

UNITED STATES DEPARTMