakably that there still exists in the port of Liverpool a permanent surplus of dock workers which amounts to nearly one-third of the total number of tallies in circulation. It would seem, therefore, that the registration of the dock workers and the limitation of the work to tally holders only was not sufficient completely to decasualize dock labor. The principal impediment to complete decasualization was found to be the lack of adjustment between the supply of labor and the daily demands of the port. When the "scheme" was first put into effect the system of hiring dock labor at stands erected by the employers at their own docks was retained

intact. Twice a day, morning and afternoon, the men are required to present themselves at these stands, where the foremen proceed to select the number of workers they need for the jobs. In addition to these regular employers' stands special reserve stands were organized for the benefit of those who failed to be taken on at the private stands. Only when this final attempt to get a job fails are the workers required to present themselves at a clearing house, where their work card is stamped accordingly. Because of the large number of stands in port it often happens that in spite of the large surplus of dock workers for the port as a whole some stands will find themselves short of labor and the employers, therefore, demanding an increase in the number of tallies issued.

The lack of a central hiring or dispatching station to manipulate the supply of the dock workers in accordance with the needs of the port was found to be the cause of the failure of the port to decasualize. Two suggestions have been made to correct this failure: First, to increase the number of "preference" or permanent men to be assigned to each employer, and second, to increase the mobility of labor by reducing the number of private stands to one or several employing agencies, with the right to dispatch the dock workers to the various docks as needed. No systematic organization, however, has as yet been created to accomplish this purpose.

Source of Supply of Dock Workers

THE power to issue new tallies is limited to the central joint committee, but each clearing house is entitled to issue as many tallies as might be needed to complete the quota for its own area. In 1929 the six clearing houses issued 1,017 tallies on the basis of the following preferences: Sons of deceased dockers, 73; sons of living dockers, aged 18 to 25, 215; old tally holders, 232; undefined, 497. In all cases the applicant for a tally must present the indorsement of the trade-union and of one of the employers participating in the "Liverpool docks scheme."

The sources of the dock labor supply and the causes of their drift toward the water front were made a special point of the inquiry. Complete answers to the questions pertaining to this problem were given by 578 tally holders and the results are shown in Table 1, which gives the ages of the workers, the sources from which they were recruited, and the reasons given by them for commencing casual employment on the water front.

TABLE 1.—SOURCES FROM WHICH TALLY HOLDERS ARE RECRUITED AND REASON FOR COMMENCING CASUAL EMPLOYMENT, BY AGE GROUPS

Source from which recruited and reason for commencing casual employment	Age at entry (years)					Total
	19 and under	20 to 24	25 to 34	35 to 44	45 and over	
<i>Source from which recruited</i>						
Blind-alley jobs or never had other than casual work.....	196	14	4	-----	-----	214
Unskilled laborers.....	43	50	34	11	4	142
Seafaring occupations.....	11	13	19	8	2	53
Carters.....	9	16	5	3	2	35
Various skilled occupations.....	10	13	13	8	2	46
Clerks, shop assistants, warehousemen, packers.....	11	14	10	4	3	42
Other sources.....	6	5	24	11	-----	46
Total.....	286	125	109	45	13	578
<i>Reason for casual employment</i>						
Blind-alley jobs or never had chance at anything else.....	180	8	2	-----	-----	190
Slackness in own trade or lost regular job and drifted to docks.....	32	59	53	24	10	178
To better himself or attracted by higher rate of pay.....	36	29	23	9	1	98
Father in same occupation.....	23	4	3	-----	-----	30
Other reasons.....	15	25	28	12	2	82
Total.....	286	125	109	45	13	578

Earnings of Dock Workers

IN ADDITION to issuing tallies the clearing house in each area also pays off the dock workers employed in that area. On Friday evening each employer within the "docks scheme" furnishes to the central clearing house a complete statement showing the total number of tally holders employed by him and their actual earnings during the week which ends at 5 p. m. every Friday. The staff of the central clearing house "clears" the wages, that is, the amounts payable by different employers to each man are compiled on one sheet against the corresponding tally of that man. The collated pay sheets are then issued to the separate area clearing houses early on Saturday morning and the workers are paid off on that day between 11 a. m. and 1 p. m.

This system of centralized pay stations not only enables the individual workers to draw their weekly earnings in one lump sum, thus saving them the trouble of going from one dock to another in order to collect their small earnings, but it also provides the port with reliable statistics on the actual earnings of the individual men as well as of the total number of men employed by the port.

Table 2 gives the distribution of the total number of men employed by the port, by earnings groups, as well as the total number of workers employed and the average earnings per week for the quarter ending March 31, 1930. These averages range from \$11.58 to \$13.75 per week, with an average for the entire three months of \$12.41 per week.

TABLE 2.—AVERAGE AND CLASSIFIED WAGES PAID TO TALLY HOLDERS EACH WEEK DURING THE QUARTER ENDING MARCH 31, 1930

[Conversions into United States money on basis of pound = \$4.8665, shilling = 24.33 cents, penny = 2.03 cents]

Week ending—	Number of men receiving—						Total number paid	Average wages per week	Net number of tallies in circulation
	\$5.84 and under	Over \$5.84 to \$8.76	Over \$8.76 to \$11.68	Over \$11.68 to \$14.60	Over \$14.60 to \$16.06	Over \$16.06			
1930									
January 6.....	2,300	1,882	2,056	2,363	1,568	5,380	15,549	\$13.75	19,746
January 13.....	2,985	1,789	1,832	1,948	1,361	4,570	14,485	12.73	19,844
January 20.....	2,839	1,861	1,786	1,819	1,067	4,552	13,924	12.84	19,897
January 27.....	2,846	1,989	2,064	2,068	1,246	4,188	14,431	12.39	19,839
Average.....	2,742	1,880	1,934	2,057	1,310	4,672	14,597	12.94	19,831
February 3.....	2,700	1,950	2,094	1,981	1,228	4,774	14,727	12.88	19,901
February 10.....	2,968	1,944	2,094	1,848	1,110	4,011	13,975	12.25	19,931
February 17.....	3,106	2,331	2,044	1,826	1,009	3,652	13,968	11.58	19,835
February 24.....	2,896	1,999	2,284	1,998	889	3,970	13,976	12.15	19,762
Average.....	2,902	2,056	2,129	1,913	1,059	4,102	14,161	12.23	19,857
March 3.....	2,920	1,824	1,860	1,732	922	4,163	13,421	12.41	19,787
March 10.....	2,627	1,983	1,895	1,825	970	4,403	13,703	12.47	19,851
March 17.....	3,150	2,007	1,863	1,826	880	3,784	13,510	11.94	19,881
March 24.....	2,743	2,049	2,067	1,879	1,018	3,775	13,531	12.06	19,829
March 31.....	3,553	1,926	1,662	1,552	728	3,914	13,335	11.64	19,735
Average.....	2,999	1,958	1,869	1,763	904	4,008	13,500	12.11	19,817
Average for 3 months.....	2,890	1,964	1,969	1,899	1,077	4,241	14,041	12.41	19,834

Unemployment Insurance

THE work of loading and dispatching cargo first became insurable under the unemployment insurance act in 1920. Table 3 gives the rates of the unemployment benefit for men, which vary from 57 cents per day for a single man between the ages of 18 and 21 to \$9.25 per week for a dock worker with an adult dependent and six children.

TABLE 3.—RATES OF UNEMPLOYMENT BENEFIT FOR MEN (SINCE MARCH 13, 1930)

[Conversions into United States currency on basis of pound = \$4.8665, shilling = 24.33 cents, penny = 2.03 cents]

Age and dependents	Rate of unemployment benefit		
	One day	Three days	One week
18 and under 21 years.....	\$0.57	\$1.70	\$3.41
21 and under 65 years.....	.69	2.07	4.14
18 years and over, with adult dependent.....	1.05	3.16	6.33
18 years and over, with adult dependent and 1 child.....	1.14	3.41	6.81
18 years and over, with adult dependent and 2 children.....	1.22	3.65	7.30
18 years and over, with adult dependent and 3 children.....	1.30	3.89	7.79
18 years and over, with adult dependent and 4 children.....	1.38	4.14	8.27
18 years and over, with adult dependent and 5 children.....	1.46	4.38	8.76
18 years and over, with adult dependent and 6 children.....	1.54	4.62	9.25

During 1929 approximately 75 per cent of the tally holders in the "Liverpool docks scheme" lodged claims for unemployment benefit at the clearing houses and \$1,717,378 was actually paid out during that year. In the same period the unemployment insurance fund re-

ceived in contributions from employers \$119,304 and from employees \$100,095, or a total of \$219,399. In other words, the dock workers within the "docks scheme" drew in unemployment benefits seven and four-fifths times the amount paid jointly by the employers and employees to the unemployment fund. Table 4 shows the classified amounts disbursed in unemployment benefits to the various groups of dock workers during the four weeks ending in March, 1926. Out of 20,557 dock workers who were registered during that period 10,605, or more than 50 per cent, were drawing unemployment benefits.

TABLE 4.—WAGES EARNED UNDER THE DOCKS SCHEME AND UNEMPLOYMENT INSURANCE BENEFIT RECEIVED BY TALLY HOLDERS DURING THE FOUR WEEKS ENDING IN MARCH, 1926

[Conversions made on basis of pound = \$4.8665]

Total earnings in the 4 weeks	Number receiving no benefit	Number drawing benefit of—				Total drawing benefit	Total tally holders
		\$5.84 and under	Over \$5.84 to \$11.68	Over \$11.68 to \$17.52	Over \$17.52		
No earnings	1, 105	139	192	346	225	902	2, 007
Not over \$9.73	390	151	201	627	473	1, 452	1, 842
Over \$9.73 to \$29.20	842	397	1, 291	1, 585	673	3, 946	4, 788
Over \$29.20 to \$48.67	1, 515	547	1, 469	706	110	2, 832	4, 347
Over \$48.67 to \$68.13	3, 112	608	484	124	5	1, 221	4, 333
Over \$68.13 to \$87.60	2, 265	149	62	9	1	221	2, 486
Over \$87.60 to \$107.06	565	15	8	1	-----	24	589
Over \$107.06	158	4	2	1	-----	7	165
Total receiving wages	8, 847	1, 871	3, 517	3, 053	1, 262	9, 703	18, 550
Grand total	9, 952	2, 010	3, 709	3, 399	1, 487	10, 605	20, 557

Conclusion

SOME of the outstanding characteristics disclosed by this survey of dock labor in the port of Liverpool are—

1. Registration of all dock workers and restriction of the work to tally holders alone was successful in eliminating the severe outside competition to which dock workers were subjected prior to the organization of the "Liverpool docks scheme" in 1912 and to that extent improved the conditions of the dock workers.

2. The trade-union organization, which was originally hostile to the "docks scheme," has now become an important factor in the administration and management of the "scheme."

3. The clearing houses have proved very successful as central pay stations for the dock workers:

(a) They save the workers the trouble of going from dock to dock in collecting their weekly earnings.

(b) They provide the port with reliable statistics on the number of men employed and their actual earnings.

(c) They were ready to receive and disburse payments of unemployment benefit when the law became applicable to the dock workers in 1920.

4. The "Liverpool docks scheme" did not succeed in completely decasualizing the dock workers because:

(a) It has failed to organize the distribution of labor and to replace the numerous private stands with a central agency for the purpose of adjusting the supply of workers to the daily demands of the port.

(b) It has failed to introduce a system of dividing the work for the purpose of equalizing the earnings of the men, which show extreme variations, from \$5.84 and under to \$17.52 and over.

5. There is now existing in Liverpool a surplus of dock workers amounting to nearly one-third of the total number of tallies issued. The results are that not only are the average earnings of the dock workers very low (about \$12 per week) but the surplus of workers constitutes a severe burden on the unemployment insurance fund, drawing out nearly eight times as much money as is deposited in the fund by the combined contributions of the employers and the workers under the "Liverpool docks scheme."

Effect of Stock-Market Crisis of 1929 on Employee Stock-Purchase Plans ¹

THE scope and the results of the employee stock-ownership movement formed the subject of a report ² issued by the National Industrial Conference Board in 1928. The present study, which supplements the former investigation, deals with the extent to which the stock-market crisis of October, 1929, affected the status of such plans in American industry.

The earlier study, which covered the history of the movement, its purposes, and the methods of operation of the plans in 389 different industrial enterprises, showed that the underlying motives in the establishment of the plans were, in the order of their importance: To encourage thrift, to reward past service, to stimulate interest in the company, and to raise capital. In some cases, however, the plans were not instituted as the result of any well thought out policy but simply in imitation of other companies.

While the widespread extent of employee stock ownership is shown by the fact that in 1928 about 800,000 persons employed by 315 companies owned over \$1,000,000,000 worth of stock according to the values of these stocks in the middle of the year 1927, still this total represented only 4¼ per cent of the total market value of the stock outstanding in the same companies. Furthermore, this stock ownership did not represent any general demand or desire on the part of employees for a share in company control, nor in cases in which a considerable part of the stock has been owned by employees has there been any tendency to attempt to influence the management in its policies. Even in the few cases in which companies had adopted definite plans for gradually turning the management over to the employees, the managerial group retained a substantial margin of control over the stock.

Two clearly defined tendencies were evident at the time of the previous study. These were the continuance of the expansion of the stock-ownership movement, which had had its greatest growth in the 5-year

¹ National Industrial Conference Board (Inc.). Employee stock-purchase plans and the stock-market crisis of 1929. New York, 1930.

² See Labor Review, August, 1928, pp. 99-103.

period 1921-1925, and the trend toward the ownership of the stock by a selected group, sometimes because it was the policy of the management to sell only to a special group consisting largely of the office staff, salesmen, and employees in executive positions, and in other cases by the movement of the stock into the hands of such a group by resales of the stock or as original subscriptions by the rank and file were canceled.

For the eight years prior to October, 1929, there was a fairly continuous advance in the average market price of listed stocks, which averaged roughly three times the previous figure. Then suddenly there was a drop within a few weeks' time to approximately 50 per cent below the peak prices. During the long period of rising values the popular demand for stock had grown to unprecedented proportions, but the frenzy of speculation was stopped abruptly by the market collapse in October, 1929, and the public suddenly shifted to extreme conservatism in the matter of investments. There was every reason to think, the report states, that the shrinkage of security values and the reaction against speculation might seriously affect employee stock-purchase plans since the development of a majority of the plans had taken place in a period of rising market values. The purpose of the study, therefore, was to determine whether the sharp decline of stock prices had caused employees to make wholesale cancellations of contracts or sales of stocks, and if so if management had been blamed for the loss with resultant dissatisfaction with management on the part of employees, and what were the changes or cancellations in employee stock purchase plans which these conditions would necessitate. An informal inquiry was, therefore, sent to each of the companies that had previously reported stock-purchase plans for their employees, asking for opinions upon these points, the inquiry being supplemented by visits to plants and interviews with employees. Replies were received from 150 plants, including most of the larger companies having such plans. In only four cases was it reported that the plan had been discontinued, the reasons given being change in financial structure of the company, not sufficient interest on the part of employees, substitution of new thrift plan, and selling of stock by employees. None of these reasons can be connected directly with the deflation of security prices following the stock-market crisis.

The study sought to show the factors which might affect the influence of the market crisis upon stock-purchase plans, including the kind of stock, whether listed or unlisted; the status of the plan in the matter of progress toward maturity; the classes of employees eligible as stock purchasers; and the extent of curtailment of company operations.

Experience with Listed and Unlisted Stocks

THE fact that the price fluctuations in listed stocks can be followed by all who are interested would naturally cause the effects of the stock-market crash to stand out more clearly than would be the case with unlisted stocks. The management of companies selling listed securities to their employees have generally recognized that this would be an important factor and that some counteracting conservative influence would be necessary. It was the general practice

in such companies, therefore, to warn employees of the risks involved, and in addition many companies had provided a measure of protection to the employees either by selling the stock at a discount from the market price or by contributing to the purchase of the stock either a definite proportion of the employees' payments or a sum based upon such conditions as length of service, amount of stock held, etc. In other cases incentives for holding stock, such as the payment of bonuses or additional dividends, were provided. Of 90 companies that sold listed stock to their employees, 51 reported that at no time had the market price fallen below the net cost of the stock to employees, 20 did not report, and only 19 stated that the market price had dropped below the employees' purchase price and in only 11 of these cases could the drop be considered really serious; that is, had the price remained more than 10 per cent below the cost to employees for more than a week.

In regard to purchase-contract cancellations and stock resales the reports of 74 companies show that in only two cases were the cancellations above normal, while of 87 companies reporting only 5 stated that stock resales were more than normal. It is therefore safe to say, the report states, that comparatively few of these companies observed any tendency on the part of employee stockholders to get rid of their stock as a result of the market collapse, although it must be noted that there are, in some cases, certain restraints upon relinquishment of stocks.

It is comparatively easy to analyze the effect of the market depression on unlisted stocks since with this type of stocks the employee has generally no way of knowing the relative or absolute value of the stock at any given time. Also many of the stocks offered under this classification are public utility preferred stocks for which an artificial but constant market is usually maintained, or they are special employees' preferred stocks which have no resale except to the company at a definite and predetermined price. The reports on this class of stock indicated that approximately the same conditions prevailed as with the listed stocks, and showed that although the market depression has clearly been responsible for some resales of stock and cancellations of subscriptions, in a large number of cases they have not exceeded a normal expected rate.

Status of Plans as Regards Their Progress Toward Maturity

It is obvious that if the total amount of installment payments of an employee-subscriber had not gone above the point to which the stock had fallen he would probably not be greatly disturbed, but if the payments already made exceeded this price the employee's reaction might be entirely different. Of the uncompleted plans covered in the survey just one-half were 50 per cent completed or more, and in all cases among this group it was found cancellations were either normal or less than normal.

Effect on Different Groups of Employees

As THE tendency in many stock-subscription plans has been toward restricting the sale of stock among the rank and file of the employees on account of the fear of an unfavorable reaction in times of market

depression, it is of interest to determine what did happen among such groups as a result of the stock crisis.

Among 109 companies reporting on contract cancellations among the ordinary workers as a group, the cancellations were either normal or below normal or there were none at all in 101 cases, while in 3 instances the cancellations were above normal and 5 companies did not report. In 9 companies reporting for a selected group on this point, 3 reported a normal number of cancellations and 6 none at all. In the matter of stock resales practically the same thing held true, as among 140 companies reporting only 8 had resales above the normal among the rank and file while there were none among the selected group. On the whole, the report states, it appears that although "plans including a selected group of employees have been somewhat more stable during a period of economic depression, there has also been a strengthening rather than a weakening of the rank and file plans, and, although some of these latter plans seem to be changing over gradually to the select group, this movement can in no wise be laid to the stock-market crisis."

Employees' Attitude Toward Stock-Purchase Plans

THREE hundred and eighty-five employees were interviewed in regard to various questions connected with their purchase of stock in their company. It was found that 227 subscribed either because they believed in stock ownership or considered it a good investment. Of this number, 177 stated they would subscribe again, 40 would not subscribe, and 10 were uncertain. The reasons for subscribing given by 36 were that they believed it politic to do so, while 76 subscribed because "every one else did," and 46 did not answer. Among the employees interviewed only 13 had sold their stock and in only 2 of these cases could the sale be traced to the market crisis.

In general, it is said, during the entire period of lowest price quotations the employees of the various firms were not fearful and their attitude reflected their confidence in their employers' ability to protect their holdings from serious loss.

In conclusion, the report states that any fear that employee stock-purchase plans would be unable to withstand a serious stock-market crisis has been dissipated by the experience of October, 1929. This has been due principally to two reasons, one being the fact that the securities sold to employees by companies having such plans appear to have been good values and the other that in the majority of cases the employees were primarily investors, not speculators, and as such were not especially affected by the fluctuations of the stock market.

Results of Manufacturing Census of 1929

ACCORDING to a report by the United States Bureau of the Census giving preliminary results of the 1929 Census of Manufactures, the number of wage earners in manufacturing industries in the United States in 1929 was 8,550,284, as against 8,349,755 in 1927, an increase of 2.4 per cent. For the same period total wages are reported to have increased 3.9 per cent. The report, issued on November 8, 1930, is reproduced in full below:

The Bureau of the Census announces that, according to a preliminary tabulation of the data collected in the Census of Manufactures taken in 1930, the total value (at f. o. b. factory prices) of products reported for 1929, \$68,453,486,518, exceeds by 9.1 per cent the corresponding total of \$62,718,347,289 for 1927, the last preceding census year. The number of wage earners (average for the year) increased 2.4 per cent, from 8,349,755 to 8,550,284, and wages increased 3.9 per cent, from \$10,848,802,532 to \$11,271,016,618. As compared with 1919, the changes are as follows: Value of products, increase of 10.3 per cent; number of wage earners, decrease of 5 per cent; wages, increase of 7.7 per cent. Because of the substantial decline in wholesale prices between 1919 and 1929, the rate of increase in value of products does not reflect the true increase in production during the 10-year period.

In making use of the statistics for 1929 it should be borne in mind that the cost of materials and the value added by manufacture are not strictly comparable with the corresponding figures for 1927 and 1919, because of the exclusion from the current figures and the inclusion in the earlier ones of data for mill or shop supplies. This change (which was made by the recommendation of an advisory committee appointed by the Secretary of Commerce, the purpose being to render it more convenient for the manufacturers to make their reports) has had the effect of reducing slightly the cost-of-materials item and increasing to the same extent the item for value added by manufacture (calculated by subtracting the cost of materials from the value of products).

The figure for value of products includes a large but indeterminable amount of duplication resulting from the use of the products of some industries as materials by others. For example: Manufacturers of motor-vehicle tires report the total value of such tires made, including the value of those sold to motor-vehicle manufacturers for installation on new vehicles, and these manufacturers in turn report the total value of vehicles manufactured, including the value of the tires. (As a rule, whatever duplications occur are between different industries and are not found to any extent within individual industries.) The value added by manufacture, which is calculated, as explained above, by subtracting the cost of materials from the value of products, is, however, free from the duplication found in the gross value of products, and therefore represents approximately the actual value created by the manufacturing industries of the country.

The statistics for 1929, 1927, and 1919 are summarized in the following table. The figures for 1929 are preliminary and subject to revision, it having been necessary to make use of estimates for a few manufacturers who have been extremely dilatory in making their returns. It is believed, however, that the margin of error resulting from the inclusion of these estimates will not amount to more than a fraction of 1 per cent.

Separate preliminary reports giving both summary statistics and detailed production figures have already been issued for about 100 industries, and those still to be published will be ready for distribution before the end of the year. A single preliminary report giving summary figures for each of the 331 industries covered by the census classification will be issued later.

SUMMARY FOR ALL MANUFACTURING INDUSTRIES, 1929, 1927, AND 1919

Item	1929	1927	1919	Per cent of increase (+) or decrease (-)	
				1927-1929	1919-1929
Number of establishments.....	199,268	191,866	214,383	+3.9	-7.1
Wage earners (average for the year) ¹	8,550,284	8,349,755	9,000,059	+2.4	-5.0
Wages ²	\$11,271,016,618	\$10,848,802,532	\$10,461,786,869	+3.9	+7.7
Cost of materials, containers for products, fuel, and purchased electric current ²	\$37,357,631,108	\$35,133,136,889	\$37,232,702,390	(3)	(3)
Value of products ²	\$68,453,486,518	\$62,718,347,289	\$62,041,795,316	+9.1	+10.3
Value added by manufacture ⁴	\$31,095,855,410	\$27,585,210,400	\$24,809,092,926	(4)	(4)

Not including salaried employees. The average number of wage earners is based on the numbers reported for the several months of the year. This average somewhat exceeds the number that would have been required for the work performed if all had been continuously employed throughout the year, because of the fact that manufacturers report the numbers employed on or about the 15th day of each month, as shown by the pay rolls, usually taking no account of the possibility that some or all of the wage earners may have been on part time or for some other reason may not actually have worked the entire month. Thus in some cases the number reported for a given month exceeds the average for that month.

² Manufacturers' profits can not be calculated from the census figures because no data are collected for certain expense items, such as interest on investment, rent, depreciation, taxes, insurance, and advertising.

³ The cost-of-materials items for 1927 and 1919 are not strictly comparable with the corresponding item for 1929 because of the fact that the schedules for 1927 and 1919 provided for the inclusion of data on the cost of mill or shop supplies, whereas the schedule for 1929 stated that such data should not be included. For this reason no per cent is shown.

⁴ Value of products less cost of materials, containers for products, fuel, and purchased electric current. The figures for 1927 and 1919 are not strictly comparable with the figure for 1929 because of the change in the cost-of-materials item. (See footnote 3.)

Money Loans to Employees

A REPORT¹ by the Industrial Bureau of the Merchants' Association of New York shows something of the extent to which business organizations loan money to their employees or provide or encourage machinery through which such loans may be made. Information was secured from 182 companies which were members of the organization, and of these it was found that 108 kept records of the loans made, while of the remaining 74 companies 41 stated they had made no loans during the preceding two years although several of them would have done so if occasion had arisen. The companies covered included various manufacturing enterprises, retail and wholesale stores, public utilities, printing and publishing houses, etc.

The number of employees in the firms in which loans were made ranged from 5 in one case to 60,000 in the one employing the largest number of people. The total amount of the loans made during the 2-year period by the 88 companies which reported on this point was approximately \$884,000, and it is estimated that the total loaned by all the companies would reach the sum of \$2,000,000 at least. The majority of the loans were for sums of less than \$500.

Interest was charged in surprisingly few cases, only 35 companies charging interest on all loans, while in 23 companies interest was charged on certain classes of loans only. Exemptions in some cases depended upon the amount of the loan, a limit being set upon the amount loaned without interest, and in other cases loans for the

¹ Merchants' Association of New York. Money Loans to Employees. A report of experience and current practices and policies. New York, 1930.

relief of destitution, illness, death, and other such emergencies were not subject to the payment of interest. Six per cent was the rate commonly charged, the rates ranging from 4 to 12 per cent. The 12 per cent rate was found in one company only and was charged on so-called small loans. Approximately \$300,000 was loaned without interest during the two years, several companies loaning amounts totaling \$20,000 and one company loaning \$144,000. In 19 companies collateral in the form of stock certificates, building and loan shares, and life insurance policies was required.

The periods during which loans were allowed to run varied greatly, the usual practice being to treat each loan individually according to the special factors involved. When loans were made for the period of one week, they were really advances on wages or salaries. It was customary to require the loans to be repaid in installments at regular intervals, in the form of salary deductions, but 18 companies allowed employees to repay the loans at their own convenience. Loans running for longer than two years, however, were infrequent.

Losses through failure to repay were reported by only 19 companies and the losses reported amounted to only four-tenths of 1 per cent of the amount loaned by the 88 companies reporting total loans. Special loan funds were reported by 27 companies, the funds being formed by contributions either by the company or individual officers of the company, but in some cases the thrift or savings organization made the loans, in which cases the employees were really borrowing from themselves.

Opinions regarding the desirability of making loans to employees were expressed by 164 companies. Of these statements, 34 were definitely unfavorable although 15 of this number made loans during the 2-year period and four others made salary advances. In general, the replies to this question indicated the belief that loans should be made carefully and after some investigation had been made as to the advisability of granting the request for the loan. Employers who were not in favor of making loans objected usually because they considered the practice made for extravagance; those in favor of the practice regarded it as necessary for the lower paid workers, while others felt that it kept the employees out of the hands of unscrupulous lending agencies, and in general it was considered as making for better morale in the organization.

Age Distribution of Ford Employees

ACCORDING to a count made on February 20, 1930, at the River Rouge plant of the Ford Motor Co., the 90,731 workers in this plant range from 18 to 83 years of age,¹ the median age being 36 (3,688 men) and the modal age, 37 (3,791 men). Table 1 shows the age distribution of these employees by 1-year intervals.

¹ Ford, Henry, in collaboration with Samuel Crowther. *Moving Forward*. Garden City, N. Y., 1930. p. 99.

TABLE 1.—AGE DISTRIBUTION OF EMPLOYEES AT THE RIVER ROUGE PLANT OF THE FORD MOTOR CO., FEBRUARY 20, 1930

Age (years)	Number of men	Age (years)	Number of men	Age (years)	Number of men	Age (years)	Number of men
18.....	46	35.....	3,632	52.....	992	69.....	51
19.....	538	36.....	3,688	53.....	816	70.....	48
20.....	649	37.....	3,791	54.....	710	71.....	24
21.....	771	38.....	3,366	55.....	714	72.....	19
22.....	1,271	39.....	3,406	56.....	574	73.....	14
23.....	2,530	40.....	3,410	57.....	558	74.....	3
24.....	2,442	41.....	3,062	58.....	448	75.....	4
25.....	2,161	42.....	2,952	59.....	385	76.....	3
26.....	2,687	43.....	2,522	60.....	357	77.....	5
27.....	2,968	44.....	2,501	61.....	293	78.....	4
28.....	3,285	45.....	2,420	62.....	213	79.....	1
29.....	3,406	46.....	1,992	63.....	176	82.....	1
30.....	3,692	47.....	1,852	64.....	147	83.....	1
31.....	3,196	48.....	1,627	65.....	111		
32.....	3,214	49.....	1,438	66.....	94	Total.....	90,731
33.....	3,347	50.....	1,398	67.....	72		
34.....	3,535	51.....	1,046	68.....	52		

From Table 1, it is evident that the heaviest weighting of men falls in the age intervals between 23 and 45, each of these intervals of one year being represented by more than 2,000 men, and by more than 3,000 men in the intervals between 28 and 41. At the lower limit, namely between ages 22 and 18, the number of men drops sharply from a total of 1,271 men at age 22 to a total of 46 at age 18. Re-viewing the figures for men in the age groups of 46 years and over it is striking to find that with minor exceptions each succeeding age interval is represented by a smaller group of workers than the age group preceding it.

In Table 2 the original figures are brought together showing the distribution of employees according to the number falling in the age group under 20 years and in succeeding 10-year intervals—20 and under 30 years, etc.²

TABLE 2.—AGE DISTRIBUTION OF EMPLOYEES AT THE RIVER ROUGE PLANT, FEBRUARY 20, 1930, BY AGE GROUPS

Age group	Employees (men)		
	Number	Per cent	Cumulative percentage
Under 20 years.....	584	0.6	.....
20 and under 30 years.....	22,170	24.5	25.1
30 and under 40 years.....	34,867	38.5	63.6
40 and under 50 years.....	23,776	26.2	89.8
50 and under 60 years.....	7,641	8.4	98.2
60 and under 70 years.....	1,566	1.7	99.9
70 years and over.....	127	.1	100.0
Total.....	90,731	100.0	.....

Table 2 shows the heaviest weighting of men in the age interval 30 and under 40 years, amounting to a total of 34,867, or 38.5 per cent of the total. The age interval 40 and under 50 years accounts for 26.2 per cent of the total workers or slightly more than the 24.5 per cent

² See Labor Review, November, 1929, pp. 22-24, for earlier statistics of age distribution of employees of the Ford Motor Co. and other establishments.

falling in the interval 20 and under 30. In all, the workers under age 50 represent 89.8 per cent of the total employed and of the remaining 10.2 per cent, 8.4 per cent fall in the interval 50 and under 60 years. Thus 1,693, or less than 2 per cent of the total employed, are 60 years old and over.

Labor Conditions in Porto Rico, 1930

ACCORDING to the report of the Governor of Porto Rico for the fiscal year ending June 30, 1930, three great problems have faced his administration—disease, poverty, and an insular revenue insufficient to meet the existing budget. Some details of these problems and the efforts made and plans formulated to solve them are given in his report.

Health Problems

THE island is and has been, the governor declares, a prey to disease of many kinds. In the year ending June 30, 1929, 4,442 of the people of Porto Rico died from tuberculosis, the death rate there from that disease being higher than that of any other place in the Western Hemisphere and four and one-half times the death rate in continental United States. The death rate in Porto Rico from malaria is two and one-half times the rate for continental United States. Moreover, some 35,000 people on the island are at present suffering from tuberculosis, some 200,000 from malaria, and some 600,000 from hookworm. In addition to hookworm, there are various other intestinal parasites doing much damage; for example, ascaris, bilharzia, trichuris, etc. The situation, the governor points out, is all the more deplorable because Porto Rico's climate is unusually healthful. The temperature is moderate with only slight variations. Sunshine is abundant and there are trade winds through the greater part of the year. In brief, the island should be regarded as a health resort.

The insular health department is excellent and energetic but its resources are wholly inadequate to meet its requirements. There are only 490 beds for tuberculosis patients in various institutions of the island, and as said above, the cases number 35,000. It is impossible to carry on a far-reaching campaign against hookworm with the restricted insular revenues. In 75 out of 77 districts the mountain people get little medical care. When one of the country folk is stricken by disease, he or she can get no competent medical attention unless brought to the nearest town, where such attention frequently means too great a drain on the family budget.

Economic Problems

THE economic condition of the island is reported as equally bad when the governor entered office, over 60 per cent of the people being unemployed either all or a part of the time each year. The average income of the working man or woman is from \$150 to \$200 per annum. Among the various causes for such a situation the governor cites, first, a population of 440 per square mile. In this connection he stresses the need for intensive agriculture on the island and the fact

that there are few small farmers. The lowlands are mainly taken up with larger farms owned by companies or individuals. In the last century a great deal of the property was owned in Spain. At present the sugar companies of continental United States have big holdings, though some of the land is still in the hands of European owners. Even with small farms and intensive cultivation, the governor declares agriculture alone can not support the population and that industries also must be developed. He also states that labor is abundant, intelligent, honest, and industrious and that the island has both hydroelectric and manufactured power and a water haul to the markets of the world.

Financial Problems

ACCORDING to the report under review, the government's financial situation in the fall of 1929 was more than critical. In the fiscal year ending June 30, 1929, the insular revenues were overspent by \$1,191,301, which sum, together with the deficits of the immediately preceding years was being carried by a floating indebtedness through bank loans. The banks, however, had been seriously affected as a result of the hurricane, many of their loans being frozen. The loans to the government crippled these financial institutions still further, and they were not in a position to extend credit to the people for building up the island's business. Moreover, the interest rates charged by the banks range from 9 to 12 per cent, while there are individuals who are illegally loaning money at usurious rates, in some cases as high as 25 per cent.

Through an erroneous estimate of receipts which was used as a basis for the 1929-30 budget, the government was running up a deficit of \$200,000 a month, and it even became necessary to borrow \$200,000 on a note of hand to pay the government employees' salaries in December, 1929. At that time there were outstanding some 6,500 vouchers of debts incurred by the government for food for hospitals, supplies, etc.

Action of the Governor

AMONG the first measures taken by the governor in grappling with the problems confronting him was the feeding of the children, some 60 per cent of them being greatly undernourished and many on the verge of starvation. In this connection appeal was made to certain organizations in the United States. The American Relief Association Children's Fund (Inc.) contributed \$100,000 and some \$50,000 were made available through a campaign in the United States by the Golden Rule Foundation. With such assistance it was possible to expend \$25,000 for milk stations to feed babies and the balance on the extension of school lunch rooms. In some of the poorer districts the capacity of these rooms was doubled, and in the rural communities where there were no rooms of this kind they were established. The population of school age in Porto Rico is approximately 500,000 and the schools accommodate only 220,000. Arrangements were made, however, so that the needy children of school age who could not be accommodated in the schools were able to avail themselves of the school lunch rooms. In districts where the need was felt to be greatest, meals for preschool children were furnished when such children had

no contact with any philanthropic agency doing this work. The effects of the feeding are reported as clearly evident.

As a result of the measures taken by the governor to meet the financial problems which faced him, the island debt is now funded and the budget for the next year balanced.

In order to establish the Porto Rican people on a sound economic basis, the governor decided that his efforts should be "primarily directed toward helping the small farmer, with the idea of putting back on the soil as many as possible and instructing all in such methods as should make their farms profitable."

There was in the island in existence a commission known as the Homestead Commission, for which certain sums of money had been provided in the past. Its functions in the past have been mainly twofold: (a) The provision of small homes for workmen, and (b) the partition of government lands into small farms. Both endeavors have succeeded well. In both instances the people are paying back in the form of rent the cost to the government, so that the money remains in the commission as a revolving fund, with the exception of certain specified additional expenses, such as school buildings, sanitation, etc.

The public land in Porto Rico suitable for farming is exhausted, so it was concluded to extend the scope of the Homestead Commission by purchasing land from large holders and making it available for homesteads. To carry out the scheme a \$500,000 bond issue was provided for by the last legislature.

Another important step recorded in the report is the extension and improvement of a special type of consolidated vocational rural school surrounded by a small farm. The farm is to be worked by boys under a practical farmer. Girl pupils are instructed in home economics adapted to their own living conditions. Certain trades are also taught at these institutions. It is planned to have a social worker at each school who will call on the families in the neighborhood and explain the fundamental principles of sanitation and health. Of course, all the rural schools of the island can not be established on the new basis, but efforts will be made to arrange their curriculums and activities along lines similar to those presented above.

An appropriation of \$20,000 is also announced by the governor to be expended for the establishment of farm bureaus to instruct small farmers. The first of these bureaus was set up in the heart of the coffee district, and six or eight such agencies are reported in contemplation for the coming year. Government demonstration farms are being developed, the services of agricultural agents extended, and some attempts made to organize the farmers in such a way as to enable them to sell their produce to greater advantage.

A bureau of commerce and industry has also been provided by law. The function of the new agency is to draw attention to business opportunities in Porto Rico and to aid people to avail themselves of such opportunities. At the suggestion of the governor, the legislature also approved the reorganization of the bureau of labor with a view to coping more effectively with the problems of industrial labor.

Campaign Against Disease

NO FRONTAL attack can be made upon disease in Porto Rico with its existing inadequate financial resources. A system of 20 health units to cover the entire island is planned. At the time the governor made

his report it was expected to get enough outside financial help to maintain eight such units.

During the year 1929-30, the infant-mortality rate was 133 per 1,000 as compared with 179 per 1,000 in the previous year. Undoubtedly the aid given through milk stations had a very considerable effect upon this, for the large majority of the babies who received aid would probably have died had none been available. We have reduced the mortality rate in tuberculosis, but our rate is still the highest in the hemisphere.

A joint committee known as the Porto Rican Child Health Committee has been formed by the following national organizations: The American Child Health Association, the Catholic Porto Rican Child Welfare Association (Inc.), the American Relief Association, Children's Fund (Inc.), the American Social Hygiene Association, the National Tuberculosis Association, and the Porto Rico Child-Feeding Committee. This newly created body has announced that it will try to raise \$7,300,000 to be expended in certain well coordinated efforts over a period of five years, at the end of which it is expected that these activities, combined with the efforts of the insular government, will have placed Porto Rico in a position to combat these evils without this outside assistance.

In emphasizing the importance of this work the governor says: "For health is a necessary adjunct to everything else we are doing. Without it we can not have education, for a sick, undernourished child is a dull child; without it we can not have economic habilitation, for an underfed diseased man can not do proper work."

Discussion of Other Problems

AMONG other major Porto Rican problems that the governor mentions are: The necessity of keeping the judiciary and education on a strictly nonpartisan basis; the great difficulties confronting many of the municipalities in balancing their budgets; and the need for changes in taxation.

The Outlook

"DESPERATE though the problems of Porto Rico may be at this time," the governor believes, "there is a practical solution for them, which can be applied by work on the island and aid from without the island, which will create a proper and adequate economic condition here. Furthermore, our people here have a most important and useful rôle which they are perfectly capable of playing in the future."

Mine Labor in China

THE average daily wage in the two best coal mines in China, which are managed by foreigners, is about 18.4 cents,¹ according to Boris P. Torgasheff in a contribution to the Chinese Economic Journal of August, 1930, in which issue he summarizes a series of preceding articles on mining labor in China. The following data are taken from that summary.

In 1928 and 1929 the greater number of large and good mines in China paid an average daily wage of 18.4 cents to underground labor

¹ Conversions into United States currency on the basis of 1 Chinese silver cent=0.46 cent.

and 16.1 cents to surface labor. Ordinary, half-modernized mines pay on the average no more than 13.8 to 15.2 cents a day, and the many native coal and iron mines, which produce one-third of the coal and iron, rarely pay over 11.5 to 13.8 cents per day as an average for the mine. Generously estimated, the average daily wage for the whole Chinese mining industry is not above 16.1 cents.

Statements to the writer by the managements of certain large coal mines in China, for example the Liuhokou mine in which the average daily wage for underground labor is 18.4 cents, and for surface workers 16.1 cents, were to the effect that any increase in wages is commercially impossible unless there is an increase in labor efficiency. Up to the present, wages have been so low in China that mine owners have had no incentive to make technical improvements in their mines. Now, however, the advantages of cheap labor are close to the margin, and the present lack of modern methods, together with the inefficiency of the workers, threatens soon to outweigh the benefits accruing from low wages and to make the undertakings unprofitable. The author suggests the urgency of reequipping the mines and increasing wages, not only for the purpose of meeting the workers' request for more humane treatment and as a concession to the labor movement, but also from the viewpoint of industry, which is interested in raising the general level of mine labor, so that such workers will be better educated, more skilled, permanent, and as a consequence more efficient.

In some of the large mines in China the working hours are restricted to 8 per day, but in the remainder of such undertakings the daily hours of labor range from 8 to 12, and it is for this long day that Chinese miners are paid 16.1 cents. Japanese miners, however, earn over four times as much per day as the Chinese miners. Furthermore, the former work 8 hours per day in coal mines and an average of 9 hours per day in other mines, as compared with the 12 hours worked in probably the majority of the mines in China. Even in Indo-China the average daily wage of coal miners is 20.7 cents, and the lowest wage in such mines is approximately 16.1 to 16.6 cents. Everywhere the average wages are above those in China, and as a consequence there is an ever-growing emigration of Chinese to the Philippines, the Dutch East Indies, Siam, etc.

In Chinese coal mines taken as a whole—both foreign and native—it requires an average of from five to six men to get out 1 ton of coal per day. As the average daily wage is 16.1 cents, the expenditure for labor per ton is from 80.5 to 96.6 cents. The author calls attention to the fact that to the wages reported above at least 10 per cent must be added to cover the amount paid to contractors, so that the total labor cost per ton is from \$0.86 to \$1.06.

Working Hours and Holidays

THE shift system is in operation in only a limited number of the large undertakings and is not uniform, depending upon the character of the work. Basing his statement on the China Year Book of 1928, the author reports that the average length of time the miners spend at work is 12 hours per day. As a recent innovation secured by labor the majority of the large mines are allowing their workers one weekly day of rest, with the choice of either not being paid for that day or

getting double pay for work on Sunday. In the few mines in which a weekly rest day is compulsory, this very exceptional provision has in most cases been obtained through strikes. In other large mining undertakings the workers are allowed a day of rest once or twice a month, ordinarily without pay. In China, in the best coal mines, under the most favorable conditions, the miners work at least 56 hours per week. It was regarded as a signal victory for the miners of the Liehshan coal mine when, after a strike in 1928, they secured a compulsory rest of 18 hours per week and double pay for holiday work. The following coal mines allow labor the holidays specified:

Penchihu coal mine, south Manchuria: First and third Sundays of the month, 2 days for the New Year, and 3 or 4 days for national holidays, amounting in all to some 30 days per annum.

Fushun coal mine: Every Sunday and the most important holidays.

Tayaogou coal mine, South Manchuria: One day a month and almost all important national holidays.

Liukiang coal mine, Chihli: Rest on Sundays without pay; when in exceptional cases there is work on that day wages are doubled. In the power house and workshops where labor is continuous, two free Sundays per month, without pay. For miners who have been directly employed by the company for several years, one month's leave without pay.

Paochin coal mine, Shansi: Rest days on the 1st and 15th of the month by the Chinese calendar and six days for the Chinese New Year. The miners, however, take two or three weeks for the New Year. All national and local holidays are observed. Operation, scarcely 300 days per annum.

While the greater number of the so-called native coal and iron mines operate on the average some eight or nine months per annum, an intermediate class of mines is worked from 260 to 300 days a year. An average of 300 days' operation the author considers a generous estimate for Chinese mines.

Accidents, Medical Aid, and Relief Organizations

ONLY a limited number of collieries and iron works in China make more or less regular statistical reports on their accidents. An exceedingly small number of the mines of the country maintain hospitals, and only a few others have some arrangement whereby the miners may receive first aid and medical assistance in neighboring public hospitals. The majority of the collieries furnish no regular assistance to sick or injured workers. According to the author, this is mainly due to complete lack of governmental regulation and to the highly objectionable contract system under which from 80 to 85 per cent of the mining labor is hired. Such labor is considered in the employ of the contractors, who often furnish some Chinese medicine and undertake to pay the miners when they are ill. Customarily, the contractors meet the travel expenses of miners returning to their native places and provide free coffins when the men lose their lives.

Fushun coal mine is reported as the only mine where there is some effort made at accident prevention, there being several experts on the mine staff charged with this work. A central rescue corps is maintained and rescue detachments are stationed at each pit.

Compensation for fatal accidents is decided upon by the bargaining of the victim or his relatives with the owner of the mine—most frequently through the contractor. The authorities seldom interfere in such cases, and the miners' unions are rarely strong enough to be of any help in these matters. Many instances have been reported to the writer in which loss of an arm or leg in some of the coal mines at Peiping has been compensated by a "gratuity" of about \$2.30.

Mutual relief associations have recently been organized in a dozen or more mines. These associations are ordinarily financed by both the companies and the workers. At the Fushun coal mine all miners directly employed by the company are obliged to become members of the mutual relief fund and contribute a day's wage per month, the minimum being slightly less than one-half a cent per day. The company, however, manages the fund and contributes the same amount that labor does. Members may have recourse to such fund for travel expenses, retirement benefits, funeral expenses, and other purposes.

Living Conditions

THE living conditions of mine workers in China are declared to be unimaginable from the western viewpoint. The Chinese mine workers are as poorly fed as Chinese laborers in general. They are certainly not fed as well as the farm laborers who eat with the farmers. The miners' food is furnished by the contractors, who practically compel their laborers to board with them as such catering has proved to be a profitable enterprise. About 80 per cent of the mine workers are hired by contractors and with few exceptions these miners have their food supplied by the contractors, who retain for board from \$1.38 to \$2.30 and even \$2.76 per month from their wages. The author reports that the deduction on this account is ordinarily greater than the actual cost of the food. To avert possible controversies on this point, the contractors usually engage their men on the basis of a definite wage per day with "free board." The writer declares, however, that as a matter of fact this is not free board at all, as the amount paid for wages by the mine management to the contractor includes a sum for boarding the men, and such amount is retained by him in addition to his "professional squeeze." It is estimated that contractors can readily make from such catering alone from 10 to 20 per cent profit on the total food costs.

Poor food and frequently systematic underfeeding of mine labor automatically reduce the efficiency of the men, and the managements of numerous large mines recognize the desirability of releasing the workers from compulsory boarding with contractors. In only a few mines, however, has this been accomplished.

There is a great variety in the lodging conditions of Chinese mine workers, but at most of the mines living quarters for the men are supplied by the mine managements themselves. In the majority of the mines, especially those located in less severe climates, the miners occupy ramshackle barracks or even sheds of bamboo framework lightly covered with straw mats, without heat or a lighting system. In the northern part of the country the men are better housed, but even these better lodgings have only the most rudimentary equipment for living. However, as an outcome of increasing labor agitation

there has been quite a rapid improvement in housing conditions, and many large mines now have rather passable brick dormitories with light and stoves.

The Fushun coal mine has almost modern lodgings, which some classes of labor employed directly by the company may occupy free of charge, while others are required to pay about 6.0 cents per day. These lodgings are heated and have electric lights, baths, etc.

Educational and Recreational Facilities

THE miners' opportunities for education and recreation are very restricted and are offered by only a few individual mines. Requests for facilities along these lines are made in strike after strike. The continual suppression of the activities of labor unions has prevented them from accomplishing anything in this connection on their own initiative. Among the few big collieries having special institutions for the miners' cultural development is the Kailan coal mine, which has a well-constructed building used as a library and workmen's club; and it is reported that a theater building has been erected. The miners at Fushun have a library, a reading club, an athletic club, a free theater, motion-picture theater, and music on holidays.

Miners' Unions

ALTHOUGH there are numerous mines in China, they are scattered all over the country. The majority of them are small native undertakings which employ very limited numbers, so that a large aggregation of miners in one locality is rare. This fact, together with the great illiteracy of these workers, the lack of governmental protection, the prevailing contract hiring system, and other general causes, tends to hinder the normal unionization of mine labor. In the author's judgment, "the ultimate formation of miners' unions means the abolition of the contract system." There is, however, little information on such unions in China. Some individual efforts at this kind of organization were made in 1921, while attempts of a broader scope are recorded for 1926, but in the opinion of the writer the unfavorable political situation of the country in recent years has frustrated the development of the movement.

The Hunan Miners' Union may be regarded as the pioneer of modern Chinese miners' unions. Late in 1921 a general strike was carried on by some 12,000 Hunanese antimony and lead miners, which resulted in the legalizing of a general district labor union. This organization was founded on highly democratic principles and secured privileges rarely obtained even in European countries. Probably as the result of its extreme position, the existence of this organization was brief. At the close of 1922 the mine owners provoked a strike and defeated the miners by military force and dissolved the union. It was reconstituted, however, in 1926 and became so active that the Chinese National Trade Union Conference held in that year selected the Hunan miners' delegates to organize the preliminary council of the National Miners' Federation. Later on this council decided to organize a miners' federation, but on account of political changes this has never been done.

In 1926 at Tayeh, Hupeh, there were seven trade-unions of iron and coal miners, with a combined membership of approximately 7,000. At the five Kailan coal mines, an organization which had numbered about 40,000 miners in 1922 still had some kind of existence in 1929, being responsible for a short and successful strike in April of that year.

The British Coal Industry in 1929

FROM the annual report of the British Secretary of Mines for 1929, which has recently been issued, it appears that during that year the coal industry made a partial recovery. The demand for export coal was greater than at any time since the early part of 1924, there was, on the whole, a fairly steady increase in the number of men employed, work was more regular, and costs of production were lower. As a result, the industry showed a slight credit balance for the year, though the margin was not sufficiently great, except in one or two instances, to raise the level of wages above minimum rates, or to secure to the coal owners the full share of the proceeds allotted to them under the wages agreement. The industry also profited by a change in the plan of local taxation, known as the derating scheme, inaugurated under the local government act of 1929.

As from October 1st all collieries, in common with other undertakings engaged in productive industry, became entitled to relief from local rates to the extent of 75 per cent of the amount which would be payable but for the provisions of the scheme. On the basis of estimates presented to Parliament during the debates on the local government bill the relief from this part of the derating scheme was calculated to amount to rather more than 3d. [6 cents] a ton on all coal commercially disposable. As the charges to the coal-mining industry in respect of local rates are considerably heavier in some districts than in others the relief will also vary in amount. The district which is likely to secure the greatest relief is South Wales.

The following table shows the average proceeds, costs, and profit or loss of the industry during the year, by districts:

AVERAGE PROCEEDS, COSTS, AND PROFIT OR LOSS IN THE COAL-MINING INDUSTRY, 1929

[Conversions into United States currency on basis of par value of shilling=24.33 cents, and of penny=2.03 cents]

District	Per ton disposable commercially				
	Gross proceeds	Costs other than wages	Net proceeds	Wages costs	Profit (+) or loss (-)
Scotland.....	\$3. 14	\$1. 02	\$2. 12	\$2. 05	+\$0. 07
Northumberland.....	2. 84	1. 01	1. 83	1. 71	+ .12
Durham.....	3. 12	1. 16	1. 96	1. 90	+ .06
South Wales and Monmouth.....	3. 67	1. 21	2. 46	2. 43	+ .03
Yorkshire.....	3. 34	. 95	2. 39	2. 24	+ .15
North Derbyshire and Nottinghamshire.....	3. 32	. 92	2. 40	2. 23	+ .17
South Derbyshire, Leicestershire, Cannock Chase, and Warwickshire.....	3. 76	1. 05	2. 71	2. 41	+ .30
Lancashire, Cheshire, and North Staffordshire.....	4. 09	1. 30	2. 79	2. 82	-. 03
Cumberland, North Wales, South Staffordshire, Shropshire, Bristol Forest of Dean, Somerset, and Kent.....	3. 59	1. 13	2. 46	2. 50	-. 04
Average for all districts.....	3. 41	1. 08	2. 32	2. 23	+ .09

While, as this table shows, the industry made a profit in all but two districts, this was in most cases very small, and was made up of an increase in gross proceeds and of a reduction in costs.

Costs other than wages fell on the average by 4d. [8 cents] per ton, ranging from 6½d. [13 cents] per ton in Northumberland to 2d. [4 cents] in Scotland. To this was added a reduction in wages costs amounting on the average to 3¼d. [8 cents], varying from 5¼d. [12 cents] in the South Derbyshire group and in Lancashire, Cheshire, and North Staffordshire to 1¼d. [4 cents] in Scotland and in Durham. The general result was an average improvement over 1928 of 1s. 3½d. [31 cents] per ton.

Average Output and Earnings

THE following table shows the average output and average cash earnings of the workers, per shift worked and per person employed:

AVERAGE OUTPUT PER MAN-SHIFT WORKED, AND AVERAGE CASH EARNINGS OF WORKERS IN 1929, BY DISTRICTS

[Conversions into United States currency on basis of par value of pound=\$4.8665, of shilling=24.33 cents, and of penny=2.03 cents]

District	Per man-shift worked		Per person employed per annum	
	Output of salable coal (hundred-weight)	Average cash earnings	Average number of man-shifts worked	Average cash earnings
Scotland.....	23.74	\$2.23	297	\$661.99
Northumberland.....	22.54	1.80	270	487.06
Durham.....	21.65	1.94	268	517.80
South Wales and Monmouth.....	20.46	2.31	272	627.60
Yorkshire.....	23.49	2.45	237	581.04
North Derbyshire and Nottinghamshire.....	24.29	2.51	233	583.57
South Derbyshire, Leicestershire, Cannock Chase, and Warwickshire.....	21.23	2.36	237	559.99
Lancashire, Cheshire, and North Staffordshire.....	17.62	2.25	235	527.73
Cumberland, North Wales, South Staffordshire, Shropshire, Bristol, Forest of Dean, Somerset, and Kent.....	18.41	2.10	267	562.12
Average for all districts.....	21.69	2.25	257	575.79

In addition to the cash earnings shown here, the workers received various allowances in kind. The value of these is estimated for Great Britain as a whole at 4½d. (9 cents) per shift, the range being from ½d. (1 cent) per shift in Scotland, Lancashire, Cheshire, and North Staffordshire to 1s. ½d. (25 cents) in Durham.

The average output per shift worked, as given here, shows an increase over 1928, when it was 21.29 hundredweights. Also, the number of shifts worked was larger in each district than in 1928, so that though wage costs per ton were lower, earnings per shift worked were only ¾d. (1½ cents) less, and the average cash earnings for the whole year were larger by £4 9s. 9d. (\$21.84).

Increasing Mechanization

PROGRESS is reported in the use of mechanical appliances, and the increased output per shift seems related to this increase.

The quantity of coal cut by machines (other than light pneumatic picks) amounted to nearly 72,000,000 tons, or 28 per cent of the entire output, as com-

pared with 26 per cent in 1928, and only 13 per cent in 1920. In Scotland, as a whole, the proportion is now 63 per cent and as high as 69 and 71 per cent, respectively, in the Lanark and Fife districts. In Northumberland 55 per cent of the output was machine cut, and in South Derbyshire 50 per cent.

There were 1,383 light pneumatic (mechanical) picks in use in 1929 at 94 mines for the purpose of coal getting. The corresponding number in 1928 was 934. The quantity of coal dealt with by these picks increased from 1,000,000 to 2,500,000 tons. The use of these picks for coal getting is, however, extremely localized, and 82 per cent of the coal got by them was obtained at 15 mines.

The number of mechanical conveyors in use below ground increased from 2,856 in 1928 to 3,218 in 1929. These are principally used for the mechanical conveyance of coal along the coal face, and from the coal face to the main roads below ground. Over 37,000,000 tons of coal, or over 14 per cent of all the coal raised were transported in this way in 1929.

UNEMPLOYMENT CONDITIONS AND RELIEF

Buffalo Unemployment Study, November, 1930

PRELIMINARY results of a special study of unemployment in nine areas in Buffalo, N. Y., were announced on November 29 by the New York State Industrial Commissioner, Frances Perkins. A like study was made a year ago which enables a comparison to be made in regard to employment conditions at that time and at the present. The work was carried on in conjunction with the Buffalo Foundation, and students of the State Teachers' College at Buffalo and the University of Buffalo cooperated in securing the data by means of a house-to-house canvass.

The analysis was made and the report prepared under the direction of Frederick E. Croxton of Columbia University and Fred C. Croxton of the Department of Industrial Relations of Ohio. The enumeration was made during the first week of November. The data here given for November, 1930, cover 14,002 persons of both sexes. Of that number 2,781 or 19.9 per cent were unemployed for various reasons, of whom 2,254 or 16.1 per cent were able and willing to work but were unable to secure jobs. Two thousand three hundred and thirty-three or 16.6 per cent were employed part time and 8,888 or 63.5 per cent had full-time employment. Summarizing the data for 11,287 males, 18 years of age or over, reveals that 165 per thousand were able and willing to work but were unable to secure jobs; 178 per thousand were employed part time; 343 per thousand who were able and willing to work were unemployed or underemployed. In 1929 the conditions among males, 18 years of age and over, were: 59 per thousand unable to secure work; 67 per thousand employed part time; 126 per thousand unable to secure work or were underemployed.

Comparing the figures for 1929 and 1930 it appears that in the areas studied the proportion of males 18 years of age and over who were unable to secure work was more than two and one-half times as great in November, 1930, as in November, 1929; and the proportion on part time was also over two and one-half times as great in November, 1930, as in November, 1929.

Unemployment had continued 10 weeks or longer for 1,236, or two-thirds, of the males who were unable to secure work; it had continued 30 weeks or more for 641, or about one-third of those out of work; and unemployment had lasted a year or more for 391, or about one-fifth, of those out of work.

In addition to the fact that 165 males per thousand were unable to secure jobs in November, 1930, it was found that 8 per thousand were temporarily unable to work because of sickness or injury; 15 per thousand were permanently unable to work because of sickness, injury, or old age; and 20 per thousand were unwilling to work, being either voluntarily retired or indifferent to work.

More detailed results of the survey are given in the following tables:

TABLE 1.—EMPLOYMENT STATUS OF ALL PERSONS ENUMERATED, BY SEX

Employment status	Number			Per cent		
	Males	Females	Both sexes	Males	Females	Both sexes
Employed full time.....	6,930	1,958	8,888	61.4	72.1	63.5
Employed part time.....	2,007	326	2,333	17.8	12.0	16.6
Two-thirds but less than full time.....	856	113	969	7.6	4.2	6.9
One-half but less than two-thirds.....	764	139	903	6.8	5.1	6.5
One-third but less than one-half.....	261	47	308	2.3	1.7	2.2
Less than one-third.....	109	24	133	1.0	0.9	.9
Not reported.....	17	3	20	.2	.1	.1
Unemployed.....	2,350	431	2,781	20.8	15.9	19.9
Able and willing to work.....	1,863	391	2,254	16.5	14.4	16.1
Temporarily unable to work.....	94	18	112	.8	.7	.8
Permanently unable to work.....	166	13	179	1.5	.5	1.3
Unwilling to work.....	226	9	235	2.0	.3	1.7
Not classified.....	1	---	1	.0	---	---
Total.....	11,287	2,715	14,002	100.0	100.0	100.0

TABLE 2.—DURATION OF UNEMPLOYMENT OF ALL UNEMPLOYED PERSONS, BY SEX¹

Sex of unemployed and duration of unemployment	Able and willing	Temporarily unable to work	Permanently unable to work	Unwilling to work	Not classified	Total
<i>Males</i>						
Under 2 weeks.....	79	4	---	3	---	86
2 and under 4 weeks.....	147	13	3	1	1	165
4 and under 10 weeks.....	389	20	6	7	---	422
10 and under 20 weeks.....	331	13	4	5	---	353
20 and under 30 weeks.....	264	15	9	5	---	293
30 and under 40 weeks.....	147	5	3	3	---	158
40 and under 52 weeks.....	103	3	5	2	---	113
52 weeks and over.....	391	20	131	189	---	731
Total males.....	1,851	93	161	215	1	2,321
<i>Females</i>						
Under 2 weeks.....	16	2	---	---	---	18
2 and under 4 weeks.....	25	1	---	---	---	26
4 and under 10 weeks.....	95	4	---	---	---	99
10 and under 20 weeks.....	72	1	1	---	---	74
20 and under 30 weeks.....	59	5	---	---	---	64
30 and under 40 weeks.....	28	1	---	---	---	29
40 and under 52 weeks.....	15	---	1	---	---	16
52 weeks and over.....	72	4	11	9	---	96
Total females.....	382	18	13	9	---	422
<i>Both sexes</i>						
Under 2 weeks.....	95	6	---	3	---	104
2 and under 4 weeks.....	172	14	3	1	1	191
4 and under 10 weeks.....	484	24	6	7	---	521
10 and under 20 weeks.....	403	14	5	5	---	427
20 and under 30 weeks.....	323	20	9	5	---	357
30 and under 40 weeks.....	175	6	3	3	---	187
40 and under 52 weeks.....	118	3	6	2	---	129
52 weeks and over.....	463	24	142	198	---	827
Total both sexes.....	2,233	111	174	224	1	2,743

¹ This table does not include 38 persons—29 males and 9 females—not reporting as to duration of unemployment.

Joint Company Unemployment Insurance Plan

A NOVEL cooperative plan for guaranteeing employment and paying unemployment benefits, financed entirely by the companies, was put into effect September 1, 1930, by three manufacturing firms of Fond du Lac, Wis. The employing organizations concluding this agreement are Sanitary Refrigerator Co., Northern Casket Co., and Demountable Typewriter Co., including two subsidiary enterprises of the latter company, the Standard Refrigerator Co. and the American Lock & Hinge Co. The total number of employees of the three corporations in November, 1930, was 378, this number being about 85 per cent of the normal employment based upon a 5-year average.

The "steady employment plan" adopted by these companies is in the form of a contract which is to be operative for five years, although it is stipulated in the contract that any company has the right to withdraw from the plan at the end of any year if there are indications that the plan does not operate in the interest of steady and permanent employment; that is, if the employing companies are called upon to pay out so large an amount of cash benefits that its continuation may cause the company to become financially embarrassed or sustain a loss of financial credit or lead to a possible business crisis or business failure. The plan covers all factory and office employees of the five companies between the ages of 21 and 60 who have been employed continuously for two years with the exception of managers, assistant managers, superintendents, and salesmen. At present about 70 per cent of the employees have the required length of service for eligibility for employment benefits and within a year about 85 per cent will become eligible. The firms are already considering liberalizing the plans by reducing the required length of service from two years to one year.

"Steady employment" will be construed under the plan to mean employment for all regular working-days throughout the year, with the exception of holidays or vacations allowed by the company or when all or any part of the factory is shut down on account of breakdown or for repairs. Employees who quit work for any reason or are discharged for causes which are generally considered as justifying dismissal are not entitled to the benefits under the plan and no benefits will be paid to employees receiving benefits under the workmen's compensation act.

Eligible employees will be entitled to receive steady employment by any one or more of the companies included in the agreement or elsewhere when it can be secured, or, when employment can not be provided, to participate in the cash unemployment benefits for the period of unemployment but not exceeding 100 working-days in the aggregate in any one year. The cash unemployment benefits are paid at the rate of 65 per cent of the average earnings during the year preceding the beginning of unemployment, but no unemployment payments will be made for the first 15 days of unemployment. The unemployment payments will be discontinued from the time the employee is offered employment by one of the companies which are parties to the agreement or any other company or when he declines to accept some other worth-while employment. While employees

temporarily or permanently laid off are not guaranteed the same work or the same amount of wages they formerly received, an effort will always be made to furnish employment at least as good as the previous employment.

The State industrial commission will act as referee and will have the final decision in any dispute between the employees and the employer arising from the operation of the plan, the costs being paid by the employing company or the employee, depending upon which one made the application for a referee's decision.

Employment Situation in Argentina¹

DURING 1929 there were 17,364 laborers in Argentina who requested employment through the National Department of Labor. Of this number, 15,167 had an elementary education and 2,197 had no education. As regards their civil status, 10,903 were single, 5,309 married, and 1,152 were widowers. They were classified by ages as follows: 14 to 20 years, 478; 21 to 30, 2,643; 31 to 40, 6,961; 41 to 50, 6,425; 51 and over, 857. Classified by nationalities, 8,064 were Spaniards, 4,160 Argentinians, 3,275 Italians, 1,037 Russians, 231 Uruguayans, and the rest of various nationalities.

The number of requests for workers made by employers to the National Department of Labor amounted to 15,087, of which 7,228 were in the Federal capital and 7,859 elsewhere in the Republic.

Work was obtained through the National Department of Labor for 10,605 persons in 1929, of whom 9,077 had an elementary education and 1,528 had no education whatsoever. Their ages were as follows: 14 to 20 years, 378; 21 to 30, 2,050; 31 to 40, 4,812; 41 to 50, 3,149; 51 and over, 206. Of these, 4,644 were Spaniards, 3,198 Argentinians, 1,702 Italians, 650 Russians, 185 Uruguayans, and the rest of other nationalities.

Canadian Unemployment Relief Act, 1930

THE unemployment relief act of 1930 was one of the measures passed during the September 8-22, 1930, special session of the Canadian Parliament, which was convened "to deal with problems arising out of exceptional economic conditions with resultant unemployment."² Under this act \$20,000,000 were appropriated from the consolidated revenue fund of the Dominion for unemployment relief under terms to be approved by the Governor General in Council. The sum appropriated, according to the provisions of the law, may be expended "in constructing, extending, or improving public works and undertakings, railways, highways, bridges, and canals, harbors, and wharves; assisting in defraying the cost of distribution of products of the field, farm, forest, sea, lake, river, and mine; granting aid to Provinces and municipalities in any public work they may undertake for relieving unemployment and reimbursing expenditures made by Provinces and municipalities in connection with unemployment, and

¹ Argentina. *Crónica Mensual del Departamento Nacional del Trabajo*, Buenos Aires, April, 1930, p. 3136.

² *Labor Gazette*, Ottawa, October, 1930, pp. 1140-1142.

generally in any way that will assist in providing useful and suitable work for the unemployed."

An order in council (P. C. 2246, September 26, 1930) vested the administration of the new measure in the Minister of Labor and appointed that official and also the Minister of Railways and Canals, the Minister of Public Works, the Minister of the Interior, and the Minister of the Marine to act as an advisory committee on expenditure.

The principles to be carried out in the administration of this law are also included in the order. Under these regulations the Minister of Labor was empowered to enter into agreement with the various Provinces for the expenditure of the above-mentioned appropriation of \$20,000,000 either for immediate relief or to assist local public works instituted to provide employment. The sum of \$4,000,000 was set apart to be available for the payment to municipalities of one-third of their expenditures for direct relief of unemployed persons for whom jobs could not be secured, the other two-thirds of such expenditures to be met by the provincial governments and the municipalities themselves.

With reference to public works for unemployment relief the regulations of the above-mentioned order stipulate that agreements should be made between the Minister of Labor and the provincial governments whereby the municipalities would pay one-half of the total expenditures on public works undertaken by them, the Dominion and Provincial Governments each paying one-fourth of the total sum. Exceptions are made, however, for municipalities which on account of recent abnormal expenditures for the relief of unemployment are unable to assume such a share of the cost of these public works.

The regulations also provide that any agreements that involve the expenditure of the Dominion grant shall include provision for the payment of fair wages to the workers employed and for an 8-hour day, according to principles set forth in the fair wages and 8-hour day act, 1930, and the fair wages order in council.

Mr. Harry Hereford, secretary of the Canadian Association of Garment Manufacturers, formerly an official of the Dominion Department of Labor, has been appointed director of unemployment relief.

Agreements with Railway Companies

By an order in council of September 30, 1930, the Minister of Labor was empowered to make an agreement with the Canadian Pacific Railway Co. and the Canadian National Railways under which these railways would expend in the performance of certain works and in purchasing certain material approximately \$21,000,000 in excess of the normal expenditure of such railways, the work to be begun at once and to be completed within the next 15 months. On the other hand, provision is made that the Dominion may pay out of the appropriation under the unemployment relief act, to the railway companies which undertake these works at once, interest at the rate of 5 per cent per annum for a period of 18 months on the total estimated cost of these works. It is estimated that employment will be provided by such works for 10,500 men and about 2,000 teams of horses. The using of the railway crossing fund was also considered, from which fund, under the railway act, grants are made to eliminate hazardous grade crossings.

Agreements with Provinces

AGREEMENTS, as provided in the regulation under P. C. 2246, have been reached between the Minister of Labor and the various provincial governments concerning expenditures for relief and for public works to provide employment for the jobless.

The Dominion's grants to these public works and undertakings of the Provinces and municipalities are to be made only after the presentation of evidence satisfactory to the Minister of Labor that there is serious unemployment in the locality in which such works are to be carried on.

The sums allocated for these public works and undertakings in the Provinces specified are not to exceed the following: In Alberta, \$900,000; in British Columbia, \$900,000; in Manitoba, \$900,000; in New Brunswick, \$500,000; in Nova Scotia, \$700,000; in Ontario, \$3,850,000; in Prince Edward Island, \$90,000; in Saskatchewan, \$1,000,000. At the time the report went to press, the sum to be allocated to Quebec had not been definitely decided. A later agreement with the Province of Saskatchewan provided for the payment of not over \$500,000 for relief in a large drought-affected area in that Province.

Measures Proposed by the Prussian Government for the Relief of Unemployment

ACCORDING to press reports the Prussian government has developed a program of measures for the relief of unemployment and has submitted this program to the Federal Government for approval. The principal measures in the program are as follows:¹ Introduction of 40-hour work week, without dismissal of the workers already employed; the lengthening of the schooling in the trades by one year, which it is estimated would reduce by about 250,000 the number of young workers seeking employment each year; prohibition of importation of foreign farm hands and their replacement by German unemployed workers, which it is estimated would reduce the ranks of the unemployed by 110,000 persons; the starting of various land reclamation and improvement projects for agriculture, which it is estimated would provide yearly employment for some 78,000 unemployed workers. The completion of these projects, including reforestation, would require about three years with an annual expenditure of about 135,000,000 marks (\$32,000,000).

Public Improvements in Italy as Unemployment Relief Measure

IN A report from Joseph Emerson Haven, American consul at Florence, Italy, dated August 25, 1930, relative to the physical improvements in Italy during the past seven years in roads, lighting, housing, telephones, sanitation, public buildings, land reclamation, and the like, an account is given of the methods adopted by the State to overcome unemployment. Work has recently been initiated

¹ Vorwarts, Berlin, Oct. 25, 1930, p. 1.

on public roads, hydraulic works, ports and harbors, railways, and public buildings costing 191,445,500 lire (\$10,070,033) and giving employment to 36,781 men.

In addition it is stated that 40,000,000 lire (\$2,104,000) has been assigned to the work on the railway line being constructed between Florence and Bologna. Half of this sum is to be expended on the construction of a belt line at Bologna, which will give employment to 2,000 men. This new railway line is to form the main rail artery of the Kingdom, leading in a straight line to northern continental Europe.

According to *Il Lavoro Fascista*, October 1, 1930, 395,849 workers are employed on public works in 92 Provinces.

According to a report of Commercial Attaché Mowatt M. Mitchell printed in *Commerce Reports*, August 18, 1930, the Government spent, during the fiscal year 1929-30, 885,000,000 lire (\$46,551,000) in land improvement in Italy and granted subsidies to private individuals to the amount of 237,000,000 lire (\$12,466,200). It is expected that during the winter more than 90,000 men will be employed on the work.

SOCIAL INSURANCE

Revision of Belgian Law on Insurance of Salaried Employees Against Old Age and Premature Death¹

THE Belgian Legislature passed a law² March 10, 1925, providing for the insurance of salaried employees against old age and premature death. This law was revised and amended by the law of June 18, 1930. According to the earlier law "employees" were defined as those whose work is principally of an intellectual nature. In general it was decided that persons subject to the law included employees of industrial, commercial, and financial establishments as well as persons employed by a public official or by a private individual whatever the profession of the latter, the law being applicable, therefore, in the latter case to employees of notaries, lawyers, engineers, architects, etc. It was decided that journalists, although not called employees, should be included temporarily but under the present law they are specifically included with the employees listed above, as well as teachers employed in private educational establishments who are not covered by the teachers' pension laws, and singers, actors, and instrumental musicians who work under a contract which has a duration of at least one month.

The law covers Belgian employees working for a Belgian firm either in Belgium or in a foreign country or for a branch of a foreign firm established in Belgium, and foreigners working in Belgium either for a Belgian or a foreign firm. It also covers employees of the State, Provinces, and communes as well as employees of public utilities who are not otherwise entitled to a personal pension nor to one covering their wives or children in the event of death.

Belgian employees working either in Belgium or a foreign country for a foreign firm which does not have a branch in Belgium are not included in the provisions of the law, but such employees may take out voluntary insurance under certain conditions.

All employees, after being insured under the present law for a term of 10 years and on whose account regular payments have been made during that period, may continue their insurance if they cease to be employed. In this case they will be required to pay an annual premium equal to the average annual payment paid by themselves and their employer during the last three years that they were compulsorily insured. The delay of 10 years will not be required of employees who take advantage of this provision before January 1, 1936, if they were insured under the previous law and have made their payments regularly since January 1, 1926. In any case such insurance will not go into effect until two years from the time when the employee ceases to be employed, but if he becomes eligible for a pension or if he dies during the 2-year period, the payments made after he ceased to be employed are refunded without interest either to the insured person or to the surviving husband or wife.

¹ *Revue du Travail*, Brussels, June, 1930, pp. 1111-1127.

² See *Labor Review*, August, 1925, pp. 164-167.

Contributions

THE amount of the premium paid by the employee is fixed at 3 per cent of his salary or remuneration up to a maximum income of 18,000 francs (\$500.40). The employer's share will amount to 4 per cent of the salary up to the year 1961, 4½ per cent from 1961 to 1975, 4¾ per cent from 1976 to 1990, and 5 per cent after January 1, 1991. By remuneration is understood any pay received by the insured person in connection with his contract, including fixed or variable salaries or cost-of-living bonuses, commissions, percentages, allowances paid for supplementary periods, dismissal wage, and the value of payments in kind.

An insured person who, within the year, is employed simultaneously or successively by several employers may cease all payments for the remainder of the year when he has paid a total of 540 francs (\$15.01) but the exemption of the employee from further payments does not relieve each of his employers of his part of the premium up to a total of 720, 780, 840, or 900 francs (\$20.02, \$21.68, \$23.35, or \$25.02) according to the periods within which the payments are made. The premiums are payable until the insured person has reached the age of 65 years in the case of men and 60 years in the case of women.

The payments of those compulsorily insured are deducted from their salaries at periods which will be fixed by a subsequent decree, the employers' payments being due at the same time and under the same conditions as those of the employees. The contribution of the State is due when the insured person begins to receive his old-age annuity. It varies according to the length of time during which the insured person has been paying contributions but the maximum amount of the State contribution is fixed at 1,200 francs (\$33.36). No payment is made by the State for insured foreign workers unless their native country grants the same privileges to Belgians.

Benefits

A LIFE annuity is paid to male employees upon reaching the age of 65 and to females at the age of 60. In either case they may obtain the liquidation of their pensions upon any birthday between the ages of 55 and 65 and 50 and 60, respectively, but with a proportionate reduction in the amount. In order to receive a pension before the normal retirement age, 12 months' notice must be given by the insured person of his intention to retire, which, however, in certain instances may not be required. An insured person may, if he chooses, upon retirement receive a payment of three-sevenths of the capitalized value of his annuity.

If the insured person is married a certain proportion of the annuity is paid to his widow in the event of death, provided the marriage was contracted prior to his receipt of pension. If the wife is the same age as her husband the amount which she receives varies from 35 per cent of the husband's pension rights before the age of 41 years to 50 per cent at age 55 and over. If the insured person and his wife are of different ages the amount of the annuity varies according to a scale fixed by the Government. If the death of the insured person occurred before he had received any pension payments, his widow may, with the authorization of the Superior Council on

Employees' Pensions, receive a cash payment equal to half of the capitalized value of the annuity to which she is entitled. When the insured person is unmarried, widowed, or divorced, three-sevenths of this capital will be paid to his descendants, ascendants, or other heirs, the balance of the capital remaining in the employees' benefit fund. If there are no heirs, the total amount remains in the fund. The law also provides for the payment of smaller benefits to the widow if the marriage was contracted after the retirement of the insured person.

When an insured person reaches the age at which he is entitled to a pension the capital is paid into the benefit fund (*fonds d'allocations*) or if he obtains the cash benefit of three-sevenths to which he is entitled, the remainder is paid into the fund.

An insured woman, upon reaching retirement age, may receive the cash payment of three-sevenths of the capital value of her pension and in the case of death an annuity equal to 30 per cent of her pension will be paid to persons she has designated as her heirs.

The amount of the pensions will be fixed according to a scale to be established by a royal decree, but may not in any case exceed 50 per cent of the average annual earnings during the last five years. The widow's allowance may not exceed 25 per cent of this amount and is forfeited in the event of remarriage. The surviving husband or wife of an insured person also receives an allowance for each child under 18 years of age, the amount of which will be fixed by a special decree.

Invalidity allowances will be paid to insured persons who become totally and permanently incapacitated for work, the amount of which will be determined later, but this allowance may not in any case be added to the pension.

Insurance Organizations

THE organizations having charge of the administration of the law include the National Employees' Allowance Fund, the General Insurance and Retirement Fund, and accepted insurance funds, which include autonomous funds in commercial, industrial, or financial establishments, communal funds established by groups of employers, and legally organized insurance societies. The national fund is under State control and guaranty under the Ministry of Industry, Labor, and Social Welfare, as are also the Superior Council and the Employees' Allowance Fund. The national fund is managed by an administrative council composed of 15 members, 5 each representing the employees, the employers, and the ministry. The period of service is six years, half of the members being appointed every three years. The director and the employer and employee members are appointed by the King.

A Superior Council on Employees' Pensions is established by the law, the duties of which are to render opinions on requests for the approval or the cancellation of approval of insurance organizations; to judge, as a court of last resort, appeals from the decisions made by the employees' allowance funds; to give final decisions upon applications for pensions by widows of insured persons in which there is a question of the amount of the pension; to give advice upon questions relating to the interpretation and execution of the law which shall be submitted to the ministry.

The Employees' Allowance Fund, which has charge of the examination and the payment of allowances, possesses legal personality within the same limits and with the same rights as the National Pension Fund. It is administered by the council and the director general of the National Pension Fund. The allowance fund is maintained by a fixed charge upon employers amounting to 120 francs (\$3.34) annually for each employee in their service on December 31 of each year, up to the year 1960, 80 francs (\$2.22) from 1961 to 1975, and 40 francs (\$1.11) from 1976 to 1990. The employees' contribution to the fund amounts to 90 francs (\$2.50) for employees born before 1875, being reduced by 15 francs (42 cents) for each 5-year period up to 1895.

General Provisions

THE law provides penalties for the failure of employers to pay their quota into the insurance funds and for preventing insured persons from being insured in the organization of their choice. A penalty of both fine and imprisonment is fixed for a false declaration in connection with a claim, together with the restitution of the sums fraudulently obtained.

All insurance contracts made between employers, employees, and insurance establishments prior to March 10, 1925, will be changed as from January 1, 1932, to conform to the present law if the insurance organization is an approved one and in case of nonapproved insurance societies, the employee may demand the cancellation of the contract without prejudice to himself.

Insurance policies can not be used as security except for mortgage loans for the purchase or construction of a home for the insured person.

The administrative measures of the law will be the subject of special decrees, which must be issued within one year and the law will take effect six months after the publication of these decrees.

Revision of Belgian Law on Insurance of Wage Earners Against Old Age and Premature Death ¹

THE Belgian law of December 10, 1924,² providing for the insurance of wage earners against old age and premature death was revised and amended by a law passed July 14, 1930. The provisions of the earlier law are codified by the present law; the amount of the pensions and annuities is considerably increased as are also the contributions of employers, employees, and the State; the administrative details are improved; the number of the beneficiaries is extended; and special rules are established in favor of workers employed in particularly unhealthy industries. In addition to including among the compulsorily insured wage earners within a certain salary limit, the law also creates an entirely new category of insured persons among independent workers, comprising a very large number of artisans, farmers, and merchants. The law, then, can be said to cover all wage earners except those who are subject to the employees' pension law, and miners, seamen, and workers occupied in the service of the State,

¹ Comité Central Industriel de Belgique. Bulletin, Brussels, Aug. 20, 1930, pp. 951-971.

² See Labor Review, April, 1925, pp. 155-157.

communes, and public utilities who are covered by special insurance systems.

Compulsory Insurance

INSURANCE against old age and premature death is compulsory for all persons of both sexes who work either in Belgium or another country for an employer whose headquarters are in Belgium. Included also among the compulsorily insured are independent workers whose annual earnings do not exceed 18,000 francs (\$500.40). A special decree to be issued later will determine the conditions under which the children of independent workers working at home will be subject to the law.

Contributions

THE amount of the premium paid by both workers and employers is based upon the wages of the insured persons upon the first pay day of each month. The wage earners are divided into eight wage classes and the contributions, which are equally divided between employers and employees, range from 5 francs (14 cents) per month for weekly wages amounting to less than 50 francs (\$1.39) to 25 francs (70 cents) for wages of more than 200 francs (\$5.56) per week, this amount being deducted by the employer from the worker's pay. Special scales of payment will be established for workers who do not fit into this wage classification, such rates amounting to 1.33 per cent of the wage, with an annual maximum of approximately 150 francs (\$4.17) respectively, for the employees and the employers. The contribution of independent workers is fixed at a minimum of 1½ per cent of their earnings up to a maximum income of 12,000 francs (\$333.60), but the contribution may not be less than 60 francs (\$1.67) for women and 120 francs (\$3.34) for men. The contributions of wage earners and independent workers are payable up to the age of 65 and the employer's contribution is due for all in his employ, but contributions paid by the latter on account of persons more than 65 years of age are paid into the widows and orphans' fund.

In case of temporary cessation of work following an industrial accident and up to the time the injured person resumes work, the amount of the employee's premium is collected from the workmen's compensation benefit. If the employer is insured in an approved insurance society, this company is required to deduct the amount of the employee's premium and send it each month to the employer.

The premium of the independent worker is paid directly into the insurance fund. Regulations will be issued later governing the payments for workers who are paid wholly or partially in kind or whose remuneration consists wholly or partially of tips, whether these are paid directly to the employee or to the employer; workers employed by the job or on piecework, whether in a workshop or at home, in the service of several employers; workers who are not paid periodically; and workers occupied intermittently in the service of one or many employers.

The contribution of the State is due when the insured person begins to receive his old-age annuity and amounts on the average to 50 per cent of the pension. However, for persons born prior to 1884, the State pays an amount varying from 60 to 100 per cent of the pension,

according to the date of birth of the insured person. The maximum contribution of the State is fixed at 1,200 francs (\$33.36). No payment is made by the State for insured foreign workers unless their native country grants the same privileges to Belgians. In case of the death of an insured person, 30 per cent of the State contribution reverts to the widow and other beneficiaries under the conditions governing their annuities.

Supplementary payments by insured persons and employers are allowed toward the purchase of increased annuities, but this can not be added to a widow's annuity unless such payments have been made for a period of two years. If the insured person dies before the end of that period, however, the amount is repaid to the widow and to the employer without interest.

Benefits

THE pension of an insured person becomes due at the age of 65 but may be liquidated at a correspondingly reduced rate at any time between the ages of 60 and 65 for males and 55 and 65 for females, by giving 12 months' notice. The widow of an insured person is also entitled to an annuity provided the marriage was contracted before the husband reached the pensionable age. The pensions due on account of the contributions made to the fund to the account of the insured person and the amount paid by the State vary according to the length of time during which contributions have been made, the State assuming the major part for persons pensioned first, and the State contribution decreasing thereafter in proportion as the employers' and employees' contributions have accumulated.³ The widow's pension, if she is the same age as the insured person, amounts to 35 per cent of the insured person's pension if death occurs before the age of 41, increasing gradually to 50 per cent at 55 years and over.

If the insured person dies before having received any pension payments, the widow may receive a cash benefit amounting to half of the value of the annuity. When an insured person is unmarried, widowed, or divorced, half is paid to descendants under the age of 16 or, if there are none, to the parents or ascendants, the remainder being deposited in the widows and orphans' fund, but if the insured person had received any part of the pension all of the remaining capital is paid into this fund.

An insured woman's pension is due at the age of 65 but may be secured by giving 12 months' notice at any time between the ages of 55 and 65, but with a proportionate reduction in the amount of the pension. If the insured person is unmarried, widowed, or divorced, 30 per cent of the annuity may be paid at her death to persons designated by her, for whose care she was responsible, if she was 18 years of age, and the declaration was made two years prior to death. If the insured woman is married, her husband is the sole beneficiary.

Voluntary Insurance

PERSONS OVER 6 years of age not compulsorily insured may take out insurance for themselves and heirs but, in case of the death of such

³ A table compiled by the committee reporting the law to the Chamber of Deputies gives the amount of the pension of a married man at the age of 65 in 1934 as 3,304 francs (\$91.85), and at the same age in 1982 as 3,879 francs (\$107.84); of an unmarried man at the same ages, as 2,204 francs (\$61.27) and 3,879 francs (\$107.84) respectively; and of a widow aged 65 who was the same age as her husband, 678 francs (\$18.85) in 1937 and 1,723 francs (\$47.90) in 1977.

persons, annuities reverting to a wife or other heirs may be paid only after premiums have been paid for two years. For persons so insured, the State contribution is granted to the husband or wife of the person compulsorily insured and their children, legitimate or whose care they have assumed, under the age of 18 years; to persons whose total taxable income does not exceed 24,000 francs (\$667.20), and to the husband or wife of such persons and their children between the ages of 6 and 18. This payment is made on condition that an annual premium amounting to at least 24 francs (67 cents) for persons under 18 and of 60 francs (\$1.67) for males between the ages of 18 and 21 and females over 18, and of 120 francs (\$3.34) at least for other insured persons has been paid.

Foreigners may not participate in such insurance unless their native country grants equal advantages.

Special Provisions

INCREASES in the regular pensions are granted to insured persons of Belgian nationality and foreigners whose country grants similar rights to Belgians who were born between the years 1867 and 1907, if their regular premiums have been paid. These increases range from 50 francs (\$1.38) per year for persons in the first wage class to 250 francs (\$6.95) per year for persons in the eighth class, and from 60 to 120 francs (\$1.67 to \$3.34), according to the sex of the insured, for independent workers. Others not ordinarily entitled to this increase, including persons taking out voluntary insurance, may receive this increase if their actual annual income does not exceed a certain fixed sum. Additional allowances are granted to widows born prior to 1907 and an allowance of 240 francs (\$6.67) is paid for each child under 16 years of age. In case of the death of the surviving husband or wife of the insured person, this amount is increased to 420 francs (\$11.68) paid to the organization or person having charge of the children. These sums are paid from the widows and orphans' fund, which is maintained by contributions from various sources.

Male workers employed in particularly unhealthy trades are allowed to retire at the age of 55 and female workers at the age of 50. The rates are higher than for other workers, ranging from 8 francs (22 cents) equally divided between employers and employees for the first class to 36 francs (\$1.00) for the eighth and highest class per month, and at 2 per cent of the wages with a maximum of 200 francs (\$5.56) per year when such workers do not fit into the special wage classification.

Insurance Organizations

THE General Savings and Retirement Fund has charge of the operation of the law, and all regulations established by the fund for the execution of the law will be submitted to the Ministry of Industry, Labor, and Social Welfare for approval.

At the end of each 5-year period, if a large enough surplus exists, the retirement fund, after agreement with the Ministry of Finance and the Ministry of Industry and Labor, will divide this surplus among the living associates who have contributed to the fund under the present law and the beneficiaries of annuities.

A superior committee on old-age pensions will be organized in the Ministry of Industry, Labor, and Social Welfare, which will have authority to render opinions upon all questions relating to the interpretation and the operation of the law which are submitted to it and to render decisions upon questions relating to women's pensions. The composition and the general functions of the committee will be fixed by a decree.

General Provisions

THE law provides penalties for failure of employers to make collections and transmit them to the insuring organization, for forcing an employee to join an insurance organization against his will, for making false declarations, and for refusing to furnish the persons or organizations concerned in the execution of the law all the information they require.

The different measures for the application of the law will be the subject of special decrees but the law will become effective as concerns collections July 1, 1931.

New Retirement Law for Government Employees in Salvador¹

THE National Legislative Assembly of Salvador passed a law on May 24, 1930, providing for the retirement and pensioning of employees in the civil, judicial, and administrative branches of the Government service, including municipal employees.

An employee without other means of support who has served faithfully for a period of at least 20 years and has reached 60 years of age if a man, or 50 if a woman, is eligible for retirement. Compensation shall be made on the basis of the highest salary received while in Government employ, provided the employee has been receiving such salary for at least one year, 40 per cent thereof if the length of service was 20 years, 50 per cent if the service was 25 years, and 60 per cent if the service was 30 years or over.

Retirement with compensation will also be granted an employee incapacitated for further work through illness contracted as a direct result of the discharge of official duties, the amount being equal to 20 per cent of the employee's highest salary if he has been employed less than 8 years, 25 per cent if employed from 8 to 14 years, 30 per cent if employed from 15 to 19 years, and on the retirement basis specified above if employed 20 years or over. The compensation of any retired employee shall never exceed 200 colons (\$100) monthly.

If, after retirement for disability, the employee is still able to render service, he may be employed by the Government, receiving the salary of the position to which he has been appointed if it exceeds the retirement compensation, or the retired compensation if the salary is less.

The dependents whose claim to a pension on the death of an employee will be recognized are the surviving spouse, the children, or the parents of the deceased. The right of sons to a pension ceases when they reach the age of 21, and that of wives, daughters, and mothers upon their marriage.

¹ Salvador. *Diario Oficial*, San Salvador, June 9, 1930, p. 1009.

FAMILY ALLOWANCES

New Belgian Act on Family Allowances

AN ACT of August 4, 1930, has for its purpose the compulsory payment of family allowances by all employers in Belgium whose force includes one or more workers not living with such employers. A résumé of the provisions of the new law¹ is given below:²

Affiliation of employers with a family allowance fund.—All employers to whom the law is applicable are obliged to affiliate with an approved family allowance fund or a special fund established by a royal decree. Such employers must pay into an approved fund monthly or quarterly for each worker in his employ a fixed sum per day of service—65 centimes (1.8 cents) for a man and 35 centimes (1 cent) for a woman. These assessments are to be paid not only for days actually worked but also for others included in the employment contract such as the days upon which no work has been performed because of sickness, accident, involuntary unemployment, or other legitimate cause. Assessments are also made for Sundays and legal holidays. In addition, employers are taxed for the maintenance of a reserve fund for the equalization pool, and in some cases to meet the expenses of family allowance scales above the legal minimum and to provide other benefits such as birth bonuses, visiting nurse services, etc., which can not be provided without extra resources. Furthermore, employers are obliged to furnish to the funds all the administrative information requested by them and that is necessary to insure the family allowance service.

Rates of allowances.—The legal minimum monthly scale for family allowances is fixed as follows: First child, 15 francs (41.7 cents); second child 20 francs (55.6 cents); third child, 40 francs (\$1.11); fourth child, 70 francs (\$1.95); fifth and subsequent children, 100 francs (\$2.78). The funds, however, may adopt a higher scale. Moreover, modification of the scale is permitted under certain conditions.

Ages of children benefiting.—The allowances are paid for children up to at least 14 years of age and up to 18 years of age if such beneficiaries are continuing a course of education during the day or are apprenticed to a trade under specified conditions. There is no age limit set for the payment of allowances for children who are physically or mentally incapable of earning their living, provided they are

¹ An act of Apr. 14, 1928, provides that all contracts relative to works executed or subsidized by the State, Provinces, or communes must include a clause making it obligatory upon contractors to become members of an equalization fund for family allowances, which meets the requirements of the aforesaid law. Industrial establishments from which the State, Provinces, and communes order supplies are also obliged to be members of an approved fund, provided supplies are furnished to the amount of 50,000 francs. The same obligation is imposed upon subcontractors also. Public-service enterprises conducted under concessions also come under the provisions of the act. (See Labor Review, July, 1928, p. 39.)

² Comité Central Industriel de Belgique. Bulletin, Brussels, Sept. 10, 1930, pp. 1039-1053.

dependent upon the person in the service of employers included under the act. Not only are legitimate and recognized illegitimate children covered by the law but also stepchildren and children who are being taken care of because of abandonment by their natural protectors, or because of the death or illness of their own parents.

Persons to whom allowances are paid.—In general, the Belgian custom has been to pay family allowances to the mother instead of to the father upon whose work such benefits are based. The new law confirms this practice by allowing the funds to stipulate in their regulations that the allowance apportioned to the work of the father is to be paid to the mother of the family or, if necessary, to any person who is actually bringing up the child beneficiaries. On the other hand, the father, the mother, or any person actually maintaining the children has the right to oppose the payment of allowances to others if the interest of the children calls therefor.

Rights to allowances.—The regulations of the funds may stipulate that the right to allowances will cease in all cases (that is to say, even if the labor contract has not been broken) at the expiration of a period of forced inactivity, which the funds may determine but which may not be less than three months. The right to allowances for victims of industrial accidents or diseases continues as long as they are incapacitated as a result thereof. If the incapacity is permanent, the allowances are continued, even after the death of the victim, until the children have attained the age limits for such grants. Furthermore, pensioned workers have also the right to allowances for children who are dependent upon them.

The right to allowances is inherent in the contract and ceases when the contract is broken. When a strike does not lead to the breaking of the contract, such disputes may be regarded as a legitimate motive for stopping work. In a case of this kind the right to family allowances continues.

Double allowances not to be paid.—When the father and mother both are employed a proportional reduction is made in the grants, as double allowances are not paid in such a case.

Primary family allowance funds.—These funds are to be approved when they fulfill the conditions prescribed for them under the act, among which are: An affiliated membership of 7 employers whose combined workers number at least 1,500. However, under a royal decree based upon the advice of the official commission on family allowances, these minima may be reduced to 3 employers and 500 workers.

Funds may provide for the payment of birth and nursing bonuses, and for the expenses of various other welfare services for families. The regulations of the funds indicate the region, and eventually the trade, to which affiliated employers should belong.

The organic constitution of the funds has a triple purpose: The fixation (1) of the assessments for employers; (2) of the allowances, birth bonuses, and other benefits to workers and the conditions under which they are paid; and (3) of the penalties which the law authorizes the funds to provide in case of fraud on the part of affiliated employers or of persons to whom allowances are due or should be paid.

Juridical character of family allowances.—The law explains that the family allowances constitute in no way a supplement to wages or salary and are not to be taken into account in determining minimum wages which are compulsory by law, by a decision of a public administration, or by a collective agreement between employers and workers through a joint committee. Such allowances are also nonattachable and nontransferable. The person, however, who actually supports the child beneficiary may take the allowance directly or may oppose its payment to the person upon whose service the allowance is based.

The auxiliary fund.—There is a provision under the law for the institution, by royal decree, of an auxiliary fund to which are to be affiliated, of their own accord, establishments which are not members of approved funds at the time when such membership becomes compulsory.

Special funds.—The law provides for special family allowance funds for dock laborers and workers who are hired by different employers almost from day to day.

The national fund.—The creation by the King of a national family allowance fund is also provided for under the act, to which central organization all the approved family allowance funds, the special funds, and the auxiliary fund are to be affiliated.

The resources of the national fund are made up of contributions by primary family allowance funds from surpluses resulting from the differences between the amounts assessed and the actual sums required to pay the minimum scale of allowances fixed by law. Such resources are increased by an annual State contribution of 30,000,000 francs. The contribution from the surpluses of primary funds are divided among other primary funds with expenses in excess of their assessments. When such contributions are insufficient to meet the losses of the funds having deficits, adjustments are to be made for funds having the greatest need.

The State contribution is to assure third and subsequent children the minima of allowances fixed in the legal scale, in case the resources of the primary funds are insufficient for the purpose. If this situation does not arise or if the distribution for such children does not exhaust the 30,000,000 francs, that sum or the balance thereof is to be divided among third and subsequent children who are not served by the primary family allowance funds of the country.

Other provisions.—The act also has special provisions in favor of funds paying a scale of allowances involving a cost at least double the amount of that for the minimum legal scale.

The act has a series of provisions concerning the organization and control of the system it sets up and also penalties to insure its effective application.

The date the law will go into operation is to be determined by a royal decree between January 1, 1931, and July 1, 1932, and will differ for different classes of employers. The family allowance act of April 14, 1928, will remain in effect until June 30, 1932. From that date all employers who can be included under the new law will be so included.

VOCATIONAL EDUCATION

Experience Under Canadian Technical Education Act, 1919 to 1929

A DECADE of the development of vocational education in Canada under the provisions of the technical education act is reported upon in Bulletin No. 30, recently issued by the Technical Education Branch of the Dominion Department of Labor. A brief review of the administration of this measure is given below:¹

During the 10-year period covered, 1919 to 1929, Canada has had no national policy for vocational education. The Federal Director of Technical Education has exercised no administrative control within the Provinces. While from the beginning the task of promoting vocational education has been recognized as primarily a function of the Provinces, recognition has also been given to the fact that the Dominion Government in the appropriation of large sums to the Provinces for vocational education should see that such sums were expended for the objects for which they were granted, and should when requested aid the Provinces in the development of their respective programs. With these facts in mind the Technical Education Branch of the Department of Labor has concentrated its efforts on the dissemination of information concerning the progress of vocational education in every part of Canada, and on stimulating cooperative action on the part of the Provinces by means of conferences and other methods, to the end that all might derive advantage from the experience of each. In brief, the following plan was adopted by the Department of Labor in administering the technical education act:

1. To accept the work already done in each Province and to cooperate with the provincial officials in developing the system of education already established.
2. To give advice freely, but only when solicited.
3. To direct the attention of the Provinces to the importance of training for citizenship as well as for employment.
4. To cultivate a spirit of good will and mutual confidence not only between the department and the Provinces, but also between the Provinces, to the end that there may be a national cooperation in educational effort.
5. To secure through every possible agency the continued sympathy and cooperation of our industrial and labor organizations.

During the decade the act has been in operation every Province has taken measures to embody permanently technical or vocational education in its educational system. The liberal sums available had a decided effect in encouraging building operations, and many fine new schools were erected, each adapted to local requirements. It may be safely said that without such Federal aid vocational education would not have attained its present position for many years. "There is every reason to believe that the grants have been justified by the results obtained."

¹ Labor Gazette, Ottawa, October, 1930, pp. 1155-1156.

Special reference is made to the assistance rendered by the Dominion Government in connection with the designing, equipment, and organizing of new schools and in selecting proper sites for new buildings. The Federal Director of Technical Education has been called upon again and again to meet local and provincial boards and explain the work and report on developments in various parts of the Dominion.

In accordance with the request of the Provinces, the Director of Technical Education organized several conferences which were of substantial value in bringing about a better understanding of vocational education and the character of the cooperative activities of the Federal and provincial governments. In calling these meetings the Technical Education Branch functioned primarily as a coordinating agency, making no attempt to influence the discussions or conclusions. Furthermore, this branch of the Department of Labor published the proceedings of these conferences and placed such reports in the hands of those interested.

HEALTH AND INDUSTRIAL HYGIENE

Relationship Between Unemployment and Health

THERE is comparatively little information upon the effect of unemployment upon health, and the results of a brief survey¹ made by the Visiting Nurse Society of Philadelphia last spring is, therefore, of interest. The study covered all the unemployed families on the lists of the 100 field nurses of the society on March 27, 1930. On that day there were 442 families in which there was unemployment, the unemployment being total in 52 per cent of these families.

The study was concerned principally with the amount of illness in the unemployed families and its possible relation to the deprivations incidental to unemployment. It was found there was illness in all of these families and that in 70 per cent the illness was among adults. This was regarded as of unusual interest as it is generally thought that the children are the first to suffer from the effects of poverty. The fact of the greater amount of sickness among the adults raised the question as to whether the grown persons were not depriving themselves so that the children might have enough up to the last possible moment. In 21 per cent of the families children were ill and in 9 per cent there was illness among both adults and children.

The relationship between the unemployment and the illness in these families appeared to be shown by the fact that in the great majority of cases the unemployment had lasted for from two to six months before the sickness began, or in a few cases was a chronic condition, although there were some homes in which the unemployment had lasted for only a few weeks before the beginning of illness or in which there had been only partial employment. Immediate relief was needed by 13.5 per cent of the families, food, coal, and adequate bedding often being required before proper care could be given the sick.

The survey showed that these families were largely newly unemployed as in 73 per cent of the cases no relief agency had previously been asked for help. This suggests that probably a large proportion of those now unemployed are persons who are normally self-supporting. Forty-eight per cent of the families had a private physician in attendance, 42 per cent were going to dispensaries, and only 9 per cent were attended by the city physicians. It was assumed that where private physicians were in attendance these physicians must be giving their services without remuneration.

There is a charge for the visiting nurse service when families are able to pay for it, but if they are unable to do so it is given free. More than half of the families carried sickness insurance, so that in these cases the nurse was being paid by the insurance company.

¹ Hospital Social Service, November, 1930, pp. 385-389: The Human Cost of Unemployment—the Health Cost.

Seven per cent of the families were making some payment and the remainder, about 38 per cent, were being cared for without payment.

Incomplete as the data are the figures would seem to indicate that there is some relation between extensive unemployment and an increased amount of sickness. The desirability of carefully kept records to show the extent to which the conditions accompanying unemployment, such as lack of proper food, heat, and clothing contribute to the increase in sickness is therefore apparent.

Medical Care for 15,000 Workers and Their Families¹

THE extent to which medical service organized for an industrial group or a community results in a better and less costly service than that provided by private practitioners is one of the questions for which the Committee on the Costs of Medical Care is seeking an answer. A study has accordingly been carried out by that committee covering the activities of the workers' medical service of the Endicott Johnson Corporation, since the service provided by this company provides a good example of group practice. In 1928, at the time the study was made, the number of employees in the five towns in which the company operates factories was approximately 15,230. While the company has carried on an extensive program of all types of welfare activities, it is said that there is little of the coercion sometimes associated with industrial welfare projects, owing to the fact that the towns are not "company" towns.

The medical work of the company was started to meet the requirements of the workmen's compensation laws and was handled at first by private practitioners maintaining offices near the factories. It was extended, at the request of the employees, after the employment in 1916 of a full-time physician and a trained nurse, to include general medical service for the employees and their families. At first only a small number, mainly lower-paid workers, availed themselves of the service, but since 1918 the service has expanded steadily, so that the patients now include the higher-paid manual workers and the office force. The medical service is provided as part of the workers' medical and relief service and is in charge of a nonmedical executive, who is responsible directly to the administrative officers of the company. In 1928, of a total budget of approximately \$1,000,000 for the department—covering workmen's compensation, sickness benefits, old-age pensions, and widows' allowances—nearly \$900,000 was expended on the medical care provided for the workers and their families.

The medical service includes three main medical centers, a small first-aid station and clinic, and various traveling clinics maintained in community buildings. In 1928 the full-time staff included 28 physicians, 4 dentists, 5 dental hygienists, 2 physical therapists, 67 trained nurses, 4 bacteriologists, 4 pharmacists, 17 technicians, and 16 clerks and office assistants, the physicians in that year making 87,400 house calls and receiving 118,740 office visits. Extensive use is also made of outside medical service such as the community hospitals and the services of specialists and consultants. There is a con-

¹ Committee on the Costs of Medical Care. Abstract of Publication No. 5: Medical Care for 15,000 Workers and Their Families, by Niles Carpenter and others. Washington, September, 1930.

valescent and rest house for women and girls and two tuberculosis cottages are maintained at the Trudeau Sanitarium at Saranac Lake. Although the entire medical service is administered from a central office at Johnson City, each of the three medical centers functions as a separate unit, the specialists and technicians dividing their time between the three centers. There is said to be a notable flexibility and uniformity throughout the entire service, the patient being permitted as far as possible to select his own physician, who keeps in touch with his particular group of patients in the same way as does a private practitioner.

The free medical care which is available to employees of the company and their dependents includes physical therapy, X-ray therapy, heliotherapy, and psychiatric care. Nursing care is free, as are also dental work and all medicines, but orthopedic supplies and eyeglasses are provided at wholesale prices unless the patient is financially unable to pay for them.

A special inquiry was made in the spring of 1928 to determine the proportion of workers making use of the medical service. The census, which covered about one-tenth of the employees and included every department of each plant, indicated that about 97 per cent of those who received medical care during the year used the company medical service partially or exclusively. It is estimated that there were 41,121 workers and dependents to whom the service was potentially available, and 35,181 workers and dependents who actually used the service. The total expenditure by the company for these services during 1928 was \$896,873.51, or an annual per capita cost of \$25.49 per individual in families using the service.

Comparison of the Company Medical Service with that of the Community

THREE special investigations were made in the effort to appraise the standards maintained in the Endicott Johnson medical service. These were: A comparison of the nature and extent of the medical care received by families under the company medical organization with that received by 100 families of the same social and economic type who were being cared for by private practitioners of Binghamton and the neighboring towns; an inquiry into the professional training and activities and the financial and professional status of the 25 Endicott Johnson physicians and of 53 physicians engaged in private practice in Binghamton and in the vicinity; and an inspection of the medical organization of the company by three physicians.

The study of the medical care in family groups showed that of 191 cases of illness which occurred in the Endicott Johnson families approximately 19 per cent did not receive medical attention, while of 164 cases in the outside families 37 per cent were not treated by physicians. In 76 per cent of the cases of illness among the company group a physician was called within three days after the onset of illness, as contrasted with 68 per cent for the other group. The Endicott Johnson workers were also hospitalized more frequently and consulted specialists more often, but there was no significant difference in the duration of illness in each group.

There was no important difference between the two groups of physicians as regards training, internship, postgraduate study, and

type of practice. The hospitalization of maternity cases by the Endicott Johnson physicians was more general and these physicians also have at their disposal more extensive organized, technical, and clerical facilities, and office, home, and hospital calls by these physicians were approximately twice as numerous as by the private practitioners.

A classification of the incomes of the physicians in 1927 showed that none of the Endicott Johnson physicians earned less than \$3,000 nor more than \$12,000, although they are entitled, in addition, to certain perquisites, such as eligibility to sick benefits, assistance in the purchase of a house, participation in an investment-savings plan and old-age pensions. Through a change in administrative policy after this field study was completed, some of the Endicott Johnson physicians were allowed to treat private patients, but as the private physicians of the vicinity objected they now receive only those who are referred to them by private physicians. The net incomes of the private practitioners covered in the survey ranged from less than \$3,000 to more than \$35,000.

Summing up the results of the study it is stated in the report that the comparison of services rendered by medical organizations and by private practitioners requires more extensive and detailed information in matters of cost and adequacy and that—

A categorical answer to the question "What standards are maintained by the Endicott Johnson medical service?" is probably impossible. In some respects the service seems to be superior to the type of private practice found in Binghamton and similar communities; in other respects it seems to be somewhat below the existing standards in this area. "Contract practice" is by tradition something quite different from normal private practice and is generally alleged to be on a distinctly lower plane. It is significant that the Endicott Johnson workers' medical service, although it is perhaps "contract practice" in the strictest interpretation of the term, has succeeded in lifting itself above the levels characteristic of certain types of contract practice and has placed itself definitely on the same plane of professional competence as private practice. The evidence from this survey and from the reports of the special observers points to the conclusion that the relation of the Endicott Johnson physician to the patient is a free and personal one, similar to that found in good private practice. The observers likewise agree as to the generally good standing of the service.

Whatever financial advantage accrues from the workers' medical service becomes actual and significant. At present it is impossible to ascertain the source of all the economies which seem to be achieved. Subdivision of functions relieves the skilled professional worker from the necessity of performing subsidiary and routine tasks; overhead costs are reduced by means of modern business devices, by large-scale buying, and by the continuous employment of professional, technical, and clerical personnel. These are perhaps a few of the financial advantages.

The Endicott Johnson workers' medical service is a practical demonstration of the possibility of establishing an elaborate community health service closely integrated with existing facilities for the care and prevention of illness. More than this, it would seem that there are ways in which the existence of a large-scale medical service may have been of benefit to the entire community. The corporation provides more extensive care than individuals would themselves obtain; it pays adequately and completely for contracted services rendered by physicians, hospitals, and clinics. It would appear that the existence of the workers' medical service results in a substantial increment to the incomes of practitioners and institutions providing medical services.

Effect of Noise on Hearing of Industrial Workers

A RECENT study¹ of the effect of noisy working conditions on the hearing of workmen was made by the New York Department of Labor to determine whether or not there is permanent deafening in workers employed in very noisy trades.

Although there has been a question for many years as to the extent of impaired hearing which may be due to the effect of noise and vibration, it is only recently that an instrument has been invented which permits the accurate measurement and comparison of noises in different places. This instrument—the audiometer—is an electrical apparatus which measures hearing in units of sensation loss. In previous studies a loss of nine sensation units had been accepted as normal, but in this study a loss of 10 sensation units was taken as the standard. When the workers tested were found to have hearing below this standard they were considered as deafened and an examination was made of the external auditory canal and ear drum to see if any external condition existed which would account for the deafening. In the absence of such condition it was considered that the noise of the work place was the important factor and these employees were selected for the examination and tests. The audiometer was used for determining the qualitative loss of hearing among these workers. A 3A audiometer equipped with a special earpiece was used in determining the amount of noise in the work places of those whose hearing was tested, and in each case the number of units of noise to which the worker was subjected was recorded. The amount of deafening in each factory was also recorded, and an effort was made to correlate this with the noise conditions.

The examinations covered 1,040 workers, 630 women and 410 men, in seven factories making biscuits, tin cans, razor blades, books, shoes, silk hosiery, carpets and rugs, and two groups of clerical workers who were used as controls. The noise in the different plants varied not only as between factories but also between different departments in the same plant, ranging from 20 to 70 units of noise.

The number of cases of deafening was very small except in the factory manufacturing tin cans and in the printing establishment. The incidence of deafness in the whole group was 246 cases, or 23.7 per cent, and 91 of these workers gave a history of some condition of the ear or parts of it which might have affected the hearing, so that these cases were excluded, leaving only 155 workers, or 14.9 per cent, in whom the deafening could be regarded as having any industrial significance.

The highest incidence of impaired hearing was found in the group of workers subjected to the greatest amount of noise; that is, where the noise was between 60 and 80 units of sound. In this group of 367 workers, 96 showed deafening with no apparent reason to account for it. Of this group of 96 workers, 66 were employed in the tin-can factory in a large room dominated by the noise of the stamping machine, so that all present were affected whether or not they worked on the machine. The noise of this machine was not very rhythmic but was irregularly intermittent in character. As it has been found

¹ New York. Department of Labor. Special Bulletin No. 166: Effect of noise on hearing of industrial workers, prepared by Bureau of Women in Industry. Albany, 1930.

that unrhythmic processes are more fatiguing to workers, it is considered possible, although this point is not proved, that unrhythmic sounds may have a different effect on the auditory organs from that produced by rhythmic sounds of the same intensity.

In considering the effect of noise on hearing at different ages, it was found that although the greatest number of cases of deafening occurred in the group between the ages of 21 and 30 years, in all age groups the largest number of cases fell in the group working under the noisiest conditions.

Something of the relation of length of exposure to noise on the hearing of workmen was shown by the fact that 26.9 per cent of those exposed 25 years and over showed deafening, while among those exposed for less than a year, only 6.0 per cent were deafened. But the groups exposed to industrial noise for the longer time were also older, and advancing age would undoubtedly be a contributing factor in the development of deafness.

In summing up the study, the report states that in order to draw any far-reaching conclusions studies involving larger numbers over a longer period of time would be required. However, the present study did indicate that the greatest incidence of deafening was in the groups exposed to the greatest amount of noise. In certain factories where workers were subjected to loud noise, and especially that made by certain types of machines, it appeared that either temporary (fatigue) or permanent effects were produced by the constant exposure, but before it could be said that there was permanent deafening it would be necessary to rule out nerve fatigue, which could be done only by careful examination of the same group at various times in the work-day and week.

As a result of the study it was recommended: That wherever possible tests of hearing should be made on all employees at the beginning of employment, which would eventually give standards for judging the average hearing in different age groups; periodic examinations should be made of workers who are subjected to more than a moderate amount of noise, from which data would be secured as to the effect of different degrees of noise and also measures taken to safeguard workers showing the effect of this exposure; certain types of machines should be isolated so that workers on quieter processes would not be subjected to the greater noise of such machines; and adequate ventilation for the removal of all vapors should be provided so that any vapor which might tend to harden cerumen in the auditory canal and thus temporarily affect hearing would be eliminated.

Acute Silicosis Caused by Cleaning Powder

TWO cases of acute silicosis occurring in two young women engaged in packing cleaning powder in a London factory are reported in a recent issue of the *Lancet*.¹ The cases attracted considerable interest because of the relatively short exposure to silica dust and the fact that death followed in both cases very shortly after the appearance of symptoms.

¹ The *Lancet*, London, Oct. 18, 1930, pp. 846-848: Two Cases of Acute Silicosis, with a Suggested Theory of Causation, by Dr. G. Macdonald and others.

The two girls, one of whom was 17 years of age and the other 19, had been employed for $2\frac{3}{4}$ and $4\frac{1}{4}$ years, respectively, in packing a cleaning powder containing ground silica. The first girl reported at a tuberculosis dispensary on April 27, 1928, complaining of a slight cough and pain in the chest. She was admitted to a hospital on April 30 and rapidly became worse, dying on June 4. The second girl was admitted to the hospital May 3, 1928, and died June 16, 1928. In the first case no tubercle bacilli were found in the sputum nor at autopsy, but in the second case the post-mortem examination showed tubercle bacilli to be present. In both cases the lungs did not collapse upon opening the thorax for the post-mortem examination but when removed from the body were bulky and very heavy and preserved their correct anatomical shape. On section they were extremely tough, grating as the knife went through the tissue. They were of a greenish-gray color resembling in a general way some kind of marble, and in the first case the lower lobes were almost entirely solid while the upper lobes still contained air but were tougher than normal. In both cases there were fine gray nodules throughout the lungs, and in the first case there was extensive fibrosis and in the interstices of this fibrosis there was a finely granular black or brown deposit.

The disease was definitely different both in kind and degree from cases usually encountered among workers in such dusty trades as mining, stonecutting, and pottery manufacture, and as it was certain that the deaths were not caused by inhalation of silica dust alone, the lungs were examined chemically and various experiments carried out to determine what part the other ingredients of the cleaning powder played in the development of the disease. All living creatures continually inhale varying small quantities of silica in the form of sand and road dust, but these small amounts of silica are absorbed in some way, probably, it is said, as colloidal silica, which is taken up in the blood stream and passed out of the body.

The cleaning powder contained 75 per cent pure silica, the remaining 25 per cent being soap powder containing sodium carbonate and soap. The combination of silica and soda causes a chemical reaction resulting in sodium silicate, which reacts with calcium and iron salts in solution, giving precipitates of the respective silicates, which are insoluble. The iron silicate obtained in this way is green in color and this fact was considered to account for the green color which was a special feature of the lungs. The theory followed by these examiners was that the deposition of these insoluble silicates is cumulative and continually builds up a film or layer of increasing thickness, which the lung tissue is unable to absorb, and which with the consequent irritation causes rapid fibrosis over the whole area. This fibrosis would add to the general stagnation and hasten the stage in which the natural absorption of the silica is prevented. As the action of the alkali was considered to be sufficient to account for the condition present in these cases, no consideration was given to the soap although it was regarded as possibly having some bearing on the problem, particularly in the more advanced cases of the disease.

The results of the chemical examination seemed to confirm the theory which had been advanced, but it was not clearly shown whether these cases were definitely different from ordinary silicosis or were

merely silicosis under the most unfavorable conditions, progressing at the maximum rate. Granted that this theory is correct, the article states, the future occurrence of rapid silicosis can be definitely prevented by taking steps to insure that alkaline dust is never inhaled at the same time as silica dust, thus reducing the risk involved in the handling of silica to that of ordinary silicosis, which is infinitely less rapid and fatal.

There are two types of soap powder in commerce, one of which is very light in texture and forms dust clouds with little agitation; the other, which is made by a wet process, being somewhat coarse and heavy in texture and requiring great agitation to raise a cloud and settling rapidly. It is recommended in this report that "wet process" soap powders, therefore, should be used, but in these plants using mixed dust there is said to be no factor of safety except the total prevention of alkaline dust.

Survey of Medical Facilities of a Typical Rural Community

A REPORT¹ of a survey, by the Committee on the Costs of Medical Care, of the medical facilities in Shelby County, Ind., gives data on the organization and costs of medical facilities and the expenditures of the residents of the county for the care and prevention of illness. This county was chosen for study as being generally typical of a predominantly rural population in the middle western section of the country. It has an area of about 400 square miles, a population of about 25,000, and is principally agricultural, although in Shelbyville, the county seat, which has a population of about 10,500, furniture manufacturing is an important industry. The information for the study was secured through personal interviews with all the physicians, dentists, and other practitioners in the community, and from the records of the local hospital, the public health agencies, and other agencies outside the county which furnished medical care to its inhabitants.

There was a total of 176 professional, semiprofessional, and other persons in the county who rendered services to the sick of the community, a large proportion of whom resided in Shelbyville. These persons included 31 physicians, 15 dentists, 4 registered nurses, 25 practical nurses, 16 registered pharmacists, and the personnel of the one hospital, while in addition there were 6 Christian Science practitioners, 5 chiropractors, 1 osteopath, and 1 chiropodist, as well as office assistants and drugstore clerks. Of the 31 physicians, only 8, or approximately one-quarter, were under 50 years of age, 12 were 60 years of age or older, and only 4 had graduated within the last 10 years. Seven had had postgraduate courses during the same period. Many of the physicians excluded certain specialties from their practice, such as major surgery, nose and throat work, and venereal disease, and although there was a certain amount of partial specialization among the Shelbyville physicians, only one might be considered a complete specialist. A group clinic well equipped with X-ray and

¹ Committee on the Costs of Medical Care. Abstract of Publication No. 6: A Survey of the Medical Facilities of Shelby County, Ind., 1929, by Allon Peebles. Washington, 1930.

diagnostic laboratory facilities had been organized by three of the partial specialists.

The ordinary fees for office calls were from \$1 to \$2 in Shelbyville and outside of the town the fee in some cases was as little as 50 cents. The fee for home visits by Shelbyville physicians was \$2 plus 50 cents a mile outside the city (one way from the office), plus 50 cents for a night call. The rates for home visits by the rural physicians were less standardized but were generally lower than those of the town physicians. These fees generally included medicines and varied somewhat in proportion to the difficulty of diagnosis and the quantity and cost of the medicines. The usual obstetrical fee in Shelbyville was \$25, and in some cases outside was as low as \$15. The charges of the clinic for a major operative procedure were \$125 to \$150 and the normal charge for a tonsillectomy was \$35. In general, fees were determined by the services rendered and not by the economic status of the patient, with the exception of surgery, Röntgenology, and to a certain extent obstetrics. The medical care of indigent persons was paid for by the township but a considerable amount of free work was done by the physicians. The total gross income in 1928 reported by 32 physicians was \$181,076 and the total net income of 30 physicians was \$102,564, or about 59 per cent of their total gross income, the largest single item of expense being a total of \$27,161 for medicines. About half of the net incomes were less than \$3,066 and half were more.

Dentists generally were called upon to provide dental care for persons who were having specific trouble with their teeth, on the whole very little prophylactic work being done. It was generally agreed that about 90 per cent of the industrial workers came for the relief of pain and about half of those who were advised to return for the filling of cavities did not do so because they could not afford it. It appeared that the farmers had more and better dental work done than the city workers. The total gross income reported by the 13 dentists in Shelby County in 1928 was \$52,480 and the total net income was \$35,675, five dentists reporting net incomes of less than \$1,500, five between \$2,500 and \$3,500, and three between \$3,500 and \$5,500.

The trained nurses were paid \$6 per day for an ordinary case in the hospital and \$7 for house care of the patient. The salaries of practical nurses varied from \$10 to \$35 per week, with a usual charge of \$20 to \$25 a week. The incomes as estimated by 15 practical nurses ranged from \$135 to about \$1,000 in 1928.

The gross income of the osteopath, optometrist, chiroprapist, and the Christian Science practitioners amounted to \$20,500, and of the chiropractors to \$20,148. The total expenditure for drugs and medicines, including those dispensed by physicians, amounted to \$187,161. Only \$7,164 was expended for public health.

The total expenditure in the county for the various health services and for medicines amounted to \$537,741 or \$21.32 per capita. Of this amount, 34.8 per cent was spent for drugs and medicines; 28.6 per cent for the services of physicians; 14.7 per cent for hospital care; 10.3 per cent for dental work; 7.5 per cent for the services of chiropractors and other nonmedical practitioners; 2.7 per cent for services of nurses; and 1.3 per cent for public health.

In estimating the adequacy of the medical facilities it is stated that it seemed the number of physicians, dentists, and pharmacists was sufficient to meet the ordinary needs of the people, although with the failure of the people to secure the needed dental attention there were too many dentists for the existing demand. The hospital facilities were found to be more than were required but the facilities for the care of tuberculosis were entirely inadequate. The inhabitants were not adequately protected against such infectious diseases as smallpox, typhoid fever, and diphtheria, and accommodations for nervous and mental patients were not sufficiently planned for. Under the existing State laws satisfactory public health work was impossible as competent physicians could not afford under the system of remuneration to give the necessary time to the duties of a health officer. While the study does not settle the question of whether the total expenditure for medical care was sufficient to secure the health protection needed by the people, or whether the distribution of the expenditure was economical and sound, it does show that in some cases at least the public health was not sufficiently safeguarded.

Cost of Maternity Care in Berkeley, Calif.

A STUDY¹ of the physical conditions surrounding maternity and infancy in Berkeley, Calif., has been carried on since 1927, the first report which dealt with the costs of obstetric service being issued in May, 1930.

As the maternal and infant mortality prevailing in Berkeley is relatively low an evaluation of the complex social, economic, and public health factors contributing to this result was considered to be desirable. The study as a whole, therefore, covers every item of importance affecting the health and welfare of both mother and child, but the first report deals mainly with the type and the costs of medical service.

The study covered a total of 390 obstetric cases, which represented approximately one-third of those registered at the Berkeley Health Department during the year 1928, the data in 376 cases being sufficiently complete to show the total cost of obstetric service for that number. Physicians' fees in 343 cases amounted to \$31,598.50, or an average of \$92.12 per case, with a median of \$73.87. If the charges for the cases with high deviations are not included, the average charge per case was about \$89, but the modal or most frequent charge was \$50, the tendency among physicians appearing to be to set their obstetric fees at multiples of \$25, beginning at \$50. One of the outstanding features brought out by the study was the large number of cases of confinement cared for in hospitals, 85.6 per cent of the 390 births recorded in the study receiving hospital care. The time spent in hospitals averaged 10 days, being approximately the same for confinements occurring in private hospitals and in the county hospital. For patients in the county hospital the costs in 17 cases amounted to \$249.80, or an average of \$14.69 per case, covering

¹ The Cost of Obstetric Service to Berkeley Mothers, by Richard Arthur Bolt, M. D. (Reprint from The Journal of the American Medical Association, May 17, 1930.)

all types of hospital service, while 14 patients paid nothing for their obstetric care. In six of the 390 cases the physicians in attendance extended professional courtesy in not making any charge to the patients, the other expenses in these cases amounting to an average of \$126.79 per case. Six of the confinements were among the industrial policy holders of the Metropolitan Life Insurance Co. and the total cost of their obstetric service was \$338.65, or an average of \$56.44 per confinement. Only one of these patients was confined at a hospital at a total cost of \$103.65. The physicians' charges in these cases were \$50 apiece for four and \$35 and \$25 for the other two. Two other patients took advantage of the service provided by a "People's Hospital Association," with charges of \$35 and \$50 for the physician and hospital charges in one instance of \$76.95. One case was an Associated Charities case with no charge by a physician but \$69.90 hospital charges. Altogether it appears that almost 10 per cent of the patients were not charged any physician's fee.

There was great variation found in the amounts paid for the services of a trained nurse. The average cost per case was \$116.21, with a median of \$89, to which must be added the special nurse's board averaging \$16.85 a case. Practical nurses were employed more frequently in the uncomplicated cases, the average cost being \$59.05. The amount expended for the services of home helps averaged about the same as for practical nursing, \$59.91 per case. For the miscellaneous charges it was found that when they were not itemized in the bill the average cost was less than when they were billed separately.

The total cost of obstetric service, excluding those cases in which no charges were made, averaged \$213.75, although in half of the cases the charges were \$179.41 or less. In exceptional cases, especially those with complications, the cost may run to \$1,000 or even \$1,800, but it was considered safe to say that the total cost of the average obstetric case in the community studied would be between \$200 and \$215.

WORKMEN'S COMPENSATION

Workmen's Compensation Legislation of 1930

OF THE 44 States having compensation laws, only seven convened in regular session (Kentucky, Louisiana, Massachusetts, New Jersey, New York, Rhode Island, and Virginia). Of this number only four States (Louisiana, Massachusetts, New York, and Virginia) acted upon the subject of workmen's compensation. Two States without compensation laws (Mississippi and South Carolina) held regular sessions but took no action in this field. The legislatures of eight States (Idaho, Illinois, Kansas, Maine, Nebraska, New Jersey, Texas and Utah) met in special session during the present year but did not enact any compensation legislation. The Seventy-first Congress of the United States was also in session but contributed nothing toward the development of compensation already extended to Federal employees, longshoremen and harbor workers, and private employees in the District of Columbia. Two Territorial legislatures (those of the Philippine Islands and Porto Rico) met in regular session in 1930. While that of Porto Rico enacted several amendments making minor changes in the administration of the act as well as additional provisions for the liquidation of the "workmen's relief trust fund," the Legislature of the Philippine Islands (from latest official information available) has not made any change in the basic act adopted in 1927.

Three of the eight Canadian Provinces (Manitoba, Nova Scotia, and Saskatchewan) acted on the subject during the legislative year of 1930. Manitoba adopted the largest number of amendments to the act and showed an active interest in liberalizing the law and improving its administration, while in Nova Scotia the only statute passed was that transferring the dredging industry from the collective liability scheme under the act to the individual liability plan. Saskatchewan merely clarified a provision which has caused administrative confusion, by eliminating "persons whose work is mainly clerical" from the list of exclusions under the definition of "workman," since such persons are not in any manner within the scope of the act.

Of the four States acting on the subject of workmen's compensation in the United States, the largest number of amendments was passed by Massachusetts, followed by New York, Virginia, and Louisiana. Liberalization of benefits received attention in three of these States. The following analysis does not include legislation increasing salaries of administrative officers, and the subject of procedure is given minor consideration.

Louisiana

By Act No. 81, Louisiana enlarged the jurisdiction (in cases of dispute over a claim of compensation between employer and employee or the dependents of the employee) so as to include the judge of the district court of the parish in which the injury was done or the accident occurred.

Massachusetts

IN Massachusetts (ch. 205) a person is now conclusively presumed to be an "employee" while operating any vehicle with the employer's general authorization and in the performance of his business, either within or without the State. By chapter 159 inmates of penal and reformatory institutions are excluded from the coverage provisions of the act relating to public employments. The period of compensation with certain limitations was extended in case of finger injuries from 12 to 22 weeks for the loss of two phalanges, and to 30 weeks for the loss of three or more phalanges (ch. 336). Upon remarriage of the widow the share which each child shall now receive in case there are more than five children was increased from \$16 to \$18 per week (ch. 293). Other amendments included the authorization of the industrial accident board for the payment of a lump sum to a minor either before or after he attains his majority (ch. 181); the provision authorizing an employee to engage his own physician to testify at a hearing when the department has failed to assign one is extended so as to include each hearing (ch. 330); a person who has failed to claim a review of a case within the time specified in the workmen's compensation law may now petition the court (superior court for the county in which the injury occurred, or for the county of Suffolk) for permission to claim such review at any time within two years from the filing of the decision (ch. 320); in cases in which the insurer claims a review and the industrial accident board orders the continuance of payments, the cost to the injured employee of such review, including counsel fees, is determined by the board and paid by the insurer (ch. 208); the board of review must now hold hearings in the city of Springfield at least six times each year (ch. 224).

New York

SEVEN acts directly amending the compensation law of New York were passed at the regular session in 1930. Chapter 609 liberalized the act by providing a minimum weekly compensation of \$15 for the loss of sight of both eyes. Compensation is now awarded for neck as well as head disfigurement, subject, however, to a maximum of \$3,500; in determining the wage-earning capacity of an employee in partial disability cases, either the employee's actual earnings at the time of the injury are to be considered as the base or, if not determinable, the industrial board may fix a reasonable wage-earning capacity, not to exceed, however, 75 per cent of the former full-time actual earnings; if an employer has made advance payments as wages to an injured employee he is entitled to reimbursement out of the unpaid installments or, if insured, from the insurance company, unless reimbursement is waived, in which event compensation shall be paid to the claimant notwithstanding the advance payments; a corporation

officer is now automatically covered unless an election otherwise is made (ch. 316). The application of the radium and X-ray provisions was broadened and the following compensable occupational diseases were added to the list: Blisters, abrasions, bursitis, synovitis, and dermatitis (ch. 60). A self-insurer must deposit securities with the industrial commissioner and authority is now given to deny the self-insuring privilege (ch. 184). By chapter 183 the commissioner of taxation and finance instead of the State treasurer is the custodian of the vocational rehabilitation fund and is authorized to invest the funds in securities authorized as legal investments, and also may sell such securities. Fines imposed for failure to secure the payment of compensation are paid to the industrial commission instead of the State treasurer as heretofore (ch. 698). Chapter 521 amends the compensation law relative to the appearance of representatives before the industrial board, and provides that all license fees must be paid into a special fund, and that the board is empowered to require tests of character and fitness of such representatives.

Porto Rico

By chapter 35 the industrial commission in its purely administrative functions no longer administers the State fund; for violations of any rules and regulations of the commission a fine of not more than \$500 is provided; a new method of financing the industrial commission is also provided and salaries for physicians (commissions') are paid from the workmen's compensation trust fund. Chapter 49 amends three sections (25, 30, 41) of the Porto Rican workmen's compensation law. A judgment by default may now be rendered against an uninsured employer who has been summoned for a hearing and fails to appear; employers are required to report in their pay roll the wages of all employees including those of the independent contractor or subcontractor, except where the former is already covered; the superintendent of insurance is empowered to fix insurance rates so as to cover cases of accidents to laborers employed by insolvent uninsured employers. Additional provisions were made for the liquidation of the "workmen's relief trust fund." The workmen's compensation bureau is now one of the four bureaus of the division of labor created by the departmental reorganization plan.

Virginia

THREE acts were passed in Virginia concerning compensation. By chapter 54 the waiting period was reduced from 10 to 7 days; the benefits were increased in death and disability cases (partial and total) from 50 to 55 per cent of weekly wages; the maximum weekly payments were increased from \$12 to \$14, and the maximum amount from \$4,500 to \$5,600, while the allowance for funeral expenses was increased from \$100 to \$150; in unusual and extraordinary cases the industrial commission may extend the period of medical attention beyond the 60-day period, but not in excess of 180 days. An employer is reimbursed for medical, etc., attention out of the judgment in a successful action by an employee against a third party (ch. 158). The tax on insurance premiums is reduced from 3½ to 2½ per cent by chapter 159.

Recent Workmen's Compensation Reports

Kansas

ACCORDING to the annual report of the Commission of Labor and Industry of Kansas for the fiscal year ending June 30, 1930, accidental injuries arising out of employment were sustained during the year by 1 out of every 14 industrial workers coming under the workmen's compensation act of Kansas.

An estimate by the State commissioner of compensation places the number of employees covered by the act at 175,000—nearly 30 per cent of the total number of gainfully employed persons in the State. Tabulatable injuries—those resulting from employment and disabling the worker for more than the day of occurrence—are shown for the year as 114 fatalities, 396 permanent total and permanent partial disabilities, and 11,797 temporary disabilities, a total of 12,307. This is an increase of 114 accidents over the number occurring during the previous year, but the number of employers operating under the act had increased 954. Fatalities, however, had increased practically 45 per cent—from 79 during the previous year to 114. Seven of the fatalities, 20 of the permanent disabilities, and 1,137 of the temporary disabilities occurred among workers less than 21 years of age.

The annual compensation cost is estimated by the commissioner as approximately \$1,000,000, and the annual medical cost to workmen under the act as upwards of \$500,000. Tabulations show that in 5,726 cases closed by final releases during the year, and including all types of disability, there was a compensation cost of \$713,107.92, an average of \$124.54 per case against an average of \$105.48 per case for the previous year. Medical data furnished for 4,127 of the cases gives the medical cost, including funeral benefits in fatal cases, as \$203,799.22, an average of \$49.37 per case, as compared with an average of \$47.18 for the preceding year.

The majority of the cases were settled by agreement, approved by the commission, and the report shows that only 1 out of every 34 accidents resulted in disputes necessitating hearing or taking of evidence.

Revision of Belgian Workmen's Compensation Law¹

THE Belgian workmen's compensation law of December 24, 1903, which had been amended in 1926 and 1929, was further revised and amended by a law passed June 18, 1930.

In general the law provides for compensation for workers in private and public works who are injured in the carrying out of their labor contract. The law also includes apprentices whether or not they are working for wages and farm workers even when their labor agreements are not governed by the specific law on labor contracts.

The law provides that victims of industrial accidents shall have free choice of a physician and other medical assistance unless the employer maintains a medical, pharmaceutical, and hospital service. Injured persons may, on demand, receive a cash payment equal to

¹ Belgium. *Revue du Travail*, Brussels, July, 1930, pp. 1378-1384.

one-third of the total payment, and in case of permanent partial disability, may demand an annual cash payment when the total yearly payment is less than 300 francs (\$8.34). In the case of apprentices the minimum basic salary on which their compensation is based is fixed at 3,650 francs (\$101.47) per year.

For the purpose of determining the degree of permanent incapacity the justice of the peace where the accident occurred can require, upon the demand of one of the parties, the services in a consultative capacity of an employer in a similar industry to that in which the accident occurred, and of a worker following the same or a similar trade as that of the injured worker.

Independently of the action resulting from the present law, the victim of an accident and his heirs may bring suit under the common law against persons responsible for the accident other than the employer or his employees. In case of the total responsibility of a third party for the accident the employer will be relieved of payment of that part of the compensation which, taken together with that paid by the third party, exceeds the amount which the person would be entitled to under common law. In case of divided responsibility the employer is also relieved of his share of the obligation under the same conditions. Action against a third responsible party may also be taken by the employer, at his own risk, instead of by the injured person or his heirs.

Regulations governing the administration of the law must be issued within a year from the publication of the law and the law will become effective on January 1 following the publication of the last of these decrees.

LABOR LAWS AND COURT DECISIONS

Employee Refusing Medical Treatment Denied Compensation

IF AN injured employee unreasonably rejects proper medical treatment, such refusal defeats any claim for compensation for resulting disabilities, according to the recent decision of the Supreme Court of Utah, in the case of *American Smelting & Refining Co. v. Industrial Commission et al.* (290 Pac. 770).

From the facts in the case it appears that on February 7, 1929, Adolph Ofgren, while engaged in dumping a railroad car, caught his left hand between the dumping lever and the end of the car, sustaining an abrasion to his thumb, a badly lacerated index finger, and a laceration of the middle finger, with a fracture of the proximal phalanx. The injuries were dressed by a doctor in Murray, Utah, and Ofgren was instructed by his employer to report to Dr. W. N. Pugh, of Salt Lake City, to have the fracture reduced. The injured employee would not permit Doctor Pugh to reduce the fracture either with or without anæsthetic, therefore the doctor simply applied a dressing. Because of his refusal of proper medical aid he contracted an infection, resulting in the entire loss of the great finger of the left hand and approximately 33½ per cent loss of function of his hand.

As a result of this disability the employer, the American Smelting & Refining Co., was ordered to pay Ofgren compensation at the rate of \$13.02 per week for 25 weeks. The employer thereupon appealed to the Utah Supreme Court to have the award annulled, contending that Ofgren's refusal of proper medical treatment relieved the company from further liability.

The court said the general rule deducible from the cases cited by the employer in support of its contention was this:

If an injured employee unreasonably refuses to submit to proper medical treatment, and as a result his disability or injury is rendered greater or permitted to continue, then such disability or injury as is caused by the unreasonable refusal to submit to treatment is said to be attributed to the voluntary act of the employee and not to the accident. In determining what constitutes a reasonable and what an unreasonable refusal to submit to medical treatment, the facts and circumstances of the particular case must be inquired into.

After considering the facts and circumstances of the present case, the court concluded that the facts as found by the commission did not constitute a reasonable excuse for the refusal of medical treatment. In rendering the decision annulling the award of the industrial commission, the court said in part:

The injured workman should be held to the duty of submitting to proper treatment either medical or surgical when it involves no serious risk or suffering and when it is such as a man of ordinary manly character would undergo for his own good. (*Jendrus v. Detroit Steel Products Co.*, 178 Mich. 265, 144 N. W. 563.)

It is urged in support of the award that Mr. Ofgren was suffering severe pain and was only semiconscious when he refused the proffered treatment, and that

he was not aware of the probability that serious results would follow his refusal to submit to the treatment. * * * If the commission believed that Mr. Ofgren was only semiconscious at the time he refused the treatment, or if the commission believed that he did not know or have good reason to believe that serious consequences would probably follow his refusal to accept the proffered treatment, then such fact or facts were proper for the commission to consider in connection with all the other facts and circumstances surrounding the refusal in determining whether the applicant acted reasonably or unreasonably in his refusal to submit to the proposed treatment. The only facts found were that Mr. Ofgren refused the proffered treatment because he was timid and probably oversensitive to pain. Such facts alone do not constitute a legal excuse for the refusal of Mr. Ofgren to submit to the proper medical treatment.

A dissenting opinion was rendered by Mr. Justice Folland, who contended that the award should be affirmed since Ofgren's refusal was not the cause of the injury. Mr. Chief Justice Cherry also concurred in this view.

LABOR ORGANIZATIONS AND CONGRESSES

Benefit Services of Standard National and International Unions, 1929

THE accompanying table shows the benefits of standard national and international trade-unions for 1929. The figures are taken from the report of the Executive Council of the American Federation of Labor to the 1930 convention of that organization and are given here to the nearest dollar.

BENEFIT SERVICES OF STANDARD NATIONAL AND INTERNATIONAL TRADE-UNIONS, 1929

Organization	Benefits paid					
	Sick	Death	Un-employment	Old-age pensions	Disability	Miscellaneous
American Federation of Labor						\$5,061
Actors and Artistes of America, Associated	(1)	(1)	(1)	(1)	(1)	(1)
Asbestos Workers, Int. Assn. of H. and F. I.	(1)	(1)	(1)	(1)	(1)	(1)
Bakery and Confectionery Workers I. U. of A.	\$124,803	\$22,419				4,302
Barbers, International Union of, Journeymen	235,250	98,457				
Bill Posters and Billers of America, Int. All. of	(1)	(1)	(1)	(1)	(1)	(1)
Blacksmiths, Drop Forgers and H., Int. Brotherhood of	14,000					90
Boiler Makers, Iron Ship Builders, and H. of A., I. B. of	² 1,814	³ 222,250				3,249
Bookbinders, International Brotherhood of		43,000				
Boot and Shoe Workers' Union	57,757	36,000			\$6,050	25,075
Brewery, Flour, Cereal, and S. D. W. of A., I. U. of U.	(1)	(-)	(1)	(1)	(1)	(1)
Bricklayers, Masons, and Plasterers' I. U. of A.		362,746		⁴ \$732,730		
Brick and Clay Workers of America, The United	⁵ 4,600	⁶ 13,200				⁵ 1,350
Bridge and Structural Iron Workers' Int. Assn.		65,300		³ 130,025		
Broom and Whisk Makers' Union, International						
Building Service Employees' International Union	(1)	(1)	(1)	(1)	(1)	(1)
Carmen of America, Brotherhood Railway		122,050			10,500	10,000
Carpenters and Joiners of America, U. B. of	100,000	746,677			47,300	70,000
Carvers' Assn. of N. A., International Wood		5,150				25
Cigarmakers' International Union of America		130,000			2,615	2,711
Clerks, National Federation of Post Office	⁶ 51,962	⁶ 67,500				
Clerks, Brotherhood of Railway		322,400				
Clerks, International Protective Assn., Retail		6,475				
Cloth Hat, Cap, and Millinery Workers' Int. Union	5,304		\$37,840			
Conductors, Order of Sleeping Car		23,000			1,450	
Coopers' International Union of North America		3,475				
Diamond Workers' Protective Union of America	4,092	4,500	9,463			

¹ No international benefits.

² Includes old-age pensions.

³ Includes disability benefits.

⁴ Includes widows' relief.

⁵ Paid by local unions.

⁶ Includes local union benefits.

BENEFIT SERVICES OF STANDARD NATIONAL AND INTERNATIONAL TRADE-UNIONS, 1929—Continued

Organization	Benefits paid					
	Sick	Death	Un-employment	Old-age pensions	Disability	Miscellaneous
Draftsmen's Union, I. F. of T. E. A. and Electrical Workers of America, Int. Brotherhood of	(1)	(1)	(1)	(1)	(1)	(1)
Elevator Constructors, International Union of		\$319,555		\$18,480		
Engineers, Brotherhood of Locomotive	(1)	(-)	(1)	(1)	(1)	(1)
Engineers, International Union of Operating	\$97,233	3,417,505		\$2,089,752	\$131,816	\$165,633
Engravers' Union, International Metal	21,400	162,475				4,125
Engravers' Union of N. A., International Photo		500				
Federal Employees, National Federation of	29,013	74,400				104,048
Fire Fighters, International Assn. of	(1)	(1)	(1)	(1)	(1)	(1)
Firemen and Enginemen, Brotherhood of Locomotive	(1)	(1)	(1)	(1)	(1)	(1)
Firemen and Oilers, Int. Brotherhood of Stationary	859,268	1,104,698		245,358	385,750	62,547
Foundry Employees, Int. Brotherhood of	12,685	15,000				600
Fur Workers' Union of the U. S. and Canada, Int.		1,400				
Garment Workers of America, United		32,900				
Garment Workers' Union, Int. Ladies	17,085	1,125	\$19,867	2,180		
Glass Bottle Blowers' Assn. of the U. S. and Canada	⁵ 4,500	45,500				
Glass Cutters League of America, Window		3,000				680
Glass Workers' Union, American Flint		34,385				
Glove Workers' Union of America, International	(1)	(1)	(1)	(1)	⁵ 50	(1)
Granite Cutters' International Association of A.		71,378		17,808		8,294
Hatters of North America, United		33,537				
Hod Carriers', Bldg. and Com. Lab. U. of A. Int.		47,500				
Horse Shoers of U. S. and Canada, I. U. of Journeymen	(1)	(1)	(1)	(1)	(1)	(1)
Hotel and Restaurant Employees and B. D. I. A.		22,550				
Iron, Steel, and Tin Workers, Amal. Assn. of		39,470				
Jewelry Workers' Union, International	(1)	(1)	(1)	(1)	(1)	(1)
Lathers, International Union of Wood, Wire and Metal		32,247				
Laundry Workers, International Union	⁵ 3,987	⁵ 2,300				3,300
Leather Workers, United, International Union	800	1,400				
Letter Carriers, National Association of	³ 165,163	156,168				
Letter Carriers, National Federation of Rural	(1)	(1)	(1)	(1)	(1)	(1)
Lithographers, I. P. and B. A. of the U. S. and Canada		37,900				56,125
Longshoremen's Association, International	(1)	(1)	(1)	(1)	(1)	(1)
Machinists, International Association of		225,429			10,000	31,326
Maintenance of Way Employees, Brotherhood of		206,595				
Marble, Slate, and Stone P. R. and S., T. and M. S. H., I. A.		4,700				
Masters, Mates, and Pilots of America, Nat. Org.	(1)	(1)	(1)	(1)	(1)	(1)
Meat Cutters and Butcher Workmen of N. A., Amal.		22,450				
Metal Workers, Sheet, International Association		57,920				11,443
Mine, Mill, and Smelter Workers, Int. Union of	³ 11,909	6,433	125			537
Mine Workers of America, United		⁵ 1,000,000				
Molders' Union of North America, International	167,984	320,871	45,458		26,300	
Musicians, American Federation of	(1)	(1)	(1)	(1)	(1)	(1)
Oil Field, Gas Well, and Refinery Workers of America		8,000				
Painters, Decorators, and Paperhangers of A., Brotherhood of		254,000			145,225	69,185
Paper Makers, International Brotherhood of		3,630				
Pattern Makers League of North America	7,053	³ 8,925	4,164			4,725

¹ No international benefits.³ Includes disability benefits.⁴ Includes widows' relief.⁵ Paid by local unions.

BENEFIT SERVICES OF STANDARD NATIONAL AND INTERNATIONAL TRADE-UNIONS, 1929—Continued

Organization	Benefits paid					
	Sick	Death	Un-employment	Old-age pensions	Disability	Miscellaneous
Pavers, Rammermen, F. L., B. and S. C. S., I. U. of.....	(1)	(1)	(1)	(1)	(1)	(1)
Paving Cutters Union of the U. S. of A. and Canada.....		\$4, 475				\$1, 447
Piano and Organ Workers Union of America, Int.....	(7)	(7)	(7)	(7)	(7)	(7)
Plasterers Int. Assn. of the U. S. and Canada, Operative.....		90, 225			\$3, 600	
Plumbers and Steamfitters of the U. S. and Canada, U. A. of.....	\$161, 010	123, 021				12, 162
Polishers, Metal, International Union.....		10, 175				9, 125
Potters, National Brotherhood of Operative.....	7, 948	15, 920				80, 814
Powder and High Explosive Workers of America, United.....	(7)	(7)	(7)	(7)	(7)	(7)
Printers, D. S. and E. Union of N. A., I. Plate.....		7, 197				
Printing Pressmen and Assistants U. of N. A., Int.....		135, 667		\$62, 104		18, 242
Pulp, Sulphite and Paper Mill Workers of U. S. and Canada, Int. Brotherhood of.....			\$800			1, 400
Quarry Workers, International Union of N. A.....	363	2, 125		650		
Railroad Trainmen, Brotherhood of.....	513, 111	3, 194, 277	13, 743	280, 820	1, 656, 565	2, 184, 626
Railway Conductors of America, Order of.....		1, 874, 708			107, 500	349, 820
Railway Employees of A., A. A. of Street and Electric.....	5 124, 576	6 920, 076	139, 861	5 101, 600	28, 600	
Railway Mail Association.....		78, 388		15, 497	97, 517	2, 000
Roofers, Damp and Waterproof Workers of A., U. S. T. and C.....		17, 400				3, 500
Seamen's Union of America, International.....	5 9, 978	5 8, 040	45		5 450	5 7, 603
Siderographers, International Association of Stage Employees and M. P. M. O. of the U. S. and Can.....	(1)	(1)	(1)	(1)	(1)	(1)
Stereotypers and Electrotypers' Union of N. A., Int.....		29, 100				
Stonemasons Association of N. A., Journeymen.....		20, 000				
Stone Mounters' International Union.....		11, 500	2, 740			
Switchmen's Union of North America.....		181, 300			45, 900	
Tailors' Union of America, Journey.....	13, 029	6, 681				
Teachers, American Federation of.....		5 4, 000				
Teamsters, Chauffeurs, S. and H. of A., I. B. of.....	(1)	(1)	(1)	(1)	(1)	(1)
Telegraphers, Order of Railroad.....		309, 293				8, 430
Telegraphers' Union of N. A., The Commercial.....		3, 625				45, 702
Textile Workers of America, United.....		10, 300				48, 640
Tobacco Workers' International Union.....	2, 464	400				
Typographical Union, International.....		473, 887		1, 185, 024		528, 749
Upholsterers' International Union of N. A.....	(1)	(1)	(1)	(1)	(1)	(1)
Wall Paper Crafts of North America.....	5 599	2, 500	2, 657			
Weavers' Protective Association, American Wire.....	5 1, 200	200				
Total 9.....	2, 831, 937	17, 598, 287	276, 718	4, 883, 028	2, 707, 188	3, 945, 288

¹ No international benefits.

⁵ Paid by local unions.

⁶ Includes local union benefits.

⁷ No report submitted.

⁸ Permanent disability benefits.

⁹ In some cases the total is not the exact sum of the items, but is as given in the report.

Amalgamated Clothing Workers' Factory in Milwaukee

THE origin, progress, and significance of the Amalgamated Clothing Workers' factory in Milwaukee form the subject matter of a recent article in the Harvard Business Review.¹ As a background

¹ Harvard Business Review, October, 1930, pp. 89-100: "The Clothing Workers' Factory in Milwaukee," by Lyle W. Cooper.

for a discussion of the union-operated factory, the author reviews the conditions which led the membership of the union in 1928 to turn producers when the firm of David Adler & Sons, of Milwaukee, initiated a lockout in accordance with a decision to inaugurate an open-shop policy.

In the article under review it is stated that the union was motivated by two lines of reasoning in opening its own factory: (1) Employment could thereby be furnished for at least a portion of the employees locked out by the Adler Co.; and (2) the Adler Co. might be influenced to resume collective bargaining with its employees when confronted with the prospect of permanently losing its old employees.

Organization and Machinery

OF THE 800 employees involved in the Adler lockout, it was possible to place 235 in the Amalgamated factory. The opening of the factory came in October, 1928, or six months after the lockout which had occurred in April, 1928. During the period between lockout and factory opening the union had rented space, set up the necessary machinery for production, and secured a contract with Hart, Schaffner & Marx whereby it was agreed that the Milwaukee workers should manufacture clothing on contract for the Chicago firm. Under the plan adopted the union retains control of the enterprise; that is, setting piece rates, arrangement of hours, layout of plant, supervision, and discipline are under union control. One employee in the plant who inspects finished garments is on the Hart, Schaffner, & Marx pay roll and one operation, cutting, is carried on in the Chicago shops of Hart, Schaffner & Marx.

Problems Encountered

WHEN the union undertook to produce under contract for Hart, Schaffner & Marx the problem of retraining workers arose. As long as the workers remained in the employ of the Adler Co. much of their work was done by hand, but in their own factory it became necessary to replace hand by machine processes in many instances to conform with the requirements of the "X-construction" plan instituted in other Hart, Schaffner, & Marx factories through the cooperation of management and the union. According to the article under review, the "X-construction" plan involves "a more minute subdivision of labor, a large substitution of machine work for hand operations, a marked reduction in the number of styles, and improvements in the routing of material through the plants. * * * Generally speaking, what occurred was the inauguration of the recently widely discussed process of 'rationalization.'" To make the transition from hand to machine work it was necessary for those in authority to proceed so as to create a minimum of friction. The supervisory staff set a weekly quota of 1,000 units (each unit consisting of a coat, a vest, and two pairs of trousers) for the first two weeks. The normal quota of 1,500 units was soon attained and at the end of seven months the mark of 1,600 was approximated.

In opening the Milwaukee factory the greatest uncertainty was felt with regard to the problem of dealing with workers. As in any

factory, the union-managed factory faces problems in working relations when disagreements arise among workers and grievances against management occur. But up to the present only one worker is said to have been discharged and other cases of disagreement have been referred when necessary to two members of the Chicago staff of the Amalgamated Clothing Workers' Union, who are designated to settle grievances arising in the Milwaukee factory.

Marks of Success

MEASUREMENT of the success of the Milwaukee factory in terms of money shows an advantage for the worker in the union-owned Milwaukee factory as compared with his earlier position as an employee of the Adler Co. The article here reviewed states that weekly earnings taken as a whole are substantially higher for the worker in the union factory even after a 10 per cent deduction is made from wages for the benefit of those among the original 800 Adler employees who have not been placed and some payment is made on the Amalgamated's original investment in the factory, which exceeded \$75,000. Exceptions are cited, namely, for those few workers who earn less on mechanized processes than they did formerly when engaged on hand operations. Passing from a consideration of short-term earnings to relatively long-term earnings, that is, for a year, it is stated that income on an annual basis is considerably enhanced. This is made possible not only because piece rates are high (91 to 92 cents an hour, with an actual work week averaging 40 hours) but because work in the new factory is much steadier than in the old. One evidence that earnings are high and work steady is that employees, especially married women, who comprise more than half of the force, take time off at their own expense.

No less significant is the evidence of success which may not be reduced to a dollar and cents value, namely, the personal satisfaction of the workers which Professor Cooper found through contact with the employees in the factory. Whether this satisfaction is due to the fact that the workers take pleasure in working in their own shop or because they feel they are not being watched all the time, the author found it impossible to say.

Future Possibilities

ACCORDING to the article reviewed, the evidence given is sufficient to indicate that the Milwaukee factory has worked out in the hoped-for manner. Nevertheless it is brought out that the union assumes no responsibility for marketing its product and is not therefore carrying on a complete business. Looking forward to a time when the contract with Hart, Schaffner & Marx might be terminated, it is asked what outlet the Milwaukee factory might find for its goods. One answer to this query is thought to lie in selling the Milwaukee-made clothing of the union factory to a retail shop that has already been opened in Milwaukee, and to others similarly organized. The Milwaukee shop was organized largely through the efforts of individuals intimately involved in the management of the factory, and although none of the clothes sold in the retail shop now come from

the Milwaukee factory, some of those interested in both projects look forward to the possibility of such a connection should the Hart, Schaffner & Marx contract come to an end.

Conclusions

IN CONCLUSION the author states that the union has forged a new weapon in creating its own factory, whereby its position will be strengthened in coping with future situations where employers decide that they will not deal with workers under union agreement. He believes also that the demonstration of the union's ability to operate an industrial unit should stimulate the tendency to look to the union for aid in solving production problems. The action of Hart, Schaffner & Marx in entering into a contract with the Milwaukee factory is taken as evidence that the union has proved to this company that it is essential in stabilizing labor costs in the highly competitive clothing industry.

Meeting of Canadian Trades and Labor Congress, 1930

THE forty-sixth annual convention of the Trades and Labor Congress of Canada opened at Regina, Saskatchewan, on September 8, 1930.¹ According to the report of the secretary-treasurer, the paid-up membership of the organization at the close of the fiscal year ending August 31, 1930, was 138,887—an increase of 12,249 over the number reported the preceding year.

Included among the subjects discussed in the report of the executive council to the convention were: The legislative program submitted by the council to the Dominion Government; a review of the 1930 regular session of the Canadian Parliament, reference being made to legislative measures of direct interest to trade-unionists; reports of provincial executives and federations of labor affiliated with the congress; the relations of the congress with national and international bodies; the importance of uniformity in social and labor legislation; the passage by the Federal Parliament of the measure regarding the payment of fair wages and the observance of an 8-hour day on Dominion public works; representations by the council to the royal commission on radio broadcasting expressing the opinion that air control should remain in the hands of the people; the greater need for the creation of a Dominion council on immigration to coordinate Federal and provincial colonization activities and to recommend immigration policies adapted to changes in conditions; unemployment and unemployment insurance.

In taking up the last-mentioned subject, the committee on officers' reports recommended that the incoming executive council continue to request a national system of unemployment insurance; that immigration be restricted to a minimum; that the importation of labor to the Dominion be permitted only after requests for such labor are bulletined in all cities by the Canadian Employment Service; that the Federal and provincial governments be asked to enact measures for the establishment of a shorter workday and a 5-day week, and that such provisions be inserted at once in all Government contracts

¹ Labor Gazette, Ottawa, October, 1930, pp. 1159-1167.

and for work subsidized by such governments. The committee also reiterated the preceding decisions of the congress that in the reduction of working hours there shall be no reduction in aggregate earnings.

Adopted Resolutions

AMONG the resolutions upon which the convention set its approval were those to the following effect:

Safety and health.—Against the dangerous abuse of highways by motor transportation companies, asking (1) for legislation for the licensing of men operating gas or electrically driven shovels, cranes, or similar machines; (2) for enactment of laws to require the owners of automobiles to carry property and accident insurance; (3) for the placing of unloading machines in charge of a certified marine engineer of at least third-class grade, who would be on the engine-room staff and under the chief engineer's supervision; (4) that electrical workers in Ontario be obliged to pass an examination and to receive a license to show their ability to install and maintain electrical wiring and equipment; (5) for the adequate protection of workers in the erection, operation, and supervision of hoisting appliances in building construction; (6) for the protection of workers from various objects on iron and steel structures; (7) for the examination and licensing of plumbers and steam fitters; and (8) for health insurance in all of the Canadian Provinces. It was decided to refer to the Dominion Fire Prevention Association the matter of leaving young children alone at home.

Eight-hour day.—Asking for legislation to provide for an 8-hour day for drivers of trucks, buses, and taxicabs; that an 8-hour day be granted to employees of Dominion penitentiaries; and for the 3-platoon system for fire fighters.

Fair wages on Government contracts.—Asking that provincial executives urge that in contracts for work on which the funds of the Provinces are expended a fair-wage clause be included providing for an 8-hour day and a 44-hour week; approving that legislation be sought to authorize the various departments of labor to make it obligatory upon all commissions and other groups which spend public moneys to conform to the regulations of the departments concerning wages and working conditions.

One day's rest in seven.—Calling attention to certain large industries which in violation of the law were compelling their employees to work seven days per week and requesting that such practice be reported to the proper authorities with a view to the prosecution of those establishments known to be deliberately breaking the law.

Other resolutions.—Asking for the complete abolition of private fee-charging employment offices, and for the extension of the various provincial minimum wage acts to towns and villages which are not covered by such acts; favoring the enactment of legislation for mothers' allowances and maternity benefits in Quebec; requesting amendments to the Quebec and Ontario workmen's compensation acts; in favor of free medical and surgical treatment to all persons in receipt of pensions, and of requesting the Dominion Government to adopt a Federal pension scheme for all needy persons 65 years of age; asking that the Dominion Government be urged to prohibit

all immigration until conditions become normal; favoring the creation of a governmental commission to investigate the high cost of food-stuffs, and of the setting up by the provincial governments of commissions to inquire into the housing of the poorer classes in Canadian cities and towns; and requesting the Federal Government to insert in all contracts a clause demanding that the materials entering into such contracts be manufactured in Canada and, if the requisite materials can not be secured in the Dominion, preference be given to the British Empire.

Officers for 1930-31

TOM MOORE will again serve as president of the congress and P. M. Draper was reelected secretary-treasurer. The 1931 convention will be held in Vancouver, B. C.

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in October, 1930

DATA regarding industrial disputes in the United States for October, 1930, with comparable data for preceding months, are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 shows the number of disputes beginning in 1927, 1928, and 1929, number of workers involved, and man-days lost for these years, the number of industrial disputes for each of the months—January, 1928, to October, 1930, inclusive—the number of disputes which began in these months, the number in effect at the end of each month, and the number of workers involved. It also shows in the last column, the economic loss (in man-days) involved. The number of workdays lost is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working-days as normally worked by the industry or trade in question.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1928, TO OCTOBER, 1930, AND TOTAL NUMBER OF DISPUTES, WORKERS, AND MAN-DAYS LOST IN THE YEARS 1927, 1928, AND 1929

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month or year
	Beginning in month or year	In effect at end of month	Beginning in month or year	In effect at end of month	
1927: Total.....	734	-----	349,434	-----	37,799,394
1928: Total.....	629	-----	357,145	-----	31,556,947
1929: Total.....	903	-----	230,463	-----	9,975,213
1928					
January.....	48	63	18,850	81,880	2,128,028
February.....	52	58	33,441	103,496	2,145,342
March.....	41	47	7,459	76,069	2,291,337
April.....	71	48	143,700	129,708	4,806,232
May.....	80	56	15,640	133,546	3,455,499
June.....	44	46	31,381	143,137	3,670,878
July.....	54	42	18,012	132,187	3,337,386
August.....	59	42	8,887	105,760	3,553,750
September.....	52	34	8,897	62,862	2,571,982
October.....	61	42	27,866	41,474	1,304,913
November.....	44	38	37,840	38,745	1,300,362
December.....	23	29	5,172	35,842	991,238
1929					
January.....	48	36	14,783	39,569	951,914
February.....	54	35	22,858	40,306	926,679
March.....	77	37	14,031	40,516	1,074,468
April.....	117	53	32,989	52,445	1,429,437
May.....	115	73	13,668	64,853	1,727,694
June.....	73	57	19,989	58,152	1,627,565
July.....	80	53	36,152	15,589	1,062,428
August.....	78	43	25,616	6,714	358,148
September.....	98	49	20,233	8,132	244,864
October.....	69	31	16,315	6,135	272,018
November.....	61	32	10,443	6,067	204,457
December.....	33	21	3,386	2,343	95,541

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1928, TO OCTOBER, 1930, AND TOTAL NUMBER OF DISPUTES, WORKERS, AND MAN-DAYS LOST IN THE YEARS 1927, 1928, AND 1929—Continued

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month or year
	Beginning in month or year	In effect at end of month	Beginning in month or year	In effect at end of month	
1930					
January.....	42	21	8, 879	5, 316	182, 202
February.....	44	33	37, 301	6, 562	436, 788
March.....	49	34	15, 017	5, 847	289, 470
April.....	60	41	5, 814	5, 711	180, 445
May.....	64	30	9, 281	4, 640	192, 201
June.....	54	34	13, 791	8, 499	150, 627
July.....	76	31	14, 219	5, 039	148, 982
August.....	51	32	15, 902	7, 161	144, 530
September ¹	69	43	15, 954	13, 476	203, 533
October ¹	41	39	10, 999	16, 549	345, 100

¹ Preliminary figures subject to change.

Occurrence of Industrial Disputes, by Industries

TABLE 2 gives by industry the number of strikes beginning in August, September, and October, 1930, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN AUGUST, SEPTEMBER, AND OCTOBER, 1930

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	August	September	October	August	September	October
Barbers.....	1			650		
Building trades.....	13	15	13	708	691	698
Chauffeurs and teamsters.....	2	1	2	98	23	43
Clerks.....	1	1			19	
Clothing.....	10	10	6	7, 667	4, 302	253
Electric and gas appliance workers.....	1			108		
Farm labor.....		1	1		400	100
Fishermen.....		1			600	
Furniture.....	2	5		56	575	
Iron and steel.....	1			416		
Leather.....	1			25		
Light, heat, power, and water.....		2	1		209	100
Longshoremen.....	1		1	252		3, 000
Metal trades.....	2	4	1	264	110	13
Coal miners.....	6	14	14	4, 135	3, 896	6, 707
Motion-picture operators, actors, and theater employees.....	2	7		26	566	
Paper and paper goods workers.....	1			35		
Printing and publishing.....	1	1		10	13	
Railway workers.....	1			106		
Stone.....	1			40		
Municipal workers.....	1	1		50	200	
Textiles.....	3	4	2	839	4, 220	85
Tobacco.....	1				100	
Other occupations.....	1	1		417	30	
Total.....	51	69	41	15, 902	15, 954	10, 999

Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in October, 1930, classified by number of workers and by industries.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN OCTOBER, 1930, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in October, 1930, involving—				
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers
Building trades.....	2	9	2		
Chauffeurs and teamsters.....	1	1			
Clothing.....	1	5			
Farm labor.....			1		
Light, heat, power, and water.....			1		
Longshoremen.....					1
Metal trades.....	1				
Miners.....		3	7	1	3
Textiles.....	1	1			
Total.....	6	19	11	1	4

In Table 4 are shown the number of industrial disputes ending in October, 1930, by industries and classified duration.

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN OCTOBER, 1930, BY INDUSTRIES AND CLASSIFIED DURATION

Industry	Classified duration of strikes ending in October				
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 months and less than 3 months	8 months and less than 9 months
Building trades.....	9	1			
Chauffeurs and teamsters.....	2			1	
Clothing.....	5		3	1	
Farm labor.....	1				
Furniture.....			2		
Light, heat, power, and water.....	1				
Lumber.....				1	
Metal trades.....	1		2		
Miners.....	6		1		1
Motion-picture operators, actors, and theater employees.....	1		2	1	
Textiles.....	2			1	
Total.....	28	1	10	5	1

Principal Strikes and Lockouts Beginning in October, 1930

Anthracite miners, Pennsylvania.—Protesting against the dismissal of two miners and the filling of their places with younger men, 1,690 miners employed at the Loomis Colliery of the Glen Alden Coal Co., of Wilkes-Barre, are reported to have been on strike from October 22 to October 23, when they returned to work, the officials to fix the terms.

The Susquehanna Coal Co., Glen Lyon, is reported to have been affected by a strike, beginning October 25, of 1,396 miners, because of grievances involving a change of machinery and the discharge of the president of the local union. Under a temporary adjustment effected by November 15 the miners, it is said, will pay the wages of the union president until the dispute is settled.

Longshoremen, Texas.—According to press reports, some 3,000 longshoremen in Galveston, Houston, Corpus Christi, and Texas City were involved in a strike called by the International Longshoremen's Union, effective at those ports at 7 p. m. October 30. The strike was the outgrowth of a disagreement as to the wage rates to be paid for loading vessels employed by Lykes Bros. Steamship Co. in the

West Indies trade. The longshoremen demanded 80 cents an hour for work on those ships. The company proposed to pay only the coastwise rate of 65 cents an hour.

After weeks of negotiation between the interested parties an agreement had been reached to which the Lykes Bros. Steamship Co. was not a party, effective October 12, to continue for one year. This agreement, though not formally signed, carried a wage rate for loading general cargo of 80 cents an hour with overtime at \$1.20.

The men voted on November 2 to return to work on Monday, November 3, at 8 a. m., after agreeing to accept the scale of 65 cents and \$1 for overtime offered by the Lykes Bros. Steamship Co. for ships engaged in the West Indies trade.

All other ships in the foreign trade covered by the agreement arranged between the maritime committees of the Houston and Galveston cotton exchanges and the Master Stevedores' Association on the one hand and the International Longshoremen's Association on the other hand, effective October 12, will continue to pay the basic wage scale of 80 cents per hour for straight time and \$1.20 for overtime.

Two working-days were lost on account of the strike and some 30 vessels were tied up.

Principal Strikes and Lockouts Continuing into October, 1930

Women's tailors and dressmakers, New York City.—The strike of some 2,500 workers which began on September 25 continues in part. The seven Fifth Avenue firms, members of the Couturiers' Association, still insist upon the right to discharge their employees without review.

Miss Frances Perkins, the State industrial commissioner, in an effort to settle the strike, suggested that the manufacturers content themselves with a 5 per cent discharge right. This proposal was accepted by the general strike committee of Local No. 38 of the International Ladies' Garment Workers' Union, but the Couturiers' Association rejected it on November 7.

Textile workers, Virginia.—The strike at the Riverside and Dan River Cotton Mills (Inc.), which began on September 29, still continues.

Conciliation Work of the Department of Labor in October, 1930

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 28 labor disputes during October, 1930. These disputes affected a known total of 12,460 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On November 1, 1930, there were 37 strikes before the department for settlement and in addition 13 controversies which had not reached the strike stage. The total number of cases pending was 50.

LABOR DISPUTES HANDLED DURING THE MONTH OF OCTOBER, 1930

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Building, Detroit, Mich.	Strike	Bricklayers	Wages cut from \$1.57½ to \$1.25 per hour.	Adjusted. Nearly all contractors paying \$1.57½.	1930 Sept. 9	1930 Oct. 8	500	2,200
H. D. Bob Shirt Co., Tamaqua, Pa.	do	Shirt makers	Wage cut.	Unclassified. Wages restored before commissioner's arrival.	Sept. 20	Oct. 2	300	-----
Phoenix Shirt Co., New York City	do	do	Objection to sending work to shops in alleged violation of agreement.	Adjusted. 25 per cent of certain work must be done in New York City between November and February.	Sept. 8	Oct. 7	53	3
Iron City Engineering Corporation, Pittsburgh, Pa.	do	Electricians	Dispute relative to union or nonunion labor.	Adjusted. Satisfactory settlement; men returned to building jobs.	Oct. 2	Nov. 6	146	100
Pennsylvania Branch of Association for Blind, Wilkes-Barre, Pa.	Threatened strike.	Blind people working on mattresses, chairs, etc.	Wages; discharges.	Adjusted. Workers reinstated, wage increase, and improved conditions.	June 10	Oct. 17	25	-----
Painters and other building crafts, Youngstown, Ohio.	Strike	Painters, etc.	Wages; part accepted \$11 instead of \$13 per day.	Adjusted. Resume work pending negotiations on wage scale.	June 1	Sept. 1	50	-----
Althouse Mines, Lonaconing, Md.	do	Miners	Asked conference on wages, etc.; refused.	Unable to adjust.	Oct. 1	Oct. 17	300	25
Radcliff Shoe Co., Brooklyn, N. Y.	do	Shoe workers	Agreement and working conditions.	Adjusted. Employer signed stamp contract providing arbitration.	Sept. 10	Sept. 20	50	2,350
Frank Desiderio, Newark, N. J.	do	Truck drivers	Asked wage increase, shorter hours, and recognition.	Adjusted. Allowed recognition and 33 per cent increase.	Oct. 4	Oct. 6	35	2
Hoisting engineers and structural-iron workers, Bernardsville, N. J.	do	Building	Asked \$4 per day transportation allowance; engineers struck in sympathy.	Adjusted. Resumed work pending further negotiations.	do	-----	22	12
Embroidery workers, New York City.	do	Embroidery	Asked 40-hour week and \$45; union conditions.	Adjusted. Returned; terms fixed later.	Sept. 19	Oct. 30	75	-----
Apple packers, Hood River, Oreg.	do	Apple packers	Wages and working conditions.	Adjusted. Returned but conditions not satisfactory.	Oct. 13	Oct. 14	100	1,000
Universal Roofing Co., Chicago, Ill.	do	Roofers and tile setters.	Company refused to join local association.	Pending.	do	-----	15	-----
World's Fair Administration Building, Chicago, Ill.	do	Carpenters	Objection to electricians setting base.	Adjusted. Base-cover work to be done by carpenters; other base work awarded to electricians.	Oct. 14	Oct. 29	30	-----
Jewish markets, The Bronx, N. Y.	do	Chicken pluckers	Asked minimum wage, \$25 per week; present wage, \$12 to \$14.	Pending.	Oct. 13	-----	500	-----
Silk workers, Wilkes-Barre, Pa.	do	Silk workers	Wages cut from 48 to 36 cents per hour.	Adjusted. Allowed 40 cents per hour.	Oct. 1	Oct. 23	67	250

[FLP]

Taylor Allardice High School, Pittsburgh, Pa.	do	Steamfitters	Operation of steam-heat valves.	Adjusted. Engineers of building will operate valves instead of steam fitters at work on building.	Oct. 14	Oct. 20	2	2
Glen Alden Coal Co., Wilkes-Barre, Pa.	do	Miners	Two discharged	Adjusted. Returned; officials to fix terms.	Oct. 22	Oct. 23	1,690	10
Allegheny General Hospital, Pittsburgh, Pa.	do	Iron workers and steamfitters.	Jurisdiction	Adjusted. Held in abeyance until unions determine jurisdiction.	Oct. 16	Oct. 20	49	-----
Warner Quinlan Oil Co., Mount Vernon, N. Y.	do	Truck drivers	New wage scale; union recognition.	Adjusted. Returned without change.	Oct. 18	do	27	15
Leather workers, Philadelphia, Pa.	Control- versy.	Leather workers	Asked 8-hour day instead of 9.	Adjusted. Agreed to make two-weeks' test.	Oct. 20	Oct. 24	40	220
Building, Seattle, Wash.	Strike	Building	Refused to pay union scale.	Adjusted. Union workers employed and union wages paid.	Oct. 27	Oct. 27	45	80
Susquehanna Coal Co., Glen Lyon, Pa.	do	Miners	Dispute as to operation of new machinery.	Adjusted temporarily	Oct. 25	Nov. 15	1,396	8
Upholstery workers, Boston, Mass.	do	Upholsters	Asked minimum wage of \$1.10 per hour and union recognition.	Adjusted. Three shops granted the demands.	Sept. 2	Oct. 8	300	-----
Billy Boy Co., New York City	Strike-lock- out.	Boys' clothing	Prices for piecework, sending work to nonunion shops, and working conditions.	Pending	Sept. 15	-----	40	5
U. S. Veterans Hospital, Bernardsville, N. J.	Strike	Ironworkers, hoisting engineers, and laborers.	Jurisdiction, etc.	Adjusted. Ironworkers allowed daily transportation and jurisdiction of all crafts fixed.	Oct. 24	Oct. 30	250	50
Hat and cap workers, New York City.	Threatened lockout.	Hat and cap workers.	Desire conference with unions.	Pending	Oct. 28	-----	(1)	-----
New Idea Infant Wear Co., New York City.	Strike	Infants' clothing	Report not yet received	do	(1)	-----	30	-----
Total	-----	-----	-----	-----	-----	-----	6,128	6,332

¹ Not reported.

Strikes Following Application of French Social Insurance Act¹

THE new system of social insurance in France² came into effect on July 1, 1930. The law provided for contributions amounting on the average to 8 per cent of wages, divided equally between employers and employees. This deduction from wages was vigorously opposed by the communist group, which urged wholesale opposition on the part of the workers to the deduction of the tax from their wages. The unions affiliated to the General Confederation of Labor (C. G. T.) and the Christian unions, on the other hand, while not entirely satisfied with the law, were in general in agreement with the principles on which it was based and approved of the participation by the workers in the contributions to the insurance system.

The law went into operation with only a few small strikes or threats of strikes, which were soon settled, in spite of the violent measures advocated in public appeals by the members of the C. G. T. Unitaire—the radical branch of the confederation. On the first day the number of persons registering under the law numbered approximately 6,800,000 out of a probable 8,500,000.

A series of strikes broke out the second week in July, however, in the north of France, notably in Lille and Armentieres, among the metal and textile workers, who demanded an increase in wages sufficient to offset the deductions on account of the insurance. The movement quickly spread to the textile mills of Roubaix-Tourcoing and the surrounding industrial region. In Lille the metal workers had for some time been demanding an increase in wages, and the unions considered that the inauguration of the social insurance law furnished additional justification for their demands, which had been based on the increase in the cost of living shown by the figures of the departmental joint committee on prices. In general the demand was for an increase in wages of 25 centimes (0.98 cent) per hour, and a general strike to enforce the demand was called on July 22. In Roubaix-Tourcoing the demand for an increase in wages was met by a proposal by the Consortium of the Textile Industry—the employers' organization—to institute a "fidelity bonus" to reimburse the workers for their contributions. The fidelity bonus was to be given after one year's continuous service in the same undertaking and was to be payable annually, upon the application of the worker, on the anniversary of his entrance into the factory. Loss of the bonus would have followed interruption of work as a result of voluntary unemployment, resignation, or dismissal, and the worker therefore would forfeit the bonus if he had a single day of unauthorized leave during the year. Authorized absences included those caused by military service, involuntary unemployment, and illness. The members of the C. G. T. and of the free syndicates (Christian) in their counter-demands stated that while the deductions from wages and the increase in the cost of living should be compensated by an increase in wages, the fidelity bonus could be accepted only if the condition as to regular attendance was removed and if it was separated from all conditions which rendered it incompatible with the dignity and freedom

¹ International Labor Office. Industrial and Labor Information, Geneva, Oct. 6, 1930, pp. 20-23, and various French newspapers, including *La Journée Industrielle* and *L'Information Sociale*.

² See *Labor Review*, September, 1930, pp. 76-87.

of labor. Although the strike had been slowly spreading throughout July, a general strike was not called by the C. G. T. in this district until August 4, after representatives of the employers and of the unions had failed to reach an agreement. The Christian unions, while strongly opposed to the fidelity bonus, considered that it was not an opportune time for a strike, and therefore did not support the strike, but advocated compulsory arbitration for the settlement of the question. The stoppage of work, however, was fairly general, and at one time it was reported that more than 100,000 workers in that region were on strike.

Settlement of the Strikes

THE strike at Lille was settled on August 21, both sides agreeing to accept the decision of the arbitrator and to apply it as from August 22. The Minister of Labor met the representatives of the employers' and of the workers' organizations in both the textile and metal industries in Lille on August 21 and the agreement was concluded providing for an increase in wages of $12\frac{1}{2}$ centimes (0.49 cent) per hour for workers of all classes in the metal industry. Work was resumed in that industry the following day. In the textile industry, which was not in so good a financial condition as the metal industry, the agreement merely provided for an immediate resumption of work by the striking employees, with provision for a reexamination of the question of the wages in relation to the cost of living. The arbitrator was instructed to secure all information in regard to the increase in living costs since May, 1930, and if an increase in wages was found to be justified to determine the amount of the increase, both parties to the decision agreeing to accept the decision of the expert. This revision of the wage scale would not be made, however, until October, when the half yearly report of the cost-of-living commission was available. In Armentieres an immediate examination of the question was provided for, the employers agreeing that if the prefect of the department found that the cost of living had increased since May, 1930, he should decide whether the condition of the industry would allow an increase in the wages; and if so, what this increase should be. This increase, if granted, would be retroactive to the time that work was resumed.

In the Roubaix-Tourcoing district the employers proposed, on August 22, that the fidelity bonus should be changed so as to allow absence from work for reasons other than authorized causes. It was also proposed to eliminate the clause providing for nonpayment of the bonus in case of a strike, to establish a joint commission to consider complaints and abuses in connection with the application of the bonus, and finally to change the "fidelity bonus" into an "attendance bonus." Negotiations continued until September 11, when an agreement was concluded which provided that the "attendance bonus," the amount of which is not mentioned in the available sources, would be payable for the first time at the end of the first year of employment, but that after the first 12 months the bonus would be incorporated with the wage and would be payable at the same time. There would be no waiting period, therefore, for workers who had already been employed one year or more in the same factory, but

they would be entitled to receive the attendance bonus at once. For persons who had not completed a full year's employment in one factory the probationary period would date from the beginning of their employment in the factory, but in case of unemployment within that period, the worker, upon being reemployed, would need only to complete his 12 months in the factory in order to be entitled to the bonus. Furthermore, the attendance bonus would be paid automatically to the worker and not on the application of the worker as the plan for the fidelity bonus had provided.

The agreement, which was therefore a compromise, was not regarded as a victory by either side, although the employers considered that the requirement of a year's attendance in the same factory in order to be entitled to the bonus would have a stabilizing effect on the workers, thus reducing the excessive turnover. The strike committee, in an official announcement issued at the close of the strike, stated that most important concessions had been obtained in regard to the former "fidelity bonus," particularly as regards the right to be absent from work without loss of the bonus on account of a strike, sickness, accident, maternity, etc., while disputed claims or questions, instead of being settled by the employers, would be submitted to a mixed commission, to the trade council or to the arbitration of the divisional inspector of labor or even to the Minister of Labor. The promise of the early settlement of cases relating to older persons not subject to the social insurance law was obtained, together with the assurance of an increase in wages at an early date. While the committee admitted that a better settlement on different questions should have been secured, it stated that it should not be forgotten that the increase comprised in the bonus would be immediately available to 90 per cent of the workers while the 10 per cent remaining had received considerable concessions.

Strike of Aviation Pilots in Netherlands ¹

ON AUGUST 29, 1930, 17 pilots of the Royal Netherlands Aviation Co. went on strike for higher wages and insurance. A senior pilot receives a wage which together with various other allowances amounts to about \$5,000 per year. In addition the company pays the premiums on a pilot's life insurance policy of \$4,000.

A Government intermediary finally succeeded in putting an end to the strike by persuading the pilots to resume work under the same conditions as before. The management of the company, however, agreed to revise the wage and insurance conditions in the near future and to substitute legal written contracts for the former oral agreements. These new contracts will be drafted by a committee of three, one of whom will represent the company, the second the labor union of the aviation pilots, and the third the Ministry of Public Works.

¹ Reports of Mr. Hallett Johnson, U. S. Chargé d'Affaires at The Hague, Netherlands, dated Sept. 4 and 17, 1930.

LABOR AWARDS AND DECISIONS

Arbitration Awards

Photo-Engravers—Cincinnati, Ohio

THE International Arbitration Board of the American Newspaper Publishers' Association and the International Photo-Engravers' Union (Frederick Van Nuys, chairman) made an award on July 1, 1930, in a dispute between the Cincinnati Daily Newspaper Publishers' Association and Photo-Engravers' Union No. 13.

Complying with the provision in their 3-year agreement made April 19, 1926, which requires that either party to the agreement desiring a change at the expiration of the agreement shall give 60 days' notice to the other party, the union gave such notice on February 9, 1929, and proposed a new agreement with a reduction in the number of hours worked weekly and an increase in the weekly wage. The newspaper publishers made a counterproposal that the hours and wages remain the same as in the 1926-1929 agreement. After the special standing committee of the American Newspaper Publishers' Association and the International Photo-Engravers' Union failed to come to an agreement, the arbitrable points were referred to the International Arbitration Board.

The union's proposals are as follows:

Forty hours shall constitute a week's work. These hours to be equally divided into six consecutive days or nights. The hours and days to be designated by the publishers but must be uniform and regular.

The scale of wages for day men shall be \$60 and for night men \$65 for six days' work.

Each office shall have a foreman.

The publishers' proposals are as follows:

Eight hours shall constitute a day's or night's work. Six days in any calendar week shall constitute a week's work.

The scale of wages for day men shall be \$54 and for night men \$57 for six days' work.

In offices employing two or more journeymen, one shall act as foreman.

The union's proposal that each office shall have a foreman was accepted by agreement of all members of the board in open session and incorporated in the award without discussion.

The award of the board is as follows:

Hours.—Forty-four hours shall constitute a week's work exclusive of lunch time. These hours shall be equally divided into six consecutive days and nights. The hours and days to be designated by the publishers must be uniform and regular.

Wages.—The scale of wages for day men shall be \$60 and for night men \$63 for six days' work as hereinbefore defined.

Retroactive.—This award shall be retroactive as to the weekly wage but not as to the overtime worked since April 19, 1929.

Foreman.—Each office shall have a foreman.

Journeyman Barbers—Chicago

THE Master Barbers' Association of Chicago requested that the clause regulating the operating hours of shops be stricken from the agreement of the association and Journeyman Barbers' Union, Local No. 548; that the guaranty be reduced from \$32 per week to \$30 per week and the overmoney be paid at the rate of 50 per cent on all amounts taken in over \$50.

The agreement between the above parties provides:

There shall be a joint committee of members permanently appointed from each body, to meet as often as is necessary in order to adjust any differences that may arise out of this contract, or new conditions that may arise from time to time.

Should there be any disagreement between this joint committee, the committee so selected shall select a third party who is not interested in the barber profession or business who shall act as a referee and his decision to be final.

The joint committee above referred to were unable to agree, and selected B. M. Squires as arbitrator.

On October 27, 1930, the arbitrator made the following decision and recommendations:

On the question of opening and closing time, the arbitrator is doubtful whether a substantial number of master barbers desire a change. Certainly no change in the number of hours is called for and there is no suggestion of a shift system. The arbitrator recognizes that it may be somewhat distasteful to be told when to open and when to close the shop. However, this was a matter of agreement as it is in many other industrial situations and should not be lightly set aside. More pertinent to the situation is the fact that circumstances make it more profitable to have a later closing hour. The arbitrator rules that for the time being the operating schedule is to remain unchanged. If at a later date a majority of the master barbers vote in favor of a change, such vote being subject to inspection by the journeyman barbers' local officials, the change may be made by giving the journeyman barbers 90 days' notice in writing.

In the matter of the guaranteed wage, the arbitrator has given much thought to the contentions of both sides and to data from other centers. He is convinced that in the present situation the guaranty should not be changed. He rules, therefore, that the guaranty shall remain at \$32 per week.

On the issue of the overmoney there is much to be said in favor of the contention of the master barbers that increased rentals and cost of materials leave them with too narrow a margin. The arbitrator does feel that the margin should be greater and rules that the amount over which 60 per cent shall be paid shall be increased from \$44 to \$47. This will afford some relief to the master barbers and should serve as an impetus to the journeymen.

Finally, the arbitrator would suggest that the situation calls not so much for drastic changes in the agreement as for a thoroughgoing analysis of problems and the utmost cooperation in meeting them.

HOUSING

Building Permits in Principal Cities, October, 1930

REPORTS of building permits issued have been received by the Bureau of Labor Statistics from 286 identical cities having a population of 25,000 or over for the months of September and October, 1930, and from 280 identical cities for the months of October, 1929, and October, 1930. These reports cover the corporate limits of the cities enumerated; hence the cost figures presented in the following tables cover erection costs of the buildings for which permits were issued in the specified cities. No land costs are included.

The States of Illinois, Massachusetts, New Jersey, New York, and Pennsylvania, through their departments of labor, are cooperating with the Bureau of Labor Statistics in the collection of these data.

Table 1 shows the estimated cost of new residential buildings, of new nonresidential buildings, and of total building operations in 286 cities of the United States by geographic divisions.

TABLE 1.—ESTIMATED COST OF NEW BUILDINGS IN 286 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN SEPTEMBER AND OCTOBER, 1930, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwellings		September, 1930	October, 1930	September, 1930	October, 1930
	September, 1930	October, 1930	September, 1930	October, 1930				
New England.....	\$3,059,125	\$3,947,400	524	643	\$4,076,009	\$4,902,780	\$9,231,204	\$10,666,692
Middle Atlantic.....	23,000,076	25,413,835	4,226	5,424	28,164,358	11,012,942	58,411,684	44,187,223
East North Central.....	12,280,596	9,365,771	1,601	1,847	19,025,110	16,904,534	35,980,758	29,955,830
West North Central.....	2,233,130	2,052,411	670	533	3,567,152	3,782,912	6,820,867	6,919,889
South Atlantic.....	1,754,136	2,319,852	439	514	3,035,396	3,172,525	6,810,872	7,124,678
South Central.....	3,169,256	3,873,448	946	1,072	5,896,368	4,756,992	10,254,211	9,607,459
Mountain and Pacific.....	7,147,428	6,223,020	2,198	2,013	8,985,119	8,230,478	19,176,170	16,776,004
Total.....	52,643,747	53,195,737	10,604	12,046	72,749,512	52,763,163	146,685,766	125,217,775
Per cent of change.....		+1.0		+13.6		-27.5		-14.6

The estimated cost of buildings for which permits were issued in these 286 cities during the month of October, 1930, was \$125,217,775, a decrease of 14.6 per cent as compared with the estimated cost of building operations for which permits were issued during the month of September, 1930. There was an increase of 1.0 per cent in the estimated cost of the new residential buildings for which permits were issued in October as compared with the permits issued for this class of building during September. New nonresidential buildings decreased 27.5 per cent in estimated cost. New dwellings for which

permits were issued during October, 1930, were to house 12,046 families, an increase of 13.6 per cent over the 10,604 new dwelling units provided by the new dwellings for which permits were issued during September.

Increases in total building operations were shown in the New England States, the West North Central States, and the South Atlantic States. Decreases were registered in each of the other divisions.

There was an increase in the estimated cost of new residential buildings for which permits were issued in the New England States, the Middle Atlantic States, the South Atlantic States, and the South Central States, comparing October with September. New nonresidential buildings registered increases in the New England States, the West North Central States, and the South Atlantic States. The number of dwelling units provided in new residential buildings increased in every district except the West North Central and the Mountain and Pacific.

Table 2 shows the estimated cost of additions, alterations, and repairs as shown by permits issued, together with the percentage of increase or decrease in October, 1930, as compared with September, 1930, in the 286 cities, by geographic divisions.

TABLE 2.—ESTIMATED COST OF ADDITIONS, ALTERATIONS, AND REPAIRS IN 286 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN SEPTEMBER AND OCTOBER, 1930, BY GEOGRAPHIC DIVISIONS

Geographic division	Estimated cost		Per cent of increase or decrease, October, compared with September
	September, 1930	October, 1930	
New England.....	\$2,096,070	\$1,816,512	-13.3
Middle Atlantic.....	7,247,250	7,760,446	+7.1
East North Central.....	4,675,052	3,665,525	-21.6
West North Central.....	1,020,585	1,084,566	+6.3
South Atlantic.....	2,021,340	1,632,301	-19.2
South Central.....	1,188,587	977,019	-17.8
Mountain and Pacific.....	3,043,623	2,322,506	-23.7
Total.....	21,292,507	19,258,875	-9.6

There was a decrease of 9.6 per cent in the estimated cost of the repairs, additions, and alterations for which permits were issued during October, 1930, as compared with the estimated cost of additions, alterations, and repairs for which permits were issued during September, 1930. Decreases were shown in all districts except the Middle Atlantic States and the West North Central States.

Table 3 shows the index number of families provided for and the index numbers of indicated expenditures for residential building; for nonresidential buildings; for alterations and repairs; and for total building operations. These indexes are worked on the chain system with the monthly average of 1929 equaling 100.

TABLE 3.—INDEX NUMBERS OF FAMILIES PROVIDED FOR AND OF THE ESTIMATED COST OF BUILDING OPERATIONS AS SHOWN BY PERMITS ISSUED IN PRINCIPAL CITIES OF THE UNITED STATES (MONTHLY AVERAGE, 1929=100)

Month	Families provided for	Estimated costs of—			
		New residential buildings	New non-residential buildings	Additions, alterations, and repairs	Total building operations
1929					
October.....	64.4	61.6	107.9	115.2	85.7
November.....	51.7	44.8	89.6	95.2	68.1
December.....	35.9	30.2	74.3	66.1	51.7
1930					
January.....	34.2	29.4	64.3	55.1	46.1
February.....	43.0	34.7	51.8	57.5	44.1
March.....	57.1	47.2	87.1	77.5	66.4
April.....	62.0	51.0	100.1	81.8	73.8
May.....	59.6	48.5	90.7	84.5	69.3
June.....	54.4	45.1	82.5	74.6	63.3
July.....	49.9	44.1	86.7	77.4	64.8
August.....	48.7	43.4	67.2	58.6	54.4
September.....	51.3	44.4	73.8	64.2	58.2
October.....	58.3	44.9	53.5	58.1	49.7

The index numbers of families provided for increased from 51.3 in September to 58.3 in October. This is higher than for any month since May, 1930. The index number of residential building stood at 44.9 for October, which is higher than for any month since June. In contrast, the index number of nonresidential building dropped to 53.5. At this point it is lower than for any month during the year, excepting February. Total building operations stood at 49.7 for October. This is lower than for any month since February, 1930.

The chart on page 129 shows in graphic form the indicated expenditure for new residential buildings, new nonresidential buildings, and for total building operations.

Table 4 shows the estimated cost of new residential buildings, new nonresidential buildings, and of total building operations in 280 identical cities having a population of 25,000 or over, for October, 1929, and October, 1930, by geographic divisions.

TABLE 4.—ESTIMATED COST OF NEW BUILDINGS IN 280 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN OCTOBER, 1929, AND OCTOBER, 1930

Geographic division	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwellings		October, 1929	October, 1930	October, 1929	October, 1930
	October, 1929	October, 1930	October, 1929	October, 1930				
New England.....	\$7,372,150	\$3,947,400	795	643	\$6,976,132	\$4,902,780	\$18,028,205	\$10,666,692
Middle Atlantic.....	25,297,371	25,385,035	2,871	5,418	41,906,607	10,832,447	77,982,726	43,944,825
East North Central.....	20,297,262	9,363,771	3,623	1,844	33,092,718	16,898,534	62,496,963	29,892,048
West North Central.....	2,995,440	2,052,411	854	533	2,655,126	3,782,912	7,647,268	6,919,889
South Atlantic.....	3,469,839	2,363,752	696	524	5,604,625	3,175,855	11,735,406	7,199,188
South Central.....	4,184,924	3,549,073	1,343	1,003	5,897,890	4,613,445	11,138,031	9,018,916
Mountain and Pacific.....	9,476,061	6,223,020	2,785	2,013	9,573,199	8,230,478	22,140,055	16,776,004
Total.....	73,093,047	52,884,462	12,967	11,978	105,706,297	52,436,451	211,168,654	124,417,562
Per cent of change.....		-27.6		-7.6		-50.4		-41.1

Comparing permits issued in October, 1930, with those issued during October, 1929, there was a decrease in the estimated cost of new residential buildings of 27.6 per cent, of new nonresidential buildings of 50.4 per cent, and of total construction of 41.1 per cent. There was also a decrease of 7.6 per cent in the number of family dwelling units provided in new residential buildings.

Decreases in total building operations were registered in every geographic division. In nonresidential building there was a decrease in all of the geographic divisions except the West North Central. Estimated expenditures for new residential buildings as shown by permits issued decreased in each geographic division except the Middle Atlantic.

Table 5 shows the estimated cost of additions, alterations, and repairs as shown by permits issued, together with the percentage of increase or decrease in October, 1930, as compared with October, 1929.

TABLE 5.—ESTIMATED COST OF ADDITIONS, ALTERATIONS, AND REPAIRS IN 280 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN OCTOBER, 1929, AND OCTOBER, 1930

Geographic division	Estimated cost		Per cent of increase or decrease, October, 1930, compared with October, 1929
	October, 1929	October, 1930	
New England.....	\$3, 679, 923	\$1, 816, 512	- 50. 6
Middle Atlantic.....	10, 778, 748	7, 727, 343	-28. 3
East North Central.....	9, 106, 983	3, 629, 743	-60. 1
West North Central.....	1, 996, 702	1, 084, 566	-45. 7
South Atlantic.....	2, 660, 942	1, 659, 581	-37. 6
South Central.....	1, 055, 217	856, 398	-18. 8
Mountain and Pacific.....	3, 090, 795	2, 322, 506	-24. 9
Total.....	32, 369, 310	19, 096, 649	-41. 0

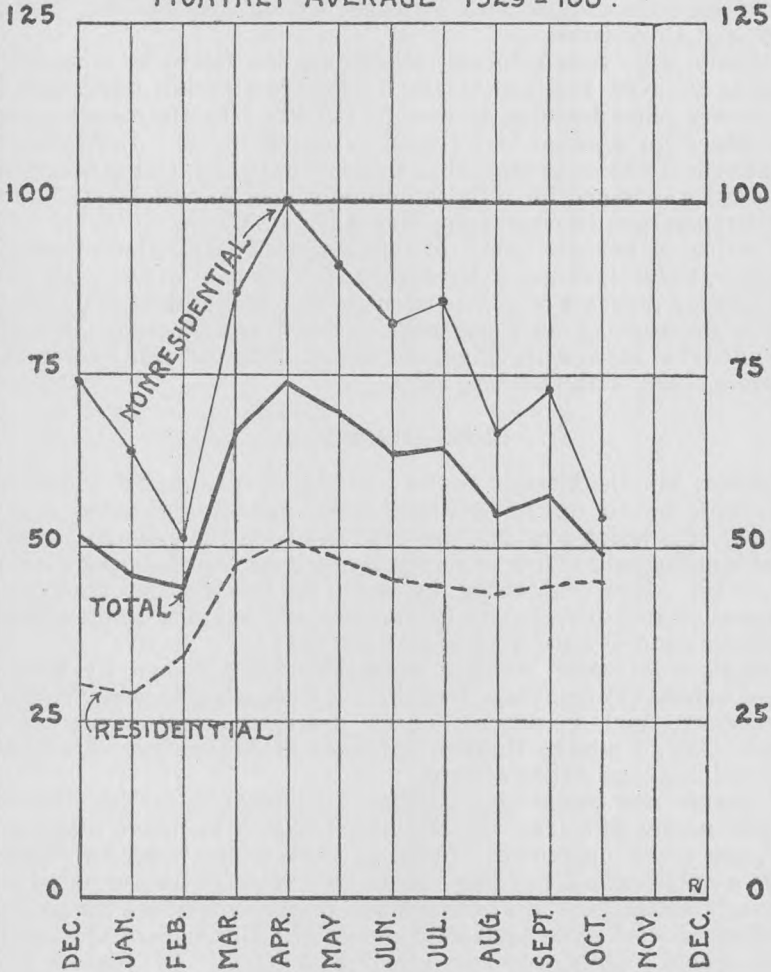
The estimated cost of additions, alterations, and repairs decreased 41.0 per cent, comparing permits issued in October, 1930, with those issued during October, 1929. Decreases were shown in all geographic divisions, ranging from 18.8 per cent in the South Central States to 60.1 per cent in the East North Central States.

Table 6 shows the estimated costs of new residential and new non-residential buildings; total building operations (including alterations and repairs); and the number of families provided for in the 286 cities from which reports were received for both September and October, 1930. Reports were received from 48 cities in the New England States; 63 cities in the Middle Atlantic States; 72 cities in the East North Central States; 22 cities in the West North Central States; 31 cities in the South Atlantic States; 24 cities in the South Central States; and 26 cities in the Mountain and Pacific States, for both September and October, 1930.

1930 INDEX NUMBERS.

COST OF RESIDENTIAL, NONRESIDENTIAL BUILDINGS,
AND TOTAL BUILDING OPERATIONS.

MONTHLY AVERAGE 1929 = 100.



New England States

THE estimated cost of building operations for which permits were issued in October, 1930, in the New England States, increased 15.6 per cent over building operations as shown by permits issued during September, 1930. The estimated cost of new residential buildings increased 29.0 per cent and nonresidential buildings 20.3 per cent. The number of families provided with dwelling units in new buildings increased 22.7 per cent. October permits indicated increases in total construction in New Haven, Boston, Lynn, Newton, and Cranston. Decreases were indicated in Meriden, Cambridge, Malden, Springfield, and Providence.

Permits were issued during October for the following large structures in the New England States: In Boston a permit was issued for a 20-story office building to cost \$1,700,000. In Holyoke a permit was issued for a junior high school to cost \$370,000. In Medford a grade school was to be erected at a cost of \$110,000, and in Worcester a permit was issued for a State normal school to cost \$400,000.

No report was received from New London, Conn.

Comparing permits issued in October, 1930, with those issued in October, 1929, there was a decrease of 46.5 per cent in new residential buildings; a decrease of 29.7 per cent in new nonresidential buildings; and a decrease of 40.8 per cent in total construction. Families provided for in new dwellings decreased 19.1 per cent, comparing October, 1930, with October, 1929.

Middle Atlantic States

IN THE Middle Atlantic States building operations for which permits were issued during October, 1930, had an estimated cost of \$44,187,223, which was 24.4 per cent less than the estimated cost of total building operations as shown by permits issued during September, 1930. New residential buildings in this district showed an increase of 10.5 per cent in estimated cost, but new nonresidential buildings showed a decrease of 60.9 per cent.

Increases in total building operations were shown by permits issued in East Orange, New Rochelle, the Borough of Queens, Yonkers, Harrisburg, and Scranton. Large decreases were registered in Jersey City, Newark, Buffalo, Borough of Manhattan, Rochester, Philadelphia, and Wilkes-Barre.

A permit was issued for a public-school building in New Rochelle to cost nearly \$400,000. In the Borough of Manhattan plans were filed for seven apartment houses to cost \$3,500,000. In Niagara Falls a public-school building was to be erected at an estimated cost of nearly \$600,000. In Philadelphia a permit was issued for a school building to cost over \$400,000; and in the Borough of Queens for three school buildings to cost nearly \$1,400,000. In Yonkers permits were issued for five apartment houses to cost over \$1,200,000.

No reports were received from Orange and Trenton, N. J., and Reading, Pa.

Comparing October, 1930, with October, 1929, the permits issued showed, in this district, a decrease of 43.7 per cent in total building construction; an increase of three-tenths of 1 per cent in new resi-

dential building; and a decrease of 74.2 per cent in new nonresidential building. The number of families provided for increased 88.7 per cent, comparing October, 1930, with October, 1929.

East North Central States

THERE was a decrease of 16.8 per cent in total construction as shown by permits issued in October, 1930, compared with September, 1930, in the East North Central district. This decrease was accounted for by the large decrease in the city of Chicago. The estimated cost of buildings for which permits were issued in Chicago in September was over \$13,500,000, while during October permits issued indicated an expenditure of less than \$7,000,000.

Permits issued for new residential buildings showed a decrease of 23.7 per cent, while those issued for new nonresidential buildings showed a decrease of 11.2 per cent, comparing October with September. New family dwelling units in construction increased 15.4 per cent, comparing the two periods. Large increases in total construction were registered in Cleveland, Columbus, Cincinnati, Milwaukee, and Grand Rapids. Decreases were registered in Toledo, Chicago, Indianapolis, and Detroit.

In Chicago permits were issued for a freight station to cost \$2,500,000 and for four school buildings to cost nearly \$1,200,000. In Detroit permits were issued for three apartment houses to cost over \$400,000 and for two school buildings to cost nearly \$450,000. In Cleveland permits were issued for a church building to cost \$200,000 and for six stores and mercantile buildings to cost over \$6,000,000. In Milwaukee a permit was issued for four apartment houses to cost nearly \$750,000.

No reports were received from Belleville, Ill., South Bend, Ind., Battle Creek, and Port Huron, Mich., Mansfield and Zanesville, Ohio.

Permits issued for building construction in October, 1930, indicated a decrease of 52.2 per cent as compared with those issued during October, 1929. New residential buildings decreased 53.9 per cent; new nonresidential buildings 48.9 per cent; and families provided for 49.1 per cent, comparing permits issued in October, 1930, with those issued during October, 1929, in the East North Central States.

West North Central States

IN THE West North Central States the records of permits issued showed a decrease of 8.1 per cent in new residential building, but an increase of 6.0 per cent in new nonresidential building. Total building (including alterations and repairs) increased 1.5 per cent. Number of families provided with dwelling units in new buildings decreased 20.4 per cent.

Increases in total construction were registered in Des Moines, Kansas City (Mo.), and Sioux Falls. Permits issued for new construction indicated a decrease in total building operations in Duluth, Dubuque, Sioux City, Minneapolis, and St. Paul.

In Burlington, Iowa, a permit was issued for a public-school building to cost \$146,000. In Wichita, Kans., a church is to be erected at a cost of \$150,000. In Kansas City, Mo., a permit was issued for an office building to cost \$1,750,000, and for a school building to cost \$100,000.

No reports received from Hutchinson, Kans., and Lincoln, Nebr.

There was a decrease of 9.5 per cent in total construction, comparing permits issued in this district in October, 1930, with those issued during October, 1929. Nonresidential building increased 42.5 per cent, while residential building decreased 31.5 per cent. New family housing units decreased 37.6 per cent.

South Atlantic States

PERMITS issued during October, 1930, in the South Atlantic Division show an increase of 4.6 per cent in total indicated construction over those issued during September, 1930. There was an increase of 32.3 per cent in the estimated cost of new residential buildings for which permits were issued in October over those issued in September. New nonresidential buildings registered an increase of 4.5 per cent. Families provided for in the new buildings for which permits were issued during October for this district increased 17.1 per cent over the families provided for in the new buildings for which permits were issued during September.

Large increases in total construction were indicated by permits issued in Washington, Atlanta, Charleston (S. C.), and Richmond. Permits issued in Baltimore, Jacksonville, Charlotte, Norfolk, and Wheeling indicated decreases in total construction.

A permit was issued for a church in Washington, D. C., to cost \$625,000; for an office building in Atlanta to cost \$750,000; and for a store building in Charleston, S. C., to cost \$165,000.

No reports were received from Pensacola, Fla.; Augusta, Ga.; Spartanburg, S. C.; Lynchburg, Va.; and Charleston, W. Va.

Comparing permits issued in the South Atlantic States during October, 1930, with those issued during October, 1929, there was a decrease of 31.9 per cent in new residential buildings; of 43.3 per cent in new nonresidential buildings; and 38.7 per cent in total construction. Families provided for in new dwellings decreased 24.7 per cent, comparing October, 1930, with October, 1929.

South Central States

THERE was an increase of 22.2 per cent in the estimated cost of new residential buildings for which permits were issued in the South Central States, comparing October, 1930, with September, 1930. New nonresidential building, however, decreased 19.3 per cent and total construction 6.3 per cent, according to permits issued in this district. New family dwelling units provided in buildings for which permits were issued during October, 1930, showed an increase of 13.3 per cent as compared with dwelling units in new buildings for which permits were issued in September, 1930.

Permits were issued for school buildings in Oklahoma City to cost \$524,000. In San Antonio, Tex., a new school building is to be erected at a cost of nearly \$1,200,000. In New Orleans, La., a permit was issued for a school building to cost \$525,000.

No reports were received for Birmingham, Ala.; Fort Smith, Ark.; Covington and Newport, Ky.; Muskogee, Okla.; El Paso, Galveston, and Laredo, Tex.

Decreases were shown in new residential buildings, in new non-residential buildings, and in total building construction, comparing permits issued during October, 1930, with those issued during October, 1929. The decrease in the estimated cost of new residential buildings was 15.2 per cent, for new nonresidential buildings 21.8, and for total building construction 19.0 per cent. Families provided for decreased 25.3 per cent, comparing the two periods.

Mountain and Pacific States

DECREASES were registered in both classes of building construction, in total construction, and in families provided for, comparing permits issued in the Mountain and Pacific States during October, 1930, with those issued during September, 1930. The decrease in the estimated cost of total building construction was 12.5 per cent, in the estimated cost of new residential building 12.9 per cent, and in the estimated cost of new nonresidential building 8.4 per cent. Family dwelling units decreased 8.4 per cent.

Increases in total construction as shown by permits issued occurred in Long Beach, San Francisco, Seattle, and Spokane. Decreases occurred in Tucson, Berkeley, Denver, Portland, and Salt Lake City. In Long Beach, Calif., a permit was issued for a municipal auditorium to cost \$1,400,000. In San Francisco a permit was issued for two office buildings to cost over \$1,000,000. In Seattle, Wash., permits were issued for four factory buildings to cost nearly \$800,000. No report was received from Great Falls, Mont.

There was a decrease of 34.3 per cent in the estimated cost of the new residential buildings for which permits were issued in October, 1930, as compared with those issued during October, 1929. New nonresidential buildings decreased 14.0 per cent and total building 24.2 per cent. Families provided for in new dwellings decreased 27.7 per cent, comparing October, 1930, permits with October, 1929, permits.

Hawaii

THERE was an increase of 7.4 per cent in the estimated cost of buildings for which permits were issued in Honolulu during October, 1930, as compared with those issued during September, 1930. Permits issued for new residential buildings indicated a decrease of 50.4 per cent in estimated expenditures, while those issued for new non-residential buildings indicated an increase of 39.8 per cent in estimated expenditures. There was a decrease of 39.5 per cent in the number of dwelling units provided in new buildings, comparing October with September.

Permits were issued in Honolulu for three factory buildings costing nearly \$500,000.

TABLE 6.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, SEPTEMBER AND OCTOBER, 1930

New England States

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	September	October	September	October	September	October	September	October
Connecticut:								
Bridgeport.....	\$127,625	\$139,450	51	35	\$12,891	\$110,433	\$159,558	\$270,463
Greenwich.....	226,500	265,000	15	16	83,975	121,250	360,925	442,650
Hartford.....	29,000	37,300	8	6	48,300	20,920	193,385	230,919
Meriden.....	19,200	29,850	5	7	201,767	13,698	230,797	56,893
New Britain.....	5,000	11,100	1	2	14,325	8,750	33,079	26,652
New Haven.....	53,500	362,500	9	19	123,480	84,450	246,730	477,880
Norwalk.....	92,300	142,000	16	19	31,170	16,200	193,930	188,110
Stamford.....	114,300	31,500	11	4	46,250	43,175	188,535	85,610
Waterbury.....	45,500	74,500	10	12	29,250	14,700	88,550	108,650
Maine:								
Bangor.....	20,700	17,700	7	5	1,150	39,130	28,450	61,830
Lewiston.....	16,000	6,000	3	1	400	0	18,900	20,000
Portland.....	54,900	68,400	12	12	10,760	14,101	92,370	98,269
Massachusetts:								
Boston ¹	399,000	419,300	87	98	500,515	2,338,520	1,365,065	3,055,222
Brookton.....	23,100	52,000	5	10	6,250	76,205	59,705	141,803
Brookline.....	18,500	254,500	2	27	6,350	8,995	32,850	269,355
Cambridge.....	461,500	86,000	14	5	261,620	124,300	792,865	234,145
Chelsea.....	0	0	0	0	8,400	0	14,060	9,525
Chicopee.....	13,000	1,800	4	1	8,050	6,500	22,600	12,800
Everett.....	3,500	7,000	1	2	384,100	151,900	402,050	163,170
Fall River.....	4,200	3,200	2	1	58,085	13,585	65,035	22,305
Fitchburg.....	7,500	11,300	2	3	2,725	21,075	16,735	33,715
Haverhill.....	3,000	11,200	2	4	2,475	3,710	39,370	26,580
Holyoke.....	18,000	9,000	3	2	17,350	375,150	103,500	395,300
Lawrence.....	16,000	5,000	6	1	159,000	20,727	219,975	45,477
Lowell.....	14,650	17,000	3	4	8,275	14,595	78,820	49,780
Lynn.....	41,200	89,600	9	19	11,660	110,545	74,540	234,935
Malden.....	49,300	24,000	11	5	381,025	5,150	434,705	38,100
Medford.....	83,900	194,500	17	39	16,100	119,925	114,360	321,275
New Bedford.....	0	35,000	0	1	260,728	12,925	268,278	62,900
Newton.....	228,200	328,700	21	32	38,630	51,285	304,535	685,564
Pittsfield.....	50,700	108,900	9	23	22,525	151,693	91,800	271,293
Quincy.....	87,400	136,500	22	31	229,370	29,655	358,661	192,077
Revere.....	16,000	14,200	4	3	50,400	8,800	79,850	36,875
Salem.....	23,800	17,500	4	3	58,750	10,800	118,610	113,785
Somerville.....	7,000	0	2	0	33,340	8,835	57,740	36,835
Springfield.....	128,200	118,350	35	25	685,250	26,025	835,075	265,575
Taunton.....	7,000	2,000	2	1	5,212	12,338	17,482	24,133
Waltham.....	57,700	26,000	16	6	23,725	12,285	92,015	40,615
Watertown.....	34,000	45,800	7	8	11,450	21,175	51,600	68,600
Worcester.....	83,200	124,400	17	24	34,351	460,740	194,542	664,742
New Hampshire:								
Manchester.....	16,350	51,700	6	13	4,785	14,360	56,393	90,674
Rhode Island:								
Central Falls.....	0	5,500	0	2	4,400	950	6,225	7,060
Cranston.....	78,100	207,300	15	47	38,600	20,900	123,500	236,350
East Providence.....	61,700	36,500	11	6	17,960	13,625	91,302	64,876
Newport.....	44,000	9,500	3	2	17,100	25,050	71,675	40,760
Pawtucket.....	48,300	103,300	10	19	15,570	20,720	203,720	146,390
Providence.....	126,600	199,800	24	34	85,750	119,405	527,757	480,890
Woonsocket.....	0	5,750	0	4	2,415	2,925	9,000	15,285
Total.....	3,059,125	3,947,400	524	643	4,076,009	4,902,780	9,231,204	10,666,692
Per cent of change.....		+29.0		+22.7		+20.3		+15.6

¹ A. applications filed.

TABLE 6.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, SEPTEMBER AND OCTOBER, 1930—Continued

Middle Atlantic States

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	September	October	September	October	September	October	September	October
New Jersey:								
Atlantic City.....	\$5,000	\$6,250	1	1	\$1,350	\$4,210	\$52,383	\$218,491
Bayonne.....	0	31,000	0	12	8,100	10,350	15,100	49,900
Bloomfield.....	86,500	145,000	16	31	9,000	18,000	128,500	164,000
Camden.....	0	27,000	0	9	115,415	154,962	141,150	213,307
Clifton.....	136,000	100,400	32	22	21,270	11,775	160,080	119,225
East Orange.....	23,500	28,000	4	7	379,375	411,660	433,992	516,716
Elizabeth.....	45,000	78,000	11	19	70,200	28,000	115,200	106,000
Hoboken.....	0	0	0	0	1,500	19,775	17,811	81,005
Irvington.....	20,800	0	4	0	39,680	25,215	65,985	35,675
Jersey City.....	40,000	127,000	10	31	3,271,513	44,180	3,470,773	236,810
Kearny.....	34,000	46,000	12	13	33,700	16,031	72,325	64,081
Montclair.....	32,000	107,500	4	5	141,365	15,925	201,130	159,139
Newark.....	52,000	146,500	8	22	591,933	208,300	735,526	447,125
New Brunswick.....	4,000	0	1	0	825	4,050	19,795	16,800
Passaic.....	0	25,500	0	4	803,997	18,300	848,905	107,912
Paterson.....	11,500	70,900	3	13	52,178	39,804	103,466	165,215
Perth Amboy.....	7,900	19,750	2	3	29,231	42,206	53,706	85,836
Plainfield.....	29,350	80,475	5	12	9,628	32,355	82,981	139,656
Union City.....	12,000	0	2	0	45,800	1,300	98,510	17,870
West New York.....	0	8,500	0	1	21,000	150	36,875	19,350
New York:								
Albany.....	489,000	565,200	58	72	2,431,886	41,800	3,004,574	657,971
Amsterdam.....	0	4,000	0	1	9,950	11,500	16,950	16,000
Auburn.....	316,000	22,000	4	4	377,415	3,235	699,765	26,530
Binghamton.....	68,800	61,850	6	16	210,717	27,000	356,683	145,297
Buffalo.....	251,500	563,800	82	168	2,288,741	488,442	2,677,963	1,143,728
Elmira.....	21,000	7,900	1	2	10,040	17,670	40,955	49,233
Jamestown.....	48,400	39,100	11	10	35,250	4,800	98,530	82,830
Kingston.....	27,000	35,000	6	5	11,590	7,880	45,690	71,060
Mount Vernon.....	246,000	351,000	26	40	5,300	8,043	320,402	410,808
Newburgh.....	6,000	18,800	1	3	13,050	2,740	21,700	26,690
New Rochelle.....	345,100	205,500	20	16	30,250	434,172	400,225	672,427
New York City—								
Bronx ¹	3,103,850	2,327,200	807	504	531,550	684,800	4,185,560	3,627,595
Brooklyn ¹	4,629,050	5,181,250	1,145	1,245	1,155,935	690,150	6,588,040	6,562,205
Manhattan ¹	5,585,000	3,948,000	563	783	5,690,302	552,650	13,648,312	5,112,740
Queens ¹	3,672,200	6,487,400	775	1,557	1,419,278	3,237,444	5,747,046	10,305,191
Richmond ¹	203,975	265,700	61	83	185,830	115,120	654,409	454,031
Niagara Falls.....	33,475	110,266	9	23	669,489	574,488	742,228	722,980
Poughkeepsie.....	17,000	63,500	2	6	2,050	13,840	30,900	90,940
Rochester.....	113,650	84,900	18	17	671,244	89,141	853,154	272,901
Schenectady.....	56,500	40,500	10	7	36,100	117,200	119,200	182,550
Syracuse.....	189,100	191,700	33	36	36,910	147,475	402,595	457,530
Troy.....	47,500	69,500	9	12	17,780	12,000	89,990	101,105
Utica.....	33,800	78,500	7	11	14,680	7,276	75,530	98,711
Watertown.....	11,900	3,500	3	1	2,335	2,950	22,633	16,497
White Plains.....	592,400	228,000	93	14	308,775	433,219	955,460	776,054
Yonkers.....	418,700	1,584,250	45	240	537,485	63,460	996,700	1,697,135
Pennsylvania:								
Allentown.....	64,000	140,500	6	20	125,000	97,275	211,000	244,525
Altoona.....	38,390	12,500	7	3	12,110	13,896	67,620	49,494
Bethlehem.....	46,400	9,700	8	3	5,450	4,425	58,200	21,075
Butler.....	0	3,500	0	1	600	450	3,500	5,150
Chester.....	12,000	4,000	3	2	3,375	4,200	44,575	15,025
Easton.....	125,000	31,000	0	3	3,050	5,795	139,961	45,355
Erie.....	177,900	241,500	28	31	28,985	73,595	243,086	356,860
Harrisburg.....	33,000	24,800	6	4	29,025	179,295	104,250	227,373
Hazleton.....	28,043	0	5	0	6,465	16,745	44,629	22,926
Johnstown.....	7,000	16,000	1	3	21,985	19,645	34,880	57,405
Lancaster.....	36,000	10,000	8	2	4,070	11,375	36,908	39,094
McKeesport.....	66,000	27,700	10	5	6,195	9,250	98,895	57,620
New Castle.....	32,800	21,500	5	4	26,270	4,715	63,740	27,440
Norristown.....	0	0	0	0	4,789	12,725	28,133	20,130
Philadelphia.....	803,450	802,300	136	162	4,618,025	1,339,205	5,765,220	4,850,145
Pittsburgh.....	353,400	424,000	71	79	173,575	126,635	719,219	806,088
Scranton.....	24,435	8,000	7	2	13,570	20,376	141,770	300,263
Wilkes-Barre.....	44,808	13,444	7	10	382,624	83,130	463,903	129,028
Wilkesburg.....	0	9,000	0	1	40,030	16,175	45,480	35,403
Williamsport.....	3,000	10,300	1	5	294,695	37,872	307,657	56,653
York.....	38,000	18,000	7	3	13,478	41,120	119,671	73,313
Total.....	23,000,076	25,413,835	4,226	5,424	28,164,358	11,012,942	58,411,684	44,187,223
Per cent of change.....		+10.5		+28.3		-60.9		-24.4

¹ Applications filed.

TABLE 6.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, SEPTEMBER AND OCTOBER, 1930—Continued

East North Central States

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	September	October	September	October	September	October	September	October
Illinois:								
Alton	\$29,476	\$3,000	6	1	\$4,350	\$4,742	\$45,908	\$17,324
Aurora	37,580	38,959	7	7	18,805	28,550	86,557	135,956
Bloomington	12,000	2,000	3	1	27,500	10,000	40,500	13,000
Chicago	5,983,500	1,698,300	339	330	7,451,850	4,798,750	13,665,300	6,763,990
Cicero	23,500	0	3	0	4,175	60,580	29,675	67,900
Danville	28,900	33,293	7	4	4,800	1,800	37,500	36,845
Decatur	18,500	17,300	4	4	39,550	62,725	72,350	83,075
East St. Louis	73,000	36,600	24	16	40,950	63,085	121,615	100,835
Elgin	12,650	35,400	3	7	44,610	7,975	69,085	53,740
Evanston	92,000	83,000	9	6	14,500	16,500	247,050	165,950
Joliet	84,500	33,500	16	6	153,100	15,680	272,705	93,980
Moline	43,200	36,800	9	11	10,410	20,255	63,535	67,470
Oak Park	47,000	29,300	4	3	13,035	24,635	78,285	71,985
Peoria	108,700	156,660	26	32	213,350	152,515	336,150	309,115
Quincy	37,000	15,800	9	6	7,045	22,480	50,740	38,795
Rockford	112,200	83,000	39	22	7,430	13,515	206,190	310,405
Rock Island	28,700	37,800	8	11	5,010	6,825	50,511	63,085
Springfield	21,300	55,200	4	13	35,545	13,357	77,981	92,305
Indiana:								
Anderson	17,000	5,750	6	3	20,052	1,380	37,052	7,130
East Chicago	9,000	2,000	1	3	19,808	6,000	55,983	43,282
Elkhart	19,300	5,940	6	3	39,360	3,310	69,579	29,310
Evansville	69,100	68,400	15	10	208,000	14,050	311,405	124,450
Fort Wayne	101,250	92,535	23	16	161,400	75,442	290,595	208,195
Gary	18,100	48,000	9	9	28,555	38,230	70,115	109,490
Hammond	67,000	60,280	15	15	102,291	17,405	177,356	87,865
Indianapolis	249,200	225,000	49	49	133,317	204,333	647,088	513,861
Kokomo	3,850	3,200	2	2	6,475	1,472	16,569	8,952
Marion	2,000	9,000	1	2	10,100	48,300	14,200	114,600
Muncie	3,000	14,400	1	4	23,082	23,160	36,697	52,949
Richmond	25,300	33,000	6	12	17,400	24,600	51,305	61,000
Terre Haute	32,700	350	10	1	18,165	8,535	58,990	93,415
Michigan:								
Bay City	20,500	7,000	6	2	3,642	4,240	53,289	48,750
Detroit	1,235,256	1,606,259	259	308	3,524,429	1,059,485	5,106,257	2,970,393
Flint	114,875	66,227	9	12	40,933	48,152	181,393	184,149
Grand Rapids	21,500	62,800	6	18	67,270	16,455	130,450	402,110
Hamtramck	0	0	0	0	829,325	7,950	834,885	18,600
Highland Park	0	0	0	0	8,200	1,400	15,925	5,830
Jackson	3,800	21,500	1	4	7,203	10,420	20,219	47,565
Kalamazoo	31,500	44,400	10	7	20,170	9,218	59,729	65,190
Lansing	19,000	37,500	5	8	24,455	131,500	64,330	202,435
Muskegon	6,500	16,400	3	5	22,480	132,210	28,980	166,567
Pontiac	30,500	15,800	6	3	17,485	32,095	50,370	54,970
Saginaw	120,800	21,900	56	6	281,935	25,209	433,830	68,034
Ohio:								
Akron	84,200	104,500	14	18	238,352	102,396	388,627	281,630
Ashtabula	24,650	18,300	5	5	8,575	3,130	41,575	25,098
Canton	31,400	34,000	3	5	6,450	25,067	71,640	81,784
Cincinnati	1,084,560	1,330,980	113	159	102,225	1,495,770	1,297,580	2,964,430
Cleveland	362,500	379,500	76	68	3,509,475	6,489,217	4,276,975	7,187,640
Columbus	308,100	421,600	49	83	84,900	218,900	430,900	949,000
Dayton	102,982	137,734	24	32	44,616	106,765	179,058	291,109
East Cleveland	0	0	0	0	2,330	7,260	3,245	12,685
Hamilton	18,850	18,150	4	6	4,060	32,923	40,665	64,588
Lakewood	28,000	36,500	11	4	14,975	16,672	54,204	59,217
Lima	0	0	0	0	8,225	6,730	14,286	9,914
Lorain	18,200	15,100	6	4	7,015	24,427	27,315	45,567
Marion	0	5,000	0	2	3,375	10,055	4,420	15,305
Newark	2,000	1,400	1	2	2,740	4,425	7,090	7,090
Portsmouth	20,400	66,800	6	4	1,395	33,000	26,245	103,073
Springfield	50,900	19,700	15	7	29,020	3,425	86,620	51,345
Steubenville	26,000	50,000	7	4	1,970	6,950	37,670	64,275
Toledo	108,300	100,100	24	21	134,525	42,750	1,957,827	224,405
Warren	18,880	14,360	7	5	4,245	7,970	67,660	49,780
Youngstown	64,750	52,700	13	16	27,318	210,635	127,003	273,937

TABLE 6.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, SEPTEMBER AND OCTOBER, 1930—Continued

East North Central States—Continued

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	September	October	September	October	September	October	September	October
Wisconsin:								
Fond du Lac.....	\$8, 500	\$68, 150	3	4	\$11, 048	\$21, 535	\$26, 028	\$96, 385
Green Bay.....	48, 700	22, 350	12	7	33, 855	78, 572	122, 230	114, 022
Kenosha.....	17, 000	12, 000	3	2	27, 625	69, 488	63, 345	88, 963
Madison.....	67, 150	61, 000	15	15	163, 760	21, 940	249, 457	121, 740
Milwaukee.....	532, 300	1, 313, 654	123	341	704, 038	449, 471	1, 613, 047	2, 115, 965
Oshkosh.....	25, 637	15, 100	10	3	16, 925	6, 665	53, 587	32, 618
Racine.....	163, 200	121, 100	20	32	94, 335	74, 313	351, 365	217, 668
Sheboygan.....	41, 200	69, 300	10	13	6, 821	7, 713	69, 711	136, 540
Superior.....	7, 500	13, 300	2	3	4, 400	61, 850	22, 155	79, 708
Total.....	12, 280, 596	9, 365, 771	1, 601	1, 847	19, 025, 110	16, 904, 534	35, 980, 758	29, 935, 830
Per cent of change.....		-23. 7		+15. 4		-11. 2		-16. 8

West North Central States

Iowa:								
Burlington.....	\$7, 400	\$7, 900	2	2	\$10, 525	\$241, 685	\$17, 925	\$254, 835
Cedar Rapids.....	24, 000	16, 700	6	8	41, 655	23, 820	96, 566	74, 857
Council Bluffs.....	7, 500	5, 000	3	1	68, 750	40, 650	78, 750	54, 150
Davenport.....	37, 200	56, 700	9	15	8, 586	22, 628	85, 332	106, 777
Des Moines.....	56, 350	179, 400	15	31	66, 406	83, 536	144, 986	274, 371
Dubuque.....	163, 800	9, 661	6	11	1, 548	26, 696	190, 158	44, 063
Ottumwa.....	37, 500	28, 500	7	5	4, 800	5, 000	44, 550	58, 250
Sioux City.....	36, 400	58, 700	19	17	217, 565	107, 495	258, 065	172, 895
Waterloo.....	36, 400	22, 800	11	5	23, 865	12, 150	71, 785	48, 000
Kansas:								
Kansas City.....	30, 300	100, 900	16	25	3, 500	0	42, 485	123, 465
Topeka.....	40, 500	32, 900	10	8	39, 070	7, 210	74, 170	46, 765
Wichita.....	249, 830	116, 085	87	48	33, 710	165, 725	314, 223	329, 558
Minnesota:								
Duluth.....	34, 800	28, 800	11	7	338, 125	33, 500	559, 170	93, 525
Minneapolis.....	353, 175	485, 855	89	125	778, 895	255, 020	1, 285, 615	951, 140
St. Paul.....	104, 700	196, 410	24	45	406, 895	279, 917	725, 129	597, 058
Missouri:								
Joplin.....	12, 000	19, 000	4	4	15, 050	2, 200	34, 550	27, 550
Kansas City.....	147, 500	136, 000	32	34	178, 600	2, 020, 350	351, 700	2, 315, 600
Springfield.....	34, 700	35, 500	10	14	19, 385	66, 195	72, 785	109, 070
St. Joseph.....	26, 000	30, 250	12	12	599, 150	9, 225	638, 815	43, 000
St. Louis.....	641, 000	255, 450	256	63	521, 685	296, 206	1, 345, 645	765, 100
Nebraska:								
Omaha.....	112, 200	128, 275	29	29	167, 781	63, 560	308, 481	291, 360
South Dakota:								
Sioux Falls.....	39, 875	101, 625	10	24	30, 606	20, 144	79, 982	138, 500
Total.....	2, 233, 130	2, 052, 411	670	533	3, 567, 152	3, 782, 912	6, 820, 867	6, 919, 889
Per cent of change.....		-8. 1		-20. 4		+6. 0		+1. 5

TABLE 6.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, SEPTEMBER AND OCTOBER, 1930—Continued

South Atlantic States

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	September	October	September	October	September	October	September	October
Delaware:								
Wilmington.....	\$184,500	\$126,750	41	29	\$33,682	\$66,049	\$249,306	\$240,770
District of Columbia:								
Washington.....	403,500	843,350	71	133	298,255	909,173	1,205,556	2,049,967
Florida:								
Jacksonville.....	25,400	63,100	12	23	230,760	62,170	300,650	185,695
Miami.....	23,700	13,200	10	6	55,650	81,195	164,971	158,524
St. Petersburg.....	18,000	44,500	5	9	25,900	8,700	54,900	74,100
Tampa.....	17,900	12,300	10	11	29,725	2,980	81,235	39,173
Georgia:								
Atlanta.....	96,150	109,385	46	51	253,860	842,102	700,934	1,026,092
Columbus.....	24,300	29,850	7	8	76,190	8,225	105,255	42,120
Macon.....	4,500	0	1	0	4,085	112,850	24,655	137,548
Savannah.....	30,300	13,500	6	3	24,400	2,350	63,050	20,575
Maryland:								
Baltimore.....	459,000	607,000	98	119	972,510	341,200	2,053,110	1,617,800
Cumberland.....	21,300	6,300	7	2	400	2,320	22,549	12,935
Hagerstown.....	0	19,500	0	5	3,795	24,450	6,080	48,370
North Carolina:								
Asheville.....	0	7,400	0	2	61,035	6,320	68,575	18,845
Charlotte.....	98,500	61,560	30	14	15,890	19,798	140,611	92,431
Durham.....	21,550	20,950	10	5	8,000	47,000	34,935	76,100
Greensboro.....	19,200	50,400	6	6	900	19,224	29,524	83,710
Wilmington.....	21,500	29,000	5	7	2,900	300	34,800	35,700
Winston-Salem.....	21,100	32,700	10	6	21,925	18,405	79,526	66,903
South Carolina:								
Charleston.....	12,950	18,500	2	8	38,000	175,910	58,648	207,905
Columbia.....	39,150	11,825	11	9	43,025	300	95,770	32,780
Greenville.....	11,000	3,500	2	5	12,765	14,795	62,505	29,385
Virginia:								
Newport News.....	18,186	18,412	7	7	17,435	47,326	41,620	80,497
Norfolk.....	21,300	51,100	7	15	161,938	36,290	197,613	119,486
Petersburg.....	5,500	16,000	2	3	240	1,365	5,830	17,665
Portsmouth.....	10,750	17,700	4	7	19,630	9,625	50,527	34,575
Richmond.....	56,800	33,900	14	8	269,128	232,943	379,023	405,696
Roanoke.....	66,100	14,670	10	4	76,015	32,670	149,295	54,355
West Virginia:								
Clarksburg.....	1,500	9,500	1	3	13,450	5,440	20,975	17,870
Huntington.....	13,000	9,500	3	3	8,200	10,000	26,800	21,500
Wheeling.....	2,500	24,500	1	3	255,708	31,050	302,044	75,606
Total.....	1,754,136	2,319,852	439	514	3,035,396	3,172,525	6,810,872	7,124,678
Per cent of change.....		+32.3		+17.1		+4.5		+4.6

South Central States

Alabama:								
Mobile.....	\$28,200	\$36,050	18	15	\$24,461	\$9,300	\$70,817	\$69,012
Montgomery.....	23,600	30,300	11	18	81,150	8,275	173,235	66,258
Arkansas:								
Little Rock.....	81,000	49,375	17	17	11,055	2,251	134,039	76,729
Kentucky:								
Lexington.....	20,300	8,550	9	4	4,370	144,060	47,703	169,906
Louisville.....	132,500	246,500	24	41	138,080	80,400	401,825	385,825
Paducah.....	3,000	16,150	3	6	700	950	4,200	17,725
Louisiana:								
Baton Rouge.....	3,216	4,440	2	4	643	570	9,622	14,694
New Orleans.....	32,650	70,975	15	22	119,240	635,775	182,846	786,379
Shreveport.....	36,364	24,725	15	11	1,308	8,760	83,878	66,516
Oklahoma:								
Oklahoma City.....	506,450	900,700	138	200	226,470	912,260	817,491	1,907,010
Okmulgee.....	0	0	0	0	2,000	2,000	2,000	3,500
Tulsa.....	422,525	369,340	80	98	881,955	70,384	1,351,234	490,196

TABLE 6.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, SEPTEMBER AND OCTOBER, 1930—Continued

South Central States—Continued

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	September	October	September	October	September	October	September	October
Tennessee:								
Chattanooga-----	\$38,470	\$28,500	12	11	\$42,300	\$60,896	\$139,010	\$125,989
Knoxville-----	77,110	27,916	17	10	69,450	120,272	171,522	158,144
Memphis-----	319,800	197,600	111	64	443,950	39,650	878,540	356,590
Nashville-----	61,525	43,550	31	23	44,975	334,450	207,722	450,522
Texas:								
Austin-----	54,430	115,468	24	27	9,599	47,680	80,900	179,539
Dallas-----	227,902	203,850	103	73	1,484,901	282,965	1,914,136	605,872
Fort Worth-----	149,817	197,875	49	51	1,075,049	149,904	1,268,622	412,525
Houston-----	755,555	967,200	182	241	1,069,500	355,728	1,842,455	1,340,318
Port Arthur-----	29,600	20,650	17	10	1,632	2,923	44,290	52,720
San Antonio-----	146,375	284,400	61	117	107,480	1,414,360	324,795	1,754,680
Waco-----	13,367	29,334	5	9	52,100	72,853	81,072	103,754
Wichita Falls-----	5,500	0	2	0	4,000	326	22,257	13,056
Total-----	3,169,256	3,873,448	946	1,072	5,896,368	4,756,992	10,254,211	9,607,459
Per cent of change-----		+22.2		+13.3		-19.3		-6.3

Mountain and Pacific States

Arizona:								
Phoenix-----	\$72,150	\$39,650	22	14	\$74,550	\$16,062	\$166,905	\$69,950
Tucson-----	99,200	88,400	20	29	162,300	12,557	276,375	131,949
California:								
Alameda-----	49,900	38,200	22	9	2,950	1,548	74,265	63,255
Berkeley-----	123,635	49,750	25	13	238,850	21,577	400,122	104,081
Fresno-----	37,900	31,100	12	11	3,810	68,095	76,081	143,762
Long Beach-----	467,650	383,920	149	157	1,112,085	1,507,945	1,656,390	1,957,565
Los Angeles-----	3,202,856	2,856,685	1,137	1,052	2,232,693	2,989,609	6,662,761	6,559,181
Oakland-----	213,420	251,450	69	84	174,428	130,694	510,481	478,412
Pasadena-----	120,917	81,191	23	16	154,467	15,015	353,681	177,244
Sacramento-----	148,850	64,774	45	15	50,068	26,915	241,625	185,051
San Diego-----	270,450	258,050	63	62	101,630	82,290	431,689	424,795
San Francisco-----	725,050	680,250	189	169	963,941	1,325,062	1,924,471	2,254,117
San Jose-----	36,100	32,850	7	8	269,580	11,435	317,465	50,850
Stockton-----	17,250	14,700	4	5	29,991	39,690	63,336	68,955
Vallejo-----	0	5,600	0	2	6,565	18,116	15,116	29,299
Colorado:								
Colorado Springs-----	5,300	25,100	2	6	79,293	31,761	100,088	63,623
Denver-----	177,250	343,600	30	72	550,900	79,250	898,360	574,500
Pueblo-----	15,500	4,000	12	2	22,350	6,115	49,173	21,968
Oregon:								
Portland-----	269,200	174,000	36	36	1,976,065	128,270	2,781,430	604,310
Utah:								
Ogden-----	38,600	13,950	20	6	11,050	500	57,050	28,600
Salt Lake City-----	184,450	117,750	48	30	29,149	37,277	251,302	194,757
Washington:								
Bellingham-----	16,300	60,350	6	28	7,855	7,850	37,585	75,320
Everett-----	0	13,450	0	9	9,160	3,095	15,735	21,735
Seattle-----	707,700	356,050	217	111	546,760	1,041,095	1,427,790	1,533,340
Spokane-----	125,300	200,700	32	53	14,109	549,875	183,589	800,000
Tacoma-----	22,500	37,500	8	14	160,520	78,780	203,365	159,385
Total-----	7,147,428	6,223,020	2,198	2,013	8,985,119	8,230,478	19,176,170	16,776,004
Per cent of change-----		-12.9		-8.4		-8.4		-12.5

Hawaii

Hawaii:								
Honolulu-----	\$200,539	\$99,547	81	49	\$372,004	\$520,116	\$608,027	\$652,839
Per cent of change-----		-50.4		-39.5		+39.8		+7.4

Comparative Cost of Dwelling Units in St. Louis and Washington, D. C.

THE Bureau of Labor Statistics presents herewith a tabulation showing comparative costs of dwelling units in the cities of St. Louis, Mo., and Washington, D. C., as shown by permits issued during the first six months of 1929. The first six months of 1929 was the period selected because it was thought that the building of dwellings would be on a more normal basis in that period than during any of the later 6-month periods. The data were obtained from the records of permits issued in these two cities. The costs as shown include building costs only. No land costs are included.

The information obtained disclosed the fact that the cost of 1-family dwellings, 2-family dwellings, and family units in apartment houses was much less in St. Louis than in Washington. This must not be construed to show that an identical dwelling could be built cheaper in St. Louis than in Washington. It may be that in the former city many smaller dwellings are erected than in the capital city.

The study was limited to the two cities of St. Louis and Washington solely because the information was available to the bureau without special effort. It is hoped that similar studies may be made in other cities.

Table 1 shows the number and per cent of families provided for in St. Louis and Washington, by cost groups.

TABLE 1.—ESTIMATED COST OF 1-FAMILY DWELLINGS FOR WHICH PERMITS WERE ISSUED IN ST. LOUIS AND WASHINGTON, DURING FIRST HALF OF 1929, BY COST GROUPS

Cost	Number of families provided for		Percentage of families provided for		Cumulative percentage of families provided for	
	St. Louis	Washington	St. Louis	Washington	St. Louis	Washington
Under \$2,000.....	31	14	4.2	1.6	4.2	1.6
\$2,000 and under \$3,000.....	53	17	7.2	1.9	11.5	3.5
\$3,000 and under \$4,000.....	348	31	47.5	3.5	59.0	7.0
\$4,000 and under \$5,000.....	163	42	22.3	4.7	81.3	11.8
\$5,000 and under \$6,000.....	78	294	10.7	33.2	91.9	45.0
\$6,000 and under \$7,000.....	14	134	1.9	15.1	93.9	60.1
\$7,000 and under \$8,000.....	10	81	1.4	9.2	95.2	69.3
\$8,000 and under \$9,000.....	16	69	2.2	7.8	97.4	77.1
\$9,000 and under \$10,000.....	3	34	.4	3.8	97.8	80.9
\$10,000 and under \$11,000.....	7	80	1.0	9.0	98.8	89.0
\$11,000 and under \$12,000.....	2	8	.3	.9	99.0	90.8
\$12,000 and under \$13,000.....	1	25	.1	2.8	99.2	93.7
\$13,000 and under \$14,000.....	2	2	—	.2	—	93.9
\$14,000 and under \$15,000.....	—	4	—	.5	—	94.4
\$15,000 and under \$16,000.....	1	12	.1	1.4	99.3	95.7
\$16,000 and under \$17,000.....	—	5	—	.6	—	96.3
\$17,000 and under \$18,000.....	—	2	—	.2	—	96.5
\$18,000 and under \$19,000.....	2	4	.3	.5	99.6	96.9
\$19,000 and under \$20,000.....	—	—	—	—	—	—
\$20,000 and over.....	13	227	.4	3.1	100.0	100.0
Total.....	732	885	100.0	100.0	—	—

¹ 1 at \$25,000, 1 at \$30,000, 1 at \$45,000.

² 4 at \$20,000, 1 at \$20,300, 1 at \$22,388, 1 at \$22,500, 1 at \$23,900, 2 at \$24,000, 3 at \$25,000, 1 at \$26,000, 1 at \$29,000, 2 at \$30,000, 1 at \$32,500, 2 at \$35,000, 2 at \$40,000, 1 at \$43,000, 1 at \$48,000, 1 at \$50,000, 1 at \$60,000, 1 at \$75,600.

Permits were issued during the first half of 1929 for 885 1-family dwellings in the city of Washington and 732 1-family dwellings in St. Louis.

In St. Louis 59 per cent of these 1-family dwellings had an estimated cost of less than \$4,000, while in Washington only 7 per cent had an estimated cost of less than \$4,000. Of the dwellings for which permits were issued in St. Louis, 348, or 47.5 per cent, were to cost between \$3,000 and \$4,000, this being the largest cost group for which permits were issued in St. Louis.

In Washington the main cost group was between \$5,000 and \$6,000, 294, or 33.2 per cent, of the dwellings for which permits were issued in this period falling in this group.

From the foregoing figures it would seem that the low-salaried man would have a much better opportunity to own a home in St. Louis than in Washington. It must be borne in mind, however, as before stated that the cost figures do not include the cost of the lot on which the building is erected, nor has any profit been included in the figures as shown. Therefore, although 59 per cent of the 1-family dwellings in St. Louis had an estimated erection cost of less than \$4,000, in all probability nearly \$2,000 more would have to be added to the cost of these dwellings to cover the cost of the land, cost of financing, and profit to the builder and seller.

Table 2 shows the number and per cent of families provided for in 2-family dwellings in St. Louis and Washington, by cost groups:

TABLE 2.—ESTIMATED COST PER FAMILY OF THE 2-FAMILY DWELLINGS FOR WHICH PERMITS WERE ISSUED IN ST. LOUIS AND WASHINGTON DURING THE FIRST HALF OF 1929, BY COST GROUPS

Cost	Number of families provided for		Percentage of families provided for		Cumulative percentage of families provided for	
	St. Louis	Washington	St. Louis	Washington	St. Louis	Washington
Under \$2,000	10		2.6		2.6	
\$2,000 and under \$3,000	140	4	36.3	66.7	38.9	66.7
\$3,000 and under \$4,000	144	2	37.3	33.3	76.2	100.0
\$4,000 and under \$5,000	72		18.7		94.8	
\$5,000 and under \$6,000	12		3.1		97.9	
\$6,000 and under \$7,000	2		.5		98.4	
\$7,000 and under \$8,000	4		1.0		99.5	
\$8,000 and under \$9,000						
\$9,000 and under \$10,000	2		.5		100.0	
\$10,000 and over						
Total	386	6	100.0	100.0		

Permits were issued in St. Louis for a large number of 2-family dwellings. In Washington very few of this class of dwellings are built.

During the six months under discussion permits were issued for 193 2-family dwellings in St. Louis to provide for 386 families, while in Washington permits were issued for only three 2-family dwellings, thereby providing for only 6 families. Two-family dwellings, therefore, while entering largely into the solution of the housing problem in St. Louis, are of little importance in Washington. Of the 2-family dwellings for which permits were issued in St. Louis during the first half of 1929, 94.8 per cent cost less than \$5,000 per family. By far

the greater number cost between \$2,000 and \$4,000; 284 of the 386 family units provided for in this class of dwelling fell in this cost group.

Table 3 shows the number and per cent of family housing units provided in apartment houses in St. Louis and Washington, by cost groups.

TABLE 3.—ESTIMATED COST PER FAMILY HOUSING UNITS OF APARTMENT HOUSES FOR WHICH PERMITS WERE ISSUED IN ST. LOUIS AND WASHINGTON DURING THE FIRST HALF OF 1929, BY COST GROUPS

Cost	Number of families provided for		Percentage of families provided for		Cumulative percentage of families provided for	
	St. Louis	Washington	St. Louis	Washington	St. Louis	Washington
Under \$2,000	723		38.2		38.2	
\$2,000 and under \$3,000	954	210	50.4	19.6	88.5	19.6
\$3,000 and under \$4,000	122	368	6.4	34.3	95.0	53.9
\$4,000 and under \$5,000	53	92	2.8	8.6	97.8	62.5
\$5,000 and under \$6,000	42		2.2		100.0	
\$6,000 and under \$7,000		109		10.2		72.7
\$7,000 and under \$8,000		96		9.0		81.6
\$8,000 and under \$9,000						
\$9,000 and under \$10,000						
\$10,000 and under \$11,000		197		18.4		100.0
Total	1,894	1,072	100.0	100.0		

According to permits issued during the first six months of 1929 1,894 families were provided with dwelling places in multi-family dwellings in St. Louis, as compared with 1,072 families in Washington. As in the case of 1-family dwellings, the family unit cost of the apartment houses was much lower in St. Louis than in Washington.

According to permits issued, 954, or 50.4 per cent, of the family units provided in apartment houses in St. Louis cost between \$2,000 and \$3,000. In Washington only 19.6 per cent fell in this cost group. In St. Louis 38.2 per cent of the family units cost less than \$2,000. In Washington no apartment houses were erected in which the family unit cost was less than \$2,000.

In St. Louis no permits were issued for apartments during this period in which the family unit cost was over \$6,000.

In Washington 18.4 per cent of the family units provided had an estimated cost of between \$10,000 and \$11,000.

LABOR TURNOVER

Labor Turnover in American Factories

OCTOBER labor turnover indexes are presented herewith for manufacturing as a whole and for eight separate manufacturing industries. The indexes for manufacturing as a whole are made up from reports received from representative manufacturing plants in over 75 industries employing nearly 1,500,000 people.

In the automotive industry the indexes are made from representative plants employing nearly 200,000 people. Firms reporting for boots and shoes and cotton employed over 100,000 people in each industry. Reports were received from firms in foundries and machine shops employing approximately 175,000 people. In the furniture industry the firms reporting on labor turnover have over 40,000 people on the pay roll, while those reporting for iron and steel employ nearly 225,000. Firms reporting for sawmills and slaughtering and meat packing employ between 65,000 and 75,000 people per industry.

The form of average used is the unweighted median of company rates. In determining the median rate the rates for the several establishments reporting are arranged in order from lowest to highest. The rate falling in the center of this arrangement of rates is the median. In other words, it is the rate that has as many company rates above it as below it. The number of employees used as a basis for computing these rates is the average number on the company pay rolls during the month of October.

In addition to the quit, discharge, lay-off, total separation, and accession rates, the bureau presents the net turnover rate. The net turnover rate means the rate of replacement. It is the number of jobs that are vacated and filled per 100 employees. In a plant that is increasing its force the net turnover rate should be the same as the separation rate, because while more people would be hired than quit the number hired above those leaving would be due to expansion and could not justly be charged to turnover. On the other hand, in a plant that is reducing its number of employees the net turnover rate is the same as the accession rate, for while more people leave than are hired the excess of separations over accessions is due to a reduction of force and therefore could not logically be charged as a turnover expense.

The net turnover rate for manufacturing as a whole has been the same as the accession rate since November, 1929.

Table 1 shows for all industries the total separation rate subdivided into quit, discharge, and lay-off rates, together with the accession and the net turnover rates, presented on a monthly and an equivalent annual basis.

TABLE 1.—AVERAGE LABOR-TURNOVER RATES IN SELECTED FACTORIES IN 75 INDUSTRIES¹

A.—Monthly Rates

Month	Separation rates								Accession rate		Net turnover rate	
	Quit		Lay-off		Discharge		Total ¹		1929	1930	1929	1930
	1929	1930	1929	1930	1929	1930	1929	1930				
January.....	2.26	1.11	0.35	1.04	0.45	0.24	3.06	2.39	4.98	2.01	3.06	2.01
February.....	2.28	1.23	.36	1.06	.46	.25	3.20	2.53	4.36	2.06	3.20	2.06
March.....	3.12	1.38	.48	1.03	.57	.30	4.17	2.71	5.20	1.95	4.17	1.95
April.....	3.56	1.45	.45	1.16	.57	.27	4.58	2.88	5.77	2.00	4.58	2.00
May.....	3.46	1.50	.48	1.18	.48	.26	4.42	2.94	5.09	2.10	4.42	2.10
June.....	3.25	1.22	.44	1.12	.51	.20	4.20	2.54	5.01	1.62	4.20	1.62
July.....	3.03	1.00	.42	1.31	.49	.18	3.94	2.49	5.21	1.48	3.94	1.48
August.....	3.26	.95	.41	1.30	.45	.13	4.12	2.38	4.61	1.25	4.12	1.25
September.....	3.14	1.13	.52	1.18	.50	.16	4.16	2.47	4.91	1.82	4.16	1.82
October.....	2.42	.82	.80	1.44	.40	.10	3.62	2.36	3.91	1.49	3.62	1.49
November.....	1.59	-----	1.26	-----	.30	-----	3.15	-----	1.95	-----	1.95	-----
December.....	1.08	-----	1.21	-----	.20	-----	2.49	-----	1.24	-----	1.24	-----
Average..	2.71	-----	.60	-----	.45	-----	3.76	-----	4.35	-----	3.76	-----

B.—Equivalent Annual Rates

January.....	26.7	13.1	4.2	12.2	5.3	2.8	36.2	28.1	58.6	23.7	36.2	23.7
February.....	31.0	16.0	4.7	13.8	6.0	3.2	41.7	33.0	56.9	26.9	41.7	26.9
March.....	36.8	16.3	5.7	12.1	6.7	3.5	49.2	31.9	61.2	23.0	49.2	23.0
April.....	43.3	17.7	5.5	14.1	6.9	3.3	55.7	35.1	70.2	24.3	55.7	24.3
May.....	40.8	17.7	5.7	13.9	5.6	3.1	52.1	34.7	59.9	24.7	52.1	24.7
June.....	39.5	14.8	5.4	13.6	6.2	2.4	51.1	30.8	60.9	19.7	51.1	19.7
July.....	35.7	11.8	5.0	15.4	5.8	2.1	46.5	29.3	61.4	17.4	46.5	17.4
August.....	38.4	11.2	4.8	15.3	5.3	1.5	48.5	28.0	54.3	14.7	48.5	14.7
September.....	38.2	13.7	6.3	14.3	6.1	2.0	50.6	30.0	59.7	22.2	50.0	22.2
October.....	28.5	9.6	9.4	17.0	4.7	1.2	42.8	27.8	46.0	17.6	42.8	17.6
November.....	19.4	-----	15.3	-----	3.7	-----	38.4	-----	23.7	-----	23.7	-----
December.....	12.7	-----	14.2	-----	2.4	-----	29.3	-----	14.6	-----	14.6	-----
Average..	32.6	-----	7.2	-----	5.4	-----	45.2	-----	52.3	-----	45.2	-----

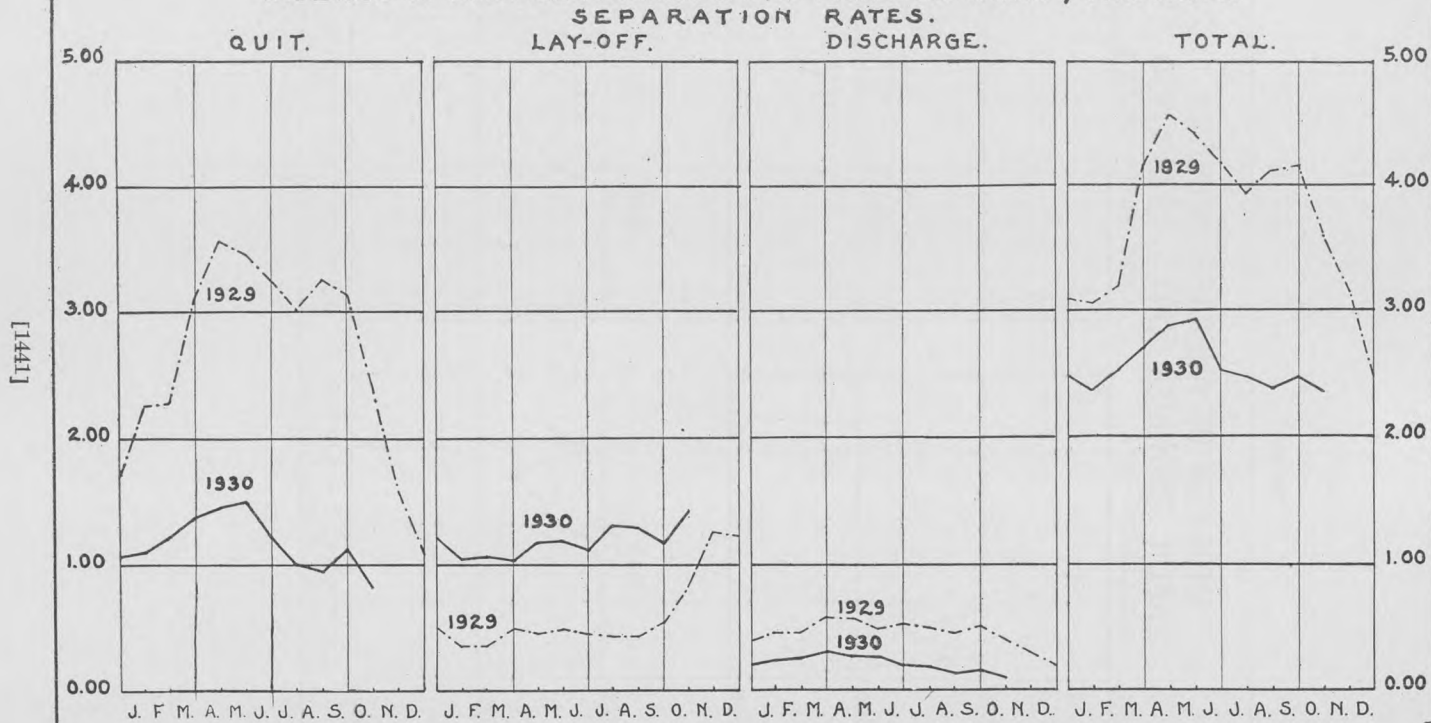
¹ Arithmetic sum of quit, lay-off, and discharge rates.

Comparing the rates for October, 1930, with September, 1930, there was a falling quit rate and a rising lay-off rate. The quit rate for October, 1930, was 0.82, the lowest quit rate shown since the bureau has been collecting turnover data. The lay-off rate for October, 1930, was 1.44. This is the peak lay-off rate for either 1929 or 1930. The discharge rate for October, 1930, was 0.10 which is lower than for any month of the past two years. The accession rate for October was 1.49. This was lower than the September accession rate but higher than either the July or August accession rate.

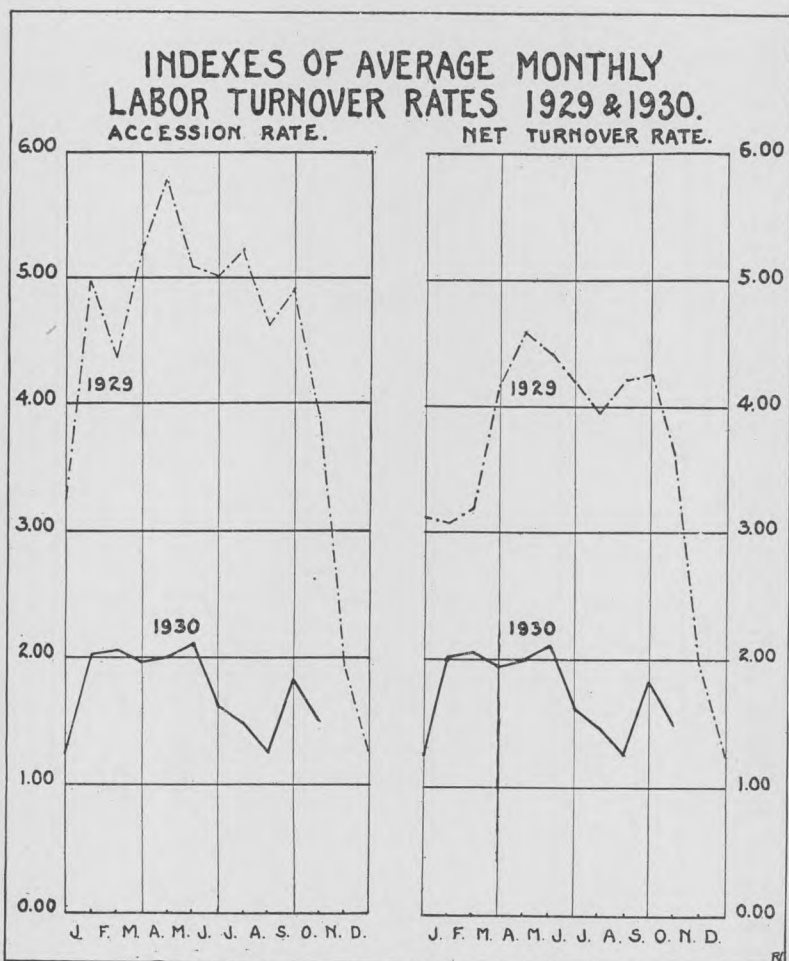
The quit rate for October, 1930, was about one-third of the October, 1929, quit rate. The lay-off rate was nearly twice as high as the October, 1929, lay-off rate. The discharge rate for October, 1930, was only one-fourth of the discharge rate as shown for October, 1929. The accession rate for October, 1930, was less than half of the October, 1929, accession rate.

The charts following show in graphic form the information contained in Table 1.

INDEXES OF AVERAGE MONTHLY LABOR TURNOVER RATES , 1929 & 1930.



LABOR TURNOVER



Turnover Rates by Industries

TABLE 2 shows the quit, discharge, lay-off, accession, and net turnover rates for automobiles, boots and shoes, cotton manufacturing, iron and steel, sawmills, and slaughtering and meat packing for the months January to October, inclusive; for the foundry and machine-shop industry for the months February to October, inclusive; and for the furniture industry for the months April to October, inclusive, presented both on a monthly and an equivalent annual basis.

TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES

Industry, year and month, 1930	Separation rates								Accession rates		Net turnover rate	
	Quits		Discharges		Lay-offs		Total		Monthly	Equivalent annual	Monthly	Equivalent annual
	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual				
Automobiles:												
January	1.27	15.0	0.59	7.0	2.22	26.2	4.08	48.2	8.20	96.9	4.08	48.2
February	1.10	14.3	.15	1.9	1.86	24.3	3.11	40.5	3.40	44.3	3.11	40.5
March	1.56	18.4	.42	4.9	1.95	23.0	3.93	46.3	5.31	66.6	3.93	46.3
April	1.84	22.4	.33	4.0	2.70	32.8	4.87	59.2	4.06	49.4	4.06	49.4
May	1.39	16.4	.27	3.2	3.68	43.3	5.34	62.9	2.74	32.3	2.74	32.3
June	1.17	14.2	.25	3.0	3.82	46.5	5.24	63.7	1.91	23.2	1.91	23.2
July	1.00	11.8	.10	1.2	4.53	53.4	5.63	66.4	1.39	16.4	1.39	16.4
August	1.02	12.0	.15	1.8	3.10	36.5	4.27	50.3	2.65	31.2	2.65	31.2
September	1.14	13.9	.16	2.0	3.60	43.8	4.90	59.7	2.70	32.9	2.70	32.9
October	.70	8.2	.08	1.0	2.60	30.6	3.38	39.8	2.10	24.7	2.10	24.7
Boots and shoes:												
January	1.51	17.8	.46	5.4	.28	3.3	2.25	26.5	5.26	61.9	2.25	26.5
February	1.23	16.0	.39	5.1	.72	9.4	2.34	30.5	2.06	26.9	2.06	26.9
March	1.56	18.4	.36	4.2	.44	5.2	2.36	27.8	2.79	27.8	2.36	27.8
April	1.73	21.1	.32	3.9	1.01	12.3	3.06	37.8	2.11	25.7	2.11	25.7
May	1.45	17.1	.25	2.9	.71	8.4	2.41	28.4	2.16	25.4	2.16	25.4
June	1.25	15.2	.32	3.9	.87	10.6	2.44	29.7	2.17	26.4	2.17	26.4
July	.96	11.3	.28	3.3	.75	8.8	1.99	23.4	2.50	29.5	1.99	23.4
August	1.32	15.5	.36	4.2	1.33	15.7	3.01	35.4	2.53	29.8	2.53	29.8
September	1.46	17.8	.25	3.0	.81	9.8	2.52	30.6	1.98	24.1	1.98	24.1
October	1.10	13.0	.15	1.8	1.39	16.4	2.65	16.4	1.85	21.8	1.85	21.8
Cotton manufacturing:												
January	1.20	14.2	.11	1.3	.29	3.4	1.60	18.9	2.40	28.3	1.60	18.9
February	1.20	15.6	.19	2.5	.14	1.8	1.53	19.9	1.62	21.1	1.53	19.9
March	1.59	18.7	.28	3.3	.25	2.9	2.12	24.9	2.53	29.8	2.12	24.9
April	1.34	16.3	.09	1.1	.14	5.4	1.87	22.8	2.34	28.5	1.87	22.8
May	1.40	16.5	.20	2.3	.59	6.9	2.19	25.7	2.25	26.5	2.19	25.7
June	1.04	12.6	.16	1.9	.90	11.0	2.10	25.5	1.75	21.3	1.75	21.3
July	.95	11.2	.11	1.3	.67	7.9	1.73	20.4	1.44	17.0	1.44	17.0
August	1.00	11.8	.14	1.6	.84	9.9	1.98	23.3	1.37	16.1	1.37	16.1
September	.95	11.5	.09	1.1	.47	5.7	1.50	18.3	2.06	25.1	1.50	18.3
October	.98	11.5	.08	1.0	.50	5.9	1.56	18.4	2.32	27.3	1.56	18.4
Foundries and machine shops:												
February	.77	10.1	.05	.7	.80	10.4	1.62	21.2	2.26	29.5	1.62	21.2
March	1.12	13.2	.16	1.9	1.21	14.2	2.49	29.3	2.33	27.4	2.33	27.4
April	1.26	15.3	.09	1.1	1.12	13.6	2.47	30.0	2.42	29.5	2.42	29.5
May	1.23	14.5	.25	2.9	1.88	22.1	3.36	39.5	1.83	21.6	1.83	21.6
June	.76	9.3	.15	1.8	1.99	24.2	2.90	35.3	1.30	15.8	1.30	15.8
July	.54	6.4	.16	1.9	1.79	21.1	2.49	29.4	1.23	14.5	1.23	14.5
August	.53	6.2	.13	1.5	2.00	23.6	2.66	31.3	1.04	12.2	1.04	12.2
September	.49	6.0	.08	1.0	2.00	24.3	2.57	31.3	1.00	12.2	1.00	12.2
October	.42	5.0	.09	1.1	1.85	21.8	2.37	27.9	1.21	14.2	1.21	14.2
Furniture:												
April	1.22	14.8	.10	1.2	1.29	15.7	2.61	31.7	1.33	16.2	1.33	16.2
May	.76	8.9	.23	2.7	2.01	23.7	3.00	35.3	1.15	13.5	1.15	13.5
June	.39	4.7	.13	1.6	2.38	28.9	2.90	35.2	1.07	13.0	1.07	13.0
July	.42	4.9	.20	2.4	1.32	15.5	1.94	22.8	1.59	18.7	1.59	18.7
August	.62	7.3	.22	2.6	.76	8.9	1.60	18.8	2.01	23.7	1.60	18.8
September	.35	4.2	.19	2.3	.70	8.5	1.24	15.0	2.70	32.9	1.24	15.0
October	.43	5.1	.10	1.2	.88	10.4	1.42	16.7	1.66	19.6	1.42	16.7
Iron and steel:												
January	1.37	16.1	.23	2.8	1.63	19.2	3.23	38.1	3.87	45.6	3.23	38.1
February	1.07	14.0	.18	2.4	.74	9.7	1.99	26.1	2.97	38.7	1.99	26.1
March	1.35	15.9	.20	2.3	.45	5.3	2.00	23.5	2.54	29.9	2.00	23.5
April	1.51	18.4	.19	2.3	.30	3.7	2.00	24.4	2.43	29.6	2.00	24.4

TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES—Contd.

Industry, year and month, 1930	Separation rates								Accession rates		Net turn-over rate	
	Quits		Discharges		Lay-offs		Total		Monthly	Equivalent annual	Monthly	Equivalent annual
	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual				
Iron and steel—Continued.												
May	1.40	16.5	0.17	2.0	0.87	10.3	2.44	28.8	2.06	24.3	2.06	24.3
June	1.36	16.6	.23	2.8	.64	7.8	2.23	27.2	2.38	28.9	2.23	27.2
July	.90	10.6	.15	1.8	.73	8.6	1.78	21.0	1.37	16.1	1.37	16.1
August	.95	11.2	.11	1.3	1.13	13.3	2.19	25.8	1.15	13.6	1.15	13.6
September	1.07	13.0	.09	1.1	1.00	12.2	2.16	26.3	1.32	16.1	1.32	16.1
October	.80	9.4	.08	.9	1.49	17.6	2.37	27.9	.80	9.4	.80	9.4
Saw mills:												
January	1.57	18.5	.44	5.2	1.77	20.9	3.78	44.6	2.54	29.9	2.54	29.9
February	1.77	23.1	.18	2.4	1.81	23.6	3.76	49.1	4.38	57.1	3.76	49.1
March	1.90	22.4	.11	1.3	1.10	13.0	3.11	36.7	4.86	57.2	3.11	36.7
April	1.62	19.7	.19	2.3	1.21	14.7	3.02	36.7	4.46	54.3	3.02	36.7
May	1.33	15.7	.11	1.3	1.46	17.2	2.90	34.2	3.48	41.0	2.90	34.2
June	1.10	13.4	.23	2.8	2.16	26.3	3.49	42.5	2.78	33.8	2.78	33.8
July	.82	9.6	.24	2.8	2.28	26.9	3.34	39.3	3.65	43.0	3.34	39.3
August	.67	7.9	.26	3.1	2.34	27.6	3.27	38.6	2.04	24.1	2.04	24.1
September	1.52	18.5	.16	2.0	2.67	32.5	4.35	53.0	3.07	37.4	3.07	37.4
October	.87	10.3	.20	2.3	2.09	24.6	3.16	37.2	3.32	39.1	3.16	37.2
Slaughtering and meat packing:												
January	1.60	18.9	.51	6.0	1.52	17.9	3.63	42.8	4.08	48.1	3.63	42.8
February	1.54	20.1	.45	5.9	4.33	56.5	6.32	82.5	2.92	38.2	2.92	38.1
March	1.89	22.3	.48	5.6	2.62	30.9	4.99	58.8	2.84	33.5	2.84	33.5
April	1.90	23.1	.46	5.6	1.91	23.3	4.27	52.0	4.28	52.1	4.27	52.0
May	2.38	28.0	.54	6.4	1.52	17.9	4.44	52.3	6.10	71.9	4.44	52.3
June	2.12	25.8	.44	5.3	1.13	13.7	3.69	44.8	6.12	74.4	3.69	44.8
July	1.52	17.9	.48	5.7	2.90	34.1	4.90	57.7	4.80	56.5	4.80	56.5
August	1.32	15.6	.36	4.2	1.35	15.9	3.03	35.7	3.66	43.1	3.03	35.7
September	1.85	22.5	.35	4.3	1.41	17.2	3.61	44.0	5.38	65.5	3.61	44.0
October	.97	11.4	.37	4.4	1.57	18.5	2.91	34.3	4.47	52.7	2.91	34.3

The total separation rate for the automotive industry for October was 3.38, compared with an accession rate of 2.10. The October quit, discharge, lay-off, and accession rates were all lower in the automotive industry than the corresponding rates for the month of September.

In the boot and shoe industry the total separation rate was 2.65, while the accession rate was 1.85. The quit, discharge, and accession rates were all lower than during September. The lay-off rate, in contrast, was more than 50 per cent higher than during September.

The accession rate in the cotton manufacturing industry was 2.32, while the separation rate was only 1.56. The quit and discharge rates were lower than a month ago, while the lay-off and accession rates were higher than a month ago.

Foundries and machine shops showed a total separation rate of 2.37, in comparison with an accession rate of 1.21. The quit and lay-off rates were lower during October than during September. The discharge and accession rates were higher during October than during September.

The furniture industry had a higher accession rate than total separation rate, the former rate being 1.66, and the latter 1.42. The October quit and lay-off rates in this industry were higher than the equivalent September rates. The discharge and accession rates were lower than the equivalent September rates.

The total separation rate in the iron and steel industry was 2.37, compared with an accession rate of 0.80. Comparison of the October

rates with September rates in this industry shows lower quit, discharge, and accession rates, but a higher lay-off rate.

The October accession rate for sawmills was 3.32, while the total separation rate was 3.16. October rates were lower than September rates for quits and lay-offs and higher than September rates for discharges and accessions.

The slaughtering and meat-packing industry showed a much higher accession rate than total separation rate. The accession rate for October was 4.47, while the total separation rate was 2.91. The October quit and accession rates were lower than the September quit and accession rates, while the October discharge and lay-off rates were higher than the September discharge and lay-off rates.

The following industries had a higher quit rate than that shown for manufacturing as a whole: Boots and shoes, cotton, sawmills, and slaughtering and meat packing. Automobiles, foundries and machine shops, furniture, and iron and steel had a lower quit rate than that shown for all manufacturing.

The discharge rate for boots and shoes, sawmills, and slaughtering and meat packing was higher than the all-manufacturing discharge rate. The discharge rate for automobiles, cotton manufacturing, foundries and machine shops, and iron and steel was lower than the all-industry discharge rate. The discharge rate for the furniture industry was identical with that for all industries.

The lay-off rates for automobiles, foundries and machine shops, iron and steel, sawmills, and slaughtering and meat packing were higher than those for manufacturing as a whole, while the lay-off rate for boots and shoes, cotton manufacturing, and furniture was lower than for manufacturing as a whole. Automobiles, boots and shoes, cotton manufacturing, furniture, sawmills, and slaughtering and meat packing all had a higher accession rate than the all-manufacturing accession rate.

The highest quit rate, 1.10, occurred in the boot and shoe industry. The lowest quit rate, 0.42, was in the foundry and machine-shop industry.

The lowest discharge rate, 0.08, was shown by automobiles, cotton manufacturing, and iron and steel. The highest discharge rate, 0.37, was shown by slaughtering and meat packing.

The automotive industry had the highest lay-off rate, 2.60. Cotton manufacturing had the lowest lay-off rate, 0.50.

The highest accession rate, 4.47, was shown by the slaughtering and meat-packing industry, while the lowest, 0.80, was shown by iron and steel.

WAGES AND HOURS OF LABOR

Wages and Hours of Labor in Rayon and Other Synthetic Textile Manufacturing, 1930

THIS report presents the results of a study in 1930 by the Bureau of Labor Statistics of wages and hours of labor of wage earners in rayon and other synthetic textile manufacturing in the United States. Data covering individual hours and earnings of 18,743 males and 13,549 females for a representative pay period, by occupations, were collected by an agent of the bureau, directly from the pay rolls and other records of 21 representative establishments. The pay period, except for a few plants, was in February, March, April, or May.

The manufacture of rayon or other synthetic textiles is comparatively a new industry. According to the United States Census reports, the number of wage earners in this industry increased from 19,128 in 1925, to 26,341 in 1927, and to 38,938 in 1929. Wages increased from \$22,975,605 in 1925 to \$28,649,441 in 1927 and to \$44,704,134 in 1929. The value of products increased from \$88,060,962 in 1925 to \$109,888,336 in 1927 and to \$149,276,487 in 1929, and production of yarns increased from 51,902,491 pounds in 1925 to 75,555,439 pounds in 1927 and to 116,492,554 pounds in 1929.

Average full-time hours per week, earnings per hour, and full-time earnings per week are presented in Table 1 for each of the occupations in the industry that were important in number of wage earners, for a miscellaneous group of "other employees" in other occupations, each too few in number of wage earners to warrant tabulation as an occupation, and also for all occupations combined or the industry.

Average full-time hours per week for males in all occupations were 51.1; for females, 49.0; and for both sexes, or the industry, 50.2. Average earnings per hour for males in all occupations were 50.4 cents; for females, 34.4 cents; and for both sexes, or the industry, 44.1 cents. Average full-time earnings per week for males in all occupations were \$25.75; for females, \$16.86; and for both males and females, or the industry, \$22.14.

Average full-time hours per week for males by occupations range from 49.4 for skein driers to 55.6 for cake wringers, and for females from 45.6 for spoolers to 51.7 for filter cleaners.

Average earnings per hour for males by occupations range from 35.4 cents for winders (cone, quill, cop, and bobbin) to 58.8 cents for spinning-bath men, and for females from 24.4 cents for truckers and handlers to 50.8 cents for spoolers.

Average full-time earnings per week for males by occupations range from \$17.70 for winders (cone, quill, cop, and bobbin) to \$29.81 for spinning-bath men, and for females from \$12.54 for truckers and handlers to \$23.16 for spoolers.

TABLE 1.—AVERAGE HOURS AND EARNINGS, 1930, BY OCCUPATION AND SEX

Occupation	Sex	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Chemical room workers.....	Male.....	21	1,782	53.6	\$0.527	\$28.25
Spinning-bath men.....	do.....	21	229	50.7	.588	29.81
Spinners.....	do.....	21	4,359	49.9	.564	28.14
	Female.....	2	163	48.0	.310	14.88
Machine cleaners.....	Male.....	16	220	51.5	.458	23.59
Spinnerette cleaners.....	do.....	19	161	51.4	.555	28.53
	Female.....	5	34	50.9	.298	15.17
Filter cleaners.....	Male.....	18	134	52.9	.457	24.18
	Female.....	5	28	51.7	.313	16.18
Bobbin washers.....	Male.....	9	443	50.0	.463	23.15
Cake washers.....	do.....	6	164	54.0	.487	26.30
Cake wringers.....	do.....	3	82	55.6	.449	24.96
Bobbin dryers.....	do.....	9	77	52.2	.452	23.59
Cake dryers.....	do.....	5	34	55.3	.490	27.10
Cake inspectors.....	do.....	3	34	55.3	.526	29.09
	Female.....	5	111	49.8	.346	17.23
Pump testers.....	Male.....	21	147	52.9	.501	26.50
Spoolers.....	Female.....	3	523	45.6	.508	23.16
Twisters or throwers.....	Male.....	6	722	49.7	.385	19.13
	Female.....	12	1,834	49.7	.319	15.85
Reelers and lacers.....	do.....	20	4,636	49.5	.351	17.37
Winders, cone, quill, cop, and bobbin.....	Male.....	10	1,013	50.0	.354	17.70
	Female.....	17	2,402	48.2	.332	16.00
Skein washers and bleachers.....	Male.....	19	865	51.5	.488	25.13
Skein dryers.....	do.....	15	181	49.4	.453	22.38
	Female.....	12	300	48.7	.359	17.48
Skein inspectors.....	do.....	20	2,269	48.9	.342	16.72
Cone inspectors.....	do.....	18	220	48.3	.346	16.71
Wrappers and packers.....	Male.....	14	206	50.3	.494	24.85
	Female.....	20	343	49.1	.338	16.60
Truckers and handlers.....	Male.....	21	1,409	50.5	.369	18.63
	Female.....	7	112	51.4	.244	12.54
Laborers.....	Male.....	21	837	51.6	.394	20.33
Other employees.....	do.....	21	5,644	51.3	.550	28.22
	Female.....	21	574	50.0	.325	16.25
All employees.....	Male.....	21	18,743	51.1	.504	25.75
	Female.....	21	13,549	49.0	.344	16.86
All employees, male and female.....		21	32,292	50.2	.441	22.14

Average Hours and Earnings 1930, by Districts

AVERAGE full-time hours per week, earnings per hour, and full-time earnings per week for wage earners of each sex and for both sexes combined are presented in Table 2 by districts. The averages are shown by districts instead of by States, so as to avoid presenting figures for one establishment alone.

District 1 includes 1 plant in Connecticut, 2 in Massachusetts, 1 in New Hampshire, and 1 in Rhode Island.

District 2 includes 1 plant in Delaware, 2 in New York, 2 in Ohio, and 1 in Pennsylvania.

District 3 includes 1 plant in Georgia, 1 in Maryland, 1 in North Carolina, 3 in Tennessee, and 4 in Virginia.

TABLE 2.—AVERAGE HOURS AND EARNINGS, 1930, BY SEX AND DISTRICT

Sex and district	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
<i>Males</i>					
District 1.....	5	861	50.7	\$0.508	\$25.76
District 2.....	6	4,415	49.9	.657	32.78
District 3.....	10	13,467	51.5	.453	23.33
Total.....	21	18,743	51.1	.504	25.75
<i>Females</i>					
District 1.....	5	837	50.8	.357	18.14
District 2.....	6	3,482	47.5	.447	21.23
District 3.....	10	9,230	49.4	.307	15.17
Total.....	21	13,549	49.0	.344	16.86
<i>Males and females</i>					
District 1.....	5	1,698	50.7	.439	22.26
District 2.....	6	7,897	48.9	.573	28.02
District 3.....	10	22,697	50.6	.396	20.04
Total.....	21	32,292	50.2	.441	22.14

Table 3 presents, by districts, average full-time hours per week, earnings per hour, and full-time earnings per week in 10 of the representative occupations in Table 1. These occupations represent 67.8 per cent of the 32,292 employees in all occupations.

TABLE 3.—AVERAGE HOURS AND EARNINGS FOR 10 SPECIFIED OCCUPATIONS, 1930, BY SEX AND DISTRICT

[For States in each district, see p. 151]

District	Chemical-room workers, male					Spinners, male				
	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
District 1.....	5	99	50.4	\$0.522	\$26.31	5	195	49.7	\$0.540	\$26.84
District 2.....	6	414	54.9	.672	36.89	6	1,057	50.1	.737	36.92
District 3.....	10	1,269	53.4	.481	25.09	10	3,107	49.8	.504	25.10
Total.....	21	1,782	53.6	.527	28.25	21	4,359	49.9	.564	28.14
<i>Twisters or throwers, female</i>										
District 1.....	2	113	50.8	\$0.336	\$17.07	5	374	50.2	\$0.384	\$19.28
District 2.....	2	353	48.5	.465	22.55	6	1,279	47.2	.446	21.05
District 3.....	8	1,368	49.9	.282	14.07	9	2,983	50.4	.308	15.52
Total.....	12	1,834	49.7	.319	15.85	20	4,636	49.5	.351	17.37
<i>Winders, cone, quill, cop, and bobbin, male</i>										
District 1.....						4	123	53.2	\$0.326	\$17.34
District 2.....	2	77	48.0	\$0.594	\$28.51	5	628	48.3	.423	20.43
District 3.....	8	936	50.2	.336	16.87	8	1,651	47.8	.301	14.39
Total.....	10	1,013	50.0	.354	17.70	17	2,402	48.2	.332	16.00
<i>Winders, cone, quill, cop, and bobbin, female</i>										

TABLE 3.—AVERAGE HOURS AND EARNINGS FOR 10 SPECIFIED OCCUPATIONS, 1930, BY SEX AND DISTRICT—Continued

District	Skein washers and bleachers, male					Skein dryers, male				
	Number of establishments	Number of employes	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Number of establishments	Number of employes	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
District 1.....	5	90	50.7	\$0.423	\$21.45	4	10	51.9	\$0.401	\$20.81
District 2.....	6	168	51.2	.594	30.41	4	44	49.0	.540	26.46
District 3.....	8	607	51.8	.469	24.29	7	127	49.3	.429	21.15
Total.....	19	865	51.5	.488	25.13	15	181	49.4	.453	22.38
	Skein dryers, female					Skein inspectors, female				
District 1.....	3	11	48.5	\$0.359	\$17.41	5	146	50.0	\$0.340	\$17.00
District 2.....	4	67	48.0	.392	18.82	6	512	47.0	.426	20.02
District 3.....	5	222	48.9	.350	17.12	9	1,611	49.4	.317	15.66
Total.....	12	300	48.7	.359	17.48	20	2,269	48.9	.342	16.72
	Truckers and handlers, male					Laborers, male				
District 1.....	5	51	51.1	\$0.339	\$17.32	5	46	50.7	\$0.466	\$23.63
District 2.....	6	300	47.9	.479	22.94	6	237	48.5	.523	25.37
District 3.....	10	1,058	51.3	.342	17.54	10	554	52.9	.332	17.56
Total.....	21	1,409	50.5	.369	18.63	21	837	51.6	.394	20.33

Average and Classified Earnings per Hour

TABLE 4 presents average earnings per hour, and also a percentage distribution of the employees in each and all occupations in the industry by classified average earnings per hour.

The 1,782 chemical-room workers of the 21 establishments included in the study earned an average of 52.7 cents per hour. From the table it will be seen that the average earnings per hour of less than 1 per cent of these employees were 24 and under 25 cents; of 16 per cent were 50 and under 55 cents; of 15 per cent were 55 and under 60 cents; of 11 per cent were 60 and under 65 cents; of 1 per cent were 90 and under 95 cents; and of less than 1 per cent were 95 cents and under \$1 per hour. These employees include all of those in the chemical room in all occupations, because in a number of the establishments such employees are continually shifting from one position to another.

TABLE 4.—AVERAGE HOURLY EARNINGS AND PER CENT OF EMPLOYEES EARNING EACH CLASSIFIED AMOUNT PER HOUR, 1930, BY OCCUPATION AND SEX

Occupation	Chemical-room workers		Spinning-bath men		Spinners		Machine cleaners		Spinnerette cleaners		Filter cleaners		Bobbin washers	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Sex														
Establishments	21	21	21	2	16	19	5	18	5	134	28	443		
Employees	1,782	229	4,359	163	220	161	34	134	28	443				
Average earnings per hour	\$0.527	\$0.588	\$0.564	\$0.310	\$0.458	\$0.555	\$0.298	\$0.457	\$0.313	\$0.463				
Per cent of employees earning each classified amount per hour														
<i>Classified earnings</i>														
20 and under 21 cents					1				3					
23 and under 24 cents														
24 and under 25 cents														
25 and under 27½ cents	(1)		(1)	10	1	2	12				36			
27½ and under 30 cents	1		(1)	50	2	3	29	21	7				2	
30 and under 32½ cents	3		4	10	8	1	29	3	11				5	
32½ and under 35 cents	3	5	4	7	10	2	15	1	21				13	
35 and under 37½ cents	4	2	4	11	12	1	3	4	4				9	
37½ and under 40 cents	4	1	2	8	2	3		9	21				7	
40 and under 42½ cents	5	8	3	2	4	7	3	4					14	
42½ and under 45 cents	5	3	9		(1)	9							4	
45 and under 47½ cents	8	2	7		21	7	3	10					12	
47½ and under 50 cents	6	6	3		4	2							2	
50 and under 55 cents	16	9	8	1	4	8		17					6	
55 and under 60 cents	15	5	11		5	6		9					5	
60 and under 65 cents	11	20	12		18	14		5					13	
65 and under 70 cents	7	18	17		9	17		2					7	
70 and under 75 cents	2	3	2			2		12					(1)	
75 and under 80 cents	2		(1)			1		1					(1)	
80 and under 85 cents	4	13	1			2								
85 and under 90 cents	2	5	12			12								
90 and under 95 cents	1	1	(1)											
95 and under 100 cents	(1)													
Per cent of employees earning each classified amount per hour														
<i>Classified earnings</i>														
12 and under 13 cents													(1)	(1)
13 and under 14 cents													(1)	(1)
15 and under 16 cents													(1)	(1)
16 and under 17 cents													(1)	(1)
17 and under 18 cents													(1)	(1)
18 and under 19 cents													1	4
19 and under 20 cents													1	1
20 and under 21 cents													1	3
21 and under 22 cents													1	1
22 and under 23 cents													(1)	2
23 and under 24 cents													(1)	6
24 and under 25 cents													1	3
25 and under 27½ cents									2	1	(1)		4	19
27½ and under 30 cents									2		(1)		4	10
30 and under 32½ cents	1	1	9			21	6	8		(1)			7	
32½ and under 35 cents			12			16	2	4					8	
35 and under 37½ cents	4	1	9	6		44	3	7					10	
37½ and under 40 cents	24	1	9			6	5	4					11	4
40 and under 42½ cents	5	11	19	6		7	5	8					38	1
42½ and under 45 cents	13	77	1	38		1	1	7					10	3
45 and under 47½ cents	2		10	6		1	18	7					4	9
47½ and under 50 cents	1		3			12	6	8					1	6
50 and under 55 cents	13	2	1	24	82	1	22	19					2	1
55 and under 60 cents	15	1	5	3			10	21					(1)	
60 and under 65 cents	16	1	8	9	3		7	18					1	
65 and under 70 cents	5		12	9			8						1	
70 and under 75 cents		2					1						(1)	
75 and under 80 cents		1											(1)	
80 and under 85 cents						3		5						

¹ Less than 1 per cent.

TABLE 4.—AVERAGE HOURLY EARNINGS AND PER CENT OF EMPLOYEES EARNING EACH CLASSIFIED AMOUNT PER HOUR, 1930, BY OCCUPATION AND SEX—Con.

Occupation.....	Reelers and lacers		Winders, cone, quill, cop, and bobbin		Skein washers and bleachers		Skein dryers		Skein inspectors	Cone inspectors	Wrappers and packers	
	F.	M.	F.	M.	M.	F.	F.	F.	M.	F.		
Establishments.....	20	10	17	19	15	12	20	18	14	20		
Employees.....	4,636	1,013	2,402	865	181	300	2,269	220	206	343		
Average earnings per hour.....	\$0.351	\$0.354	\$0.332	\$0.488	\$0.453	\$0.359	\$0.342	\$0.346	\$0.494	\$0.338		

Classified earnings	Per cent of employees earning each classified amount per hour									
	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
10 and under 11 cents.....	(1)									
11 and under 12 cents.....	(1)									
12 and under 13 cents.....	(1)									
13 and under 14 cents.....			(1)							
14 and under 15 cents.....		(1)	(1)							
15 and under 16 cents.....	(1)		(1)							
16 and under 17 cents.....	(1)	(1)	(1)							
17 and under 18 cents.....	2	5	(1)				(1)			
18 and under 19 cents.....	3	3	2			1	3	1		1
19 and under 20 cents.....	2	1	2				1			(1)
20 and under 21 cents.....	3	(1)	3			(1)	1	1		2
21 and under 22 cents.....	3	(1)	1				2	(1)		1
22 and under 23 cents.....	4	(1)	2			(1)	2	2		2
23 and under 24 cents.....	2	(1)	1			2	2	4		1
24 and under 25 cents.....	2	(1)	1			1	3	3		1
25 and under 27½ cents.....	3	4	25		1	4	6	11	1	13
27½ and under 30 cents.....	3	8	7	(1)	3	12	5	6	1	8
30 and under 32½ cents.....	5	11	7	1	6	1	11	12	5	13
32½ and under 35 cents.....	6	11	9	(1)	2	(1)	10	6	8	3
35 and under 37½ cents.....	12	13	9	3	9	2	15	14	9	8
37½ and under 40 cents.....	8	16	5	6	8	60	12	10	2	20
40 and under 42½ cents.....	8	9	6	8	18	16	16	7	12	14
42½ and under 45 cents.....	9	4	5	5	5	(1)	3	5	1	11
45 and under 47½ cents.....	10	5	3	25	3		3	10	6	(1)
47½ and under 50 cents.....	6	1	3	2	2		2	3	(1)	2
50 and under 55 cents.....	5	2	5	19	11		2	1	17	2
55 and under 60 cents.....	1	1	2	15	18		1	2	9	1
60 and under 65 cents.....	1	2	1	5	3		(1)	1	9	
65 and under 70 cents.....	(1)	2	(1)	6	11		(1)	(1)	11	
70 and under 75 cents.....	(1)	1	(1)	4			(1)		4	
75 and under 80 cents.....	(1)								3	
80 and under 85 cents.....	(1)									

Occupation.....	Truckers and handlers		Laborers	Other employees		All employees		
	M.	F.	M.	M.	F.	M.	F.	Total
Establishments.....	21	7	21	21	21	21	21	21
Employees.....	1,409	112	837	5,644	574	18,743	13,549	32,292
Average earnings per hour.....	\$0.369	\$0.244	\$0.394	\$0.550	\$0.325	\$0.504	\$0.344	\$0.441

Classified earnings	Per cent of employees earning each classified amount per hour							
	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
10 and under 11 cents.....							(1)	(1)
11 and under 12 cents.....							(1)	(1)
12 and under 13 cents.....						(1)	(1)	(1)
13 and under 14 cents.....							(1)	(1)
14 and under 15 cents.....	(1)			(1)	(1)	(1)	(1)	(1)
15 and under 16 cents.....				(1)	(1)	(1)	(1)	(1)
16 and under 17 cents.....				(1)	(1)	(1)	(1)	(1)
17 and under 18 cents.....				(1)	(1)	(1)	(1)	(1)
18 and under 19 cents.....	1	3		(1)	(1)	(1)	(1)	1
19 and under 20 cents.....	(1)			(1)	(1)	(1)	(1)	1
20 and under 21 cents.....	1	24		(1)	(1)	(1)	(1)	1
21 and under 22 cents.....	(1)	3		(1)	(1)	(1)	(1)	1
22 and under 23 cents.....	1	3		(1)	(1)	(1)	(1)	1
23 and under 24 cents.....	(1)	39		(1)	(1)	(1)	(1)	1
24 and under 25 cents.....	1	1	(1)	(1)	(1)	(1)	(1)	1
25 and under 27½ cents.....	14	10	12	2	8	3	10	6
27½ and under 30 cents.....	10	7	12	1	13	3	6	4

¹ Less than 1 per cent.

TABLE 4.—AVERAGE HOURLY EARNINGS AND PER CENT OF EMPLOYEES EARNING EACH CLASSIFIED AMOUNT PER HOUR, 1930, BY OCCUPATION AND SEX—Con.

Occupation.....	Truckers and handlers		Laborers	Other employ-ees		All employees		
	M.	F.		M.	F.	M.	F.	Total
Establishments.....	21	7	21	21	21	21	21	21
Employees.....	1,409	112	837	5,644	574	18,743	13,549	32,292
Average earnings per hour.....	\$0.369	\$0.244	\$0.394	\$0.550	\$0.325	\$0.504	\$0.344	\$0.441

Classified earnings—Contd.	Per cent of employees earning each classified amount per hour							
	10	2	11	3	29	5	8	6
30 and under 32½ cents.....	10	2	11	3	29	5	8	6
32½ and under 35 cents.....	7	-----	4	2	6	4	7	5
35 and under 37½ cents.....	12	-----	3	4	4	5	11	8
37½ and under 40 cents.....	7	4	6	3	8	5	9	7
40 and under 42½ cents.....	7	-----	20	6	5	8	8	8
42½ and under 45 cents.....	2	1	5	3	2	5	5	5
45 and under 47½ cents.....	9	1	3	8	1	8	6	7
47½ and under 50 cents.....	5	-----	7	2	1	3	4	3
50 and under 55 cents.....	4	4	-----	11	7	10	4	7
55 and under 60 cents.....	2	-----	15	11	(1)	10	2	6
60 and under 65 cents.....	3	-----	2	13	(1)	10	1	6
65 and under 70 cents.....	2	-----	1	10	-----	9	(1)	5
70 and under 75 cents.....	2	-----	(1)	7	-----	3	(1)	2
75 and under 80 cents.....	-----	-----	(1)	6	(1)	2	(1)	1
80 and under 85 cents.....	-----	-----	-----	2	-----	1	(1)	1
85 and under 90 cents.....	-----	-----	-----	2	-----	4	-----	2
90 and under 95 cents.....	-----	-----	-----	1	-----	1	-----	(1)
95 and under 100 cents.....	-----	-----	-----	(1)	-----	(1)	-----	(1)
100 and under 110 cents.....	-----	-----	-----	1	-----	(1)	-----	(1)
110 and under 120 cents.....	-----	-----	-----	(1)	-----	(1)	-----	(1)
120 and under 130 cents.....	-----	-----	-----	(1)	-----	(1)	-----	(1)
140 and under 150 cents.....	-----	-----	-----	(1)	-----	(1)	-----	(1)
160 and under 170 cents.....	-----	-----	-----	(1)	-----	(1)	-----	(1)

¹ Less than 1 per cent.

Recent Changes in Wages and Hours of Labor

INFORMATION received by the bureau regarding recent wage changes is presented below in two distinct groups: Part 1 relates to manufacturing establishments that report monthly figures regarding volume of employment, while part 2 presents data obtained from new trade agreements and other miscellaneous sources. Although the effort is made, it is not always possible to avoid duplication of data as between parts 1 and 2.

Part 1. Wage Changes in Manufacturing Industries

SIX ESTABLISHMENTS in five manufacturing industries reported wage-rate increases during the month ending October. These increases averaged 13.4 per cent and affected 649 people or 59 per cent of all employees in the establishments concerned.

One hundred and eighteen establishments in 32 manufacturing industries reported wage-rate decreases during the same period. These decreases averaged 9.4 per cent and affected 9,817 employees or 70 per cent of all employees in the establishments concerned. Eighteen of the 87 wage-rate decreases were in the textile industries and affected 3,542 employees; 17 decreases were in the lumber group of industries and affected 2,619 employees; 45 decreases were in the brick industry and affected 934 employees.

WAGE CHANGES OCCURRING BETWEEN SEPTEMBER 15, 1930 AND OCTOBER 15, 1930

Industry	Establishments		Per cent of increase or decrease in wage rate		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
<i>Increases</i>							
Baking.....	722	2	1.0	1.0	11	10	(1)
Clothing, women's.....	417	1	20.0	20.0	263	100	
Lumber, sawmills.....	633	1	10.0	10.0	43	33	(1)
Printing, book and job.....	446	1	2.3	2.3	43	14	(1)
Beverages.....	132	1	10.0	10.0	289	100	3
<i>Decreases</i>							
Slaughtering and meat packing.....	205	1	5.0	5.0	58	67	(1)
Flour.....	345	2	10.0	10.0	20	38	(1)
Baking.....	722	2	20.0	20.0	32	100	(1)
Cotton goods.....	461	4	3.5-10.0	4.9	1,436	96	1
Hosiery and knit goods.....	361	3	6.0-10.0	9.8	401	81	(1)
Silk goods.....	267	7	5.0-20.0	10.0	1,083	78	2
Woolen and worsted goods.....	190	2	10.0-12.5	12.0	374	86	1
Shirts and collars.....	114	1	15.0	15.0	217	100	1
Clothing, women's.....	417	1	10.0	10.0	31	100	(1)
Iron and steel.....	208	2	7.5	7.5	400	72	(1)
Structural ironwork.....	180	1	7.0	7.0	14	44	(1)
Foundry and machine-shop products.....	1,096	5	10.0	10.0	176	54	(1)
Machine tools.....	155	1	10.0	10.0	24	100	(1)
Lumber, sawmills.....	633	8	5.0-15.0	10.0	1,427	89	1
Lumber, millwork.....	342	4	10.0-15.0	10.3	209	85	1
Furniture.....	415	5	5.0-10.0	9.6	983	95	2
Leather.....	134	1	10.0	10.0	246	100	1
Boots and shoes.....	318	1	10.0	10.0	86	100	(1)
Paper and pulp.....	212	1	15.0	15.0	130	100	(1)
Printing, book and job.....	446	1	5.0	5.0	44	78	(1)
Printing, newspapers.....	432	1	10.0	10.0	23	43	(1)
Fertilizers.....	180	5	5.0-25.0	10.3	222	73	2
Brick, tile, and terra cotta.....	713	45	8.0-16.7	9.7	934	99	3
Pottery.....	118	1	10.0	10.0	15	23	(1)
Brass.....	160	2	10.0	10.0	303	33	1
Cigars and cigarettes.....	203	3	10.0-12.5	10.4	126	7	(1)
Automobiles.....	210	1	10.0	10.0	126	27	(1)
Electrical machinery.....	211	1	10.0	10.0	450	100	(1)
Shipbuilding.....	89	1	20.0	20.0	11	100	(1)
Jewelry.....	120	1	10.0	10.0	113	100	1
Paint and varnish.....	186	3	10.0	10.0	43	98	(1)
Rubber goods, other than rubber boots, shoes, tires and tubes.....	74	1	21.0	21.0	60	90	(1)

1 Less than one-half of 1 per cent.

Part 2. Wage Changes Reported by Trade-Unions since August, 1930

RECENT reports from trade-unions, municipalities, etc., in the United States in which wage or hour changes have become effective are shown in the table following and cover 4,925 workers of which 372 were reported as having adopted the 5-day week.

The largest group, that of printing trades, shows increases of \$0.50 to \$5.50 per week. Street railways workers from one locality showed an increase of 1 cent per hour and railroad workers for one road, had increases of 1 to 35 cents per day.

Only one group (municipal workers) showed decreases.

RECENT UNION WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, AUGUST TO NOVEMBER, 1930

Industry, occupation, and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Building trades:		<i>Per day</i>	<i>Per day</i>		
Electricians, Pueblo, Colo.....	Sept. 1	\$10.00	(¹)	45	40
Plumbers, Kansas City, Mo., and vicinity...	Nov. 1	² 1.37½	² \$1.50	40	40
Printing and publishing:					
Bindery workers—		<i>Per week</i>	<i>Per week</i>		
Elmira, N. Y., bookbinders and cutters, female.....	Sept. 1	\$15.00	\$17.00	44	44
New York City, N. Y.—					
Rulers and binders.....	Nov. 3	47.00	51.00	48-60	46
Folders, machine, and cutters.....	do.	49.00	53.00	48-60	46
Bindery women.....	do.	24.00	29.50	48-60	46
Niagara Falls, N. Y., paper-cutting and paper-slitting machine operators.....	Sept. 1	37.00	38.00	44	44
Compositors—					
Denison, Tex.....	(¹)	30.00	35.00	44-48	44-48
High Point, N. C.....	(¹)	42.00-45.00	43.50-46.50	48	48
Joliet, Ill.—					
Night work.....	Nov. 2	43.50	45.00	44	44
Day work.....	do.	41.00	41.80		
Schenectady, N. Y.—					
Night work.....	Nov. 1	53.50	54.50	45	45
Day work.....	do.	50.00	51.00		
St. Cloud, Minn.—					
Night work.....	do.	36.00	38.00	44	44
Day work.....	do.	36.00	37.00	44	44
Stereotypers—					
Mobile, Ala.—					
Day work.....	Nov. 28	42.50	43.00	48	48
Night work.....	do.	43.50	44.00	48	48
Washington, D. C.—					
Day work.....	Sept. 20	48.00	50.00	³ 8	³ 8
Night work.....	do.	51.00	53.00	⁴ 7	⁴ 7
Railway workers: Maintenance-of-way employees, Boston & Maine R. R.—					
Section foremen—		<i>Per day</i>	<i>Per day</i>		
First class.....	Aug. 1	\$5.09-\$5.44	⁵ \$5.36	(¹)	(¹)
Second class.....	do.	5.09-5.34	⁵ 5.28	(¹)	(¹)
Third class.....	do.	5.09-5.29	⁵ 5.20	(²)	(²)
Yard foremen—					
Superintendent, yard.....	do.	5.79	5.92	(¹)	(¹)
First class.....	do.	5.50-5.69	5.84	(¹)	(¹)
Second class.....	do.	5.29-5.59	5.64	(¹)	(¹)
Third class.....	do.	5.19-5.44	⁵ 5.36	(¹)	(¹)
Extra crews foremen.....	do.	5.04-5.19	5.20	(¹)	(¹)
		5.44-5.59	5.64	(¹)	(¹)
		5.69-5.73	5.84	(¹)	(¹)
Foremen welders.....	do.	5.59	5.64	(¹)	(¹)
Assistant track foremen.....	do.	² .535	² .55		
Stationary engineers and firemen: Kansas City, Mo.....	Sept. 11	<i>Per week</i>	<i>Per week</i>		
		\$43.20	\$45.60	³ 8	³ 8
		38.40	40.80	³ 8	³ 8
Stone: Granite cutters—		<i>Per day</i>	<i>Per day</i>		
Franklin, Me.....	Nov. 1	\$8.50	\$9.00	40	⁶ 40
Sullivan, Me.....	do.	8.50	9.00	44	⁶ 40
Street railways: Motormen, conductors, etc.—		<i>Per hour</i>	<i>Per hour</i>		
Des Moines, Iowa.....	do.	\$0.54-\$0.57-\$0.60	\$0.55-\$0.58-\$0.61	³ 8	³ 8
Seattle, Wash.....	Sept. 15	.80	.80	77	76
Municipal workers:		<i>Per day</i>	<i>Per day</i>		
State of Mississippi, laborers.....	Sept. 1	\$2.00-\$2.50	\$1.50	70	70
New Orleans, La., firemen.....	Aug. 16	<i>Per month</i>	<i>Per month</i>	(¹)	(¹)
		\$157.00	\$141.30		

¹ Not reported.² Per hour.³ Per day.⁴ Per night.⁵ No decreases until present incumbents vacate positions.⁶ 6 months of year.⁷ Days per week; hours not reported.

Farm Wage and Labor Situation on October 1, 1930

CERTAIN general statements regarding the farm wage and labor situation, based on statements issued by the United States Department of Agriculture, were published in the Monthly Labor

Review for November, 1930 (p. 189). Detailed figures on farm wages and the farm labor supply and demand on October 1 have been published by the Department of Agriculture in Crops and Markets for October, 1930, and are reproduced below.

The average wages paid to hired farm labor in the different States and geographic divisions on October 1 of 1929 and 1930 are shown in Table 1.

TABLE 1.—AVERAGE WAGES PAID TO HIRED FARM LABOR, BY STATES, OCTOBER 1, 1929 AND 1930

State and division	Per month, with board		Per month, without board		Per day, with board		Per day, without board	
	1929	1930	1929	1930	1929	1930	1929	1930
Maine.....	\$49.00	\$45.00	\$71.00	\$66.00	\$2.80	\$2.60	\$3.45	\$3.20
New Hampshire.....	49.00	45.00	72.00	73.00	2.60	2.35	3.50	3.20
Vermont.....	49.00	44.00	72.00	67.75	2.60	2.30	3.45	3.10
Massachusetts.....	51.00	48.75	80.00	78.50	2.80	2.35	3.80	3.45
Rhode Island.....	56.00	52.50	85.00	81.00	2.80	2.70	3.85	3.60
Connecticut.....	54.00	47.00	86.00	77.25	3.10	2.45	4.00	3.55
New York.....	50.50	45.00	70.75	64.75	3.05	2.70	3.85	3.50
New Jersey.....	51.00	45.25	76.00	71.25	2.75	2.70	3.65	3.40
Pennsylvania.....	40.25	36.00	60.00	54.25	2.60	2.25	3.30	2.90
North Atlantic.....	47.72	42.89	69.90	64.65	2.83	2.50	3.63	3.27
Ohio.....	38.75	32.75	54.50	48.25	2.50	2.05	3.15	2.70
Indiana.....	37.25	32.25	50.00	43.25	2.30	1.85	2.85	2.40
Illinois.....	43.00	38.00	55.25	49.25	2.40	1.90	2.90	2.45
Michigan.....	44.25	32.50	61.75	47.75	2.75	1.95	3.35	2.60
Wisconsin.....	49.25	40.25	67.50	56.25	2.55	2.00	3.15	2.65
East North Central.....	42.51	35.50	57.55	49.13	2.49	1.95	3.06	2.56
Minnesota.....	46.25	40.25	63.00	54.75	2.60	2.15	3.40	2.85
Iowa.....	48.75	47.25	60.25	58.00	2.55	2.35	3.20	2.95
Missouri.....	34.50	31.25	45.75	41.50	1.75	1.55	2.15	2.00
North Dakota.....	47.75	37.50	63.75	53.50	2.45	1.85	3.75	2.70
South Dakota.....	46.50	43.00	66.75	57.00	2.80	2.20	3.55	2.90
Nebraska.....	44.00	41.00	57.75	54.25	2.50	2.25	3.30	2.90
Kansas.....	39.00	34.50	54.75	49.00	2.50	2.00	3.20	2.70
West North Central.....	43.07	38.96	57.28	51.68	2.38	2.03	3.07	2.65
Delaware.....	35.50	33.25	53.50	45.00	2.40	2.05	3.05	2.55
Maryland.....	35.25	34.25	50.75	49.00	2.20	1.85	2.85	2.40
Virginia.....	31.00	26.75	43.00	38.50	1.60	1.40	2.00	1.85
West Virginia.....	33.50	28.50	48.50	43.25	1.65	1.35	2.30	1.90
North Carolina.....	28.75	22.25	39.25	31.25	1.40	1.10	1.80	1.45
South Carolina.....	19.50	16.50	27.50	24.25	.95	.80	1.20	1.05
Georgia.....	19.50	17.00	27.75	24.50	1.05	.85	1.35	1.10
Florida.....	23.75	20.50	36.25	35.00	1.15	1.00	1.60	1.50
South Atlantic.....	25.52	21.75	36.02	31.65	1.32	1.10	1.71	1.46
Kentucky.....	27.50	24.25	38.75	34.25	1.40	1.20	1.80	1.55
Tennessee.....	25.00	21.50	34.75	30.25	1.20	1.05	1.50	1.30
Alabama.....	21.00	17.00	27.00	25.00	1.10	.85	1.40	1.10
Mississippi.....	22.50	17.75	32.25	25.75	1.15	.85	1.60	1.15
Arkansas.....	24.50	21.00	35.25	26.25	1.30	1.00	1.70	1.40
Louisiana.....	24.50	20.50	37.75	30.25	1.25	1.00	1.55	1.30
Oklahoma.....	30.50	25.00	42.50	36.25	1.70	1.30	2.20	1.70
Texas.....	29.00	25.50	42.00	36.75	1.45	1.20	1.90	1.60
South Central.....	25.86	21.96	36.70	31.23	1.32	1.07	1.72	1.40
Montana.....	57.25	45.00	77.00	60.00	3.05	2.20	3.80	3.05
Idaho.....	58.00	52.50	80.75	73.00	2.90	2.50	3.80	3.15
Wyoming.....	59.00	47.75	75.75	67.50	2.65	2.35	3.45	3.25
Colorado.....	45.50	40.50	66.50	57.00	2.45	2.15	3.00	2.90
New Mexico.....	36.00	37.75	52.00	52.00	1.90	1.70	2.30	2.10
Arizona.....	50.00	43.50	66.50	70.00	1.90	2.10	2.60	2.50
Utah.....	64.75	56.25	82.50	75.00	2.55	2.40	3.75	3.00
Nevada.....	65.00	54.00	91.00	84.50	2.75	2.35	3.75	3.00
Washington.....	54.50	43.75	78.00	69.75	2.80	2.25	3.65	3.40
Oregon.....	54.00	48.00	74.00	69.50	2.70	2.40	3.40	3.40
California.....	64.00	60.00	90.00	88.00	2.60	2.60	3.60	3.40
Western.....	56.54	51.23	78.93	73.97	2.57	2.36	3.39	3.14
United States.....	35.90	31.31	50.00	44.36	1.92	1.61	2.46	2.12

Table 2 gives average farm wage rates and index numbers from 1910 to 1929, by years, and quarterly from January, 1923, to October, 1930:

TABLE 2.—FARM WAGE RATES AND INDEX NUMBERS, 1910 TO 1930

Year	Average yearly farm wage ¹				Index numbers of farm wages (1910-1914=100)
	Per month		Per day		
	With board	Without board	With board	Without board	
1910.....	\$19.58	\$28.04	\$1.07	\$1.40	97
1911.....	19.85	28.33	1.07	1.40	97
1912.....	20.46	29.14	1.12	1.44	101
1913.....	21.27	30.21	1.15	1.48	104
1914.....	20.90	29.72	1.11	1.44	101
1915.....	21.08	29.97	1.12	1.45	102
1916.....	23.04	32.58	1.24	1.60	112
1917.....	28.64	40.19	1.56	2.00	140
1918.....	35.12	49.13	2.05	2.61	176
1919.....	40.14	56.77	2.44	3.10	206
1920.....	47.24	65.05	2.84	3.56	239
1921.....	30.25	43.58	1.66	2.17	150
1922.....	29.31	42.09	1.64	2.14	146
1923.....	33.09	46.74	1.91	2.45	166
1924.....	33.34	47.22	1.88	2.44	166
1925.....	33.88	47.80	1.89	2.46	168
1926.....	34.86	48.86	1.91	2.48	171
1927.....	34.58	48.63	1.90	2.46	170
1928.....	34.66	48.65	1.88	2.43	169
1929.....	34.74	49.08	1.88	2.42	170
1923—January.....	27.87	40.50	1.46	1.97	137
April.....	30.90	44.41	1.55	2.09	148
July.....	34.64	48.61	1.84	2.44	169
October.....	34.56	48.42	2.02	2.58	174
1924—January.....	31.55	45.53	1.79	2.38	159
April.....	33.57	47.38	1.77	2.34	163
July.....	34.34	48.02	1.87	2.43	168
October.....	34.38	48.46	1.93	2.51	171
1925—January.....	31.07	45.04	1.74	2.31	156
April.....	33.86	47.40	1.77	2.33	164
July.....	34.94	48.55	1.89	2.44	170
October.....	34.91	48.99	1.95	2.53	173
1926—January.....	31.82	46.26	1.76	2.33	159
April.....	34.38	48.40	1.78	2.35	166
July.....	36.10	49.89	1.91	2.47	174
October.....	36.00	50.10	1.97	2.55	176
1927—January.....	32.94	47.07	1.79	2.36	162
April.....	34.53	48.47	1.78	2.37	166
July.....	35.59	49.52	1.89	2.44	172
October.....	35.68	49.77	1.96	2.51	175
1928—January.....	32.50	46.75	1.76	2.34	161
April.....	34.46	48.44	1.78	2.34	166
July.....	35.39	49.32	1.84	2.39	170
October.....	35.75	49.60	1.96	2.51	175
1929—January.....	33.04	47.24	1.78	2.34	162
April.....	34.68	49.00	1.79	2.34	167
July.....	36.08	50.53	1.89	2.43	173
October.....	35.90	50.00	1.92	2.46	174
1930—January.....	32.29	46.80	1.73	2.27	159
April.....	33.83	47.81	1.72	2.27	162
July.....	33.47	47.24	1.72	2.23	160
October.....	31.31	44.36	1.61	2.12	150

¹ Yearly averages are from reports by crop reporters, giving average wages for the year in their localities except for 1924-1929, when the wage rates per month are a straight average of quarterly rates, April, July, and October of the current year and January of the following year, and the wage rates per day are a weighted average of quarterly rates.

Index numbers of the farm labor supply and demand on October 1 of 1929 and 1930 are given in Table 3:

TABLE 3.—FARM LABOR SUPPLY AND DEMAND, OCTOBER 1, 1929 AND 1930

State	Farm labor supply, per cent of normal		Farm labor demand, per cent of normal		Supply expressed as per cent of demand	
	1929	1930	1929	1930	1929	1930
Maine.....	90	101	93	89	97	114
New Hampshire.....	96	107	96	88	100	122
Vermont.....	89	106	95	89	94	119
Massachusetts.....	95	103	88	84	108	123
Rhode Island.....	90	100	90	85	100	118
Connecticut.....	89	106	90	80	99	132
New York.....	86	100	87	80	99	125
New Jersey.....	96	102	93	86	103	119
Pennsylvania.....	91	102	89	79	102	129
North Atlantic.....	89.8	101.9	89.4	81.8	100.5	124.4
Ohio.....	90	112	88	72	102	156
Indiana.....	90	114	89	74	101	154
Illinois.....	95	109	88	74	108	147
Michigan.....	85	118	85	69	100	171
Wisconsin.....	94	110	95	82	99	134
East North Central.....	91.4	112.1	89.1	74.4	102.6	150.6
Minnesota.....	94	105	88	80	107	131
Iowa.....	97	107	95	82	102	130
Missouri.....	91	106	86	72	106	147
North Dakota.....	98	108	84	69	117	156
South Dakota.....	97	107	92	75	105	143
Nebraska.....	99	105	91	81	109	130
Kansas.....	96	115	90	73	107	158
West North Central.....	95.2	107.2	89.5	76.7	106.4	139.0
North Central.....	93.3	109.6	89.3	75.6	104.5	145.8
Delaware.....	92	101	94	88	98	115
Maryland.....	93	105	92	75	101	140
Virginia.....	90	106	91	71	99	149
West Virginia.....	90	99	86	62	105	160
North Carolina.....	92	104	85	73	108	142
South Carolina.....	87	94	83	80	105	118
Georgia.....	86	99	89	79	97	125
Florida.....	100	107	79	79	127	135
South Atlantic.....	89.7	101.2	86.9	75.5	103.1	134.0
Kentucky.....	88	103	86	65	102	158
Tennessee.....	93	101	90	78	103	130
Alabama.....	91	104	90	74	101	140
Mississippi.....	87	99	92	74	95	134
Arkansas.....	93	120	86	75	108	160
Louisiana.....	89	107	91	67	98	160
Oklahoma.....	97	105	87	71	111	118
Texas.....	92	104	84	66	110	158
South Central.....	91.3	105.0	87.7	70.7	104.1	148.5
Montana.....	100	122	82	70	122	174
Idaho.....	98	120	97	87	101	138
Wyoming.....	97	110	101	84	96	131
Colorado.....	95	110	96	87	99	126
New Mexico.....	91	110	99	80	92	138
Arizona.....	90	110	95	85	95	129
Utah.....	96	115	99	81	97	142
Nevada.....	97	113	90	84	108	134
Washington.....	99	114	86	72	115	158
Oregon.....	97	110	96	80	101	138
California.....	95	106	90	83	106	128
Western.....	95.6	110.6	92.4	81.4	103.5	135.9
United States.....	91.8	105.9	88.6	75.2	103.6	140.8

Wages in Buenos Aires, 1922, 1926, and 1928-29

THE following table, showing wage rates prevailing in Buenos Aires in 1922, 1926, and 1928-29, is taken from the April, 1930, issue of the *Crónica Mensual*, published by the Argentine Department

[1457]

of Labor. The wage equivalents in United States currency have been computed on the value of the paper peso (42.5 cents).

AVERAGE DAILY WAGES IN SPECIFIED OCCUPATIONS IN BUENOS AIRES, 1922, 1926, AND 1928-29

Occupation	1922	1926	1928-29	Occupation	1922	1926	1928-29
Plumbers.....	\$3.03	\$2.88	\$3.19	Tinsmiths.....	\$2.57	\$2.61	\$2.60
Sawmill workers.....	2.95	3.18	3.07	Furniture polishers.....	3.71	3.47	3.49
Carpenters.....	2.97	2.87	3.11	Mechanics.....	2.69	2.85	3.19
Teamsters.....	2.11	2.21	2.75	Mortormen.....	2.23	2.22	2.22
Leather cutters and tanners.....	2.55	2.85	3.11	Laborers.....	1.98	1.90	1.89
Cabinetmakers.....	3.63	3.70	3.60	Tapestry workers.....	3.63	3.97	3.61
Electricians.....	2.52	2.69	3.20	Painters.....	2.32	2.78	3.09
Stevedores.....	2.98	2.98	3.40	Kniters and weavers.....	2.10	1.81	2.69
Bookbinders.....	2.86	3.04	2.90	Printers.....	3.12	3.37	3.51
Foundry workers.....	2.77	3.31	3.01	Mechanics in lathe works.....	3.17	3.00	3.49
Conductors.....	2.40	2.19	2.19	Shoemakers.....	3.29	2.66	2.89
Blacksmiths.....	3.12	2.81	3.01				

Wages in Denmark in 1929¹

WAGES of skilled workmen, manual laborers, and female laborers engaged in handicrafts and industries in Denmark in 1929, by occupations, were as follows:

AVERAGE HOURLY WAGES IN DENMARK IN 1929, BY OCCUPATION OR INDUSTRY GROUP

[Conversions into United States currency on basis of 1 krone=26.8 cents]

Occupation or industry group	In Copenhagen	In Provinces	Occupation or industry group	In Copenhagen	In Provinces
<i>Skilled workers</i>	<i>Cents</i>	<i>Cents</i>	<i>Manual laborers—Continued</i>	<i>Cents</i>	<i>Cents</i>
Bakers.....	41	34	Textiles.....	33	31
Mill workers.....	38	31	Cement work.....	44	29
Tobacco industry.....	39	40	Masons' helpers.....	50	32
Shoemakers.....	40	34	Woodworkers.....	32	28
Tinsmiths.....	47	36	Cement factories.....		36
Joiners.....	44	37	Tile work.....	35	30
Glaziers.....	37	30	Ceramic work.....	35	29
Painters.....	53	42	Iron workers.....	36	32
Masons.....	64	39	Oil industry.....	38	38
Carpenters.....	54	35	Paper industry.....	31	29
Machinists.....	40	32	Printers.....	38	35
Saddle and tapestry work.....	45	38	Harbor workers.....	44	41
Ceramic work.....	45	34	Storage and packing.....	30	29
Electricians.....	42	37	<i>Female laborers</i>		
Molders.....	51	41	Breweries.....	26	21
Gold, silver, and electroplating.....	39	35	Chocolate factories.....	19	17
Coppersmiths.....	40	35	Condensed milk factories.....		21
Ship carpenters.....	50	40	Tobacco industry.....	29	26
Machine construction.....	46	39	Textiles.....	23	21
Bookbinders.....	49	36	Shoemakers.....	24	19
Typographers.....	48	44	Seamstresses.....	21	19
Lithographers.....	47	38	Ceramic work.....	28	20
<i>Manual laborers</i>			Iron workers.....	24	20
Breweries.....	36	33	Box factories.....	24	22
Margarine factories.....	32	31	Bookbinders.....	25	19
Butchery workers.....	42	35	Printers.....	24	19
Sugar factories.....	39	30			

¹ Denmark. Det Statistiske Departement. Statistisk Aarbog, 1930. Copenhagen, 1930, p. 124.

Forty-Hour Week Proposed by German Trade-Unions

THE Council of the German Federation of Labor Unions recently adopted the following resolution:¹

The general council demands a statutory 40-hour week until the labor market is relieved of its present congestion, such 40-hour week to be accompanied by

¹ Press reports of the International Federation of Trade Unions, No. 38, Amsterdam, Oct. 23, 1930, p. 2.

a general obligation to put on more workers in proportion to the shortening of working hours, to notify vacancies, and to make use of the public labor exchanges. The funds hitherto used as unemployment benefit may be utilized to help to compensate for the increased wages bill during the transition period. Permits for overtime work must be limited to the most urgent exceptional cases, and it must be laid down that for every hour of overtime the employer shall pay a full hour's wage as a special contribution to the unemployment insurance fund.

The president of the German Federation of Labor, commenting upon the above resolutions, has stated:

We have endeavored to picture to ourselves how a shortening of working hours from 48 to 40 will work out. By way of precaution we have excluded the small businesses, agriculture, and domestic work, taken into account the short time already worked, and omitted from our consideration the building trades, with their special conditions, and mining, with its many idle shifts. By the shortening of weekly working hours by 8 we arrive, if the trade remains as at present, at the very carefully calculated estimate that from a quarter to a half million unemployed—that is to say, 10, 15, or perhaps 20 per cent of the present total of unemployed persons—could be found work. This may be a small result, but we must not forget the psychological effect of the shortening of working hours. This psychological effect might, however, fail of its effect if the hope of appointing more unemployed were to be destroyed. We must emphasize the fact therefore that the shortening of working hours must in the first place insure the retention in their posts of those who are still at work, and only under these conditions may there be hope of the appointment of those who have been unemployed.

The president of the federation also pointed out that the total purchasing power will not be affected, and that the purchasing power will be diverted only in so far as those who have hitherto been unemployed will not at first improve their diet, but will have to think first of replacing their worn-out clothes.

Recent Wage Scales Adopted in Italy

IN THE October 22, 1930, issue of *Il Lavoro Fascista* (Rome) are given wage scales for printers recently adopted in several of the cities of Italy. The minimum scales for Trieste, Messina, and Venice are given below. Day work is performed between 7 a. m. and 8.30 p. m. in Venice, and between 7 a. m. and 7 p. m. in the other cities.

MINIMUM WEEKLY WAGES OF PRINTING TRADES IN TRIESTE, MESSINA, AND VENICE

[Conversions into United States currency on basis of lira=5.26 cents]

Occupation	Trieste		Messina		Venice
	Day work	Night work	Day work	Night work	
Compositors, hand	\$10. 51	\$11. 58	\$8. 14	\$9. 47	\$12. 36
Machine operators, head	11. 63	12. 43	12. 32	14. 20	14. 73
Machine operators	11. 31	12. 11			
Compositors and machine operators	11. 31	12. 31	11. 27	13. 14	13. 99
Stereotypers:					
First class	10. 83	11. 90	11. 72	13. 67	11. 99
Second class	10. 51	11. 58	8. 33	9. 72	10. 10
Third class	10. 19	11. 27			8. 57
Duplex pressmen	11. 31	12. 11			
Duplex pressmen's assistants	11. 00	11. 80			
Rotary pressmen:					
First class	11. 31	12. 11	11. 54	13. 46	12. 10
Second class	11. 00	11. 80	8. 14	9. 47	10. 52
Rotary pressmen's assistants	9. 21	9. 63	5. 37	6. 31	9. 99
Helpers	6. 58	7. 24			6. 31

The scale for metal workers in the city of Cremona, adopted July 4, 1930, given in the following table is taken from Il Lavoro Fascista, August 24, 1930. Outside of the city the scale in the Province is generally 5 centesimi (0.26 cent) less than in the city.

The scale for millers and macaroni makers in Sicily, retroactive to December 1, 1929, given in the table following was furnished by Howard K. Travers, American consul at Palermo, Sicily, August 30, 1930. The wages paid to women are 60 per cent of those of men.

The scales in the mining industry in the Province of Turin, April 10, 1930, and for hand weavers of bedspreads, August 12, 1930, in the commune of Chieri, near the city of Turin, were furnished by William W. Heard, American consul at Turin, Italy. In all these scales the number of hours worked per week is 48.

WAGES ESTABLISHED BY COLLECTIVE AGREEMENTS

[Conversion into United States currency on basis of lira=5.26 cents]

Occupation	Rate per hour	Occupation	Rate per hour
<i>Metal workers, City of Cremona</i>		<i>Mining industry, Turin—Continued</i>	
Specialized workers	<i>Cents</i> 15.0	Talc and graphite establishments:	
Skilled workers	11.3	Laborers—	<i>Cents</i>
Laborers, common	8.9	First class	10.8
Apprentices:		Second class	10.3
Over 20 years	8.9	Under 18 years	8.4
18 to 20 years	5.5	Specialized workers	13.7
16 to 18 years	4.5	Women—	
Women:		Over 18 years	6.8
Class A	5.3	Under 18 years	5.8
Class B	4.7	Asbestos mines:	
Boys	2.4	Foremen	15.8
<i>Millers, Sicily</i>		Miners—	
Grain washers	11.3	First class	13.2
Helpers	8.9	Second class	12.6
Pressers	10.8	Third class	11.6
Grinders and mixers	11.3	Operators, various machines	11.3
Helpers	10.3	Laborers—	
Sifters	12.1	First class	11.3
Loaders	10.0	Second class	10.5
Mill guiders	11.8	Night watchmen	10.5
Coal men and firemen	9.5	Boys under 18 years	7.9
Machine oilers	6.0	Asbestos establishments:	
<i>Macaroni workers, Sicily</i>		Engineers—	
Kneaders	9.5	First class	18.7
Pressers	9.5-10.0	Second class	15.8
Helpers	4.5-5.3	Third class	14.5
Superintendents	11.0	Helpers	12.6
Packers	8.9	Forgers—	
Other workers	6.3-9.5	First class	20.0
Boy helpers	3.9-4.5	Second class	13.7
<i>Mining industry, Turin</i>		Helpers	12.6
Talc and graphite mines:		Skilled workers	13.2
Foremen	15.8	Apprentices	11.6
Miners—		Laborers—	
First grade	12.4	First class	11.3
Second grade	11.8	Second class	10.5
Laborers—		Boys under 18 years	7.9
First grade	10.8	<i>Bedspread makers, Chieri</i>	
Second grade	10.3	Textile workers:	
Under 18 years	8.4	Over 20 years	103.1
<i>Mining industry, Turin</i>		Under 20 years	78.9
Talc and graphite mines:		Apprentices	78.9
Foremen	15.8	Skilled workers, extra hands	98.6
Miners—		Women:	
First grade	12.4	Knotters	64.2
Second grade	11.8	Weavers	54.7
Laborers—		Spinners	46.8
First grade	10.8	Spoolers	41.0
Second grade	10.3	Finishers	57.9
Under 18 years	8.4		

Wages in Japanese Mines, First Quarter of 1929

THE following table shows the average wages per day, including benefits and bonuses, of workers in Japanese mines for the first quarter of 1929. The figures are taken from the Statistical Résumé of the Empire of Japan, Tokyo, 1930 (p. 108):

AVERAGE DAILY WAGES (INCLUDING BENEFITS AND BONUSES) OF MINE WORKERS IN JAPAN, FIRST QUARTER OF 1929

[Conversion into U. S. currency on basis of yen=45.1 cents]

Sex and age of workers	Metal mines	Coal mines
	Cents	Cents
Males:		
Under 16 years.....	27.4	43.3
Over 16 years.....	90.7	86.5
Average.....	89.7	85.9
Females:		
Under 16 years.....	21.4	43.1
Over 16 years.....	33.4	58.0
Average.....	33.1	57.5
General average.....	84.4	81.2

Wages and Hours in New Zealand, 1928-29

THE statistical report for the year 1928-29 recently issued by the Census and Statistics Office of New Zealand contains various data relating to wages and hours in the leading industries of the State. The following table shows the average minimum weekly wages, by occupations, in the four principal industrial districts, as of March 31 in 1924, 1925, and 1929:

AVERAGE MINIMUM WEEKLY WAGES IN NEW ZEALAND IN SPECIFIED YEARS, BY OCCUPATION

[Conversions into United States currency on basis of shilling=24.33 cents, penny=2.03 cents]

Occupation	1914	1925	1929
Bakers:			
Journeyman.....	\$13.38	\$23.72	\$24.33
Laborers.....	11.68	18.98	19.59
Butchers:			
First shopmen.....	17.64	25.94	28.44
Second shopmen.....	15.21	23.36	25.55
Butter-factory employees: Churning and butter making.....	12.77	18.90	19.89
Flour milling:			
Kilnmen.....	11.68	22.14	22.55
Assistant smutter men.....	12.65	20.20	20.60
Roller men.....	13.63	23.12	23.52
Meat freezing:			
Slaughtermen (per 100 sheep).....	6.69	9.37	9.73
General hands.....	13.14	21.41	22.30
Meat preserving:			
Boners.....	15.09	24.31	25.20
Second men.....	14.48	22.75	23.20
Aerated waters and cordial making:			
Cordial makers.....	14.30	20.60	22.63
Bottle washers.....	10.95	17.98	20.20
Brewing: Laborers.....	11.59	20.16	20.32
Tailors:			
Journeyman.....	13.08	21.90	23.12
Factory hands.....	13.63	20.44	21.29
Tailoresses, custom-made clothing:			
Coat hands.....	7.30	11.18	12.17
Machine operators.....	6.51	11.18	12.17
Tailoresses, ready-made clothing: Journeywomen.....	6.69	10.71	10.95

AVERAGE MINIMUM WEEKLY WAGES IN NEW ZEALAND IN SPECIFIED YEARS,
BY OCCUPATION—Continued

Occupation	1914	1925	1929
Shoe operatives:			
Male.....	\$12.77	\$20.52	\$21.64
Journeywomen.....	6.69	11.56	12.17
Woolen mills:			
Male spinners.....	12.41	20.87	22.81
Male general hands.....	11.31	18.13	20.07
Adult females.....	6.39	9.98	10.95
Building:			
Bricklayers.....	16.65	24.32	-----
Carpenters.....	15.64	23.64	24.76
Joiners.....	15.64	23.64	24.76
Plasterers.....	16.50	23.57	24.88
Plumbers.....	16.06	23.20	24.09
Builders' laborers.....	12.78	19.22	20.07
Sawmilling:			
Stationary engineers.....	13.14	23.12	25.43
Sawyers.....	12.91	24.34	25.14
Tailors out.....	10.65	21.48	21.85
Yardmen.....	13.56	22.28	24.37
General hands.....	12.41	20.28	21.11
Boatbuilding: Shipwrights.....	15.25	24.42	25.43
Metal workers:			
Blacksmiths.....	14.98	21.87	24.09
Boilermakers.....	15.25	23.20	24.09
Iron and brass molders.....	15.72	23.20	24.09
Tinsmiths.....	15.25	23.20	24.09
Machinists—Fitters, etc.....	15.72	23.20	24.09
Electrical workers.....	15.06	23.20	24.09
Motor mechanics.....	15.81	23.14	24.09
Skin and leather workers:			
Curriers.....	14.11	23.12	24.82
Pelt fleshers.....	13.26	23.12	23.12
General hands.....	12.04	20.52	20.84
Mineral and stone workers:			
Brickmakers.....	13.13	24.33	25.35
General hands.....	11.39	20.44	21.01
Mining, coal:			
Surface.....			
Tippers.....	13.05	20.89	21.31
Laborers.....	13.22	20.89	21.31
Stationary engineers, first class.....	16.42	24.21	25.59
Miners.....	15.39	24.27	26.00
Truckers.....	13.61	22.30	22.57
Miners in winzes or rises, with machines.....	15.69	22.14	22.91
Quarrymen.....	12.83	20.75	20.75
Agricultural and pastoral workers:			
General farm hands.....	10.22	14.36	16.79
Harvesters.....	17.03	24.58	22.63
Plowmen.....	11.76	15.43	17.03
Shearers (per 100 sheep).....	5.60	7.30	8.52
Shepherds.....	11.96	14.52	19.47
Wool pressers.....	10.95	20.07	23.72
Dairy-farm hands.....	10.79	13.75	16.79
Railways:			
Locomotive engineers.....	18.25	26.76	27.33
Firemen.....	14.60	21.96	22.97
Guards.....	15.33	25.95	26.77
Street railways:			
Motormen.....	13.02	21.90	23.12
Conductors.....	11.59	20.80	22.02
Shipping and cargo working:			
Assistant stewards, first class.....	10.56	21.47	22.69
Assistant stewards, second class.....	8.92	20.90	22.12
Chief cooks.....	18.98	29.32	30.54
Second cooks.....	13.36	24.85	26.06
A. B. seamen.....	17.01	23.16	-----
Ordinary seamen, first class.....	14.76	17.82	-----
Waterside workers, ordinary cargo.....	15.17	23.64	23.64
Hotel workers:			
Chefs (male).....	27.37	32.12	32.12
Waiters (male).....	12.90	21.17	21.17
Cooks (female).....	12.77	19.34	19.34
Housemaids.....	7.91	14.84	15.21
Waitresses.....	10.48	14.84	15.21
Miscellaneous:			
Soft-goods assistants, male.....	13.38	22.51	23.12
Warehouse storemen.....	12.48	20.68	20.68
Grocers' assistants.....	12.17	22.37	23.12

The cost-of-living index during this period is not given as a single figure, but the following table shows the variations in the price index of food, rent, and fuel and light in the same four districts, the average for the period 1909-1913 being taken as 1000:

PRICE INDEXES OF COST-OF-LIVING ITEMS IN NEW ZEALAND, 1925 AND 1928

Item	1925	1928
Food.....	1605	1563
House rent.....	1685	1929
Fuel and light.....	1829	1871

The following table shows the average hours per week worked in the four principal industrial districts as at March 31 for 1914, 1925, and 1929:

AVERAGE WEEKLY HOURS IN NEW ZEALAND IN SPECIFIED YEARS, BY OCCUPATION

Occupation	1914	1925	1929	Occupation	1914	1925	1929
Bakers.....	48	46	46	Mineral and stone workers.....	47	47 $\frac{3}{4}$	47 $\frac{3}{4}$
Butchers, shopmen.....	56	48	48	Miners, coal:			
Butter-factory employees.....	48	48 $\frac{1}{2}$	48 $\frac{1}{2}$	Surface.....	43 $\frac{3}{4}$	44	44
Flour-mill employees.....	48	48	48	Underground.....	43 $\frac{3}{4}$	43 $\frac{3}{4}$	43 $\frac{3}{4}$
Freezing-works employees.....	48	44	44	Miners, gold.....	47 $\frac{1}{2}$	45 $\frac{1}{4}$	44
Aerated water and cordial making employees.....	46 $\frac{1}{2}$	46	46	Quarrymen.....	47 $\frac{3}{4}$	46 $\frac{3}{4}$	46 $\frac{3}{4}$
Brewery workers.....	46 $\frac{1}{4}$	44 $\frac{1}{4}$	44 $\frac{1}{4}$	Railway employees:			
Tailors.....	48	44	44	Engineers and firemen.....	48	44	44
Tailoresses.....	45	44	44	Guards.....	48	48	48
Shoemaking operatives, male and female.....	45	45	45	Street-railway employees: Conductors and motormen.....	48	48	48
Woolen-mill employees:				Shipping:			
Males.....	48	45	45	Stewards (at sea).....		70	63
Females.....	48	45	45	Cooks (at sea).....		70	63
Bricklayers.....	45	44	44	Seamen (at sea).....	56	51	51
Carpenters.....	44 $\frac{3}{4}$	44	44	Waterside workers.....	44	44	44
Joiners.....	44 $\frac{3}{4}$	44	44	Hotel workers:			
Plasterers.....	44	44	44	Males.....	65	48	48
Plumbers.....	44	44	44	Females.....	65	48	48
Sawmill hands.....	46 $\frac{1}{2}$	46 $\frac{1}{4}$	46 $\frac{1}{4}$	Soft-goods assistants.....	48	48	48
Boatbuilders and shipwrights.....	47	44	44	Warehouse storemen.....	45 $\frac{3}{4}$	44	44
Blacksmiths.....	46 $\frac{1}{4}$	45	45	Grocers' assistants.....	52	47	47
Boiler makers.....	47 $\frac{3}{4}$	44	44	Restaurant workers:			
Tinsmiths.....	47	44 $\frac{3}{4}$	44 $\frac{3}{4}$	Males.....	61 $\frac{1}{4}$	51	51
Skin and leather workers.....	48	48	48	Females.....	52	48	48

TREND OF EMPLOYMENT

Summary for October, 1930

EMPLOYMENT decreased 1.4 per cent in October, 1930, as compared with September, and pay-roll totals decreased 0.8 per cent, according to reports made to the Bureau of Labor Statistics.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the total pay rolls for one week, for both September and October, together with the per cent of change in October are shown in the following summary:

SUMMARY OF EMPLOYMENT AND PAY-ROLL TOTALS, SEPTEMBER AND OCTOBER, 1930

Industrial group	Estab-lish-ments	Employment		Per cent of change	Pay roll in 1 week		Per cent of change
		Septem-ber, 1930	October, 1930		September, 1930	October, 1930	
1. Manufacturing	13,941	3,093,335	3,062,798	-1.4	\$76,451,701	\$75,261,319	-1-2.0
2. Coal mining	1,477	314,198	322,551	+2.7	7,505,105	8,601,369	+14.6
Anthracite.....	153	96,751	102,072	+5.5	2,944,884	3,765,449	+27.9
Bituminous.....	1,324	217,447	220,479	+1.4	4,560,221	4,835,920	+6.0
3. Metalliferous mining	339	50,565	49,937	-1.2	1,368,355	1,342,214	-1.9
4. Quarrying and nonmetallic mining	751	37,423	36,156	-3.4	923,282	887,072	-3.9
5. Crude petroleum producing	566	31,858	31,910	+0.2	1,162,643	1,143,308	-1.7
6. Public utilities	11,823	755,258	744,430	-1.4	22,743,056	22,493,338	-1.1
Telephone and telegraph.....	7,940	342,714	334,330	-2.4	9,821,505	9,698,519	-1.3
Power, light, and water.....	3,114	260,026	258,887	-0.4	8,182,090	8,139,739	-0.5
Electric railroad operation and maintenance, exclusive of car shops.....	469	152,518	151,213	-0.9	4,739,461	4,655,080	-1.8
7. Trade	9,673	338,464	348,565	+3.0	8,659,437	8,836,059	+2.0
Wholesale.....	1,966	65,472	65,077	-0.6	2,037,160	2,020,107	-0.8
Retail.....	7,707	272,992	283,488	+3.8	6,622,277	6,815,952	+2.9
8. Hotels	2,144	163,952	159,736	-2.6	2,726,176	2,683,472	-1.6
9. Canning and preserving	985	127,026	84,891	-33.2	2,039,921	1,330,114	-34.8
Total	41,399	4,912,089	4,840,914	-1.4	123,579,676	122,578,265	-0.8

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION							
New England ³	3,179	452,769	448,980	-0.8	\$10,861,159	\$10,624,958	-2.2
Middle Atlantic ⁴	7,215	1,472,918	1,471,601	-0.1	40,048,131	40,541,702	+1.2
East North Central ⁵	9,847	1,365,790	1,333,300	-2.4	35,625,191	34,824,879	-2.2
West North Central ⁶	4,468	314,924	306,885	-2.6	7,792,406	7,592,508	-2.6
South Atlantic ⁷	4,516	480,501	478,550	-0.4	9,618,360	9,673,932	+0.6
East South Central ⁸	2,330	204,030	232,038	+1.0	3,737,214	3,706,483	-0.8
West South Central ⁹	3,303	192,730	189,370	-1.7	4,674,665	4,602,827	-1.5
Mountain ¹⁰	1,568	103,334	108,884	+5.4	2,688,349	2,872,904	+6.9
Pacific ¹¹	4,973	325,093	301,306	-7.3	8,534,201	8,138,072	-4.6
All divisions	41,399	4,912,089	4,840,914	-1.4	123,579,676	122,578,265	-0.8

¹ Weighted per cent of change for the combined 54 manufacturing industries, repeated from Table 2, p. 174; the remaining per cents of change, including total, are unweighted.

² Cash payments only; see text, p. 189.

³ Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.

⁴ New Jersey, New York, Pennsylvania.

⁵ Illinois, Indiana, Michigan, Ohio, Wisconsin.

⁶ Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.

⁷ Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.

⁸ Alabama, Kentucky, Mississippi, Tennessee.

⁹ Arkansas, Louisiana, Oklahoma, Texas.

¹⁰ Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming.

¹¹ California, Oregon, Washington.

The combined totals of these 13 industrial groups showed a decrease of 1.4 per cent in employment from September to October and a decrease of 0.8 per cent in employees' earnings. Excluding manufacturing, the remaining 12 groups in October showed a drop in employment of 2.2 per cent and a gain in employees' earnings of 0.4 per cent.

The per cents of change shown for the total figures represent only the changes in the establishments reporting, as the figures of the several groups are not weighted according to the relative importance of each industry.

Increased employment in October was shown in 4 of the 13 industrial groups: Anthracite mining gained 5.5 per cent; bituminous coal mining gained 1.4 per cent; crude petroleum producing gained 0.2 per cent; retail trade gained 3.8 per cent.

Decreased employment was shown in the remaining 9 groups as follows: Manufacturing, 1.4 per cent; metalliferous mining, 1.2 per cent; quarrying, 3.4 per cent; telephone and telegraph, 2.4 per cent; power-light-water, 0.4 per cent; electric railroads, 0.9 per cent; wholesale trade, 0.6 per cent; hotels, 2.6 per cent; canning and preserving, 33.2 per cent.

The solitary gain in employment shown in the recapitulation by geographic divisions is due to the addition in this report of the beet sugar industry, which in October begins its refining season; nearly one-half of the industry's employees are in the mountain district's factories.

The bureau here publishes, for the first time a statement as to actual *per capita* weekly earnings in each industrial group covered by this volume of employment survey. The *per capita earnings* given in the table following, for October, 1930, must not be confused with *full-time* weekly rates of wages, as they are computed by dividing the total number of employees reported into the total amount of pay roll in the week reported, and the "number of employees" includes all persons who worked any part of the period reported, that is *part-time workers* as well as *full-time workers*.

Comparisons are made with per capita earnings in September, 1930, and with October, 1929, where data are available.

Per capita earnings in each of the separate *manufacturing* industries were published for the first time in the September report, and will henceforth appear in the manufacturing industries section of these reports.

PER CAPITA EARNINGS IN OCTOBER, 1930, AND COMPARISON WITH SEPTEMBER, 1930, AND OCTOBER, 1929

Industrial group	Actual per capita weekly earnings in October, 1930	Per cent of change, October, 1930, compared with—	
		September, 1930	October, 1929
1. Manufacturing	\$24.51	-0.6	-11.1
2. Coal mining:			
Anthracite	36.89	+21.2	-6.2
Bituminous	21.93	+4.5	-20.0
3. Metalliferous mining	26.88	-0.7	-12.2
4. Quarrying and nonmetallic mining	24.53	-0.5	-8.3
5. Crude petroleum producing	35.83	-2.0	(1)
6. Public utilities:			
Telephone and telegraph	29.01	+1.1	+3.6
Power, light, and water	31.44	-0.1	+0.5
Electric railroads	30.78	-0.9	-1.8
7. Trade:			
Wholesale	31.04	-0.1	-1.2
Retail	24.04	-0.8	-1.3
8. Hotels (cash payments only) ²	16.80	+0.9	-1.7
9. Canning and preserving	15.67	-2.4	-9.5
Total	25.32	+0.6	(1)

¹ Data not available.

² The additional value of board, room, tips, and other perquisites can not be computed.

For convenient reference the latest data available relating to all employees, excluding executives and officials, on Class I railroads, drawn from Interstate Commerce Commission reports, are shown in the following statement. These reports are for the months of August and September instead of for September and October, consequently the figures can not be combined with those presented in the foregoing table.

EMPLOYMENT AND PAY-ROLL TOTALS, CLASS I RAILROADS

Industry	Employment		Per cent of change	Amount of pay roll in entire month		Per cent of change
	Aug. 15, 1930	Sept. 15, 1930		August, 1930	September, 1930	
Class I railroads	1,497,872	1,469,521	-1.9	\$207,828,332	\$200,817,972	-3.4

The total number of employees included in this summary is approximately 6,310,000 whose combined earnings in one week amounted to about \$169,000,000.

1. Employment in Selected Manufacturing Industries in October, 1930

Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, September and October, 1930

EMPLOYMENT in manufacturing industries decreased 1.4 per cent in October as compared with September, and pay-roll totals decreased 2 per cent. These changes are based upon returns made by 13,256 establishments in 54 of the principal manufacturing industries of the United States. These establishments in October

had 2,907,026 employees whose combined earnings in one week were \$71,243,900.

The bureau's weighted index of employment for October, 1930, is 78.6, as compared with 79.7 for September, 79.9 for August, and 98.3 for October, 1929; the index of pay-roll totals for October, 1930, is 72.7, as compared with 74.2 for September, 73.9 for August, and 102.3 for October, 1929. The monthly average for 1926 equals 100.

The textile, paper, and tobacco groups of industries each showed a slight increase in employment in October; among the decreases in the remaining nine groups there were three of notable size—4.9 per cent in vehicles, 3.4 per cent in the leather group, and 2.3 per cent in the iron and steel group.

Twenty-three of the 54 separate industries, upon which the manufacturing employment index is based, reported increased employment in October. The chief gains, ranging from 6.9 per cent to 3.5 per cent, were in the following industries: Dyeing and finishing textiles, pianos, silk goods, confectionery, rubber boots and shoes, carpets, and hosiery and knit goods; among the 16 remaining industries showing gains were women's clothing, stoves, millwork, furniture, paper boxes, chemicals, pottery, glass, agricultural implements, and cotton goods, the increase in the last-named industry having been less than one-tenth of 1 per cent.

Outstanding decreases in employment in October were 8.6 per cent in ice cream; from 5 to 5.3 per cent each in woolen and worsted goods, men's clothing, automobiles, and steam-car shops; from 4 to 4.7 per cent each in boots and shoes, petroleum refining, fertilizer, brick, cement, cane-sugar refining, and automobile tires; from 3 to 3.8 per cent each in millinery, cast-iron pipe, machine tools, structural ironwork, and foundry and machine-shop products; 2.4 per cent in shipbuilding and 1.2 per cent in paper and pulp.

Nine additional industries have been taken up during 1929 and 1930 and are not included in the bureau's indexes of employment or pay rolls, no data for 1926, the index-base year, being available. Increases in employment in these industries were reported in October as follows: Radio, 13.5 per cent; jewelry, 2.5 per cent; rubber goods, other, 1.1 per cent; beet sugar, 256.2 per cent, this being the beginning of this industry's refining season. Decreased employment was reported in the remaining 5 industries as follows: 2.6 per cent in rayon; 9.1 per cent in aircraft; 0.5 per cent in paint and varnish; 3.5 per cent in beverages; and 2.4 per cent in cash registers, adding machines, and calculating machines.

The New England, Middle Atlantic, and mountain geographic divisions each reported increased employment in October, while each of the remaining divisions reported a falling-off in employment.

The 22.6 per cent increase shown for the mountain division was caused by the addition in this report of the beet-sugar industry, which begins its refining season in October, thereby showing a very large increase in employment over September. The beet-sugar industry is one of the most important manufacturing industries in the mountain district and was added to the bureau's list to give an adequate representation of employment in that district.

The per cents of change in the mountain district, without beet sugar, would have been decreases of 2.3 per cent in employment and 1.5 per cent in pay-roll totals.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1930, BY INDUSTRIES

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
Food and kindred products	1,969	228,913	227,963	(¹)	\$6,017,741	\$5,867,553	(¹)
Slaughtering and meat packing.....	205	80,639	80,475	-0.2	2,154,739	2,127,439	-1.3
Confectionery.....	337	37,903	39,620	+4.5	734,584	729,672	-0.7
Ice cream.....	344	15,141	13,844	-8.6	503,824	456,084	-9.5
Flour.....	345	15,260	15,191	-0.5	412,068	405,515	-1.6
Baking.....	722	69,291	68,623	-1.0	1,889,356	1,847,673	-2.2
Sugar refining, cane.....	16	10,679	10,210	-4.4	323,170	301,170	-6.8
Textiles and their products	2,426	541,248	543,923	(¹)	9,952,126	10,070,398	(¹)
Cotton goods.....	461	165,443	165,447	+ ⁽²⁾	2,303,332	2,382,412	+3.4
Hosiery and knit goods.....	361	89,352	92,487	+3.5	1,559,209	1,701,983	+9.2
Silk goods.....	267	52,743	55,214	+4.7	1,000,720	1,082,617	+8.2
Woolen and worsted goods.....	190	54,354	51,561	-5.1	1,144,138	1,056,129	-7.7
Carpets and rugs.....	30	17,212	17,913	+4.1	352,288	388,853	+10.4
Dyeing and finishing textiles.....	114	32,734	35,006	+6.9	781,618	850,295	+8.8
Clothing, men's.....	346	63,606	60,220	-5.3	1,291,555	1,119,690	-13.3
Shirts and collars.....	114	18,274	18,521	+1.4	257,790	268,324	+4.1
Clothing, women's.....	417	32,626	33,116	+1.5	902,327	905,649	+0.4
Millinery and lace goods.....	126	14,904	14,438	-3.1	359,169	314,446	-12.5
Iron and steel and their products	1,995	599,855	587,547	(¹)	15,659,130	15,429,191	(¹)
Iron and steel.....	208	240,380	238,193	-0.9	6,492,329	6,524,612	+0.5
Cast-iron pipe.....	39	10,513	10,199	-3.0	239,519	228,830	-4.5
Structural ironwork.....	180	29,260	28,204	-3.6	823,120	802,506	-2.5
Foundry and machine-shop products.....	1,096	217,637	209,401	-3.8	5,612,446	5,357,517	-4.5
Hardware.....	71	26,107	25,952	-0.6	541,366	550,311	+1.7
Machine tools.....	165	28,706	27,795	-3.2	748,361	718,460	-4.0
Steam fittings and steam and hot-water heating apparatus.....	109	27,492	27,731	+0.9	696,576	727,127	+4.4
Stoves.....	137	19,760	20,072	+1.6	505,413	519,828	+2.9
Lumber and its products	1,390	183,316	182,623	(¹)	3,740,783	3,709,747	(¹)
Lumber, sawmills.....	633	106,844	105,241	-1.5	2,061,430	2,009,726	-2.5
Lumber, millwork.....	342	26,194	26,503	+1.2	592,494	587,193	-0.9
Furniture.....	415	50,278	50,879	+1.2	1,086,859	1,112,828	+2.4
Leather and its products	452	135,031	130,405	(¹)	2,726,690	2,492,266	(¹)
Leather.....	134	25,741	25,467	-1.1	623,429	606,959	-2.6
Boots and shoes.....	318	109,290	104,938	-4.0	2,103,261	1,885,307	-10.4
Paper and printing	1,287	209,599	209,739	(¹)	6,930,888	6,877,585	(¹)
Paper and pulp.....	212	56,263	55,561	-1.2	1,419,078	1,407,261	-0.8
Paper boxes.....	197	19,325	19,535	+1.1	435,404	442,816	+1.7
Printing, book and job.....	446	52,616	52,768	+0.3	1,794,444	1,754,700	-2.2
Printing, newspapers.....	432	81,395	81,875	+0.6	3,281,962	3,272,808	-0.3
Chemicals and allied products	401	103,677	101,120	(¹)	3,041,964	2,963,305	(¹)
Chemicals.....	141	37,266	37,532	+0.7	1,005,440	1,019,770	+1.4
Fertilizers.....	180	10,763	10,275	-4.5	210,929	189,395	-10.2
Petroleum refining.....	80	55,648	53,313	-4.2	1,825,595	1,754,140	-3.9
Stone, clay, and glass products	1,089	118,252	116,246	(¹)	2,812,731	2,814,162	(¹)
Cement.....	120	24,359	23,272	-4.5	692,412	666,382	-3.8
Brick, tile, and terra cotta.....	713	38,778	37,058	-4.4	822,265	822,177	-4.6
Pottery.....	118	17,009	17,319	+1.8	359,017	393,040	+9.5
Glass.....	138	38,106	38,597	+1.3	899,037	932,563	+3.7
Metal products, other than iron and steel	238	45,055	44,834	(¹)	1,028,243	1,049,144	(¹)
Stamped and enameled ware.....	78	16,647	16,615	+0.4	344,871	369,820	+7.2
Brass, bronze, and copper products.....	160	28,508	28,219	-1.0	683,372	679,324	-0.6
Tobacco products	230	62,755	62,905	(¹)	987,230	959,962	(¹)
Chewing and smoking tobacco and snuff.....	27	8,862	8,832	-0.3	144,562	132,180	-8.6
Cigars and cigarettes.....	203	53,893	54,073	+0.3	842,668	827,782	-1.8

Footnotes at end of table.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1930, BY INDUSTRIES—Continued

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
Vehicles for land transportation	1,277	427,255	406,649	(¹)	\$11,581,348	\$10,961,056	(¹)
Automobiles.....	210	285,370	270,965	-5.0	7,563,374	7,070,895	-6.5
Carriages and wagons.....	53	1,158	1,138	-1.7	24,339	24,082	-1.1
Car building and repairing, electric-railroad.....	442	28,321	28,092	-0.8	846,031	837,195	-1.0
Car building and repairing, steam-railroad.....	572	112,406	106,454	-5.3	3,147,604	3,028,884	-3.8
Miscellaneous industries	502	296,652	293,072	(¹)	8,284,868	8,049,531	(¹)
Agricultural implements.....	87	18,436	18,660	+1.2	421,540	433,030	+2.7
Electrical machinery, apparatus, and supplies.....	211	175,005	173,161	-1.1	5,067,305	4,978,688	-1.7
Pianos and organs.....	67	6,220	6,637	+6.7	165,659	182,092	+9.9
Rubber boots and shoes.....	9	14,427	15,037	+4.2	296,503	301,746	+1.8
Automobile tires and inner tubes.....	39	42,173	40,175	-4.7	1,165,701	1,043,504	-10.5
Shipbuilding.....	89	40,391	39,402	-2.4	1,168,160	1,110,471	-4.9
Total	13,256	2,951,608	2,907,026	(¹)	72,763,742	71,243,900	(¹)
Industries added in 1929 and 1930, for which data for the index-base year (1926) are not available	685	141,727	155,712	(¹)	3,687,959	4,017,419	(¹)
Rayon.....	16	22,292	21,703	-2.6	427,688	432,862	+1.2
Radio.....	45	40,535	46,013	+13.5	1,039,832	1,231,928	+18.5
Aircraft.....	47	7,959	7,234	-9.1	257,982	241,078	-6.6
Jewelry.....	120	13,539	13,876	+2.5	327,620	334,541	+2.1
Paint and varnish.....	186	11,986	11,924	-0.5	322,338	329,686	+2.3
Rubber goods, other than rubber boots, shoes, tires, and inner tubes.....	74	14,118	14,280	+1.1	338,085	352,458	+4.3
Beet sugar.....	48	3,958	14,100	+256.2	128,458	310,365	+141.6
Beverages.....	132	9,534	9,204	-3.5	295,452	279,792	-5.3
Cash registers, adding machines, and calculating machines.....	17	17,806	17,378	-2.4	550,504	504,709	-8.3
All industries	13,941	3,093,335	3,062,738	(¹)	76,451,701	75,261,319	(¹)

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION ⁵							
New England.....	1,547	344,110	345,522	+0.4	\$7,805,302	\$7,683,056	-1.6
Middle Atlantic.....	3,588	933,572	934,013	+(²)	25,093,502	24,818,066	-1.1
East North Central.....	3,455	979,223	953,801	-2.6	25,430,294	24,736,990	-2.7
West North Central.....	1,198	167,445	163,233	-2.5	4,095,911	3,966,246	-3.2
South Atlantic.....	1,638	318,622	314,562	-1.3	5,934,582	5,944,517	+0.2
East South Central.....	632	109,350	108,527	-0.8	1,967,487	1,961,875	-0.3
West South Central.....	763	91,717	88,287	-3.7	2,125,308	2,042,967	-3.9
Mountain.....	270	31,756	38,944	+22.6	860,309	986,996	+14.7
Pacific.....	850	117,540	115,849	-1.4	3,139,006	3,120,606	-0.6
All divisions	13,941	3,093,335	3,062,738	(¹)	76,451,701	75,261,319	(¹)

¹ The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

² Less than one-tenth of 1 per cent.

³ Total—54 industries upon which indexes of employment and pay rolls are based.

⁴ The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting.

⁵ See footnotes 3 to 11, p. 168.

TABLE 2.—PER CENT OF CHANGE, SEPTEMBER TO OCTOBER, 1930—12 GROUPS OF MANUFACTURING INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change September to October, 1930		Group	Per cent of change September to October, 1930	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products.....	-0.4	-2.2	Stone, clay, and glass products..	-1.8	+0.2
Textiles and their products.....	+0.3	+0.1	Metal products, other than iron and steel.....	-0.7	+1.5
Iron and steel and their prod- ucts.....	-2.3	-1.7	Tobacco products.....	+0.2	-2.6
Lumber and its products.....	-0.3	-0.8	Vehicles for land transportation..	-4.9	-4.8
Leather and its products.....	-3.4	-8.4	Miscellaneous industries.....	-1.2	-3.0
Paper and printing.....	+0.1	-0.8			
Chemicals and allied products..	-1.9	-2.1	All industries.....	-1.4	-2.0

Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, October, 1930, with October, 1929

THE level of employment in manufacturing industries in October, 1930, was 20 per cent below the level of October, 1929, and pay-roll totals were 28.9 per cent lower.

Shipbuilding and chewing and smoking tobacco were the only industries of the 54, upon which the indexes of employment and pay rolls are based, to report more employees at the end of the 12-month period than at the beginning.

Six industries—carpets, machine tools, furniture, automobiles, carriages, and agricultural implements—each reported a decrease of more than 30 per cent in employment in October, 1930, as compared with October, 1929; cotton goods, woolen and worsted goods, foundry and machine-shop products, steam fittings, stoves, sawmills, mill-work, brick, glass, brass, bronze, copper, steam-car shops, electrical machinery, pianos, rubber boots and shoes, and automobile tires each reported a decrease in employment of more than 20 per cent but less than 30 per cent.

The smallest decreases in employment over this year's interval were 2.4 per cent in newspaper printing, 6.2 per cent in book and job printing, 7.2 per cent each in ice cream and slaughtering, 8.2 per cent in electric-car shops, 8.3 per cent in cigars and cigarettes, 8.4 per cent in cement, 8.7 per cent in baking, 8.8 per cent in flour, 9.8 per cent in cane-sugar refining, and 9.9 per cent in millinery.

Decreased employment ranging from 14 per cent in the South Atlantic geographic division to 26.1 per cent in the East North Central division was shown in this year-to-year comparison for October in each of the nine geographic divisions, and in each division the decrease in employment was exceeded by the decrease in employees' earnings.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, OCTOBER, 1930, WITH OCTOBER, 1929

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change October, 1930, compared with October, 1929		Industry	Per cent of change October, 1930, compared with October, 1929	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products.	-9.1	-9.5	Chemicals and allied products.	-13.1	-15.5
Slaughtering and meat packing.....	-7.2	-6.0	Chemicals.....	-10.5	-15.3
Confectionery.....	-14.1	-17.2	Fertilizers.....	-12.1	-16.3
Ice cream.....	-7.2	-8.1	Petroleum refining.....	-16.5	-15.6
Flour.....	-8.8	-11.7	Stone, clay, and glass products.	-20.3	-26.8
Baking.....	-8.7	-9.4	Cement.....	-8.4	-12.6
Sugar refining, cane.....	-9.8	-13.6	Brick, tile, and terra cotta.....	-26.0	-32.6
Textiles and their products.	-18.4	-26.3	Pottery.....	-13.0	-23.7
Cotton goods.....	-21.4	-29.1	Glass.....	-22.3	-28.5
Hosiery and knit goods.....	-15.7	-24.1	Metal products, other than iron and steel.	-23.3	-34.6
Silk goods.....	-18.7	-25.4	Stamped and enameled ware.....	-17.8	-26.1
Woolen and worsted goods.....	-24.8	-32.8	Brass, bronze, and copper products.....	-25.5	-37.6
Carpets and rugs.....	-32.0	-43.8	Tobacco products.	-7.2	-17.1
Dyeing and finishing textiles.....	-10.7	-16.0	Chewing and smoking tobacco and snuff.....	+2.9	-10.9
Clothing, men's.....	-17.5	-29.6	Cigars and cigarettes.....	-8.3	-17.8
Shirts and collars.....	-17.4	-27.9	Vehicles for land transportation.	-27.8	-39.3
Clothing, women's.....	-10.4	-18.2	Automobiles.....	-31.3	-46.0
Millinery and lace goods.....	-9.9	-16.9	Carriages and wagons.....	-37.2	-40.7
Iron and steel and their products.	-22.0	-34.4	Car building and repairing, electric-railroad.....	-8.2	-13.5
Iron and steel.....	-16.6	-29.1	Car building and repairing, steam-railroad.....	-25.5	-33.9
Cast-iron pipe.....	-18.0	-22.2	Miscellaneous industries.	-23.2	-28.9
Structural ironwork.....	-18.0	-26.2	Agricultural implements.....	-35.8	-49.0
Foundry and machine-shop products.....	-25.3	-38.5	Electrical machinery, apparatus and supplies.....	-25.4	-29.8
Hardware.....	-19.9	-35.0	Pianos and organs.....	-24.8	-35.9
Machine tools.....	-36.7	-50.9	Rubber boots and shoes.....	-26.9	-40.3
Steam fittings and steam and hot-water heating apparatus.....	-20.5	-32.1	Automobile tires and inner tubes.....	-26.5	-33.0
Stoves.....	-26.2	-36.5	Shipbuilding.....	+4.3	-3.5
Lumber and its products.	-28.6	-37.5	All industries.....	-20.0	-28.9
Lumber, sawmills.....	-28.3	-36.5			
Lumber, millwork.....	-26.3	-33.9			
Furniture.....	-30.2	-40.8			
Leather and its products.	-16.3	-30.2			
Leather.....	-13.5	-21.2			
Boots and shoes.....	-16.9	-33.0			
Paper and printing.	-6.9	-10.4			
Paper and pulp.....	-10.2	-17.7			
Paper boxes.....	-11.7	-16.1			
Printing, book and job.....	-6.2	-9.7			
Printing, newspapers.....	-2.4	-5.2			

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION ¹			GEOGRAPHIC DIVISION—CON.		
New England.....	-18.9	-28.1	West South Central.....	-25.6	-29.9
Middle Atlantic.....	-15.2	-23.3	Mountain.....	-20.9	-24.6
East North Central.....	-26.1	-37.1	Pacific.....	-20.0	-24.3
West North Central.....	-16.7	-22.4	All divisions.....	-20.0	-28.9
South Atlantic.....	-14.0	-19.4			
East South Central.....	-22.7	-29.0			

¹ See footnotes 3 to 11, p. 168.

Per Capita Earnings in Manufacturing Industries

ACTUAL per capita weekly earnings in October, 1930, for each of the 63 manufacturing industries surveyed by the Bureau of Labor Statistics, together with per cents of change in October, 1930, as compared with September, 1930, and October, 1929, are shown in Table 4.

Per capita earnings in October, 1930, for the combined 54 chief manufacturing industries of the United States, upon which the bureau's indexes of employment and pay rolls are based, were 0.6 per cent lower than in September, 1930, and 11.1 per cent lower than in October, 1929.

The actual average per capita weekly earnings in October, 1930, for the 54 manufacturing industries were \$24.51; the average per capita earnings for all of the 63 industries combined were \$24.57.

TABLE 4.—PER CAPITA EARNINGS IN MANUFACTURING INDUSTRIES IN OCTOBER, 1930, AND COMPARISON WITH SEPTEMBER, 1930, AND OCTOBER, 1929

Industry	Per capita weekly earnings in October, 1930	Per cent of change October, 1930, compared with—	
		September, 1930	October, 1929
Food and kindred products:			
Slaughtering and meat packing.....	\$26.44	-1.0	+1.7
Confectionery.....	18.42	-5.0	-3.9
Ice cream.....	32.94	-1.0	-1.0
Flour.....	26.69	-1.1	-3.2
Baking.....	26.92	-1.3	-0.8
Sugar refining, cane.....	29.50	-2.5	-4.5
Textiles and their products:			
Cotton goods.....	14.40	+3.4	-9.7
Hosiery and knit goods.....	18.40	+5.4	-10.2
Silk goods.....	19.61	+3.4	-8.3
Woolen and worsted goods.....	20.48	-2.7	-10.3
Carpets and rugs.....	21.71	+6.1	-17.5
Dyeing and finishing textiles.....	24.29	+1.7	-6.1
Clothing, men's.....	18.59	-8.5	-14.7
Shirts and collars.....	14.49	+2.7	-12.6
Clothing, women's.....	27.35	-1.1	-8.6
Millinery and lace goods.....	21.78	-9.6	-7.6
Iron and steel and their products:			
Iron and steel.....	27.39	+1.4	-15.0
Cast-iron pipe.....	22.44	-1.5	-4.8
Structural ironwork.....	28.45	+1.1	-10.2
Foundry and machine-shop products.....	25.58	-0.8	-17.7
Hardware.....	21.20	+2.2	-19.1
Machine tools.....	25.85	-0.8	-22.5
Steam fittings and steam and hot-water heating apparatus.....	26.22	+3.5	-14.8
Stoves.....	25.90	+1.3	-13.5
Lumber and its products:			
Lumber, sawmills.....	19.10	-1.0	-11.2
Lumber, millwork.....	22.16	-2.0	-10.3
Furniture.....	21.87	+1.2	-15.1
Leather and its products:			
Leather.....	23.83	-1.6	-9.1
Boots and shoes.....	17.97	-6.6	-19.5
Paper and printing:			
Paper and pulp.....	25.33	+0.4	-8.7
Paper boxes.....	22.67	+0.6	-4.8
Printing, book and job.....	33.25	-2.5	-4.0
Printing, newspapers.....	39.97	-0.9	-2.6
Chemicals and allied products:			
Chemicals.....	27.17	+0.7	-5.4
Fertilizers.....	18.43	-6.0	-5.0
Petroleum refining.....	32.90	+0.3	+0.9
Stone, clay, and glass products:			
Cement.....	28.63	+0.7	-4.6
Brick, tile, and terra cotta.....	22.19	-0.2	-8.9
Pottery.....	22.69	+7.5	-12.4
Glass.....	24.16	+2.4	-8.0
Metal products, other than iron and steel:			
Stamped and enameled ware.....	22.26	+6.8	-9.8
Brass, bronze, and copper products.....	24.07	+0.4	-16.4

TABLE 4.—PER CAPITA EARNINGS IN MANUFACTURING INDUSTRIES IN OCTOBER, 1930, AND COMPARISON WITH SEPTEMBER, 1930, AND OCTOBER, 1929—Continued

Industry	Per capita weekly earnings in October, 1930	Per cent of change October, 1930, compared with—	
		September, 1930	October, 1929
Tobacco products:			
Chewing and smoking tobacco and snuff.....	\$14.97	-8.2	-12.9
Cigars and cigarettes.....	15.31	-2.1	-10.3
Vehicles for land transportation:			
Automobiles.....	26.10	-1.5	-21.1
Carriages and wagons.....	21.16	+0.7	-5.3
Car building and repairing, electric-railroad.....	29.80	-0.2	-5.5
Car building and repairing, steam-railroad.....	28.45	+1.6	-11.1
Miscellaneous industries:			
Agricultural implements.....	23.21	+1.5	-20.8
Electrical machinery, apparatus, and supplies.....	28.75	-0.7	-5.8
Pianos and organs.....	27.44	+3.0	-14.9
Rubber boots and shoes.....	20.07	-2.3	-18.3
Automobile tires and inner tubes.....	25.97	-6.0	-8.9
Shipbuilding.....	28.18	-2.6	-7.5
Rayon.....	19.94	+3.9	-2.2
Radio.....	26.77	+4.4	+11.1
Aircraft.....	33.33	+2.8	(1)
Jewelry.....	24.11	-0.4	(1)
Paint and varnish.....	27.65	+2.8	(1)
Rubber goods, other than boots, shoes, tires, and tubes.....	24.68	+3.0	(1)
Beet sugar.....	22.01	-32.2	(1)
Beverages.....	30.40	-1.9	(1)
Cash registers, adding machines, and calculating machines.....	29.04	-6.1	(1)

¹ Data not available.

Index Numbers of Employment and Pay-Roll Totals in Manufacturing Industries

TABLE 5 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to October, 1930, together with average indexes for each of the years 1923 to 1929, inclusive.

TABLE 5.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO OCTOBER, 1930

[Monthly average, 1926=100]

Month	Employment								Pay-roll totals							
	1923	1924	1925	1926	1927	1928	1929	1930	1923	1924	1925	1926	1927	1928	1929	1930
January.....	106.6	103.8	97.9	100.4	97.3	91.6	95.2	90.2	95.8	98.6	93.9	98.0	94.9	89.6	94.5	87.6
February.....	108.4	105.1	99.7	101.5	99.0	93.0	97.4	90.3	99.4	103.8	99.3	102.2	100.6	93.9	101.8	90.7
March.....	110.8	104.9	100.4	102.0	99.5	93.7	98.6	89.8	104.7	103.3	100.8	103.4	102.0	95.2	103.9	90.8
April.....	100.8	102.8	100.2	101.0	98.6	93.3	99.1	89.1	105.7	101.1	98.3	101.5	100.8	93.8	104.6	89.8
May.....	110.8	98.8	98.9	99.8	97.6	93.0	99.2	87.7	109.4	96.5	98.5	99.8	99.8	94.1	104.8	87.6
June.....	110.9	95.6	98.0	99.3	97.0	93.1	98.8	85.5	109.3	90.8	95.7	99.7	97.4	94.2	102.8	84.1
July.....	109.2	92.3	97.2	97.7	95.0	92.2	98.2	81.6	104.3	84.3	93.5	95.2	93.0	91.2	98.2	75.9
August.....	108.5	92.5	97.8	98.7	95.1	93.6	98.6	79.9	103.7	87.2	95.4	98.7	95.0	94.2	102.1	73.9
September.....	108.6	94.3	98.9	100.3	95.8	95.0	99.3	79.7	104.4	89.8	94.4	99.3	94.1	95.4	102.6	74.2
October.....	108.1	95.6	100.4	100.7	95.3	95.9	98.3	78.6	106.8	92.4	100.4	102.9	95.2	99.0	102.3	72.7
November.....	107.4	95.5	100.7	99.5	93.5	95.4	94.8	-----	105.4	91.4	100.4	99.6	91.6	96.1	95.1	-----
December.....	105.4	97.3	100.8	98.9	92.6	95.5	91.9	-----	103.2	95.7	101.6	99.8	93.2	97.7	92.0	-----
Average...	108.8	98.2	99.2	100.0	96.4	93.8	97.5	85.2	104.3	94.6	97.7	100.0	96.5	94.5	100.4	82.7

¹ Average for 10 months

Index numbers showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 manufacturing industries surveyed by the Bureau of Labor Statistics and in each of the 12 groups of industries, and also general indexes for the combined 12 groups of industries, are shown in Table 6 for October, 1929, and for August, September, and October, 1930.

In computing the general indexes and the group indexes the index numbers of separate industries are weighted according to the relative importance of the industries.

Following Table 6 are two charts which represent the 54 separate industries combined and show the course of pay-roll totals as well as the course of employment for each month of the years 1926 to 1929, inclusive, and for January, February, March, April, May, June, July, August, September, and October, 1930.

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, OCTOBER, 1929, AND AUGUST, SEPTEMBER, AND OCTOBER, 1930

[Monthly average, 1926=100]

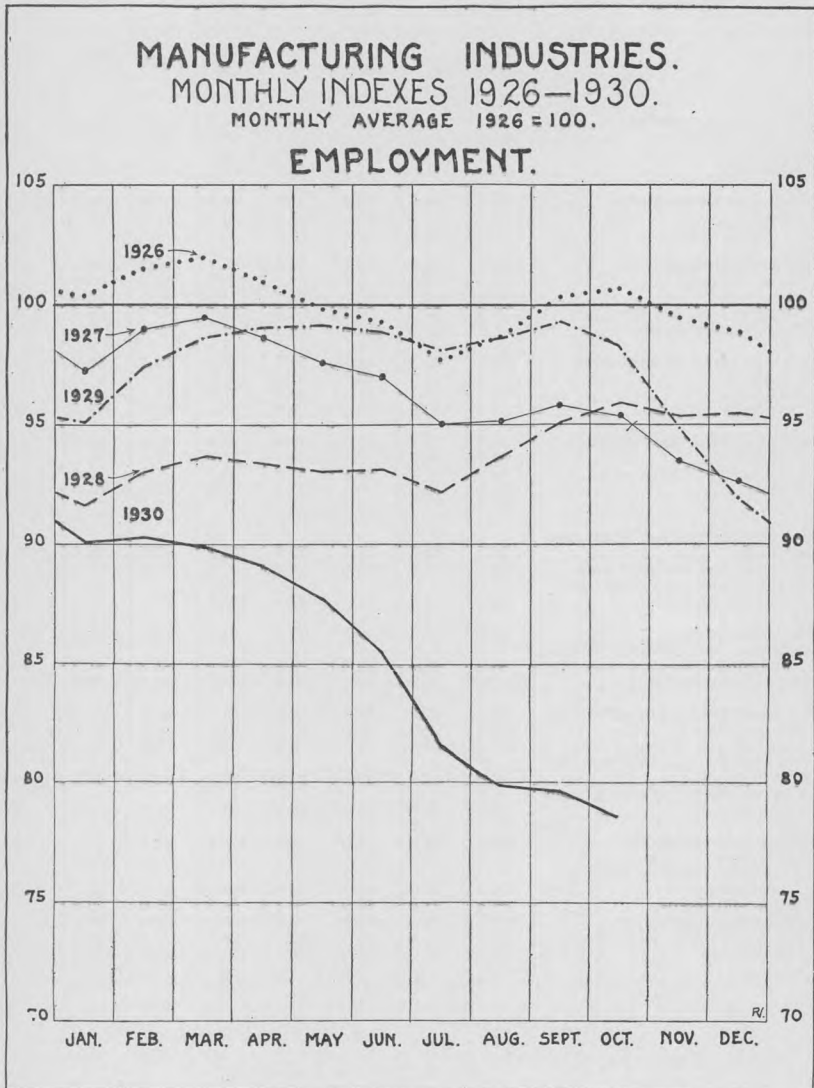
Industry	Employment				Pay-roll totals			
	1929		1930		1929		1930	
	October	August	September	October	October	August	September	October
General index	98.3	79.9	79.7	78.6	102.3	73.9	74.2	72.7
Food and kindred products	104.0	92.6	94.9	94.5	106.0	95.1	98.1	95.9
Slaughtering and meat packing.....	101.4	94.3	94.3	94.1	103.8	96.8	98.9	97.6
Confectionery.....	111.0	75.4	91.2	95.3	112.7	75.2	93.9	93.3
Ice cream.....	90.6	101.1	92.0	84.1	91.2	100.4	92.6	83.8
Flour.....	106.5	97.5	97.6	97.1	112.6	101.0	101.0	99.4
Baking.....	105.2	96.1	97.1	96.1	107.1	96.9	99.2	97.0
Sugar refining, cane.....	96.8	92.6	91.3	87.3	103.0	94.8	95.5	89.0
Textiles and their products	98.2	77.8	79.9	80.1	100.0	69.4	73.6	73.7
Cotton goods.....	94.8	72.9	74.5	74.5	94.2	61.5	64.6	66.8
Hosiery and knit goods.....	103.2	79.6	84.1	87.0	113.7	70.9	79.0	86.3
Silk goods.....	98.1	78.0	76.2	79.8	101.8	72.1	70.2	75.9
Woolen and worsted goods.....	98.5	78.4	78.1	74.1	100.7	72.9	73.4	67.7
Carpets and rugs.....	109.1	73.5	71.3	74.2	108.4	54.7	55.2	66.9
Dyeing and finishing textiles.....	102.4	86.6	85.5	91.4	103.5	76.4	79.9	86.9
Clothing, men's.....	93.3	79.7	81.3	77.0	85.2	71.9	69.2	60.0
Shirts and collars.....	94.6	74.3	77.0	78.1	94.6	64.5	65.5	68.2
Clothing, women's.....	108.1	85.0	95.4	96.9	114.9	75.4	93.6	94.0
Millinery and lace goods.....	92.2	80.2	85.7	83.1	89.5	71.0	85.0	74.4
Iron and steel and their products	99.5	80.5	79.4	77.6	104.4	71.7	69.7	68.5
Iron and steel.....	93.9	80.8	79.0	78.3	99.1	72.5	70.0	70.3
Cast-iron pipe.....	79.4	68.5	67.1	65.1	80.3	66.0	65.5	62.5
Structural iron work.....	106.9	92.0	91.0	87.7	113.1	90.2	85.7	83.5
Foundry and machine-shop products.....	104.7	82.7	81.3	78.2	109.5	73.0	70.5	67.3
Hardware.....	92.0	73.1	74.1	73.7	94.2	59.8	60.2	61.2
Machine tools.....	135.8	82.6	88.8	86.0	146.5	69.8	74.9	71.9
Steam fittings and steam and hot-water heating apparatus.....	79.1	62.0	62.4	62.9	82.8	54.0	53.8	56.2
Stoves.....	100.2	73.0	72.7	73.9	102.3	60.0	63.1	65.0

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, OCTOBER, 1929, AND AUGUST, SEPTEMBER, AND OCTOBER, 1930—Continued

Industry	Employment				Pay-roll totals			
	1929	1930			1929	1930		
	October	August	September	October	October	August	September	October
Lumber and its products	89.6	66.3	64.2	64.0	94.9	60.6	59.8	59.3
Lumber, sawmills.....	86.2	65.4	62.7	61.8	90.6	60.1	59.0	57.5
Lumber, millwork.....	79.9	61.7	58.2	58.9	82.8	59.2	55.2	54.7
Furniture.....	104.3	71.6	71.9	72.8	111.5	62.7	64.5	66.0
Leather and its products	98.2	86.5	85.1	82.2	96.6	77.3	73.6	67.4
Leather.....	96.2	84.6	84.1	83.2	100.6	83.5	81.5	79.3
Boots and shoes.....	98.7	87.0	85.4	82.0	95.5	75.5	71.4	64.0
Paper and printing	103.1	96.9	95.9	96.0	109.1	99.0	98.5	97.7
Paper and pulp.....	96.9	90.0	88.0	87.0	100.7	86.3	83.6	82.9
Paper boxes.....	103.6	89.0	90.6	91.5	113.5	90.7	93.6	95.2
Printing, book and job.....	101.9	98.3	95.3	95.6	106.7	100.5	98.4	96.3
Printing, newspapers.....	110.9	106.5	107.5	108.2	116.6	109.0	110.8	110.5
Chemicals and allied products	102.8	89.7	91.0	89.3	106.9	91.6	92.2	90.3
Chemicals.....	105.6	92.4	93.9	94.5	109.6	90.1	91.5	92.8
Fertilizers.....	91.7	70.1	84.4	80.6	92.6	70.7	86.3	77.5
Petroleum refining.....	103.2	92.9	89.9	86.2	106.7	96.6	93.8	90.1
Stone, clay, and glass products ...	88.8	72.3	72.1	70.8	88.9	65.0	65.0	65.1
Cement.....	80.9	80.5	77.6	74.1	82.6	77.8	75.1	72.2
Brick, tile, and terra cotta.....	83.6	66.1	64.8	61.9	80.7	57.7	57.0	54.4
Pottery.....	94.0	80.0	80.4	81.8	94.5	65.0	65.8	72.1
Glass.....	98.3	72.9	75.4	76.4	101.7	67.7	70.1	72.7
Metal products, other than iron and steel	96.3	76.3	74.4	73.9	102.3	67.5	65.9	66.9
Stamped and enameled ware.....	90.3	75.1	73.9	74.2	93.6	67.1	64.6	69.2
Brass, bronze, and copper products.....	99.1	76.9	74.6	73.8	105.7	67.7	66.4	66.0
Tobacco products	97.0	86.1	89.8	90.0	99.5	81.8	84.7	82.5
Chewing and smoking tobacco and snuff.....	85.9	87.4	88.6	88.4	89.5	87.2	87.2	79.7
Cigars and cigarettes.....	98.4	85.9	89.9	90.2	100.7	81.1	84.4	82.8
Vehicles for land transportation	94.7	73.9	71.9	68.4	100.7	64.1	64.2	61.1
Automobiles.....	103.7	78.0	75.0	71.2	105.1	56.5	60.7	56.8
Carriages and wagons.....	84.2	54.8	53.8	52.9	92.9	60.7	55.7	55.1
Car building, and repairing, electric-railroad.....	92.4	86.0	85.5	84.8	95.1	85.5	83.2	82.3
Car building and repairing, steam-railroad.....	86.8	69.4	68.3	64.7	96.7	70.4	66.4	63.9
Miscellaneous industries	113.1	88.5	88.0	86.9	114.4	84.3	83.8	81.3
Agricultural implements.....	110.1	69.1	69.8	70.7	112.8	56.8	56.0	57.5
Electrical machinery, apparatus, and supplies.....	126.5	95.2	95.5	94.4	130.6	91.3	93.3	91.7
Pianos and organs.....	66.6	42.8	47.0	50.1	68.3	36.0	39.9	43.8
Rubber boots and shoes.....	103.5	74.6	72.7	75.7	107.5	64.6	63.1	64.2
Automobile tires and inner tubes.....	95.1	77.4	73.4	69.9	88.3	72.4	66.1	59.2
Shipbuilding.....	106.0	113.7	113.3	110.6	109.9	114.8	111.6	106.1

Force Employed and Time Worked in Manufacturing Industries in October, 1930

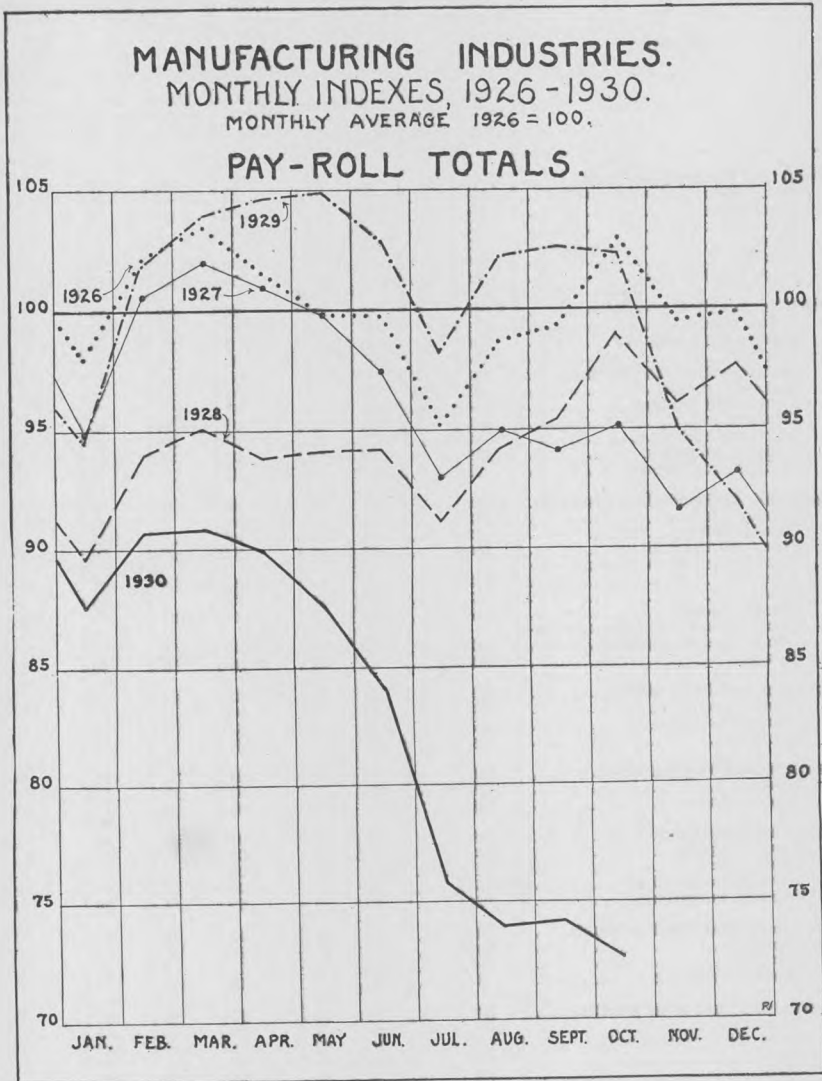
REPORTS as to force employed in October and working time of employees were received from 10,720 establishments in 54 manu-



facturing industries. Twenty-four per cent of the establishments had a full normal force of employees, 75 per cent were working with reduced forces, and 1 per cent were idle; employees in 62 per cent of the

establishments were working full time and employees in 37 per cent were working part time.

The establishments in operation had an average of 77 per cent of a full normal force of employees, who were working an average of 92



per cent of full time; the percentages for September were 78 and 92, respectively.

The establishments working part time in October averaged 78 per cent of full time.

TABLE 7.—PROPORTION OF FULL NORMAL FORCE EMPLOYED IN MANUFACTURING INDUSTRIES IN OCTOBER, 1930, AND PROPORTION OF FULL TIME WORKED BY EMPLOYEES

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Food and kindred products	1,617	(1)	88	12	98	38	62	89
Slaughtering and meat packing.....	171		84	16	98	42	58	88
Confectionery.....	270	(1)	76	24	96	24	76	84
Ice cream.....	196		86	14	98	12	88	73
Flour.....	307	(1)	90	10	98	42	58	88
Baking.....	659	(1)	95	5	99	49	50	94
Sugar refining, cane.....	14		71	29	96	29	71	95
Textiles and their products	1,843	2	62	36	92	23	75	78
Cotton goods.....	424	3	47	50	87	13	84	75
Hosiery and knit goods.....	303	1	67	32	92	23	76	84
Silk goods.....	242	2	74	25	96	30	69	79
Woolen and worsted goods.....	174	3	47	50	88	10	87	71
Carpets and rugs.....	23		39	61	84	22	78	63
Dyeing and finishing.....	100		54	46	89	21	79	83
Clothing, men's.....	241	3	69	28	93	34	63	80
Shirts and collars.....	82		77	23	96	34	66	91
Clothing, women's.....	184	4	76	20	97	33	63	87
Millinery and lace goods.....	70		70	30	96	24	76	78
Iron and steel and their products	1,752	1	37	62	83	14	85	75
Iron and steel.....	137	9	54	37	88	7	85	79
Cast-iron pipe.....	36		11	89	69		100	65
Structural ironwork.....	164		57	43	92	21	79	84
Foundry and machine-shop products.....	999	1	36	63	83	13	87	71
Hardware.....	59		10	90	78	5	95	67
Machine tools.....	142		23	77	79	17	83	80
Steam fittings and steam and hot-water heating apparatus.....	102	1	30	69	81	19	80	75
Stoves.....	113		42	58	87	24	76	82
Lumber and its products	1,015	2	50	49	89	14	85	68
Lumber, sawmills.....	420	4	56	40	90	13	84	68
Lumber, millwork.....	257	(1)	47	52	89	12	88	67
Furniture.....	338		44	56	87	17	83	70
Leather and its products	384	1	57	42	90	31	68	88
Leather.....	116	1	64	35	92	28	72	84
Boots and shoes.....	268	1	54	46	88	32	67	89
Paper and printing	1,038	1	76	24	97	44	55	94
Paper and pulp.....	141	4	62	34	93	20	76	88
Paper boxes.....	168		67	33	95	39	61	89
Printing, book and job.....	367		68	32	96	37	63	94
Printing, newspapers.....	362		93	7	99	64	36	101
Chemicals and allied products	296		79	21	97	19	81	77
Chemicals.....	109		77	23	96	27	73	92
Fertilizers.....	134		74	26	97	9	91	47
Petroleum refining.....	53		98	2	100	28	72	78
Stone, clay, and glass products	793	4	66	30	93	15	81	76
Cement.....	101	6	90	4	99	10	84	76
Brick, tile, and terra cotta.....	485	5	62	33	91	10	85	65
Pottery.....	101		51	49	90	31	69	89
Glass.....	106	2	78	20	97	29	69	84
Metal products, other than iron and steel	208	(1)	45	54	89	14	86	75
Stamped and enameled ware.....	69		57	43	91	17	83	80
Brass, bronze, and copper products.....	139	1	40	60	88	12	87	72
Tobacco products	210	1	49	50	90	37	62	97
Chewing and smoking tobacco and snuff.....	25		64	36	92	36	64	96
Cigars and cigarettes.....	185	1	46	52	90	37	62	97

¹ Less than one-half of 1 per cent.

TABLE 7.—PROPORTION OF FULL NORMAL FORCE EMPLOYED IN MANUFACTURING INDUSTRIES IN OCTOBER, 1930, AND PROPORTION OF FULL TIME WORKED BY EMPLOYEES—Continued

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Vehicles for land transportation	1,144	(1)	64	35	93	16	84	66
Automobiles.....	176		37	63	84	17	83	64
Carriages and wagons.....	46		63	37	92	11	89	59
Car building and repairing, electric-railroad.....	392		98	3	100	30	70	90
Car building and repairing, steam-railroad.....	530	(1)	49	51	91	6	94	67
Miscellaneous industries	420	2	55	44	90	20	78	79
Agricultural implements.....	81	9	37	54	84	12	79	63
Electrical machinery, apparatus, and supplies.....	164		57	43	91	22	78	81
Pianos and organs.....	55		45	55	90	9	91	76
Rubber boots and shoes.....	7		43	57	90	57	43	80
Automobile tires and inner tubes.....	32		28	72	85	6	94	72
Shipbuilding.....	81	1	85	14	98	36	63	87
All industries	10,720	1	62	37	92	24	75	77

¹Less than one-half of 1 per cent.

2. Employment in Coal Mining in October, 1930

EMPLOYMENT in coal mining—anthracite and bituminous coal combined—increased 2.7 per cent in October as compared with September, and pay-roll totals increased 14.6 per cent.

The 1,477 mines reported in October had 322,551 employees whose combined earnings in one week were \$8,601,369.

Anthracite

IN ANTHRACITE mining in October there was an increase in employment of 5.5 per cent, as compared with September, and an increase of 27.9 per cent in pay-roll totals, these increases being seasonal, in preparation for winter demands.

Employment in October, 1930, was 6.7 per cent lower than in October, 1929, and pay-roll totals were 12.5 per cent less.

All anthracite mines reported are in Pennsylvania—the Middle Atlantic geographic division. The details for September and October are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ANTHRACITE MINES IN SEPTEMBER AND OCTOBER, 1930

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
Middle Atlantic.....	153	96,751	102,072	+5.5	\$2,944,884	\$3,765,449	+27.9

Bituminous Coal

EMPLOYMENT in bituminous coal mining increased 1.4 per cent in October as compared with September, and pay-roll totals increased 6.0 per cent, as shown by reports from 1,324 mines in which there were in October 220,479 employees whose combined earnings in one week were \$4,835,920. These increases were seasonal.

Employment in October, 1930, was 7.1 per cent lower than in October, 1929, and pay-roll totals were 25.7 per cent lower.

Details for each geographic division, except the New England division, for which no coal mining is reported, are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL BITUMINOUS COAL MINES IN SEPTEMBER AND OCTOBER, 1930

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
Middle Atlantic.....	396	62,308	63,459	+1.8	\$1,315,003	\$1,385,679	+5.4
East North Central.....	164	29,387	30,930	+5.3	659,837	745,604	+13.0
West North Central.....	56	5,613	5,958	+6.1	120,067	132,008	+9.9
South Atlantic.....	331	54,783	54,784	+()	1,140,077	1,161,901	+1.9
East South Central.....	223	46,133	44,911	-2.6	802,527	787,476	-1.9
West South Central.....	29	2,731	2,840	+4.0	50,414	59,616	+18.3
Mountain.....	116	15,059	16,206	+7.6	427,894	520,858	+21.7
Pacific.....	9	1,433	1,391	-2.9	44,402	42,778	-3.7
All divisions.....	1,324	217,447	220,479	+1.4	4,560,221	4,835,920	+6.0

¹ Less than one-tenth of 1 per cent.

3. Employment in Metalliferous Mining in October, 1930

METALLIFEROUS mines in October showed a decrease in employment of 1.2 per cent as compared with September, and a decrease of 1.9 per cent in pay-roll totals. The 339 mines covered had in October 49,937 employees whose combined earnings in one week were \$1,342,214.

Employment in October, 1930, was 24.2 per cent lower than in October, 1929, and pay-roll totals were 33.5 per cent lower.

Details for each geographic division from which metalliferous mining is reported are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL METALLIFEROUS MINES IN SEPTEMBER AND OCTOBER, 1930

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
Middle Atlantic.....	7	1,370	1,402	+2.3	\$36,193	\$36,671	+1.3
East North Central.....	48	12,417	12,029	-3.1	291,217	280,205	-3.8
West North Central.....	56	7,890	7,781	-1.4	243,762	232,611	-4.6
East South Central.....	14	3,401	3,436	+1.0	66,487	66,671	+0.3
West South Central.....	63	2,730	2,855	+4.6	66,052	66,046	-()
Mountain.....	118	20,351	20,036	-1.3	592,501	589,695	-0.5
Pacific.....	33	2,406	2,348	-2.4	72,143	70,315	-2.5
All divisions.....	339	50,565	49,937	-1.2	1,368,355	1,342,214	-1.9

¹ Less than one-tenth of 1 per cent.

4. Employment in Quarrying and Nonmetallic Mining in October, 1930

A DECREASE of 3.4 per cent in employment and a decrease in earnings of 3.9 per cent from September to October were shown by reports received from 751 establishments in this industrial group.

These establishments had in October 36,156 employees whose combined pay roll in one week was \$887,072.

Employment in October, 1930, was 18.2 per cent lower than in October, 1929, and pay-roll totals were 25 per cent lower.

Details for each geographic division are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL QUARRIES AND NONMETALLIC MINES IN SEPTEMBER AND OCTOBER, 1930

Geographic division	Estab-lish-ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
New England.....	101	4, 886	4, 599	-5.9	\$142, 639	\$128, 919	-9.6
Middle Atlantic.....	120	7, 421	7, 178	-3.3	196, 059	193, 410	-1.4
East North Central.....	222	9, 880	9, 510	-3.7	278, 935	267, 954	-3.9
West North Central.....	81	2, 584	2, 477	-4.1	59, 228	55, 958	-5.5
South Atlantic.....	96	5, 773	5, 683	-1.6	106, 621	102, 932	-3.5
East South Central.....	57	2, 790	2, 753	-1.3	43, 683	42, 781	-2.1
West South Central.....	39	2, 753	2, 647	-3.9	57, 437	58, 801	+2.4
Mountain.....	4	129	65	-49.6	3, 891	1, 916	-50.8
Pacific.....	31	1, 217	1, 244	+2.2	34, 789	34, 401	-1.1
All divisions.....	751	37, 433	36, 156	-3.4	923, 282	887, 072	-3.9

5. Employment in Crude Petroleum Producing in October, 1930

REPORTS received from 566 crude petroleum producing establishments in October showed an increase of 0.2 per cent in employment with a decrease of 1.7 per cent in pay-roll totals as compared with September. The establishments reporting had in October 31,910 employees whose combined earnings in one week were \$1,143,308.

As data for this industry were not collected for the months prior to January, 1930, no comparison with October, 1929, can be made at this time.

Details for each geographic division, except New England, for which no production is reported, are shown in the following table.

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL CRUDE PETROLEUM PRODUCING COMPANIES IN SEPTEMBER AND OCTOBER, 1930

Geographic division	Estab-lish-ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
Middle Atlantic.....	43	859	816	-5.0	\$22, 786	\$22, 259	-2.3
East North Central.....	4	26	27	+3.8	540	446	-17.4
West North Central.....	23	189	128	-32.3	3, 742	3, 510	-6.2
South Atlantic.....	13	591	577	-2.4	16, 290	15, 930	-2.2
East South Central.....	4	267	518	+94.0	6, 615	8, 473	+28.1
West South Central.....	384	21, 248	21, 530	+1.3	753, 429	748, 507	-0.7
Mountain.....	15	333	332	-0.3	12, 174	12, 044	-1.1
Pacific.....	80	8, 345	7, 982	-4.3	347, 067	332, 139	-4.3
All divisions.....	566	31, 858	31, 910	+0.2	1, 162, 643	1, 143, 308	-1.7

6. Employment in Public Utilities in October, 1930

EMPLOYMENT in 11,523 establishments—telephone and telegraph companies, power, light, and water companies, and electric railroads, combined—decreased 1.4 per cent in October as compared with September, and pay-roll totals decreased 1.1 per cent. These establishments had in October 744,430 employees, whose combined earnings in one week were \$22,493,338.

Employment in public utilities was 5.6 per cent lower in October, 1930, than in October, 1929, while pay-roll totals were 4.5 per cent lower.

Data for the three groups into which public utilities have been separated follow.

Telephone and Telegraph

EMPLOYMENT in telephone and telegraph companies was 2.4 per cent lower in October than in September, and earnings decreased 1.3 per cent. The 7,940 establishments reporting in October had 334,330 employees whose combined earnings in one week were \$9,698,519.

Employment in October, 1930, was 7.3 per cent below the level of October, 1929, and pay-roll totals were 4.0 per cent lower in October, 1930, than in October, 1929.

Details for each geographic division are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **TELEPHONE AND TELEGRAPH** ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1930

Geographic division	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
New England.....	721	31,034	29,573	-4.7	\$939,223	\$909,702	-3.1
Middle Atlantic.....	1,239	109,489	106,753	-2.5	3,473,044	3,446,767	-0.8
East North Central.....	1,432	77,593	75,664	-2.5	2,148,161	2,111,218	-1.7
West North Central.....	1,312	31,756	31,253	-1.6	786,181	771,490	-1.9
South Atlantic.....	561	21,943	21,669	-1.2	590,431	587,376	-0.5
East South Central.....	592	10,912	10,710	-1.9	240,236	237,088	-1.3
West South Central.....	689	19,305	18,659	-3.3	436,678	428,206	-1.9
Mountain.....	482	8,305	8,134	-2.1	203,261	198,684	-2.3
Pacific.....	912	32,377	31,915	-1.4	1,004,290	1,007,988	+0.4
All divisions.....	7,940	342,714	334,330	-2.4	9,821,505	9,698,519	-1.3

Power, Light, and Water

EMPLOYMENT in power, light, and water plants was 0.4 per cent lower in October than in September, and pay-roll totals were 0.5 per cent lower. The 3,114 establishments reporting had in October 258,887 employees whose combined earnings in one week were \$8,139,739.

Employment in October, 1930, was 0.9 per cent lower than in October, 1929, and pay-roll totals were 0.4 per cent lower.

Details for each geographic division are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL POWER, LIGHT, AND WATER COMPANIES IN SEPTEMBER AND OCTOBER, 1930

Geographic division	Estab-lish-ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
New England.....	253	22, 224	22, 228	+ (1)	\$732, 878	\$719, 873	- 1.8
Middle Atlantic.....	352	66, 976	66, 812	- 0.2	2, 187, 740	2, 176, 961	- 0.5
East North Central.....	659	59, 729	59, 637	- 0.2	1, 955, 670	1, 965, 776	+ 0.5
West North Central.....	419	29, 920	29, 892	- 0.1	874, 078	873, 358	- 0.1
South Atlantic.....	260	24, 771	24, 829	+ 0.2	743, 725	740, 752	- 0.4
East South Central.....	174	8, 288	7, 650	- 7.7	201, 039	192, 510	- 4.2
West South Central.....	537	16, 990	16, 616	- 2.2	473, 706	463, 585	- 2.1
Mountain.....	118	6, 100	6, 358	+ 4.2	191, 064	195, 676	+ 2.4
Pacific.....	342	25, 028	24, 865	- 0.7	822, 190	811, 248	- 1.3
All divisions.....	3, 114	260, 026	258, 887	- 0.4	8, 182, 090	8, 139, 739	- 0.5

¹ Less than one-tenth of 1 per cent.

Electric Railroads

EMPLOYMENT in the operation and maintenance of electric railroads, exclusive of car shops, decreased 0.9 per cent from September to October, while pay-roll totals decreased 1.8 per cent. The 469 establishments reporting in October had 151,213 employees whose combined earnings in one week were \$4,655,080.

A comparison of employment and earnings in this group over the year period shows a drop of 9.5 and 11.1 per cent, respectively, in the two items.

Details for each geographic division are shown in Table 3.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN THE OPERATION AND MAINTENANCE OF IDENTICAL ELECTRIC RAILROADS IN SEPTEMBER AND OCTOBER, 1930

Geographic division	Estab-lish-ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
New England.....	49	14, 341	14, 455	+ 0.8	\$515, 805	\$515, 057	- 0.1
Middle Atlantic.....	111	40, 278	39, 337	- 2.3	1, 212, 141	1, 168, 875	- 3.6
East North Central.....	106	46, 634	46, 335	- 0.6	1, 519, 023	1, 480, 077	- 2.6
West North Central.....	65	14, 594	14, 330	- 1.8	434, 193	434, 681	+ 0.1
South Atlantic.....	47	9, 331	9, 468	+ 1.5	254, 888	255, 356	+ 0.2
East South Central.....	11	3, 792	3, 650	- 3.7	105, 280	99, 853	- 5.2
West South Central.....	30	5, 180	5, 515	+ 6.5	132, 480	140, 664	+ 6.2
Mountain.....	15	2, 328	2, 213	- 4.9	63, 546	61, 552	- 3.1
Pacific.....	35	16, 040	15, 910	- 0.8	592, 105	498, 965	- 0.6
All divisions.....	469	152, 518	151, 213	- 0.9	4, 739, 461	4, 655, 080	- 1.8

7. Employment in Wholesale and Retail Trade in October, 1930

EMPLOYMENT in 9,673 establishments—wholesale and retail trade combined—increased 3.0 per cent in October as compared with September, and pay-roll totals increased 2.0 per cent. These establishments had in October 348,565 employees, whose combined earnings in one week were \$8,836,059.

Wholesale Trade

EMPLOYMENT in wholesale trade decreased 0.6 per cent in October as compared with September, and pay-roll totals decreased 0.8 per cent. The 1,966 establishments reporting had in October 65,077 employees and pay-roll totals in one week of \$2,020,107.

Employment in October, 1930, was 8.5 per cent lower than in October, 1929, and pay-roll totals were 9.5 per cent lower.

Details for each geographic division are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL WHOLESALE TRADE ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1930

Geographic division	Estab-lish-ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
New England.....	174	4,061	4,086	+0.6	\$113,724	\$114,310	+0.5
Middle Atlantic.....	306	9,690	9,749	+0.6	312,629	311,768	-0.3
East North Central.....	285	13,007	12,951	-0.4	405,241	402,594	-0.7
West North Central.....	268	14,067	14,039	-0.2	421,716	422,460	+0.2
South Atlantic.....	194	3,977	4,027	+1.3	120,305	120,552	+0.2
East South Central.....	64	1,741	1,725	-0.9	50,281	49,525	-1.5
West South Central.....	248	5,914	5,913	(-)	178,853	176,924	-1.1
Mountain.....	79	1,869	1,836	-1.8	63,842	63,062	-1.2
Pacific.....	348	11,146	10,751	-3.5	370,569	358,912	-3.1
All divisions.....	1,966	65,472	65,077	-0.6	2,037,160	2,020,107	-0.8

¹ Less than one-tenth of 1 per cent.

Retail Trade

EMPLOYMENT in retail trade increased 3.8 per cent in October and pay-roll totals increased 2.9 per cent, a continuation of the seasonal increases noted in September.

The 7,707 establishments from which reports were received in October had 283,488 employees whose combined earnings in one week were \$6,815,952.

Employment in October, 1930, was 6.1 per cent lower than in October, 1929, and pay-roll totals were 7.3 per cent lower.

Details by geographic divisions are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL RETAIL TRADE ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1930

Geographic division	Estab-lish-ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
New England.....	106	14,016	14,194	+1.3	\$329,656	\$332,803	+1.0
Middle Atlantic.....	384	71,972	76,353	+6.1	1,956,461	2,069,367	+5.8
East North Central.....	2,794	81,396	81,592	+0.2	2,002,383	1,987,784	-0.7
West North Central.....	693	20,555	21,275	+3.5	458,254	460,575	+0.5
South Atlantic.....	1,062	20,268	22,157	+9.3	442,339	473,676	+7.1
East South Central.....	416	7,846	8,870	+13.1	148,721	154,586	+3.9
West South Central.....	330	12,385	13,193	+6.5	256,254	274,688	+7.2
Mountain.....	171	4,336	4,605	+6.2	94,567	101,573	+7.4
Pacific.....	1,751	40,218	41,249	+2.6	933,642	960,900	+2.9
All divisions.....	7,707	272,992	283,488	+3.8	6,622,277	6,815,952	+2.9

8. Employment in Hotels in October, 1930

EMPLOYMENT in hotels decreased 2.6 per cent in October as compared with September, and pay-roll totals decreased 1.6 per cent. The 2,144 hotels reporting had in October 159,736 employees and pay-roll totals in one week of \$2,683,472.

The West North Central, West South Central, and South Atlantic groups reported slight increases both in employment and in pay-roll totals as compared with September, while the six remaining districts reported decreases in both items, with the exception of the East South Central division which showed a small drop in employment and an increase in pay-roll total. The greatest decreases were in the New England, Mountain, and Pacific divisions, and were occasioned by the complete closing of summer-resort hotels not reported closed in September.

Employment in October, 1930 was 3.1 per cent lower than in October, 1929, and pay-roll totals were 4.7 per cent lower.

Per capita earnings, obtained by dividing the total number of employees into the total amount of pay roll, should not be interpreted as being the entire earnings of hotel employees. The pay-roll totals here reported are cash payments only, with no regard to the value of room or board furnished employees, and of course no satisfactory estimate can be made of additional recompense in the way of tips. The additions to the money wages granted vary greatly, not only among localities but among hotels in one locality and among employees in one hotel. Some employees are furnished board and room, others are given board only for 1, 2, or 3 meals, while the division of tips is made in many ways. Per capita earnings are further reduced by the considerable amount of part-time employment in hotels caused by conventions and banquets or other functions.

The details for each geographic division are shown in the table following:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL HOTELS
IN SEPTEMBER AND OCTOBER, 1930

Geographic division	Hotels	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
New England.....	134	10,679	9,528	-10.8	\$166,785	\$155,589	-6.7
Middle Atlantic.....	429	53,619	52,093	-2.8	938,655	922,048	-1.8
East North Central.....	422	34,712	34,088	-1.8	601,525	600,610	-0.2
West North Central.....	228	13,303	13,567	+2.0	195,555	201,400	+3.0
South Atlantic.....	176	11,873	12,325	+3.8	176,533	182,292	+3.3
East South Central.....	100	6,529	6,501	-0.4	79,929	80,769	+1.1
West South Central.....	152	9,765	9,919	+1.6	131,499	133,627	+1.6
Mountain.....	124	4,887	4,079	-16.5	83,023	71,055	-14.4
Pacific.....	379	18,585	17,636	-5.1	352,672	336,082	-4.7
All divisions.....	2,144	163,952	159,736	-2.6	2,726,176	2,683,472	-1.6

9. Employment in Canning and Preserving in October, 1930

CANNING and preserving establishments reported a seasonal decrease of 33.2 per cent in employment in October as compared with September and a decrease of 34.8 per cent in pay-roll totals.

By October, tomatoes, the latest big canning crop, are practically finished in all sections, and the apple crop is too small to prevent decreases in the divisions that can and preserve apples. The South Atlantic division reported decreases of 1.2 per cent in employment and 4.2 per cent in amount of pay roll, and the East South Central division reported decreases of 6.5 per cent and 0.2 per cent in employment and amount of pay roll, respectively. These are the smallest decreases reported in canning for October and are due apparently to grapefruit, shrimp, and oysters, products that are in season in these two divisions.

Reports were received from 985 establishments having in October 84,891 employees and pay-roll totals in one week of \$1,330,114.

Employment in October, 1930, was 14.9 per cent higher than in October, 1929, and pay-roll totals were 4.1 per cent higher.

Details by geographic divisions are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **CANNING AND PRESERVING** ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1930

Geographic division	Estab-lish-ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1930	October, 1930		September, 1930	October, 1930	
New England.....	94	7,418	4,795	-35.4	\$115,147	\$65,649	-43.0
Middle Atlantic.....	87	18,613	11,564	-37.9	359,034	224,382	-37.5
East North Central.....	256	21,786	16,736	-23.2	332,365	245,621	-26.1
West North Central.....	69	7,008	2,952	-57.9	99,719	38,211	-61.7
South Atlantic.....	138	8,569	8,469	-1.2	92,569	88,648	-4.2
East South Central.....	43	2,981	2,787	-6.5	24,929	24,876	-0.2
West South Central.....	39	2,012	1,396	-30.6	12,555	9,186	-26.8
Mountain.....	56	7,881	6,026	-23.5	92,277	69,793	-24.4
Pacific.....	203	50,758	30,166	-40.6	911,326	563,738	-38.1
All divisions.....	985	127,026	84,891	-33.2	2,039,921	1,330,114	-34.8

Indexes of Employment and Pay-Roll Totals—Mining, Quarrying, Public Utilities, Trade, Hotels, and Canning

THE following table shows the index numbers of employment and pay-roll totals for anthracite, bituminous coal, and metalliferous mining, quarrying, telephone and telegraph, power-light-water, electric railroads, wholesale and retail trade, hotels, and canning and preserving, from January, 1929, to October, 1930, with the monthly average for 1929 as 100.

INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS, JANUARY, 1929, TO OCTOBER, 1930—MINING, QUARRYING, PUBLIC UTILITIES, TRADE, HOTELS, AND CANNING

[Monthly average, 1929=100]

Year and month	Anthracite mining		Bituminous coal mining		Metalliferous mining		Quarrying and non-metallic mining		Telephone and telegraph		Power, light, and water		Operation and maintenance of electric railroads ¹		Wholesale trade		Retail trade		Hotels		Canning and preserving		
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	
1929																							
January	105.7	100.7	106.4	106.1	93.1	88.0	91.6	85.9	94.3	94.5	92.9	91.7	99.7	98.7	97.7	96.7	99.2	99.0	97.1	98.5	50.8	57.3	
February	106.0	122.1	107.7	116.6	94.6	91.8	91.9	88.9	95.3	93.0	92.6	91.8	99.1	97.6	96.9	96.4	94.6	94.5	99.8	102.0	48.9	59.2	
March	98.0	90.8	106.8	108.6	97.0	99.1	96.0	95.0	96.5	98.7	92.8	94.5	97.0	98.0	97.3	98.5	96.2	96.1	100.9	103.4	49.4	54.9	
April	100.7	88.3	100.2	89.2	100.6	104.6	99.6	100.5	97.8	98.3	95.9	95.5	98.5	99.5	97.9	97.8	95.5	96.0	99.7	100.6	90.6	98.9	
May	103.7	99.0	96.6	91.9	100.8	104.6	104.1	107.1	100.4	99.4	98.4	98.1	100.4	101.0	99.0	99.0	97.3	97.1	98.1	98.9	62.0	71.2	
June	92.9	80.7	94.7	90.0	103.8	105.6	106.6	110.5	101.5	100.0	100.7	100.4	101.2	101.7	99.2	98.6	97.4	98.6	99.3	98.7	76.6	71.9	
July	83.2	64.7	94.1	85.6	101.5	99.0	104.7	104.7	102.6	104.1	103.2	102.3	102.2	101.9	100.4	100.5	93.6	95.9	101.1	99.8	126.8	109.2	
August	91.1	78.4	95.7	92.8	103.2	100.1	106.7	110.3	103.7	101.8	105.4	103.8	102.2	102.0	101.3	100.0	93.6	95.2	102.6	99.4	184.8	180.1	
September	101.9	103.8	97.2	98.6	101.2	102.0	106.6	109.8	102.5	100.4	105.5	106.6	101.4	101.5	101.9	103.3	97.6	99.2	102.8	100.2	210.1	207.9	
October	106.1	133.9	98.8	106.8	101.9	103.1	103.6	105.8	101.9	105.1	105.7	106.0	100.5	100.0	102.9	102.7	101.7	102.6	100.6	100.2	143.3	134.5	
November	104.0	100.5	101.0	106.0	103.0	102.2	98.6	96.0	101.9	101.2	104.7	104.1	99.4	98.4	102.9	101.9	106.7	105.2	100.0	99.8	95.1	91.6	
December	107.1	137.2	101.3	108.2	98.5	99.7	90.1	85.4	101.8	103.9	102.5	105.8	98.3	99.8	102.6	104.7	126.2	120.6	97.7	98.9	61.3	63.4	
Average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
1930																							
January	102.1	105.8	102.5	101.4	95.7	92.7	79.6	71.9	101.6	105.1	99.6	99.7	97.1	97.8	100.0	100.0	98.9	99.7	100.4	100.3	46.1	50.3	
February	106.9	121.5	102.4	102.1	92.3	92.5	79.8	73.5	100.2	101.9	98.8	100.4	95.1	95.7	98.5	98.3	94.4	96.0	102.4	103.8	45.7	51.5	
March	82.6	78.5	98.6	86.4	90.9	90.8	83.0	80.0	99.4	105.8	99.7	102.1	94.4	95.4	97.7	99.7	93.9	95.5	102.4	104.4	49.7	50.8	
April	84.1	75.0	94.4	81.7	89.3	88.3	87.4	85.4	98.9	103.4	100.7	102.6	95.2	97.1	97.3	97.9	97.3	97.5	100.1	100.3	74.8	72.6	
May	93.8	98.8	90.4	77.5	87.5	85.6	90.8	90.2	99.7	103.2	103.4	104.5	95.2	96.0	96.8	97.4	96.7	97.3	98.0	98.4	65.7	66.9	
June	90.8	94.3	88.4	75.6	84.6	81.6	90.3	90.9	99.8	103.4	104.6	107.8	94.8	97.0	96.5	98.6	93.9	96.8	98.0	98.1	83.0	81.5	
July	91.6	84.0	88.0	68.9	80.5	71.9	89.9	85.5	100.0	106.6	105.9	106.7	95.3	95.6	96.0	96.0	89.0	91.7	101.3	99.8	126.3	112.7	
August	80.2	78.8	89.2	71.1	79.0	71.0	89.3	85.8	98.8	102.5	106.4	106.6	92.9	92.1	95.0	93.6	85.6	87.6	101.5	98.6	185.7	172.0	
September	93.8	91.6	90.5	74.9	78.1	69.9	87.7	82.5	96.8	102.2	105.2	106.1	91.8	90.5	94.8	93.6	92.0	92.4	100.1	97.1	246.6	214.8	
October	99.0	117.2	91.8	79.4	77.2	68.6	84.7	79.3	94.5	100.9	104.8	105.6	91.0	88.9	94.2	92.9	95.5	95.1	97.5	95.5	164.7	140.0	

¹ Not including car building and repairing, electric railroads; see vehicles group, manufacturing industries, page 173, et seq.

Employment on Class I Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to September, 1930, on Class I railroads—that is, all roads having operating revenues of \$1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON CLASS I STEAM RAILROADS IN THE UNITED STATES, JANUARY, 1923, TO SEPTEMBER, 1930

[Monthly average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929	1930
January	98.3	96.9	95.6	95.8	95.5	89.3	88.2	86.3
February	98.6	97.0	95.4	96.0	95.3	89.0	88.9	85.4
March	100.5	97.4	95.2	96.7	95.8	89.9	90.1	85.5
April	102.0	98.9	96.6	98.9	97.4	91.7	92.2	87.0
May	105.0	99.2	97.8	100.2	99.4	94.5	94.9	88.6
June	107.1	98.0	98.6	101.6	100.9	95.9	96.1	86.5
July	108.2	98.1	99.4	102.9	101.0	95.6	96.6	84.7
August	109.4	99.0	99.7	102.7	99.5	95.7	97.4	83.7
September	107.8	99.7	99.9	102.8	99.1	95.3	96.8	82.2
October	107.3	100.8	100.7	103.4	98.9	95.3	96.9	-----
November	105.2	99.0	99.1	101.2	95.7	92.9	93.0	-----
December	99.4	96.0	97.1	98.2	91.9	89.7	88.8	-----
Average	104.1	98.3	97.9	100.0	97.5	92.9	93.3	¹ 85.5

¹ Average for 9 months.

Table 2 shows the total number of employees on the 15th day each of September, 1929, and August and September, 1930, and pay-roll totals for the entire months.

In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES—SEPTEMBER 1929, AND AUGUST AND SEPTEMBER, 1930

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	September, 1929	August, 1930	September, 1930	September, 1929	August, 1930	September, 1930
Professional, clerical, and general	272,427	249,931	247,693	\$39,363,958	\$36,951,757	\$36,350,646
Clerks	154,600	138,835	137,595	21,106,291	19,396,109	19,009,186
Stenographers and typists	24,850	23,070	22,892	3,193,815	3,031,083	2,986,240
Maintenance of way and structures	462,241	374,499	356,484	42,214,702	35,325,981	32,581,625
Laborers, extra gang, and work train	87,306	54,200	48,409	6,750,927	4,149,142	3,463,891
Laborers, track, and roadway section	232,462	195,626	186,028	16,390,390	14,158,051	12,741,144
Maintenance of equipment and stores	454,628	393,456	387,879	61,951,080	51,313,475	49,789,665
Carmen	100,115	83,406	81,727	15,645,676	12,253,171	11,865,142
Machinists	54,318	49,682	49,175	8,913,507	7,604,721	7,428,103
Skilled trades helpers	101,408	86,259	85,235	11,882,283	9,469,566	9,178,943
Laborers (shops, engine houses, power plants, and stores)	36,909	32,763	32,235	3,502,330	3,143,026	3,010,561
Common laborers (shops, engine houses, power plants, and stores)	52,421	43,358	42,681	4,152,445	3,306,961	3,173,414

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES—SEPTEMBER, 1929, AND AUGUST AND SEPTEMBER, 1930—Continued

Occupation	Number of employees at middle of month			Total earnings		
	September, 1929	August, 1930	September, 1930	September, 1929	August, 1930	September, 1930
Transportation, other than train, engine, and yard.	199,430	178,521	178,742	\$24,949,515	\$22,865,171	\$22,358,733
Station agents.....	29,335	28,683	28,580	4,611,218	4,611,223	4,534,547
Telegraphers, telephoners, and towermen.....	23,309	21,487	21,345	3,585,440	3,411,655	3,291,761
Truckers (stations, warehouses, and platforms).....	35,166	26,646	28,236	3,359,200	2,542,170	2,620,781
Crossing and bridge flagmen and gatemen.....	20,672	19,864	19,830	1,596,378	1,550,934	1,539,232
Transportation (yard masters, switch tenders, and hostlers)	21,860	20,103	19,849	4,320,331	4,017,071	3,851,844
Transportation, train and engine.	320,254	281,362	278,874	67,176,243	57,354,877	55,855,459
Road conductors.....	36,309	32,036	31,503	8,975,789	7,839,611	7,581,038
Road brakemen and flagmen.....	71,427	61,821	61,424	13,040,228	10,948,905	10,699,123
Yard brakemen and yard helpers.....	53,880	47,129	47,047	9,811,474	8,208,096	8,047,184
Road engineers and motormen.....	42,897	38,083	37,576	12,108,676	10,434,712	10,101,657
Road fireman and helpers.....	43,290	38,757	38,286	8,912,909	7,613,228	7,370,256
All employees.....	1,730,840	1,497,872	1,469,521	239,975,829	207,828,332	200,817,972

Changes in Employment and Pay Rolls in Various States

THE following data as to changes in employment and pay rolls have been compiled from reports received from the various State labor offices:

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES

Monthly period

State, and industry group	Per cent of change, September to October, 1930		State, and industry group	Per cent of change, August to September, 1930	
	Employment	Pay roll		Employment	Pay roll
Arkansas			California		
Auto dealers, garages.....	+0.1	+0.5	Stone, clay, and glass products.....	-2.1	-3.0
Auto bodies, wood parts.....	-1.2	-0.9	Metals, machinery, and conveyances.....	-1.1	+0.8
Beverages.....	-0.6	-2.1	Wood manufactures.....	-2.4	-0.1
Brick and tile.....	-1.9	-2.5	Leather and rubber goods.....	-9.3	-8.0
Candy and confections.....	+1.1	+1.1	Chemicals, oils, paints, etc.....	-2.0	-0.2
Cooperage, heading.....	-0.3	-0.5	Printing and paper goods.....	+1.5	+1.1
Cotton compresses, gins, and products.....	+4.0	+4.6	Textiles.....	0.0	-4.7
Coal mines.....	+2.2	+3.7	Clothing, millinery, and laundering.....	+4.3	+3.2
Furniture manufactures.....	-0.5	-2.8	Food, beverages, and tobacco.....	-5.2	-14.1
Flour, grain, feed, fertilizer.....	+1.6	+0.6	Miscellaneous.....	-10.2	-11.7
Glass factories.....	+1.3	+4.4	All industries.....	-2.9	-4.7
Handles, hubs, spokes.....	+1.0	+0.6	Public utilities.....	-0.1	+0.9
Hotels.....	-0.1	-0.9	Illinois		
Laundries.....	-0.8	-0.4	Stone, clay, and glass products.....	-1.0	+3.8
Lumber mills.....	-0.6	-0.9	Metals, machinery, and conveyances.....	-3.9	-3.8
Machinery, foundries, parts.....	-0.9	-1.5	Wood products.....	-0.6	+2.2
Newspapers and printers.....	+0.2	+0.4			
Packing houses.....	+0.1	+0.5			
Petroleum products.....	+1.5	+0.4			
Sand, gravel, stone.....	+0.1	+0.1			
Textile mills, garments.....	-0.1	+0.4			
Public utilities.....	+0.7	+0.8			
Wholesale and retail.....	-0.1	-0.1			
Miscellaneous.....	+0.2	+0.4			

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—
Continued

Monthly period—Continued

State, and industry group	Per cent of change, August to September, 1930		State, and industry group	Per cent of change, September to October, 1930	
	Employment	Pay roll		Employment	Pay roll
Michigan—Continued			New York—Continued		
Leather and its products.....	+1.0	+0.4	Metals and machinery— Continued.....		
Boots and shoes.....	+2.7	+2.4	Railroad equipment and repair.....	-3.2	-5.1
Food and kindred prod- ucts.....	-1.0	+ .9	Boat and ship build- ing.....	-27.1	-39.1
Textiles and their products.....	-3.5	-9.5	Instruments and appli- ances.....	-2.3	-5.0
Tobacco products.....	-5.5	-5.4	Wood manufactures.....	- .8	-5.4
Vehicles for land transpor- tation.....	-3.5	+12.7	Saw and planing mills.....	-6.1	-14.8
Miscellaneous.....	-18.5	-26.8	Furniture and cabinet- work.....	-1.6	-5.4
All industries.....	-4.1	+7.7	Pianos and other musi- cal instruments.....	+8.6	+8.8
New Jersey			Miscellaneous wood.....	-1.6	-6.7
Food and kindred prod- ucts.....	+27.3	+23.0	Furs, leather, and rubber goods.....	+ (0)	-1.9
Textiles and their prod- ucts.....	+ .5	+3.9	Leather.....	-2.0	+4.1
Iron and steel and their products.....	- .7	+2.8	Furs and fur goods.....	-5.3	-9.7
Lumber and its products.....	-2.2	-2.4	Shoes.....	- .7	-5.9
Leather and its products.....	+ .5	- .8	Other leather and can- vas goods.....	+4.1	+12.4
Tobacco products.....	- .7	+ .1	Rubber and gutta- percha.....	+ .3	-3.7
Paper and printing.....	+1.9	+ .6	Pearl, horn, bone, etc.....	+4.2	+11.2
Chemicals and allied prod- ucts.....	+ .4	-2.3	Chemicals, oils, paints, etc.....	-1.3	-2.4
Stone, clay, and glass prod- ucts.....	-3.0	-13.7	Drugs and chemicals.....	- .2	+ .1
Metal products other than iron and steel.....	+ .6	-6.6	Paints and colors.....	- .7	-3.3
Vehicles for land transpor- tation.....	-3.9	+1.5	Oil products.....	- .1	-1.1
Miscellaneous.....	+22.0	+18.7	Miscellaneous chemi- cals.....	-3.1	-4.9
All industries.....	+4.5	+4.2	Paper.....	+1.3	-4.6
September to October, 1930			Printing and paper goods.....	+ .5	-3.2
New York			Paper boxes and tubes.....	+ .7	+ .4
Stone, clay, and glass.....	+0.6	-1.0	Miscellaneous paper goods.....	-2.8	-2.8
Miscellaneous stone and minerals.....	+2.6	+3.2	Printing and book- making.....	+1.0	-3.4
Lime, cement, and plaster.....	+4.8	-3.1	Textiles.....	- .6	- .3
Brick, tile, and pottery.....	+ (0)	- .9	Silk and silk goods.....	+4.9	+6.6
Glass.....	-3.7	-3.9	Wool manufactures.....	-1.9	+ .7
Metals and machinery.....	-1.9	-5.6	Cotton goods.....	+6.1	-1.0
Silver and jewelry.....	-3.4	-2.5	Knit goods (excluding silk).....	+2.3	-1.4
Brass, copper, and aluminum.....	-2.1	-2.6	Other textiles.....	-6.8	-3.4
Iron and steel.....	+2.6	+6.4	Clothing and millinery.....	-1.6	-8.0
Structural and archi- tectural iron.....	- .1	-1.6	Men's clothing.....	-9.0	-19.4
Sheet metal and hard- ware.....	-1.7	-2.3	Men's furnishings.....	+ .8	-4.2
Firearms, tools, and cutlery.....	-3.7	-11.3	Women's clothing.....	+1.9	-2.4
Cooking, heating, and ventilating apparat- us.....	+3.3	+13.2	Women's underwear.....	+9.4	+11.4
Machinery, including electrical apparatus.....	- .6	-8.4	Women's headwear.....	-6.9	-25.8
Automobiles, carri- ages, and airplanes.....	- .2	-3.4	Miscellaneous sewing.....	+5.6	+8.5
			Laundering and clean- ing.....	+1.6	-1.1
			Food and tobacco.....	-7.7	-7.6
			Flour, feed, and cereals.....	-4.2	-8.3
			Canning and preserv- ing.....	-43.9	-45.4
			Other groceries.....	- .7	-4.4
			Meat and dairy prod- ucts.....	+1.4	+1.2
			Bakery products.....	-1.1	-3.0
			Candy.....	+8.0	+5.3
			Beverages.....	-1.6	-4.1
			Tobacco.....	+ .2	-1.9
			Water, light, and power.....	+1.0	- .9
			All industries.....	-1.6	-4.7

1 Less than one-tenth of 1 per cent.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—
Continued

Monthly period—Continued

State, and industry group	Per cent of change, August to September, 1930		State, and industry group	Per cent of change, August to September, 1930	
	Employment	Pay roll		Employment	Pay roll
Wisconsin			Wisconsin—Continued		
<i>Manual</i>			<i>Manual—Continued</i>		
Logging.....	-16.5	-17.3	Construction—Continued.		
Mining:			Highway.....	-14.6	-9.5
Lead and zinc.....	-16.1	-24.0	Railroad.....	-18.8	-16.2
Iron.....	-7	-1.4	Marine dredging, sewer digging.....	+3.0	+6
Stone crushing and quarrying.....	+12.2	-6	Communication:		
Manufacturing:			Steam railways.....	+5.5	+3.5
Stone and allied industries.....	-7.2	-13.7	Electric railways.....	-4.1	-2.6
Metal.....	+1.3	+4	Express, telephone, and telegraph.....	-3.9	.0
Wood.....	-6.1	-5.9	Light and power.....	-4.4	-3.3
Rubber.....	-2.8	-10.3	Wholesale trade.....	+8.5	+8.5
Leather.....	-5	-4.9	Hotels and restaurants.....	-8.1	
Paper.....	-1.8	-4.2	Laundering and dyeing.....	-1	+5
Textiles.....	+4.9	+12.1			
Foods.....	-6.5	-3.6	<i>Nonmanual</i>		
Printing and publishing.....	-1	+2.9	Manufacturing, mines, and quarries.....	-2.5	-1.1
Chemicals (including soap, glue, and explosives).....	+6	+6.3	Construction.....	-1.9	+9
All manufacturing.....	-1.1	-1.2	Communication.....	-2.1	-6
Construction:			Wholesale trade.....	-1	+1
Building.....	-11.1	-10.7	Retail trade, sales force only.....	+8.7	+7.3
			Miscellaneous professional services.....	-1.3	-4.2

Yearly period

State, and industry group	Per cent of change, September, 1929, to September, 1930		State, and industry group	Employment—index numbers (1925- 1927=100)	
	Employment	Pay roll		September, 1929	September, 1930
California			Illinois		
Stone, clay, and glass products.....	-20.2	-22.0	Stone, clay, and glass products.....	91.6	80.7
Metals, machinery, and conveyances.....	-19.0	-21.9	Metals, machinery, and conveyances.....	116.0	82.2
Wood manufactures.....	-23.6	-22.9	Food products.....	76.1	58.8
Leather and rubber goods.....	-32.4	-32.0	Furs and leather goods.....	107.3	85.9
Chemicals, oils, paints, etc.....	-26.8	-27.9	Chemicals, oils, paints, etc.....	102.1	87.3
Printing and paper goods.....	-1.1	-3.2	Printing and paper goods.....	102.1	96.0
Textiles.....	-10.9	-15.3	Textiles.....	98.4	81.4
Clothing, millinery, and laundering.....	-11.1	-13.6	Clothing and millinery.....	81.7	75.6
Foods, beverages, and tobacco.....	+15.9	+7.8	Foods, beverages, and tobacco.....	104.7	92.8
Miscellaneous.....	-47.1	-38.9	All manufacturing.....	105.8	82.9
All industries.....	-13.0	-17.9	Trade, wholesale and retail.....	87.5	67.9
Public utilities.....	-6.5	-1.5	Services.....		
			Public utilities.....	107.4	100.2

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—
Continued

Yearly period—Continued

State, and industry group	Employment—index numbers (1925-1927=100)		State, and industry group	Per cent of change, October, 1929, to October, 1930	
	September, 1929	Pay roll		Employment	Pay Roll
Illinois—Continued			New York—Continued		
Coal mining.....	75.3	80.3	Metals and machinery—Continued.		
Building and contracting.....	84.9	72.4	Automobiles, carriages, and airplanes.....	-35.5	-39.1
All industries.....	103.3	85.4	Railroad equipment and repair.....	-22.2	-32.1
Massachusetts			Boat and ship building.....	-30.2	-42.8
Boot and shoe cut stock and findings.....	125.4	101.5	Instruments and appliances.....	-16.4	-21.9
Boots and shoes.....	94.8	82.9	Wood manufactures.....	-19.0	-30.8
Bread and other bakery products.....	112.2	106.4	Saw and planing mills.....	-19.4	-29.7
Clothing, men's.....	103.7	87.4	Furniture and cabinet-work.....	-23.1	-36.1
Clothing, women's.....	117.5	103.9	Pianos and other musical instruments.....	-17.3	-30.5
Confectionery.....	105.6	97.9	Miscellaneous wood.....	-12.1	-19.7
Cotton goods.....	75.0	49.1	Furs, leather, and rubber goods.....	-8.2	-18.4
Dyeing and finishing textiles.....	95.2	86.5	Leather.....	-9.4	-9.0
Electrical machinery, apparatus, and supplies.....	101.7	68.3	Furs and fur goods.....	+4.0	+4.6
Foundry and machine-shop products.....	112.2	100.1	Shoes.....	-6.3	-24.1
Furniture.....	97.9	80.1	Other leather and canvas goods.....	-8.0	-5.2
Hosiery and knit goods.....	78.8	72.4	Rubber and gutta percha.....	-24.2	-33.7
Leather, tanned, curried, and finished.....	108.2	94.9	Pearl, horn, bone, etc.....	-24.7	-28.4
Paper and wood pulp.....	95.4	86.8	Chemicals, oils, paints, etc.....	-5.6	-7.2
Printing and publishing.....	107.2	103.0	Drugs and chemicals.....	-8.6	-7.0
Rubber footwear.....	99.2	74.9	Paints and colors.....	-18.0	-22.2
Rubber goods, tires, and tubes.....	81.6	57.6	Oil products.....	-8.8	-8.6
Silk goods.....	81.4	55.5	Miscellaneous chemicals.....	+2.3	-3.0
Textile machinery and parts.....	83.8	56.8	Paper.....	-8.7	-18.8
Woolen and worsted goods.....	82.8	71.0	Printing and paper goods.....	-7.4	-10.6
All industries.....	91.1	73.3	Paper boxes and tubes.....	-10.4	-14.4
			Miscellaneous paper goods.....	-7.4	-8.1
	Per cent of change, October, 1929, to October, 1930		Printing and book-making.....	-7.1	-10.4
	Employment	Pay roll	Textiles.....	-24.2	-32.7
New York			Silk and silk goods.....	-13.2	-20.9
Stone, clay, and glass.....	-15.1	-23.7	Wool manufactures.....	-33.4	-44.4
Miscellaneous stone and minerals.....	-20.1	-27.7	Cotton goods.....	-22.7	-26.9
Lime, cement, and plaster.....	-8.6	-12.2	Knit goods (excluding silk).....	-15.4	-25.0
Brick, tile, and pottery.....	-6.1	-18.5	Other textiles.....	-25.0	-27.0
Glass.....	-23.9	-31.9	Clothing and millinery.....	-11.1	-14.4
Metals and machinery.....	-25.4	-32.1	Men's clothing.....	-15.5	-28.8
Silver and jewelry.....	-20.7	-35.8	Men's furnishings.....	-21.4	-28.0
Brass, copper, and aluminum.....	-20.2	-28.3	Women's clothing.....	-3.4	-4.7
Iron and steel.....	-28.7	-23.1	Women's underwear.....	-8.6	-9.0
Structural and architectural iron.....	-15.5	-24.3	Women's headwear.....	-13.2	-16.3
Sheet metal and hardware.....	-19.8	-23.3	Miscellaneous sewing.....	-14.0	-17.7
Firearms, tools, and cutlery.....	-10.5	-19.4	Laundering and cleaning.....	-2.8	-3.8
Cooking, heating, and ventilating apparatus.....	-28.2	-37.2	Food and tobacco.....	-12.8	-15.2
Machinery, including electrical apparatus.....	-28.8	-36.4	Flour, feed, and cereals.....	-9.4	-13.4
			Canning and preserving.....	+2.0	-1.7
			Other groceries.....	-19.1	-21.7
			Meat and dairy products.....	-8.5	-10.0
			Bakery products.....	-14.5	-14.5
			Candy.....	-12.8	-17.6
			Beverages.....	-1.8	+3.0
			Tobacco.....	-34.1	-37.1
			Water, light, and power.....	+1.4	+1.9
			All industries.....	-17.2	-23.1

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—
Continued

Yearly period—Continued

State, and industry group	Index numbers (1925-1927=100)—employment		State, and industry group	Index numbers (1925-1927=100)—pay roll	
	September, 1929	September, 1930		September, 1929	September, 1930
Wisconsin			Wisconsin—Continued		
<i>Manual</i>			<i>Manual</i>		
Logging.....	101.9	61.3	Logging.....	88.1	38.8
Mining:			Mining:		
Lead and zinc.....	44.1	37.0	Lead and zinc.....	50.8	30.0
Iron.....	117.4	88.6	Iron.....	102.6	84.2
Stone crushing and quarrying.....	100.5	102.6	Stone crushing and quarrying.....	99.8	95.6
Manufacturing:			Manufacturing:		
Stone and allied industries.....	98.3	88.0	Stone and allied industries.....	100.9	86.0
Metal.....	101.5	75.6	Metal.....	98.4	60.0
Wood.....	92.6	69.0	Wood.....	81.9	55.3
Rubber.....	130.5	93.8	Rubber.....	112.5	69.7
Leather.....	105.2	87.4	Leather.....	105.6	75.8
Paper.....	106.1	99.8	Paper.....	107.3	96.4
Textiles.....	93.2	81.2	Textiles.....	96.3	81.9
Foods.....	102.7	106.3	Foods.....	105.7	106.9
Printing and publishing.....	130.2	128.8	Printing and publishing.....	124.7	123.6
Chemicals (including soap, glue, and explosives).....	78.7	66.9	Chemicals (including soap, glue, and explosives).....	73.3	60.3
All manufacturing.....	101.3	83.1	All manufacturing.....	98.5	72.3
Construction:			Construction:		
Building.....	117.6	102.1	Building.....	135.1	101.6
Highway.....	138.4	137.5	Highway.....	137.0	151.8
Railroad.....	133.1	92.4	Railroad.....	133.9	93.3
Marine dredging, sewer digging.....	260.0	172.7	Marine dredging, sewer digging.....	269.9	186.5
Communication:			Communication:		
Steam railways.....	94.4	88.2	Steam railways.....	112.0	98.4
Electric railways.....	67.9	61.2	Electric railways.....	70.7	66.5
Express, telephone, and telegraph.....	162.2	156.3	Express, telephone, and telegraph.....	166.8	154.9
Light and power.....	135.3	120.3	Light and power.....	132.3	121.3
Wholesale trade.....	117.4	117.0	Wholesale trade.....	113.7	105.9
Hotels and restaurants.....	101.8	85.2	Laundering and dyeing.....	110.9	99.5
Laundering and dyeing.....	117.1	106.7			
<i>Nonmanual</i>			<i>Nonmanual</i>		
Construction.....	99.5	99.0	Construction.....	104.9	108.1
Communication.....	117.9	117.0	Communication.....	117.4	116.0
Wholesale trade.....	112.9	104.0	Wholesale trade.....	120.3	113.3
Retail trade, sales force only.....	115.3	112.2	Retail trade, sales force only.....	116.8	110.4
Miscellaneous professional services.....	127.6	115.5	Miscellaneous professional services.....	125.5	104.1

Unemployment in Foreign Countries

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

STATISTICS OF UNEMPLOYMENT IN FOREIGN COUNTRIES¹

Date (end of month)	Australia		Austria	Belgium				Canada	
	Trade-unionists unemployed		Compulsory insurance, number unemployed in receipt of benefit	Unemployment insurance societies				Trade-unionists unemployed	
	Number	Per cent		Wholly unemployed		Partially unemployed		Number	Per cent
				Number	Per cent	Number	Per cent		
1929									
May.....	(?)	-----	130,469	2,382	0.4	8,686	1.4	7,750	4.0
June.....	40,996	10.0	110,266	2,559	.4	11,194	1.8	5,723	2.9
July.....	(?)	-----	104,399	4,037	.6	16,452	2.6	6,003	3.0
August.....	(?)	-----	101,845	3,200	.5	15,614	2.5	7,159	3.5
September.....	52,480	12.1	104,947	3,492	.5	16,714	2.6	7,654	3.7
October.....	(?)	-----	125,850	3,261	.5	13,930	2.2	12,716	6.0
November.....	(?)	-----	167,487	6,895	1.1	13,176	2.1	19,832	9.3
December.....	56,801	13.1	226,567	15,761	2.4	29,309	4.6	24,289	11.4
1930									
January.....	(?)	-----	273,197	22,542	3.5	25,782	4.0	22,795	10.8
February.....	(?)	-----	284,543	16,085	2.6	31,222	4.9	24,175	11.5
March.....	63,144	14.6	239,094	14,030	2.2	28,469	4.5	22,912	10.8
April.....	(?)	-----	192,477	13,715	2.2	36,605	5.8	18,581	9.0
May.....	(?)	-----	162,678	12,119	1.9	38,761	6.1	20,424	10.3
June.....	80,595	18.5	150,075	12,226	1.9	41,336	6.5	21,380	10.6
July.....	-----	-----	153,188	15,302	2.4	48,580	7.7	18,473	9.2
August.....	-----	-----	156,145	17,747	2.8	51,649	8.2	18,232	9.3
September.....	-----	-----	163,945	23,693	3.8	61,623	9.9	-----	-----
October.....	-----	-----	³ 174,866	-----	-----	-----	-----	-----	-----

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

² Not reported.

³ Oct. 15, 1930.

STATISTICS OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Czechoslovakia		Danzig (Free City of)	Denmark		Estonia	Finland	France	Germany
	Trade-union insurance funds—unemployed in receipt of benefit		Number of unemployed registered	Trade-union unemployed funds—unemployed		Number unemployed remaining on live register	Number of unemployed registered	Number of unemployed in receipt of benefit	Number of unemployed registered
	Number	Per cent		Number	Per cent				
1929									
May	21,866	1.9	11,135	29,671	10.8	2,169	1,624	570	1,349,833
June	19,436	1.9	8,876	27,398	10.0	1,110	1,157	394	1,260,044
July	16,859	1.6	9,007	26,621	9.6	780	1,188	399	1,251,452
August	18,674	1.8	8,958	25,164	9.1	609	1,859	403	1,271,990
September	19,468	1.9	9,296	24,175	8.7	902	2,710	385	1,323,603
October	16,248	1.5	10,664	28,194	10.1	3,065	4,997	396	1,557,146
November	17,108	1.6	13,146	36,302	13.0	5,288	9,495	577	2,035,667
December	30,170	2.8	16,198	62,563	22.4	6,116	8,716	817	2,850,849
1930									
January	39,199	3.6	19,282	55,876	20.3	5,608	12,696	1,484	3,217,608
February	40,550	3.6	21,153	59,363	21.0	4,580	11,545	1,683	3,365,811
March	45,567	4.0	20,376	47,109	15.6	3,575	10,062	1,630	3,040,797
April	42,664	3.7	18,371	33,471	11.8	2,227	7,274	1,203	2,786,912
May	41,098	3.8	16,232	27,966	9.4	2,065	4,666	859	2,634,718
June	37,853	3.4	14,975	24,807	8.7	910	3,553	1,019	2,640,681
July	46,800	4.1	15,330	426,200	49.1	762	4,026	856	2,765,258
August	52,694	4.7	15,687	426,232	49.1	1,039	5,288	964	2,883,000
September				427,700	49.4	1,414	6,220	988	3,004,000
October								1,663	3,253,000
Germany									
Trade-unionists									
Date (end of month)	Wholly unemployed		Partially unemployed		Number unemployed in receipt of benefit	Compulsory insurance			
	Number	Per cent	Number	Per cent		Wholly unemployed		Temporary stoppages	
1929									
May	419,373	9.1	315,191	6.8	1,010,781	900,562	7.6	276,922	2.3
June	393,749	8.5	308,699	6.7	929,579	884,549	7.4	279,108	2.4
July	395,202	8.6	315,739	6.9	863,594	881,189	7.4	296,318	2.5
August	410,481	8.9	322,824	7.0	883,002	918,550	7.7	280,332	2.4
September	442,312	9.6	315,150	6.8	910,245	937,795	7.9	265,627	2.2
October	498,604	10.9	319,489	7.0	1,061,134	992,769	8.2	261,711	2.2
November	634,790	13.7	351,947	7.6	1,387,079	1,061,618	8.8	263,987	2.2
December	922,681	20.1	389,278	8.5	1,984,811	1,071,849	8.9	272,371	2.2
1930									
January	1,004,787	22.0	501,950	11.0	2,482,648	1,183,974	9.8	336,474	2.8
February	1,076,441	23.5	593,380	13.0	2,655,723	1,211,262	10.0	371,840	3.1
March	995,972	21.7	576,153	12.6	2,347,102	1,284,231	10.6	409,785	3.4
April	926,831	20.3	553,098	12.1	2,081,068	1,309,014	10.8	451,506	3.8
May	895,542	19.5	552,318	12.0	1,889,240	1,339,595	11.1	516,303	4.2
June	896,465	19.6	578,116	12.6	1,834,662	1,341,818	11.1	569,931	4.7
July	930,777	20.5	631,903	13.9	1,900,961	1,405,981	11.6	664,107	5.5
August	984,384	21.7	670,466	14.8	1,947,811	1,500,990	12.4	618,658	5.1
September					1,965,348	1,579,708	13.1	608,692	5.0
October	1,011,820	22.5	677,627	15.1	2,071,730	1,725,731	13.9	593,223	4.8

⁴ Provisional figures.

STATISTICS OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Great Britain	Hungary			Irish Free State		Italy		Latvia
	Number of persons registered with employment exchanges	Trade-unionists unemployed			Compulsory insurance—unemployed		Number of unemployed registered		Number unemployed remaining on live register
		Christian (Buda-pest)	Social-Democratic		Number	Per cent	Wholly unemployed	Partially unemployed	
			Number	Per cent					
1929									
May	(²)	787	13,266	8.8	24,256	8.6	227,682	8,713	1,433
June	1,117,807	787	13,921	9.5	(²)		193,325	10,970	1,236
July	1,154,129	801	13,964	9.3	(²)		201,868	13,503	1,205
August	1,155,803	833	14,007	9.5	21,834	7.8	216,666	19,650	1,008
September	1,181,862	783	13,922	9.5	(²)		228,831	16,835	1,582
October	1,234,388	967	14,215	9.7	(²)		297,382	17,793	4,204
November	1,285,458	1,033	15,910	10.3	26,186	9.2	332,833	19,694	8,479
December	1,510,231	1,107	19,181	13.0	(²)		408,748	21,349	8,134
1930									
January	1,491,519	1,161	21,533	14.5	31,592	11.1	466,231	23,185	9,263
February	1,539,265	1,120	21,309	14.8	(²)		456,628	26,674	8,825
March	1,677,473	983	21,016	14.6	(²)		385,432	28,026	6,494
April	1,698,386	906	20,139	13.7	26,027	9.2	372,236	24,305	3,683
May	1,770,051	875	19,875	13.6	(²)		367,183	22,825	1,421
June	1,890,575	829	18,960	13.0	(²)		322,291	21,887	779
July	2,011,467	920	19,081	13.2	23,393	8.2	342,061	24,209	607
August	2,039,702	847	21,013	(²)	(²)		375,548	24,056	573
September	2,114,955						394,630	22,734	1,336
October	⁵ 2,199,000								
Date (end of month)	Netherlands		New Zealand		Norway			Poland	
	Unemployment insurance societies—unemployed		Trade-unionists unemployed		Trade-unionists (10 unions) unemployed		Number unemployed remaining on live register	Number unemployed registered with employment offices	
	Number	Per cent	Number	Per cent	Number	Per cent			
1929									
May	10,820	3.0	5,276	9.3	4,694	12.5	18,000	119,877	
June	9,987	2.6	(²)		4,337	11.3	14,547	105,065	
July	12,030	3.1	(²)		3,999	10.2	12,417	97,297	
August	12,701	3.3	5,226	9.4	4,245	10.7	12,493	90,094	
September	12,517	3.2	(²)		4,854	12.1	15,525	81,848	
October	13,639	3.5	(²)		5,682	14.0	18,420	91,035	
November	20,941	5.3	3,018	5.6	6,256	15.4	20,546	125,066	
December	48,609	12.3	(²)		7,693	18.9	22,092	185,314	
1930									
January	56,535	13.9	(²)		7,786	19.0	22,549	241,974	
February	50,957	12.5	4,348	8.5	7,851	18.9	22,974	274,708	
March	34,996	8.6	(²)		7,503	17.8	22,533	289,469	
April	28,421	6.9	(²)		6,701	15.8	19,829	271,225	
May	26,211	6.3	5,884	10.9	5,239	12.2	16,376	224,914	
June	23,678	5.5	(²)	(²)	4,700	10.8	13,939	204,982	
July	29,075	6.7	(²)	(²)			11,997	193,687	
August	32,755	7.6	7,197	13.5			12,923	⁶ 176,810	
September	⁴ 34,824	⁴ 9.0					17,053	⁷ 173,163	

² Not reported.⁴ Provisional figures.⁵ Oct. 20, 1930.⁶ Last week in August.⁷ Sept. 27, 1930.

STATISTICS OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Poland				Rumania	Saar Territory	Sweden	
	Industrial workers				Number unemployed remaining on live register	Number unemployed registered	Trade-unionists unemployed	
	Extractive and manufacturing industries—wholly unemployed		Manufacturing industries—partially unemployed				Number	Per cent
	Number	Per cent	Number	Per cent				
1929								
May.....	104,200	11.6	135,608	25.1	6,819	(2)	24,452	8.1
June.....	91,000	10.2	98,708	18.6	5,849	3,762	21,764	7.4
July.....	84,300	9.7	89,639	17.7	3,909	3,238	20,048	6.5
August.....	77,500	9.0	82,297	15.7	3,714	3,398	19,914	6.3
September.....	68,700	8.0	70,055	13.2	5,171	3,990	22,271	7.2
October.....	76,818	8.9	84,060	15.3	5,481	5,025	27,529	8.6
November.....	108,200	12.5	94,890	17.5	6,958	6,408	33,581	10.4
December.....	166,240	19.5	94,601	18.5	6,866	10,515	53,977	16.6
1930								
January.....	219,333	24.3	108,812	24.8	12,622	11,307	45,636	14.2
February.....	251,627	27.5	120,058	28.4	15,588	11,949	45,460	13.2
March.....	265,135	28.7	120,844	28.9	13,045	8,882	42,278	12.5
April.....	246,670	27.0	113,594	26.9	13,412	7,522	38,347	11.1
May.....	201,116	23.0	104,469	24.2	25,096	7,362	28,112	8.3
June.....	182,600	21.6	94,375	22.2	22,960	6,330	28,956	8.1
July.....	170,665	20.5	70,597	17.0	23,236	7,095	27,170	7.8
August.....					24,209	7,099	28,539	8.1
September.....					39,110		32,800	9.4
Switzerland								
Unemployment funds								
Date (end of month)	Wholly unemployed		Partially unemployed				Yugoslavia	Number of unemployed registered
	Number	Per cent	Number	Per cent				
1929								
May.....	(2)	(2)	(2)	(2)				10,583
June.....	(2)	0.7	(2)	(2)			1.0	9,017
July.....	(2)	(2)	(2)	(2)			(2)	7,652
August.....	(2)	(2)	(2)	(2)			(2)	6,750
September.....	(2)	.8	(2)	(2)			.9	6,755
October.....	(2)	(2)	(2)	(2)			(2)	4,739
November.....	(2)	(2)	(2)	(2)			(2)	5,026
December.....	12,309	4.2	9,805	3.3				5,663
1930								
January.....	10,523	4.4	10,710	4.4				8,508
February.....	9,971	4.1	11,445	4.7				9,437
March.....	7,882	2.6	12,642	4.2				9,739
April.....	5,203	2.1	12,755	5.3				12,052
May.....	5,356	2.2	13,129	5.4				8,704
June.....	5,368	1.7	17,688	5.7				6,991
July.....	4,751	1.9	15,112	6.2				7,236
August.....	5,703	2.3	19,441	7.9				6,111
September.....								5,973

² Not reported.

WHOLESALE AND RETAIL PRICES

Retail Prices of Food in the United States

THE following tables are compiled from simple averages of the actual selling prices¹ received monthly by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food October 15, 1929, and September 15 and October 15, 1930, as well as the percentage changes in the year and in the month. For example, the retail price per pound of pork chops was 38.9 cents on October 15, 1929; 39.1 cents on September 15, 1930; and 37.9 cents on October 15, 1930. These figures show decreases of 3 per cent in both the year and the month.

The cost of various articles of food combined shows a decrease of 10 per cent October 15, 1930, as compared with October 15, 1929, and a decrease of 0.9 per cent October 15, 1930, as compared with September 15, 1930.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE OCTOBER 15, 1930, COMPARED WITH OCTOBER 15, 1929, AND SEPTEMBER 15, 1930

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

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (—) Oct. 15, 1930, compared with—	
		Oct. 15, 1929	Sept. 15, 1930	Oct. 15, 1930	Oct. 15, 1929	Sept. 15, 1930
		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>		
Sirloin steak	Pound	50.3	45.0	44.5	-12	-1
Round steak	do	44.5	39.7	39.3	-12	-1
Rib roast	do	37.0	33.0	32.5	-12	-2
Chuck roast	do	30.0	25.6	25.4	-15	-1
Plate beef	do	21.0	17.2	17.2	-18	0
Pork chops	do	38.9	39.1	37.9	-3	-3
Bacon, sliced	do	43.7	42.7	42.6	-3	-0.2
Ham, sliced	do	55.1	53.5	53.1	-4	-1
Lamb, leg of	do	38.5	34.0	32.8	-15	-4
Hens	do	38.4	34.0	33.8	-12	-1
Salmon, red, canned	do	31.9	33.5	34.0	+7	+1
Milk, fresh	Quart	14.4	14.0	14.0	-3	0
Milk, evaporated	16-oz. can	10.6	10.0	9.9	-7	-1
Butter	Pound	55.7	48.7	47.8	-14	-2
Oleomargarine (all butter substitutes)	do	27.0	25.1	25.0	-7	-0.4
Cheese	do	37.9	34.2	34.2	-10	0
Lard	do	18.3	17.5	17.7	-3	+1
Vegetable lard substitute	do	24.7	24.2	24.1	-2	-0.4
Eggs, strictly fresh	Dozen	58.0	43.1	44.8	-23	+4
Bread	Pound	8.9	8.7	8.6	-3	-1
Flour	do	5.2	4.4	4.3	-17	-2
Corn meal	do	5.3	5.3	5.3	0	0
Rolled oats	do	8.8	8.7	8.6	-2	-1
Corn flakes	8-oz. package	9.5	9.4	9.3	-2	-1
Wheat cereal	28-oz. package	25.5	25.4	25.4	-0.4	0

¹ In addition to monthly retail prices of food and coal, the bureau publishes periodically the prices of gas and electricity for household use in each of 51 cities. At present this information is being collected in June and December of each year.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE OCTOBER 15, 1930, COMPARED WITH OCTOBER 15, 1929, AND SEPTEMBER 15, 1930—Continued

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

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (—) Oct. 15, 1930, compared with—	
		Oct. 15, 1929	Sept. 15, 1930	Oct. 15, 1930	Oct. 15, 1929	Sept. 15, 1930
		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>		
Macaroni.....	Pound.....	19.7	19.2	19.1	-3	-1
Rice.....	do.....	9.7	9.6	9.5	-2	-1
Beans, navy.....	do.....	14.2	11.7	11.3	-20	-3
Potatoes.....	do.....	3.8	3.2	3.1	-18	-3
Onions.....	do.....	5.3	4.7	4.2	-21	-11
Cabbage.....	do.....	4.5	3.9	3.6	-20	-8
Pork and beans.....	No. 2 can.....	11.7	10.9	10.8	-8	-1
Corn, canned.....	do.....	15.8	15.3	15.2	-4	-1
Peas, canned.....	do.....	16.7	16.1	16.0	-4	-1
Tomatoes, canned.....	do.....	12.6	12.3	12.1	-4	-2
Sugar.....	Pound.....	6.7	5.9	5.8	-13	-2
Tea.....	do.....	77.6	77.3	77.1	-1	-0.3
Coffee.....	do.....	49.1	39.5	39.1	-20	-1
Prunes.....	do.....	17.1	15.5	14.5	-15	-6
Raisins.....	do.....	12.2	11.9	11.7	-4	-2
Bananas.....	Dozen.....	32.4	29.7	29.4	-9	-1
Oranges.....	do.....	44.9	63.3	66.8	+49	+6
Weighted food index.....					-10.0	-0.9

Table 2 shows for the United States average retail prices of specified food articles on October 15, 1913, and on October 15 of each year from 1924 to 1930, together with percentage changes in October of each of these specified years compared with October, 1913. For example, the retail price per pound of rib roast was 20 cents in October, 1913; 28.6 cents in October, 1924; 30 cents in October, 1925; 30.6 cents in October, 1926; 31.9 cents in October, 1927; 36.8 cents in October, 1928; 37 cents in October, 1929; and 32.5 cents in October, 1930.

As compared with October, 1913, these figures show increases of 43 per cent in October, 1924; 50 per cent in October, 1925; 53 per cent in October, 1926; 60 per cent in October, 1927; 84 per cent October, 1928; 85 per cent in October, 1929; and 63 per cent in October, 1930.

The cost of the various articles of food combined showed an increase of 39 per cent in October, 1930, as compared with October, 1913.

Table 3 shows the trend in the retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years, from 1913 to 1929, and by months for 1928, 1929, and 1930. The articles within these groups are as follows:

Cereals: Bread, flour, corn meal, rice, rolled oats, corn flakes, wheat cereal, and macaroni.

Meats: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, hens, and leg of lamb.

Dairy products: Butter, cheese, fresh milk, and evaporated milk.

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

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

Article	Average retail prices on Oct. 15—								Per cent of increase Oct. 15 of each specified year compared with Oct. 15, 1913							
	1913	1924	1925	1926	1927	1928	1929	1930	1924	1925	1926	1927	1928	1929	1930	
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.								
Sirloin steak pound	25.7	39.6	41.2	41.5	43.7	50.3	50.3	44.5	54	60	61	70	96	96	73	
Round steak do	23.1	33.7	35.4	36.0	37.9	44.6	44.5	39.3	46	53	56	64	93	93	70	
Rib roast do	20.0	28.6	30.0	30.6	31.9	36.8	37.0	32.5	43	50	53	60	84	85	63	
Chuck roast do	16.4	20.7	22.0	22.8	24.3	30.2	30.0	25.4	26	34	39	48	84	83	55	
Plate beef do	12.3	13.1	14.1	14.6	15.8	20.8	21.0	17.2	7	15	19	28	69	71	40	
Pork chops do	22.6	37.5	39.1	42.6	41.5	37.6	38.9	37.9	66	73	88	84	66	72	68	
Bacon, sliced do	27.8	40.1	49.6	51.7	46.6	45.3	43.7	42.6	44	78	86	68	63	57	53	
Ham, sliced do	27.6	47.1	54.3	59.8	53.6	55.6	55.1	53.1	71	97	117	94	101	100	92	
Lamb, leg of do	18.4	35.9	38.4	38.3	38.2	38.8	38.5	32.8	95	109	108	108	111	109	78	
Hens do	21.2	35.1	36.5	37.6	35.7	37.9	38.4	33.8	66	72	77	68	79	81	59	
Salmon, red, canned pound		31.5	35.5	35.6	34.4	32.6	31.9	34.0								
Milk, fresh quart	9.0	13.9	14.3	14.0	14.2	14.2	14.4	14.0	54	59	56	58	58	60	56	
Milk, evaporated 16-ounce can		11.0	11.5	11.4	11.5	11.3	10.6	9.9								
Butter pound	38.2	47.9	59.4	54.3	55.7	57.5	55.7	47.8	25	55	42	46	51	46	25	
Oleomargarine (all butter substitutes) pound		30.0	30.9	30.3	27.9	27.6	27.0	25.0								
Cheese do	22.4	34.8	37.2	36.7	38.3	38.8	37.9	34.2	55	66	64	71	73	69	53	
Lard do	16.0	21.4	24.1	21.9	19.6	19.5	18.3	17.7	34	51	37	23	22	14	11	
Vegetable lard substitute pound		25.5	25.9	25.7	25.2	24.9	24.7	24.1								
Eggs, strictly fresh dozen	41.6	59.7	60.3	58.2	56.6	54.3	58.0	44.8	44	45	40	36	31	39	8	
Bread pound	5.6	8.8	9.4	9.4	9.3	9.1	8.9	8.6	57	68	68	66	63	59	54	
Flour do	3.3	5.3	5.9	5.7	5.5	5.2	5.2	4.3	61	79	73	67	58	58	30	
Corn meal do	3.1	5.0	5.3	5.1	5.2	5.3	5.3	5.3	61	71	65	68	71	71	71	
Rolled oats do		8.9	9.2	9.1	9.0	8.9	8.8	8.6								
Corn flakes 8-ounce package		10.5	11.0	10.9	9.7	9.5	9.5	9.3								
Wheat cereal 28-ounce package		24.4	25.1	25.4	25.5	25.6	25.5	25.4								
Macaroni pound		19.5	20.5	20.1	20.1	19.7	19.7	19.1								
Rice do	8.7	10.4	11.3	11.6	10.5	9.9	9.7	9.5	20	30	33	21	14	11	9	
Beans, navy do		10.1	10.0	9.1	9.6	12.5	14.2	11.3								
Potatoes do	1.8	2.4	3.7	3.8	3.0	2.2	3.8	3.1	33	106	111	67	22	111	72	
Onions do		5.2	5.8	5.0	5.0	6.1	5.3	4.2								
Cabbage do		3.9	4.2	4.0	3.9	4.3	4.5	3.6								
Pork and beans No. 2 can		12.6	12.3	11.7	11.5	11.6	11.7	10.8								
Corn, canned do		16.3	17.4	16.3	15.7	15.9	15.8	15.2								
Peas, canned do		18.2	18.2	17.4	16.7	16.7	16.7	16.0								
Tomatoes, canned No. 2 can		13.5	13.1	12.1	11.9	11.8	12.6	12.1								
Sugar, granulated pound	5.5	8.8	6.8	7.1	7.2	6.9	6.7	5.8	60	24	29	31	25	22	5	
Tea do	54.5	71.8	75.8	77.3	77.5	77.5	77.6	77.1	32	39	42	42	42	42	41	
Coffee do	29.7	46.1	51.1	50.9	47.4	49.6	49.1	39.1	55	72	71	60	67	65	32	
Prunes do		17.3	17.2	16.9	14.6	13.8	17.1	14.5								
Raisins do		15.0	14.3	14.8	14.2	12.4	12.2	11.7								
Bananas dozen		36.1	35.1	34.9	33.9	33.1	32.4	29.4								
Oranges do		50.6	64.6	56.0	57.8	64.2	44.9	66.8								
All articles combined ¹									43.2	55.5	54.1	50.3	51.0	54.5	39.0	

¹ Beginning with January, 1921, index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

TABLE 3.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS FOR THE UNITED STATES, 1913 TO OCTOBER, 1930

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913: Average for year.....	100.0	100.0	100.0	1929: Average for year.....	164.1	188.4	148.6
1914: Average for year.....	106.7	103.4	97.1	January.....	164.1	180.9	151.9
1915: Average for year.....	121.6	99.6	96.1	February.....	164.1	180.3	152.6
1916: Average for year.....	126.8	108.2	103.2	March.....	164.1	182.8	152.4
1917: Average for year.....	186.5	137.0	127.6	April.....	164.1	187.5	148.9
1918: Average for year.....	194.3	172.8	153.4	May.....	163.5	191.2	147.5
1919: Average for year.....	198.0	184.2	176.6	June.....	163.0	192.4	146.8
1920: Average for year.....	232.1	185.7	185.1	July.....	163.5	195.9	146.8
1921: Average for year.....	179.8	158.1	149.5	August.....	164.7	196.0	147.1
1922: Average for year.....	159.3	150.3	135.9	September.....	165.2	194.2	148.1
1923: Average for year.....	156.9	149.0	147.6	October.....	163.5	189.2	149.3
1924: Average for year.....	160.4	150.2	142.8	November.....	163.6	184.1	147.0
1925: Average for year.....	176.2	163.0	147.1	December.....	162.9	181.8	144.9
1926: Average for year.....	175.5	171.3	145.5	1930:			
1927: Average for year.....	170.7	169.9	148.7	January.....	162.9	183.6	138.9
1928: Average for year.....	167.2	179.2	150.0	February.....	161.6	183.1	138.5
January.....	168.0	168.3	152.2	March.....	160.9	183.0	137.6
February.....	168.0	167.8	150.7	April.....	160.3	183.3	138.9
March.....	166.8	167.1	150.7	May.....	159.8	181.5	137.0
April.....	167.2	170.3	147.8	June.....	160.1	179.9	133.7
May.....	168.3	175.4	147.3	July.....	158.6	175.2	133.9
June.....	169.8	177.7	146.1	August.....	156.9	169.9	137.4
July.....	169.3	184.4	147.1	September.....	156.4	173.3	138.8
August.....	168.2	189.5	148.3	October.....	154.4	171.1	137.8
September.....	166.7	195.8	151.2				
October.....	165.9	188.9	151.1				
November.....	165.3	184.9	152.5				
December.....	164.2	179.1	153.5				

Index Numbers of Retail Prices of Food in the United States

IN TABLE 4 index numbers are given which show the changes in the retail prices of specified food articles, by years, for 1913 and 1920 to 1929,² by months for 1929 and for January through October, 1930. These index numbers, or relative prices, are based on the year 1913 as 100, and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1929 was 196.9, which means that the average money price for the year 1929 was 96.9 per cent higher than the average money price for the year 1913. As compared with the relative price, 188.2 in 1928, the figures for 1929 show an increase of 8.7 points, but an increase of 4.6 per cent in the year.

In the last column of Table 4 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100.0 are 145.6 for September, 1930, and 144.4 for October, 1930.

The curve shown in the chart on next page pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

² For index numbers of each month, January, 1913, to December, 1928, see Bulletin No. 396, pp. 44 to 61; and Bulletin No. 495, pp. 32 to 45.

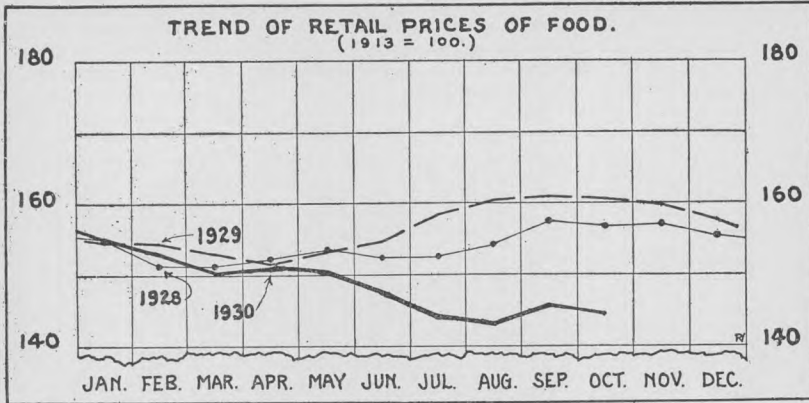


TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920 TO 1929, AND BY MONTHS FOR 1929 AND 1930

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate chops	Pork chops	Bacon	Ham	Hens	Milk	Butter	Cheese
1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920.....	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921.....	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.9
1922.....	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9
1923.....	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0
1924.....	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7
1925.....	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926.....	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	165.6
1927.....	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1
1928.....	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	175.6	159.6	147.5	174.2
1929.....	196.9	199.1	185.4	186.9	172.7	175.7	161.1	204.1	186.4	160.7	143.9	171.9
1929: January.....	190.6	191.0	180.8	181.3	170.2	153.8	159.3	200.0	184.0	160.7	150.7	173.8
February.....	188.2	188.8	178.8	179.4	167.8	157.1	158.2	199.6	186.4	160.7	152.7	172.9
March.....	188.6	189.2	179.3	180.0	167.8	167.6	158.9	201.9	190.1	160.7	152.5	172.9
April.....	192.9	194.6	183.8	184.4	170.2	176.7	160.4	203.3	196.2	159.6	145.7	172.4
May.....	198.4	201.3	187.9	190.0	174.4	179.5	160.7	204.8	198.1	159.6	142.3	171.9
June.....	201.6	205.4	189.9	191.9	176.0	179.0	162.2	205.6	193.9	159.6	140.5	171.9
July.....	206.7	210.8	192.9	195.6	177.7	188.1	164.1	209.7	187.3	160.7	139.4	171.5
August.....	206.3	210.8	191.9	194.4	176.0	192.4	165.6	211.2	185.0	160.7	140.5	171.0
September.....	202.8	206.7	189.4	191.9	175.2	193.8	164.4	209.7	184.0	160.7	143.1	171.9
October.....	198.0	199.6	186.9	187.5	173.6	185.2	161.9	204.8	180.3	161.8	145.4	171.5
November.....	194.1	196.4	183.3	183.8	171.1	170.5	159.3	200.4	177.0	161.8	139.7	171.0
December.....	192.5	194.6	181.8	183.1	170.2	163.3	157.4	198.5	174.2	161.8	134.7	170.6
1930: January.....	192.9	195.5	183.3	184.4	172.7	168.1	157.0	199.3	178.4	159.6	121.9	169.2
February.....	191.3	194.2	181.8	184.4	171.9	167.6	157.8	200.7	179.3	158.4	122.7	167.0
March.....	190.6	192.8	181.3	182.5	170.2	171.9	157.8	201.1	179.8	157.3	121.9	164.7
April.....	190.2	193.3	181.3	182.5	168.6	176.7	157.4	200.4	179.3	157.3	125.6	162.9
May.....	190.2	192.8	179.8	179.4	164.5	171.9	156.7	200.7	175.6	157.3	120.9	162.0
June.....	188.6	191.5	177.3	175.6	160.3	174.3	156.7	200.7	167.6	157.3	113.1	157.9
July.....	182.3	184.3	171.7	166.3	149.6	173.8	156.7	200.0	161.5	157.3	114.1	155.2
August.....	175.6	176.7	163.1	155.6	138.8	174.8	155.6	198.1	158.7	157.3	123.8	153.4
September.....	177.2	178.0	166.7	160.0	142.1	186.2	158.1	198.9	159.6	157.3	127.2	154.8
October.....	175.2	176.2	164.1	158.7	142.1	180.5	157.8	197.4	158.7	157.3	124.8	154.8

TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920 TO 1929, AND BY MONTHS FOR 1929 AND 1930—Continued

Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Pota- toes	Sugar	Tea	Coffee	All articles ¹
1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920.....	186.7	197.4	205.4	245.5	216.7	206.0	370.6	352.7	134.7	157.7	203.4
1921.....	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922.....	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923.....	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924.....	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925.....	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926.....	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6
1927.....	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1928.....	117.7	134.5	162.5	163.6	176.7	114.9	188.8	129.1	142.3	165.1	154.3
1929.....	115.8	142.0	164.7	154.5	176.7	111.5	185.2	120.0	142.6	164.8	156.7
1929: January.....	117.1	146.7	160.7	154.5	176.7	112.6	135.3	120.0	142.6	166.1	154.6
February.....	116.5	142.3	160.7	154.5	176.7	112.6	135.3	118.2	142.6	166.1	154.4
March.....	116.5	122.0	160.7	154.5	176.7	112.6	135.3	118.2	142.6	166.4	151.6
April.....	117.1	106.4	160.7	154.5	176.7	112.6	135.3	116.4	142.6	166.4	151.6
May.....	116.5	112.2	166.7	151.5	176.7	111.5	158.8	116.4	142.6	166.1	153.3
June.....	115.8	120.0	160.7	148.5	176.7	111.5	182.4	116.4	142.6	165.8	154.8
July.....	115.8	127.8	160.7	151.5	176.7	111.5	229.4	116.4	142.6	165.8	158.5
August.....	116.5	140.0	160.7	157.6	176.7	112.6	235.3	126.0	142.5	165.4	160.2
September.....	117.1	153.6	160.7	160.6	176.7	111.5	229.4	121.8	142.6	165.1	160.8
October.....	115.8	168.1	158.9	157.6	176.7	111.5	223.5	121.8	142.6	164.8	160.5
November.....	113.9	183.5	158.9	157.6	176.7	111.5	223.5	121.8	142.3	162.1	159.7
December.....	111.4	182.0	158.9	154.5	180.0	110.3	223.5	120.0	142.8	155.4	158.0
1930: January.....	108.9	160.6	158.9	154.5	180.0	110.3	229.4	120.0	143.4	147.0	155.4
February.....	108.2	136.8	157.1	154.5	176.7	110.3	229.4	118.2	143.2	143.3	153.0
March.....	107.0	102.3	147.1	151.5	176.7	109.2	229.4	116.4	142.8	140.6	150.1
April.....	106.3	100.0	157.1	148.5	176.7	110.3	241.2	114.5	142.5	138.9	151.2
May.....	105.7	97.7	157.1	145.5	176.7	109.2	252.9	114.5	142.5	137.2	150.1
June.....	105.1	97.4	157.1	145.5	176.7	109.2	247.1	110.9	143.0	136.2	147.9
July.....	103.2	101.7	157.1	139.4	176.7	109.2	194.1	110.9	142.6	135.6	144.0
August.....	104.4	112.5	155.4	136.4	176.7	109.2	182.4	110.9	142.3	134.6	143.7
September.....	110.8	124.9	155.4	133.3	176.7	110.3	188.2	107.3	142.1	132.6	145.6
October.....	112.0	129.9	153.6	130.3	176.7	109.2	182.4	105.5	141.7	131.2	144.4

¹ 22 Articles in 1913-1920; 42 articles in 1921-1930.

Comparison of Retail Food Costs in 51 Cities

TABLE 5 shows for 39 cities the percentage of increase or decrease in the retail cost of food³ in October, 1930, compared with the average cost in the year 1913, in October, 1929, and September, 1930. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average consumption of these articles in each city.⁴

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of October, 99 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 35 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Boston, Bridgeport, Chicago, Cincinnati, Cleveland, Columbus, Denver, Detroit, Fall River, Houston, Indianapolis, Kansas City, Little Rock, Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Minneapolis, New Haven, New York, Norfolk, Omaha, Peoria, Portland (Me.), Providence, Richmond, St. Louis, St. Paul, Salt Lake City, Savannah, Scranton, Springfield (Ill.), and Washington.

³ For list of articles see note 1, p. 207.

⁴ The consumption figures used for January, 1913, to December, 1920, for each article in each city are given in the Labor Review for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month, beginning with January, 1921, are given in the Labor Review for March, 1921, p. 26.

TABLE 5.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN OCTOBER, 1930, COMPARED WITH THE COST IN SEPTEMBER, 1930, OCTOBER, 1929, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percentage increase October, 1930, compared with 1913	Percentage decrease October, 1930, compared with—		City	Percentage increase October, 1930, compared with 1913	Percentage decrease October, 1930, compared with—	
		October, 1929	September, 1930			October, 1929	September, 1930
Atlanta	45.5	11.0	0.3	Minneapolis	45.7	9.4	0.5
Baltimore	49.4	10.2	0.0	Mobile		6.8	0.4
Birmingham	47.4	9.1	1.5	Newark	43.3	8.3	1.5
Boston	48.8	8.4	0.1	New Haven	49.0	9.5	1.0
Bridgeport		8.8	0.2	New Orleans	43.0	10.2	1.4
Buffalo	49.5	9.7	0.1	New York	49.3	9.7	0.4
Butte		13.8	1.0	Norfolk		10.4	0.3
Charleston, S. C.	49.2	8.0	0.7	Omaha	36.6	10.3	2.2
Chicago	56.5	8.2	1.0	Peoria		9.6	0.8
Cincinnati	52.9	8.3	1.0	Philadelphia	47.2	10.8	0.0
Cleveland	39.4	11.2	2.3	Pittsburgh	46.5	9.9	1.5
Columbus		9.4	0.7	Portland, Me.		9.8	0.5
Dallas	42.7	10.5	0.3	Portland, Oreg.	28.3	13.9	0.4
Denver	28.6	10.4	1.7	Providence	46.9	10.6	0.8
Detroit	45.9	12.3	1.8	Richmond	50.2	9.9	0.5
Fall River	43.2	10.3	0.6	Rochester		9.7	0.4
Houston		9.9	1.5	St. Louis	46.7	10.0	1.6
Indianapolis	41.7	11.4	2.5	St. Paul		9.9	1.0
Jacksonville	37.6	8.0	0.9	Salt Lake City	24.8	11.1	0.3
Kansas City	39.8	11.5	1.1	San Francisco	44.4	9.3	0.3
Little Rock	39.6	10.1	0.8	Savannah		11.1	1.2
Los Angeles	31.9	12.9	0.5	Scranton	51.0	11.3	0.7
Louisville	38.8	12.1	3.2	Seattle	36.2	12.0	0.0
Manchester	43.1	9.4	0.7	Springfield, Ill.		8.6	1.1
Memphis	37.6	9.4	1.3	Washington	55.5	7.8	0.6
Milwaukee	46.6	10.9	0.7				

¹ Increase.Retail Prices of Coal in the United States¹

THE following table shows the average retail prices of coal on October 15, 1929, and September 15 and October 15, 1930, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

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

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

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

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON OCTOBER 15, 1929, AND SEPTEMBER 15 AND OCTOBER 15, 1930

City, and kind of coal	1929			1930		
	Oct. 15	Sept. 15	Oct. 15	Oct. 15	Sept. 15	Oct. 15
United States:						
Pennsylvania anthracite—						
Stove—						
Average price.....	\$15.31	\$15.08	\$15.13			
Index (1913=100).....	198.2	195.2	195.8			
Chestnut—						
Average price.....	\$14.98	\$14.80	\$14.87			
Index (1913=100).....	189.3	187.0	187.9			
Bituminous—						
Average price.....	\$8.98	\$8.79	\$8.88			
Index (1913=100).....	165.3	161.7	163.3			
Atlanta, Ga.:						
Bituminous, prepared sizes.	\$7.78	\$7.50	\$7.47			
Baltimore, Md.:						
Pennsylvania anthracite—						
Stove.....	14.25	14.25	14.25			
Chestnut.....	13.75	13.75	13.75			
Bituminous, run of mine—						
High volatile.....	7.89	7.96	7.89			
Birmingham, Ala.:						
Bituminous, prepared sizes.	7.61	7.26	7.51			
Boston, Mass.:						
Pennsylvania anthracite—						
Stove.....	16.00	16.25	16.25			
Chestnut.....	15.50	15.75	15.75			
Bridgeport, Conn.:						
Pennsylvania anthracite—						
Stove.....	15.50	14.50	14.75			
Chestnut.....	15.50	14.50	14.75			
Buffalo, N. Y.:						
Pennsylvania anthracite—						
Stove.....	13.76	13.67	13.79			
Chestnut.....	13.31	13.17	13.29			
Butte, Mont.:						
Bituminous, prepared sizes.	11.14	10.40	10.70			
Charleston, S. C.:						
Bituminous, prepared sizes.	9.67	9.67	9.67			
Chicago, Ill.:						
Pennsylvania anthracite—						
Stove.....	16.85	16.38	16.38			
Chestnut.....	16.40	16.21	16.28			
Bituminous—						
Prepared sizes—						
High volatile.....	8.42	8.08	8.09			
Low volatile.....	12.35	11.89	11.96			
Run of mine—						
Low volatile.....	8.25	7.75	8.00			
Cincinnati, Ohio:						
Bituminous—						
Prepared sizes—						
High volatile.....	6.05	6.15	6.30			
Low volatile.....	8.38	8.23	8.53			
Cleveland, Ohio:						
Pennsylvania anthracite—						
Stove.....	15.22	14.44	14.50			
Chestnut.....	14.80	14.13	14.25			
Bituminous—						
Prepared sizes—						
High volatile.....	7.10	6.89	6.86			
Low volatile.....	9.96	9.61	9.80			
Columbus, Ohio:						
Bituminous—						
Prepared sizes—						
High volatile.....	6.13	5.98	6.02			
Low volatile.....	8.44	7.56	7.75			
Dallas, Tex.:						
Arkansas anthracite—Egg..	15.50	15.00	15.00			
Bituminous, prepared sizes.	12.83	12.58	12.58			
Denver, Colo.:						
Colorado anthracite—						
Furnace, 1 and 2 mixed..	14.75	15.25	15.25			
Stove, 3 and 5 mixed..	14.75	15.25	15.25			
Bituminous, prepared sizes.	10.31	10.29	10.29			
Detroit, Mich.:						
Pennsylvania anthracite—						
Stove.....	\$16.00	\$15.00	\$15.00			
Chestnut.....	15.50	15.00	15.00			
Bituminous—						
Prepared sizes—						
High volatile.....	8.46	8.18	8.00			
Low volatile.....	10.27	9.77	9.77			
Run of mine—						
Low volatile.....	8.00	7.83	7.83			
Fall River, Mass.:						
Pennsylvania anthracite—						
Stove.....	16.50	16.50	16.50			
Chestnut.....	16.25	16.25	16.25			
Houston, Tex.:						
Bituminous, prepared sizes.	12.20	11.60	12.20			
Indianapolis, Ind.:						
Bituminous—						
Prepared sizes—						
High volatile.....	6.31	5.89	5.90			
Low volatile.....	9.04	8.38	8.75			
Run of mine—						
Low volatile.....	7.25	7.00	7.05			
Jacksonville, Fla.:						
Bituminous, prepared sizes.	13.00	10.00	10.00			
Kansas City, Mo.:						
Arkansas anthracite—						
Furnace.....	12.45	12.42	12.44			
Stove No. 4.....	13.58	13.25	13.58			
Bituminous, prepared sizes.	7.28	7.06	6.93			
Little Rock, Ark.:						
Arkansas anthracite—Egg..	12.50	12.50	13.00			
Bituminous, prepared sizes.	9.55	9.20	9.70			
Los Angeles, Calif.:						
Bituminous, prepared sizes.	16.50	16.25	16.50			
Louisville, Ky.:						
Bituminous—						
Prepared sizes—						
High volatile.....	6.66	6.19	6.37			
Low volatile.....	9.00	8.75	8.75			
Manchester, N. H.:						
Pennsylvania anthracite—						
Stove.....	17.00	16.83	16.83			
Chestnut.....	17.00	16.83	16.83			
Memphis, Tenn.:						
Bituminous, prepared sizes.	7.37	7.85	7.87			
Milwaukee, Wis.:						
Pennsylvania anthracite—						
Stove.....	16.29	15.75	15.75			
Chestnut.....	15.84	15.36	15.41			
Bituminous—						
Prepared sizes—						
High volatile.....	7.71	7.68	7.68			
Low volatile.....	10.96	10.46	10.63			
Minneapolis, Minn.:						
Pennsylvania anthracite—						
Stove.....	18.30	17.26	16.92			
Chestnut.....	17.85	16.99	16.83			
Bituminous—						
Prepared sizes—						
High volatile.....	10.53	9.90	9.81			
Low volatile.....	13.65	12.89	12.63			
Mobile, Ala.:						
Bituminous, prepared sizes.	9.37	8.88	9.23			
Newark, N. J.:						
Pennsylvania anthracite—						
Stove.....	13.95	13.90	13.90			
Chestnut.....	13.45	13.40	13.40			
New Haven, Conn.:						
Pennsylvania anthracite—						
Stove.....	14.96	14.90	14.90			
Chestnut.....	14.96	14.90	14.90			
New Orleans, La.:						
Bituminous, prepared sizes.	10.64	9.11	10.43			

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON OCTOBER 15, 1929, AND SEPTEMBER 15 AND OCTOBER 15, 1930—Continued

City, and kind of coal	1929			1930			City, and kind of coal	1929			1930		
	Oct. 15	Sept. 15	Oct. 15	Oct. 15	Sept. 15	Oct. 15		Oct. 15	Sept. 15	Oct. 15	Oct. 15	Sept. 15	Oct. 15
New York, N. Y.:							Rochester, N. Y.:						
Pennsylvania anthracite—				Pennsylvania anthracite—			Pennsylvania anthracite—						
Stove.....	\$14.54	\$14.04	\$14.08	Stove.....	\$14.75	\$14.75	Stove.....	\$14.75	\$14.75	\$14.75			
Chestnut.....	14.04	13.56	13.58	Chestnut.....	14.25	14.25	Chestnut.....	14.25	14.25	14.25			
Norfolk, Va.:				St. Louis, Mo.:									
Pennsylvania anthracite—				Pennsylvania anthracite—									
Stove.....	14.00	14.50	15.00	Stove.....	16.70	16.25	Stove.....	16.70	16.25	16.23			
Chestnut.....	14.00	14.50	15.00	Chestnut.....	16.45	16.00	Chestnut.....	16.45	16.00	15.98			
Bituminous—				Bituminous, prepared sizes.	6.77	6.34	Bituminous, prepared sizes.	6.77	6.34	6.29			
Prepared sizes—				St. Paul, Minn.:									
High volatile.....	7.38	7.38	7.38	Pennsylvania anthracite—									
Low volatile.....	9.00	9.00	10.00	Stove.....	18.30	17.60	Stove.....	18.30	17.60	16.90			
Run of mine—				Chestnut.....	17.85	17.15	Chestnut.....	17.85	17.15	16.90			
Low volatile.....	6.83	7.00	7.00	Bituminous—									
Omaha, Nebr.:				Prepared sizes—									
Bituminous, prepared sizes.	9.67	9.52	9.79	High volatile.....	10.28	10.25	High volatile.....	10.28	10.25	9.75			
Peoria, Ill.:				Low volatile.....	13.65	13.25	Low volatile.....	13.65	13.25	12.80			
Bituminous, prepared sizes.	6.67	6.28	6.44	Salt Lake City, Utah:									
Philadelphia, Pa.:				Bituminous, prepared sizes.	7.93	8.40	Bituminous, prepared sizes.	7.93	8.40	8.41			
Pennsylvania anthracite—				San Francisco, Calif.:									
Stove.....	115.00	13.83	13.96	New Mexico anthracite—									
Chestnut.....	114.50	13.33	13.46	Cerrillos egg.....	26.00	26.00	Cerrillos egg.....	26.00	26.00	26.00			
Pittsburgh, Pa.:				Colorado anthracite—									
Pennsylvania anthracite—				Egg.....	25.50	25.00	Egg.....	25.50	25.00	25.50			
Chestnut.....	15.00	14.75	14.50	Bituminous, prepared sizes.	17.13	17.00	Bituminous, prepared sizes.	17.13	17.00	16.88			
Bituminous, prepared sizes.	5.36	4.98	4.91	Savannah, Ga.:									
Portland, Me.:				Bituminous, prepared sizes.	310.14	39.62	Bituminous, prepared sizes.	310.14	39.62	39.87			
Pennsylvania anthracite—				Scranton, Pa.:									
Stove.....	16.80	16.80	16.80	Pennsylvania anthracite—									
Chestnut.....	16.80	16.80	16.80	Stove.....	10.28	10.22	Stove.....	10.28	10.22	10.18			
Portland, Oreg.:				Chestnut.....	9.92	9.85	Chestnut.....	9.92	9.85	9.88			
Bituminous, prepared sizes.	13.38	13.09	13.27	Seattle, Wash.:									
Providence, R. I.:				Bituminous, prepared sizes.	10.68	10.65	Bituminous, prepared sizes.	10.68	10.65	10.68			
Pennsylvania anthracite—				Springfield, Ill.:									
Stove.....	216.00	216.00	216.00	Bituminous, prepared sizes.	4.34	4.34	Bituminous, prepared sizes.	4.34	4.34	4.34			
Chestnut.....	215.94	216.00	216.00	Washington, D. C.:									
Richmond, Va.:				Pennsylvania anthracite—									
Pennsylvania anthracite—				Stove.....	115.73	15.62	Stove.....	115.73	15.62	15.73			
Stove.....	15.00	15.00	15.00	Chestnut.....	115.23	15.23	Chestnut.....	115.23	15.23	15.23			
Chestnut.....	15.00	15.00	15.00	Bituminous—									
Bituminous—				Prepared sizes—									
Prepared sizes—				High volatile.....	18.63	18.63	High volatile.....	18.63	18.63	18.63			
High volatile.....	8.38	8.75	8.75	Low volatile.....	111.42	111.43	Low volatile.....	111.42	111.43	111.43			
Low volatile.....	9.11	8.85	9.37	Run of mine—									
Run of mine—				Mixed.....	17.75	17.81	Mixed.....	17.75	17.81	17.81			
Low volatile.....	7.25	7.25	7.25										

¹ Per ton of 2,240 pounds.

² The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.

³ All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

Index Numbers of Wholesale Prices in October, 1930

THE index number of wholesale prices computed by the Bureau of Labor Statistics of the United States Department of Labor shows a decline in the general level for October as compared with September. This index number, which includes 550 price quotations weighted according to the importance of each article and based on prices in 1926 as 100.0, declined from 84.2 in September to 82.6 in October, a fall of nearly 2 per cent. The purchasing power of the 1926 dollar was \$1.211.

Farm products as a group showed a decrease of over 4 per cent from the September level, due to lower prices for all grains, beef cattle,

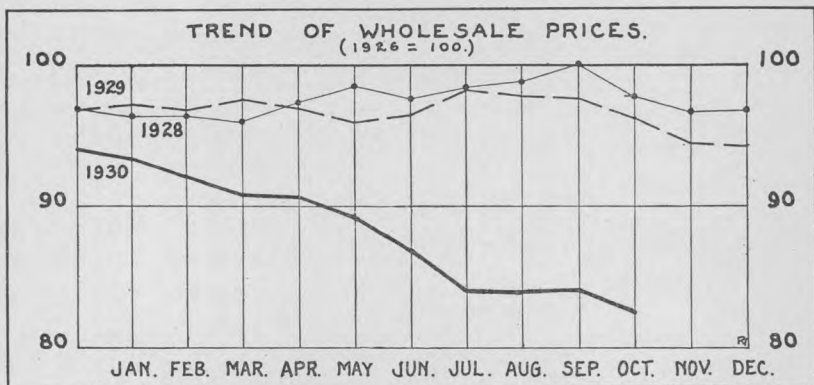
hogs, sheep and lambs, poultry, cotton, flaxseed, and foreign wools. No price change was reported for Ohio wools, while eggs, hay, and potatoes averaged higher.

Foods were slightly lower than in September, with declines in butter, cheese, lamb, mutton, pork, veal, lemons, corn meal, and flour. Coffee and sugar were somewhat higher than in the month before.

Hides and skins showed a pronounced price drop, due largely to sharp declines in packers' sheepskins, while leather also averaged somewhat lower. Little change in the price level is shown for boots and shoes and other leather products, but in these groups also the trend was downward.

Textile products as a whole were cheaper than in September, cotton goods, silk and rayon, woolen and worsted goods, and other textile products all contributing to the decline.

In the group of fuel and lighting materials there was a small price advance in anthracite coal, while no change was reported for bitu-



minous coal and coke. Petroleum products were lower, with declines in Oklahoma crude oil and gasoline.

Metals and metal products were downward, iron and steel and nonferrous metals, including antimony, brass sheets, electrolytic copper, sheet copper, copper wire, pig lead, lead pipe, bar silver, pig tin, and slab zinc, all sharing in the decrease.

Among building materials there were decreases for lumber and paint materials, while brick advanced slightly and cement and structural steel remained stationary in price.

In the group of chemicals and drugs there were small price decreases among chemicals, with no change among drugs and pharmaceuticals, and small increases among fertilizer materials and mixed fertilizers.

House-furnishing goods were practically unchanged in price, while in the group designated as miscellaneous there were declines reported for cattle feed, crude rubber, and lubricating and cylinder oils.

In all major groups of commodities, including raw materials, semi-manufactured articles, and finished products, also in the groups designated as nonagricultural commodities and all commodities less farm products and foods, prices in October averaged lower than in the preceding month.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Groups and subgroups	October, 1929	September, 1930	October, 1930	Purchasing power of the dollar, October, 1930
All commodities	96.3	84.2	82.6	\$1.211
Farm products	103.9	85.3	82.6	1.211
Grains	99.1	77.0	72.1	1.387
Livestock and poultry	98.8	88.0	82.4	1.214
Other farm products	108.9	86.4	86.3	1.159
Foods	101.2	89.2	88.6	1.129
Butter, cheese, and milk	106.2	99.6	98.7	1.013
Meats	106.7	99.2	96.7	1.034
Other foods	95.8	79.3	79.8	1.253
Hides and leather products	110.5	99.1	96.5	1.036
Hides and skins	117.9	94.2	83.6	1.196
Leather	114.2	98.2	96.7	1.034
Boots and shoes	106.1	100.5	100.3	.997
Other leather products	106.6	105.0	104.2	.960
Textile products	92.7	75.5	73.8	1.355
Cotton goods	99.0	82.8	81.6	1.225
Silk and rayon	79.3	55.4	52.1	1.919
Woolen and worsted goods	96.2	84.6	83.6	1.196
Other textile products	80.0	61.3	59.0	1.695
Fuel and lighting materials	81.7	76.3	75.1	1.332
Anthracite coal	91.2	89.1	89.6	1.116
Bituminous coal	92.0	89.2	89.2	1.121
Coke	84.4	83.9	83.9	1.192
Gas	93.1	101.3	(1)	
Petroleum products	70.8	62.0	59.4	1.684
Metals and metal products	103.6	91.8	90.4	1.106
Iron and steel	96.8	89.5	88.6	1.129
Nonferrous metals	104.2	71.2	67.8	1.475
Agricultural implements	96.1	94.9	94.9	1.054
Automobiles	109.9	101.6	100.2	.998
Other metal products	98.6	98.4	98.4	1.016
Building materials	97.8	86.4	85.8	1.166
Lumber	96.3	80.8	80.2	1.247
Brick	90.6	82.3	82.5	1.212
Cement	85.6	91.7	91.7	1.091
Structural steel	97.0	81.7	81.7	1.224
Paint materials	101.1	78.1	75.9	1.318
Other building materials	105.6	98.0	97.3	1.028
Chemicals and drugs	94.2	86.6	86.0	1.163
Chemicals	100.4	90.9	89.6	1.116
Drugs and pharmaceuticals	70.7	66.8	66.8	1.497
Fertilizer materials	90.1	83.1	83.6	1.196
Mixed fertilizers	97.4	92.5	92.9	1.076
House-furnishing goods	97.1	95.4	95.3	1.049
Furniture	96.7	96.5	96.5	1.036
Furnishings	97.4	94.4	94.2	1.062
Miscellaneous	81.3	69.7	68.8	1.453
Cattle feed	130.4	93.6	89.6	1.116
Paper and pulp	87.9	83.5	83.5	1.198
Rubber	40.7	17.1	16.9	5.917
Automobile tires	55.1	52.0	52.0	1.923
Other miscellaneous	108.4	93.8	91.5	1.093
Raw materials	97.1	82.1	80.0	1.250
Semimanufactured articles	97.9	76.5	75.5	1.325
Finished products	95.8	86.8	85.6	1.168
Nonagricultural commodities	94.3	84.0	82.8	1.208
All commodities less farm products and foods	92.7	82.8	81.5	1.227

1 Data not yet available.

Wholesale Prices in the United States and in Foreign Countries, 1923 to September, 1930

IN THE following table the more important index numbers of wholesale prices in foreign countries and those of the United States Bureau of Labor Statistics have been brought together in order that the trend of prices in the several countries may be compared. The base periods here shown are those appearing in the sources from which the information has been drawn, in most cases being the year 1913 or some other pre-war period. Only general comparisons can be made from these figures, since, in addition to differences in the base periods, there are important differences in the composition of the index numbers themselves.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES

Country	United States	Canada	Austria	Belgium	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Computing agency	Bureau of Labor Statistics	Dominion Bureau of Statistics (revised)	Federal Statistical Bureau	Ministry of Industry and Labor	Central Bureau of Statistics (revised index)	Statistical Department	Central Bureau of Statistics (revised)	General Statistical Bureau	Federal Statistical Bureau	Riccardo Bacchi (revised)
Base period	1926	1926	January-June, 1914	April, 1914	July, 1914	1913	1926	1913	1913	1913
Commodities	550	502	47	132	69	118	139	45	400	138
<i>Year and month</i>										
1923	100.6	98.0	124	497	977			419		1 503.9
1924	98.1	99.4	136	573	997			488	137.3	1 497.4
1925	103.5	102.6	136	558	1008	210		551	141.8	1 612.0
1926	100.0	100.0	123	744	955	163	100	703	134.4	1 618.2
1927	95.4	97.7	133	847	979	153	101	617	137.6	1 466.7
1928	97.7	96.4	130	843	979	153	102	620	140.0	1 453.1
1929	96.5	95.6	130	851	924	150	98	611	137.2	1 439.7
1923										
January	102.0			434	991			387		516.1
April	103.9			480	1012			415		525.7
July	98.4			504	949			407		503.9
October	99.4			515	960			421		499.6
1924										
January	99.6			580	974			494		504.4
April	97.3			555	1008			450		510.3
July	95.6			566	953			481		497.4
October	98.2			555	999			497		522.0
1925										
January	102.9			559	1045	243		514		568.2
February	104.0			551	1048	240		515		571.1
March	104.2			546	1034	236		514		571.2
April	101.9			538	1020	230		513		570.1
May	101.6			537	1006	227		520		571.2
June	103.0			552	998	223		543		590.9
July	104.3			559	1009	212		557		612.0
August	103.9			567	993	197		557		630.6
September	103.4			577	996	186		556		621.5
October	103.6			575	989	179		572		617.1
November	104.5			569	977	176		605		612.3
December	103.4			565	977	176		633		613.8

¹ July.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES—Continued

Country	United States	Canada	Austria	Belgium	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Computing agency	Bureau of Labor Statistics	Dominion Bureau of Statistics (revised)	Federal Statistical Bureau	Ministry of Industry and Labor	Central Bureau of Statistics (revised index)	Statistical Department	Central Bureau of Statistics (revised)	General Statistical Bureau	Federal Statistical Bureau	Riccardo Bacchi (revised)
Base period	1926	1926	January-June, 1914	April, 1914	July, 1914	1913	1926	1913	1913	1913
Commodities	550	502	47	132	69	118	139	45	400	138
Year and month										
1926										
January	103.6	103.0	122	560	966	172	-----	634	135.8	608.0
February	102.1	102.1	120	556	950	165	-----	636	134.3	603.5
March	100.4	101.3	119	583	938	158	-----	632	133.1	592.3
April	100.1	101.2	119	621	923	157	-----	650	132.7	590.0
May	100.5	100.2	118	692	928	158	-----	688	132.3	595.8
June	100.5	100.2	124	761	926	157	-----	738	131.9	604.9
July	99.5	100.2	126	876	948	158	-----	836	133.1	618.2
August	99.0	99.1	126	836	963	162	-----	769	134.0	632.5
September	99.7	98.5	123	859	973	162	-----	787	134.9	622.0
October	99.4	98.1	125	856	972	178	-----	751	136.2	596.7
November	98.4	97.6	128	865	978	170	-----	684	137.1	594.2
December	97.9	97.9	127	860	978	158	-----	627	137.1	573.6
1927										
January	96.6	97.8	130	856	979	157	100	622	135.9	558.2
February	95.9	97.6	130	854	975	156	101	632	135.6	555.8
March	94.5	97.3	133	858	976	153	101	641	135.0	544.7
April	93.7	97.5	135	846	979	152	100	636	134.8	521.3
May	93.7	98.5	137	848	988	152	100	628	137.1	496.2
June	93.8	98.9	142	851	990	152	101	622	137.9	473.4
July	94.1	98.6	140	845	992	152	101	621	137.6	466.7
August	95.2	98.3	133	850	983	153	102	618	137.9	465.4
September	96.5	97.1	130	837	975	153	101	600	139.7	465.4
October	97.0	97.2	129	839	966	154	101	587	139.8	467.5
November	96.7	96.9	127	838	967	154	103	594	140.1	466.0
December	96.8	97.3	127	841	975	154	103	604	139.6	462.9
1928										
January	96.3	96.9	129	851	982	153	102	607	138.7	463.5
February	96.4	96.8	128	848	985	152	102	609	137.9	461.3
March	96.0	97.7	129	848	978	153	103	623	138.5	463.9
April	97.4	98.3	131	847	984	154	103	624	139.5	464.4
May	98.6	97.7	131	844	987	155	103	632	141.2	464.9
June	97.6	97.1	133	844	986	155	103	626	141.3	461.7
July	98.3	96.2	133	841	979	155	103	624	141.6	453.1
August	98.9	95.4	133	831	996	154	103	617	141.5	456.2
September	100.1	95.5	131	830	986	151	101	620	139.9	457.8
October	97.8	95.4	129	835	971	150	101	617	140.1	463.3
November	96.7	94.9	128	847	957	151	101	626	140.3	465.6
December	96.7	94.5	127	855	955	151	101	624	139.9	464.4
1929										
January	97.2	93.7	128	867	953	151	100	630	138.9	461.2
February	96.7	94.9	130	865	950	159	100	638	139.3	462.7
March	97.5	95.5	133	869	964	154	100	640	139.6	461.1
April	96.8	94.1	134	862	963	150	99	627	137.1	455.0
May	95.8	92.4	135	851	940	148	98	623	135.5	451.6
June	96.4	92.6	134	848	917	146	98	611	135.1	446.6
July	98.0	96.0	132	858	922	149	97	613	137.8	439.7
August	97.7	98.1	132	850	916	150	97	597	138.1	437.4
September	97.5	97.3	128	846	902	150	96	597	138.1	437.0
October	96.3	96.7	127	838	895	149	96	590	137.2	435.8
November	94.4	95.8	125	834	888	147	95	584	135.5	430.8
December	94.2	96.2	123	823	876	146	95	576	134.3	424.5
1930										
January	93.4	95.6	125	808	² 126.1	143	94	564	132.3	417.4
February	92.1	94.0	123	791	² 124.2	140	93	564	129.3	408.0
March	90.8	91.9	121	774	² 121.5	136	92	553	126.4	399.7
April	90.7	91.7	119	777	² 121.0	135	92	548	126.7	396.1
May	89.1	89.9	118	774	² 120.2	132	90	542	125.7	390.3
June	86.8	88.0	121	750	² 119.1	130	90	533	124.5	380.6
July	84.0	85.8	119	739	² 119.7	129	90	538	125.1	-----
August	84.0	84.1	118	729	² 118.1	128	89	533	124.7	-----
September	84.2	82.5	115	-----	² 115.1	126	-----	-----	122.8	-----

² Gold basis.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES—Continued

Country	Netherlands	Norway	Spain	Sweden	Switzerland	United Kingdom	Australia	New Zealand	South Africa	Japan	China	India
Computing agency	Central Bureau of Statistics	Central Bureau of Statistics	Institute of Geography and Statistics	Chamber of Commerce	Federal Labor Department	Board of Trade	Bureau of Census and Statistics	Census and Statistics Office (revised)	Office of Census and Statistics	Bank of Japan, Tokyo	National Tariff Commission, Shanghai	Labor Office, Bombay
Base period	1913	1913	1913	1913	July, 1914	1913	July, 1914	1913	1913	1913	1913	July, 1914
Commodities	48	95	74	160	118	150	92	180	188	56	117	44
Year and month												
1923	151	232	172	163	181	158.9	170	158	127	199	156.4	181
1924	156	298	183	162	175	166.2	165	165	129	206	153.9	182
1925	155	253	188	161	162	159.1	162	161	128	202	159.4	163
1926	145	198	181	149	145	148.1	161	154	123	179	164.1	149
1927	148	167	172	146	142	141.4	159	146	124	170	170.4	147
1928	149	161	168	148	145	140.3	157	147	121	171	160.7	146
1929	142	153	171	140	141	136.5	-----	147	116	166	163.7	145
1923												
January	157	223	170	163	-----	157.0	163	-----	131	184	152.7	181
April	156	229	174	168	-----	162.0	167	-----	126	196	157.7	180
July	145	231	170	162	-----	156.5	180	-----	124	192	155.4	178
October	148	235	171	161	-----	158.1	171	-----	125	212	156.1	181
1924												
January	156	251	178	161	-----	165.4	174	-----	131	211	155.8	188
April	154	263	184	161	-----	164.7	166	-----	126	207	153.7	184
July	151	265	182	157	-----	162.6	163	-----	125	195	151.5	184
October	161	273	186	167	-----	170.0	163	-----	133	213	152.8	181
1925												
January	160	279	191	169	-----	171.1	163	166	130	214	159.9	173
February	158	281	192	169	-----	168.9	162	162	-----	210	159.2	173
March	155	279	193	168	-----	166.3	160	162	-----	204	160.3	171
April	151	273	190	163	-----	161.9	158	162	130	202	159.3	165
May	151	262	191	162	-----	158.6	159	162	-----	199	157.8	164
June	153	260	187	161	-----	157.2	162	162	-----	200	157.3	160
July	155	254	188	161	-----	156.9	162	161	127	198	162.8	158
August	155	249	184	159	-----	156.2	162	161	-----	200	160.3	160
September	155	237	185	157	-----	155.1	162	160	-----	201	160.2	157
October	154	223	187	154	-----	153.9	163	162	124	200	159.0	158
November	154	220	186	155	-----	152.7	165	161	-----	198	158.4	160
December	155	220	187	156	-----	152.1	160	160	-----	194	158.1	154
1926												
January	153	214	186	153	153	151.3	161	159	124	192	164.0	154
February	149	211	186	152	147	148.8	160	159	-----	188	163.0	151
March	145	205	183	149	146	144.4	163	157	-----	184	164.4	150
April	143	199	179	150	145	143.6	168	156	120	181	162.8	151
May	143	197	179	151	143	144.9	167	156	-----	177	159.7	151
June	144	194	177	150	143	146.4	163	155	-----	177	155.8	150
July	141	192	178	148	145	148.7	162	156	122	179	156.9	149
August	139	193	180	147	142	149.1	162	154	-----	177	160.5	148
September	140	193	178	146	142	150.9	158	153	-----	176	164.2	149
October	143	198	179	148	144	152.1	154	153	127	174	171.1	147
November	147	199	185	148	142	152.4	155	151	-----	171	174.4	146
December	147	184	186	150	142	146.1	155	153	-----	170	172.0	146
1927												
January	145	174	184	146	141	143.6	154	151	128	170	172.8	146
February	146	172	180	146	141	142.6	153	147	-----	171	172.0	148
March	144	167	179	145	141	140.6	150	147	-----	171	174.7	146
April	143	164	177	143	140	139.8	151	147	126	170	173.1	145
May	145	162	172	145	141	141.1	152	145	-----	171	171.3	146
June	149	166	171	146	140	141.8	155	146	-----	172	169.3	147
July	151	165	168	146	140	141.1	161	146	120	170	171.0	147
August	149	167	168	146	142	140.9	165	146	-----	167	170.8	148
September	150	167	169	148	144	142.1	170	146	-----	169	171.8	148
October	150	165	169	147	145	141.4	173	146	122	170	168.7	146
November	151	166	168	148	147	141.1	166	147	-----	168	165.7	144
December	151	166	169	148	146	140.4	162	148	-----	168	163.5	143

³ 52 commodities in 1920; 53 commodities from August, 1920, to December, 1921.

⁴ 147 items.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES—Continued

Country	Netherlands	Norway	Spain	Sweden	Switzerland	United Kingdom	Australia	New Zealand	South Africa	Japan	China	India
Computing agency	Central Bureau of Statistics	Central Bureau of Statistics	Institute of Geography and Statistics	Chamber of Commerce	Federal Labor Department	Board of Trade	Bureau of Census and Statistics	Census and Statistics Office (revised)	Office of Census and Statistics	Bank of Japan, Tokyo	National Tariff Commission, Shanghai	Labor Office, Bombay
Base period	1913	1913	1913	1913	July, 1914	1913	July, 1914	1913	1913	1913	1913	July, 1914
Commodities	48	95	74	160	118	150	92	180	188	56	117	44
Year and month												
1928												
January	153	164	166	148	145	141.1	163	150	123	169	163.1	141
February	150	163	166	147	144	140.3	160	147	-----	169	164.3	142
March	152	164	165	149	145	140.8	160	147	-----	169	163.4	140
April	153	162	166	151	146	142.9	162	147	121	170	163.1	142
May	152	162	164	152	145	143.6	159	148	-----	171	164.5	145
June	153	161	164	151	145	142.6	158	148	-----	169	160.0	149
July	148	162	164	150	144	141.1	157	148	119	169	159.2	147
August	144	162	166	149	144	139.3	154	147	-----	170	157.2	146
September	145	158	168	146	144	137.6	153	148	-----	174	156.2	148
October	146	157	174	145	145	137.9	152	149	120	174	158.8	150
November	148	157	176	145	145	137.9	152	150	-----	173	159.2	149
December	148	157	175	145	144	138.3	154	149	-----	174	159.9	145
1929												
January	146	154	171	144	143	138.3	157	147	120	172	160.1	148
February	146	155	175	145	143	138.4	156	146	-----	171	162.4	150
March	147	155	174	144	142	140.1	157	146	-----	171	164.2	147
April	144	154	174	141	140	138.8	158	146	117	170	161.2	144
May	142	152	171	140	139	135.8	156	147	-----	169	161.7	141
June	141	151	170	139	139	135.6	158	147	-----	168	162.6	143
July	141	152	169	140	143	137.4	159	147	115	166	162.7	145
August	142	154	170	141	143	135.8	160	148	-----	165	164.7	146
September	141	154	171	140	142	135.8	162	148	-----	164	167.1	147
October	140	154	172	138	142	136.1	161	148	113	163	168.0	146
November	137	152	171	135	140	134.0	158	147	-----	160	164.7	143
December	135	152	172	134	139	132.5	154	146	-----	155	164.7	141
1930												
January	131	150	172	131	136	131.0	151	147	107	152	169.6	139
February	126	147	173	128	133	127.8	147	146	-----	151	174.7	137
March	122	146	173	125	131	124.5	144	146	-----	148	173.9	137
April	122	145	172	124	129	123.7	146	146	104	147	174.2	134
May	118	144	168	123	128	122.0	148	146	-----	143	173.4	130
June	118	143	166	123	126	120.7	145	145	-----	138	185.9	127
July	115	142	170	121	126	119.2	144	144	100	134	190.1	124
August	114	141	-----	121	126	117.8	-----	-----	-----	133	189.4	124
September	112	141	-----	119	123	115.5	-----	-----	-----	130	187.5	-----

IMMIGRATION AND EMIGRATION

Statistics of Immigration for September, 1930

By J. J. KUNNA, CHIEF STATISTICIAN UNITED STATES BUREAU OF
IMMIGRATION

THE statistics for September, 1930, show 47,151 aliens admitted to the United States, comprising 17,792 immigrants or newcomers for permanent residence in this country and 29,359 nonimmigrants or visitors. The latter class comprised over two-thirds of the aliens landed at New York this month, through which port the bulk of the arrivals from Europe enter this country. During September 33,068 aliens were admitted at New York, of whom 10,818 were classified as immigrants and 22,250 as nonimmigrants. Nearly three-fourths of these nonimmigrants came in as returning residents under the immigration act of 1924, 15,531 being natives of Europe, principally of Germany, Great Britain, Scandinavia, Italy, and the Irish Free State. About two-thirds of these home-coming aliens of European birth were women and children.

September, 1930, also saw the return of a record number of Americans from abroad, 80,900 United States citizens having arrived this month from foreign countries, the majority of whom were tourists coming from a vacation in Europe. In this month 71,021 citizens arrived at New York, 40,692 being females and 30,329 males, an increase over the corresponding month a year ago when 69,409 citizens—37,950 females and 31,459 males—landed at that port.

There was a drop in immigration this month of 10,228, or 37 per cent, from the number of immigrants for the same period a year ago, 17,792 immigrant aliens having been admitted during September, 1930, as against 28,020 during September, 1929. Immigration for the first quarter of the present fiscal year shows a decrease of 24,935, or 35.2 per cent, as compared with the corresponding period of the previous year, the number of immigrants admitted dropping from 70,866 for the three months from July 1 to September 30, 1929, to 45,931 for the same months of 1930. European immigration decreased 10,009, or 26.9 per cent, while immigration from Canada shows a greater percentage of decrease or 44.9 per cent, and that from Mexico a still greater one or 72.9 per cent.

During the three months July-September, 1930, a total of 15,163 emigrant aliens left the United States with the intention of making their homes in some foreign country, or about 1 emigrant leaving for every 3 immigrants admitted. Of these permanent departures, 9,735 were destined to European countries, principally Great Britain, Germany, Poland, and Italy, while 4,328 went to countries in the Western Hemisphere, and 1,100 to Asiatic and other countries. About 40 per cent of these emigrants were residents of New York, 6,044 giving that State as their last permanent residence, while 2,412 left the other North Atlantic States, 3,246 departed from the North

Central States, 1,812 from the Southern States, and 1,649 gave the Western States and outlying possessions as their last permanent residence.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1 TO SEPTEMBER 30, 1930

Period	Inward					Aliens debarred from entering ¹	Outward					Aliens deported after landing ²
	Aliens admitted			United States citizens arrived	Total		Aliens departed			United States citizens departed	Total	
	Immigrant	Non-immigrant	Total				Emigrant	Non-emigrant	Total			
1930												
July	13,323	16,466	29,789	38,822	68,611	881	4,818	22,588	27,406	55,366	82,772	1,440
August	14,816	19,724	34,540	69,957	104,497	837	5,245	29,166	34,411	88,372	122,783	1,208
September	17,792	29,359	47,151	80,900	128,051	929	5,100	24,604	29,704	56,526	86,230	1,552
Total ..	45,931	65,549	111,480	189,679	301,159	2,647	15,163	76,358	91,521	200,264	291,785	4,200

¹ These aliens are not included among arrivals, as they were not permitted to enter the United States.

² These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

PUBLICATIONS RELATING TO LABOR

Official—United States

KANSAS.—Commission of Labor and Industry. Department of Workmen's Compensation. *Annual report for the fiscal year ending June 30, 1930. Topeka, 1930. 24 pp.*

Reviewed in this issue.

MASSACHUSETTS.—Department of Labor and Industries. *Twenty-ninth annual directory of labor organizations in Massachusetts, 1930 (labor bulletin No. 160). [Boston, 1930.] 79 pp.*

NEW YORK.—Commission on Old Age Security. *Report transmitted to the legislature February 17, 1930. Albany, 1930. 692 pp. Legislative document (1930) No. 67.*

The New York old-age assistance law, passed at the last session of the legislature, is based upon the findings of this commission. The report covers a wide study of the aged poor in the State, the causes of old-age dependency, its distribution, the established methods of caring for it with their respective advantages and disadvantages, and the whole question of administering relief in their own homes to the aged needy in the form commonly known as the old-age pension system. Its investigation of facts makes it a valuable addition to the few authoritative studies of the subject already in use.

— Department of Labor. *Special bulletin No. 166: Effect of noise on hearing of industrial workers, prepared by Bureau of Women in Industry. Albany, 1930. 42 pp.*

Reviewed in this issue.

OKLAHOMA.—Department of Labor. Bureau of Factory Inspection. *Bulletin No. 11-A: Petroleum industry safety standards, 1930 edition. Oklahoma City, 1930. 80 pp.; diagrams, illus.*

PORTO RICO.—Governor. *Thirtieth annual report [for fiscal year ending June 30, 1930]. San Juan, 1930. 20 pp.*

Reviewed in this issue.

UNITED STATES.—Employees' Compensation Commission. *Medical facilities available to employees of the United States Government injured in the performance of duty under Federal compensation act of September 7, 1916. Washington, 1930. 46 pp.*

— Federal Board for Vocational Education. *Bulletin No. 148, Vocational rehabilitation series No. 20: Vocational guidance in rehabilitation service. Washington, 1930. 55 pp.*

This handbook was prepared for the purpose of showing how systematic procedure can be developed in collecting and interpreting data concerning the disabled person and his prospective job with a view to proper placement, and how scientific methods in vocational rehabilitation can be adopted.

Official—Foreign Countries

BRITISH COLUMBIA (CANADA).—Minimum Wage Board. *Report for the year ended December 31, 1929. Victoria, 1930. 15 pp.*

In a discussion of the results of minimum wage legislation in Ontario it is stated that wages have been increased in a marked manner and kept at levels considerably higher than the actual legal minimum. In 1929 approximately 62 per cent of the employees had pay checks above the rates fixed by law.

CANADA.—Bureau of Statistics. General Statistics Branch. *The Canada year-book, 1930. Ottawa, 1930. 1094 pp.; maps, charts.*

Among the subjects covered in this volume are immigration, manufactures, labor and wages, and prices.

— Honorary Advisory Council for Scientific and Industrial Research. *Bulletin No. 15: Review of literature dealing with health hazards in spray painting. Prepared under the auspices of The Associate Committee on Spray Painting. Ottawa, 1930. 43 pp.*

This review of the literature on spray painting contains a statement by the committee regarding the hazards of the process and the measures which should be taken to safeguard workers in this occupation. There is a comprehensive bibliography.

DENMARK.—Invalideforsikringsraadet. *Beretning for Aaret 1929. Copenhagen, 1930. 181 pp.; charts.*

Report of the Invalidity Insurance Council of Denmark for the year 1929, including information on legislation and organization of the invalidity insurance system, statistics of invalidity, etc.

Table heads are in English as well as Danish, and there is a summary in English of the administration of the invalidity insurance act through the Council.

— Statistiske Departement. *Husleje og boligforhold, November, 1929. Copenhagen, 1930. 92 pp.; map. (Statistiske meddelelser, 4. Række, 85. Bind, 3. Hæfte.)*

Contains information in regard to housing and buildings in Denmark in November, 1929, including statistics in regard to the number and size of apartments and amount of rents, increases in rents, etc. Some of the table heads are in English.

— — *Produktionsstatistik 1929. Copenhagen, 1930. 82 pp. (Statistiske meddelelser, 4. Række, 85. Bind, 4. Hæfte.)*

Contains production statistics of Denmark for 1929, including figures for each separate branch of industry. Table heads and table of contents are in Danish and French.

— — *Statistisk Aarvog, 1930. Copenhagen, 1930. 262 pp. (In French and Danish.)*

Statistical yearbook containing information on social insurance, employment service, unemployment, industrial disputes during 1923–1929, trade agreements, hours of labor, wages, labor unions, welfare work, etc., in Denmark in 1930.

DRESDEN (GERMANY).—Statistisches Amt. *Dresden in Zahlen. Statistisches Jahrbuch. Dresden, 1930. 118 pp.*

Includes statistics on education, public health, welfare work, consumption, prices, employment, employment service, etc., in the city of Dresden, Germany.

— — *Die Verwaltung der Stadt Dresden, 1929. Dresden, 1930. 202 pp.*

Contains information on housing, welfare work, education, sanitation, etc., in the city of Dresden, Germany, during 1929.

ESTONIA.—Bureau Central de Statistique. *Annuaire de la statistique agricole, 1929. Tallinn, 1930. 264 pp.*

The yearbook contains information in regard to agriculture in Estonia for 1929, including prices and wages, work of family members, employment of farm hands by season and year, herders, day laborers, their wages and cost of living. Table heads are in both Estonian and French.

GERMANY.—Reichsarbeitsministerium. *Jahresberichte der Gewerbeaufsichtsbeamten und Bergbehörden für das Jahr 1929*. Berlin, 1930. 3 vols. [Various paging.]

Annual report of the German factory and mine inspection offices, for the year 1929. The subjects covered include the protection of workers against industrial hazards, economic conditions, training of apprentices, vocational guidance, hazards in artificial silk factories, provision of seats, etc.

— — — *Jahresberichte der gewerblichen Berufsgenossenschaften über Unfallverhütung für 1929*. Berlin, [1930]. 639 pp.; diagrams, illus. (53 Sonderheft zum Reichsarbeitsblatt.)

Annual report of trade organizations on prevention of industrial accidents in 1929 by various industries and occupations in Germany, including summaries for groups of related industries and occupations.

— — — *Die Tarifverträge im Deutschen Reich am 1. Januar 1929, nebst Anhang: Die Reichstarifverträge am 1. Januar 1930*. Berlin, 1930. 20 pp. (55 Sonderheft zum Reichsarbeitsblatt.)

Contains statistics of wage agreements for the year 1928, including a supplement showing the State wage agreements in force on January 1, 1930. In the first part, the wage agreements are classified by industries and industrial groups, extent or coverage, terms, hours of labor, wages, etc. The second part contains detailed statistics on the same subject.

GREAT BRITAIN.—Industrial Health Research Board. *Tenth annual report, for year ending December 31, 1929*. London, 1930. 29 pp.

This report gives an outline of the studies carried out by the board during 1929, covering problems of general industrial importance, such as heating and ventilation, lighting, noise and vibration, accident causation, sickness records and absenteeism on account of sickness, effect of posture and of repetitive work, etc.; studies of health and other problems in special industries; and special laboratory researches.

— Mines Department. *Ninth annual report of the Secretary for Mines, for the year ended December 31, 1929*. London, 1930. 216 pp.; charts.

Data from this report are presented in this issue.

— Registry of Friendly Societies. *Report for the year 1929. Part 1: General*, London, 1930. 33 pp.

— — — *Report for the year 1929. Part 4: Trade-unions. Section I—Proceedings and statistical notes*. London, 1930. 17 pp.

Figures are given for the year ending December 31, 1928. At this date there were 481 registered trade-unions with a membership of 3,764,865, which was less, by approximately 138,000, than at the close of 1927. The membership at the close of 1928, however, was still 500,000 more than at the end of 1914. The average contribution per member for all unions together was £1 16s. 10d. (\$8.96) for the year, the range being from 10s. 1d. (\$2.45) in agricultural groups to £4 1s. 6d. (\$19.83) in printing and allied trades.

ICELAND.—Statistical Bureau. *Iceland, 1930*. Reykjavik, 1930. 193 pp.; map, illus. (In English.)

Includes information on workers, labor unions, strikes and lockouts, protection of workers, prices and wages, poor relief, social insurance, sanitation, housing, temperance and prohibition, etc., in Iceland in 1930.

IRISH FREE STATE.—Registry of Friendly Societies. *Report for the year ending December 31, 1929*. Dublin, 1930. 32 pp.

Contains statistical details concerning friendly societies and industrial and provident societies, including agricultural, productive, distributive, land and housing, building, and miscellaneous societies, and trade-unions.

JAPAN.—Cabinet Imperial. Bureau de la Statistique générale. *Résumé statistique de l'Empire du Japon, 44^e année.* Tokyo, 1930. 161 pp.; charts. (In English and Japanese.)

This is a summary of the forty-eighth Statistical Annual of the Empire of Japan, published in December, 1929. One section of this volume is devoted to labor subjects—unemployment, placement, industrial controversies, wages, bonuses, etc. Wages of miners for the first quarter of 1929, taken from the summary, are presented in this issue.

LEAGUE OF NATIONS.—Economic and Financial Section. *International statistical yearbook, 1929.* Geneva, 1930. 262 pp. (In English and French.)

Includes statistics of production and consumption, and index numbers of prices and wages.

NETHERLANDS.—Departement van Arbeid, Handel en Nijverheid. *Centraal verslag der arbeidsinspectie in het Koninkrijk der Nederlanden over 1929.* The Hague, 1930. [Various paging.] *Diagrams, illus.*

Annual report of the labor inspectors in the Netherlands for the year 1929, including information on the personnel of labor inspection offices and their activities in various fields, legislation, working hours, safety measures and devices, accidents, medical inspection, employment of women and juveniles, and various labor conditions.

NEW ZEALAND.—Census and Statistics Office. *Statistical report on prices, wages and hours of labor, employment and unemployment, industrial accidents, building societies, etc., for the year 1928.* Wellington, 1930. 203 pp.

Data on wages and hours in New Zealand in 1928–29, taken from this report, are given in this issue.

QUEENSLAND (AUSTRALIA).—Registrar of Friendly Societies, Building Societies, and Industrial and Provident Societies. *Forty-fifth report, containing a general review of friendly societies in Queensland, lists of societies to March 31, 1930, and financial and numerical statements for the year ended June 30, 1929.* Brisbane, 1930. 34 pp.

SPAIN.—Ministerio de Trabajo y Previsión. *Boletín de Información Social, año 1, número 1.* Madrid, August, 1930. [Various paging]; charts.

This publication supersedes the Boletín Oficial, which was issued by the Spanish Ministry of Labor and Welfare up to and including the July, 1930, issue.

The present bulletin contains industrial accident and cost-of-living statistics, as well as detailed information concerning strikes in Spain and the causes thereof. Social conditions in Spain, Latin-America, and other countries are dealt with in considerable detail. An account is given also of the various employees' associations and workers' organizations functioning in Spain.

— — — Servicio General de Estadística. *Anuario estadístico de España, año XIV, 1928.* Madrid, 1930. xxvii, 71 pp.

In addition to statistical data relating to population, production, education, etc., this yearbook for Spain contains tables showing index numbers of food prices and the number of strikes and industrial accidents that occurred in Spain in 1927 and 1928. Wage statistics are given in considerable detail for the same years for various occupations.

SWITZERLAND.—Département Fédéral de l'Économie Publique. *Rapports des inspecteurs fédéraux des fabriques, 1928 et 1929.* Aarau, 1930. 242 pp.

The reports of the Federal factory inspectors for the years 1928 and 1929.

TOKYO (JAPAN).—Municipal Office. Bureau of Statistics. *Statistical abstract for Tokyo, 1928.* Vol. 1. Tokyo, 1930. 157 pp.; map. (In English.)

Part VIII, which is devoted to labor statistics, gives data on hours and wages, etc., in factories and workshops, average wages and index numbers of wages, and labor disputes.

UNION OF SOUTH AFRICA.—Office of Census and Statistics. *Special report series No. 70: Fourteenth industrial census, 1928-29. (Preliminary report.) Pretoria, 1930. 13 pp., mimeographed. (In Dutch and English.)*

WARSAW (POLAND).—Magistrat M. St. Warszawy. *Rocznik Statystyczny Warszawy 1928. Warsaw, 1930. 275 pp. (In Polish and French.)*

The yearbook contains statistical information for the city of Warsaw, Poland, for the year 1928, including data on wages, employment, employment service, unemployment, industrial disputes, labor unions, social insurance, welfare work, etc.

Unofficial

AMERICAN FEDERATION OF LABOR. Executive Council. *Report to the fiftieth annual convention, Boston, Mass., October 6, 1930. Washington, 1930. 96 pp.; map, charts.*

Data from this report, on benefit services of standard national and international unions, appear in this issue of the Labor Review.

BERUFGENOSSENSCHAFT DER FEINMECHANIK UND ELEKTROTECHNIK. *Jahresbericht über die Durchführung der Unfallverhütungsvorschriften und die Massnahmen für die erste Hilfe. Berlin, 1930. 37 pp.; diagrams, illus.*

A report on the activities of the technical inspection offices in Germany during the year 1929, including information on industrial accidents by causes and occupations and measures for prevention of industrial accidents and diseases.

CADES, HAZEL RAWSON. *Jobs for girls. New York, Harcourt, Brace & Co., 1930. 208 pp.*

A discussion, written in a popular style, of different lines of work open to girls.

COMMITTEE ON THE COSTS OF MEDICAL CARE. *Abstract of publication No. 5: Medical care for 15,000 workers and their families. A survey of the Endicott Johnson workers' medical service, 1928, by Niles Carpenter and others. Washington, 910 Seventeenth Street NW., September, 1930. 17 pp.*

Reviewed in this issue.

— *Abstract of publication No. 6: A survey of the medical facilities of Shelby County, Ind., 1929, by Allon Peebles. Washington, 910 Seventeenth Street NW., 1930. 20 pp.; charts.*

Reviewed in this issue.

DIEUDE, CH. *Les allocations familiales. Louvain, La Société d'Études Morales, Sociales et Juridiques, 1929. 259 pp.*

An account of the origin and development of family allowances in France. Data on such grants in various other countries are also given. Considerable space is taken up with the discussion of the economic and juridical character of these benefits.

FORD, HENRY, AND CROWTHER, SAMUEL. *Moving forward. Garden City, N. Y., Doubleday, Doran & Co., 1930. 310 pp.*

Data on age distribution of Ford employees, taken from this volume, are given in this issue of the Review.

HABER, WILLIAM. *Industrial relations in the building industry. Cambridge, Harvard University Press, 1930. 593 pp.; charts. (Wertheim Fellowship Publications III.)*

The author states that "this book seeks to describe the major industrial problems in the construction industry, to relate them to the technical changes taking place and the business methods prevailing therein, and to present the elements out of which a more stable industrial relations policy can be evolved."

HANHAM, F. G. *Report of inquiry into casual labor in the Merseyside area. Liverpool, 1930. 190 pp.; charts.*

The section of the report dealing with labor conditions of dock workers in the port of Liverpool is summarized in this issue.

INTERNATIONAL FEDERATION OF TRADE-UNIONS. *Sixth year book, 1930*. Amsterdam, W. Tesselschadestraat, 31, 1930. 244 pp. (In English, French, and German.)

The 1930 edition of the yearbook of the International Federation of Trade-Union is the first to be published since 1927 when it was decided that the yearbook should be published only every three years. Certain statistics on trade-union membership contained in this edition were printed in the August, 1930, issue of the Review (pp. 124-126), the source being the International Trade-Union Movement for April and May, 1930.

MEIKLEJOHN, KENNETH, AND NEHEMKIS, PETER. *Southern labor in revolt*. New York, Intercollegiate Student Council of League for Industrial Democracy, 112 East Nineteenth Street, 1930. 24 pp.

MERCHANTS' ASSOCIATION OF NEW YORK. Industrial Bureau. *Money loans to employees: A report of experience and current practices and policies*. New York, 233 Broadway, January, 1930. 10 pp.

Reviewed in this issue.

MICHIGAN, UNIVERSITY OF. School of Business Administration. Bureau of Business Research. *Michigan business studies, Vol. III, No. 1. Earnings of women in business and the professions, by Margaret Elliott and Grace E. Manson*. Ann Arbor, 1930. 215 pp.; charts.

Includes figures and charts showing the influence on earnings of such factors as age, work experience, size of community, marital status, education, responsibility for dependents, and occupational stability, and also gives data on the effects of earnings on the socio-economic status of the workers.

POST, LOUIS F. *The prophet of San Francisco: Personal memories and interpretations of Henry George*. New York, Vanguard Press, 1930. 335 pp.

REED, LOUIS S. *The labor philosophy of Samuel Gompers*. New York, Columbia University Press, 1930. 190 pp. (Columbia University studies in history, economics, and public law, No. 327.)

In dealing with the ideas and policies of the subject of his study, the author tries to account for them, and in cases where these ideas and policies changed, to show their development and the causes thereof.

SATURDAY NIGHT CLUB. *A study of old-age dependency in the city of Baltimore*. Baltimore, 1930. 16 pp.

This study was made early in 1930 in an effort to find out how many aged persons in Baltimore, cared for by public or private charity, would be eligible for pensions if the old age pension law of 1927 were put into effect. A careful survey showed 437 persons meeting all the requirements of the pension law and not requiring institutional care. The cost of supporting such cases in public institutions is estimated at a minimum of \$342.95 each per annum.

"If a pensioner received the full allotment of the pension, or \$365, the present almshouse system, using the above figures, would be cheaper by \$22.05 per year per person. If, on the other hand, the Pennsylvania experience, that the average annual cost for pensions was \$248, be taken, the present almshouse system would be more costly by \$94.95 per year per person."

TAYLOR, GRAHAM. *Pioneering on social frontiers*. Chicago, University of Chicago Press, 1930. 457 pp.

A discussion of some of the social movements and developments of the past 50 years by one who has played an important part in determining their character and direction.

TOKYO CHAMBER OF COMMERCE AND INDUSTRY. *The annual statistical report, 1929, Tokyo, 1930*. 238 pp. (In Japanese and English.)

In addition to the statistics on prices and wages, production, commerce, and finance for the city of Tokyo, this volume also includes data on public finance, money and banking, manufacturing, etc., of the Japanese Empire.

WATSON, FREDERICK. *Civilization and the cripple*. London, John Bale, Sons & Danielsson (Ltd.), 1930. 120 pp.; map, illus.

Discusses the influence of war on the cripple, the education and training of the cripple, the American scheme for dealing with the disabled, the prevention of crippling diseases, rehabilitation, and the limitation of social service.

WHITE, LEONARD. *The civil service in the modern State*. Chicago, University of Chicago Press, 1930. 563 pp.

A collection of selected fundamental documents pertaining to the civil service of 14 countries: Australia, Austria, Belgium, Canada, France, Germany, Great Britain, Italy, Japan, Norway, Rumania, Sweden, Switzerland, and the United States. Published under the auspices of the International Congress of the Administrative Sciences.

WIESE, MILDRED J., AND RETICKER, RUTH. *The modern worker*. New York, Macmillan Co., 1930. 610 pp.; diagrams, illus.

An elementary textbook for the study of labor problems. At the end of each chapter is a set of questions and references for further study.

WISCONSIN STATE FEDERATION OF LABOR. *Proceedings of the thirty-eighth annual convention, held at La Crosse, Wis., July 15-18, 1930*. Milwaukee, Craftsmen Press, 1930. 164 pp.

Among the recommendations made by the legislative committee to the convention was one favoring still greater efforts to secure the passage of a bill for unemployment compensation similar to that proposed at the 1929 session of the State legislature.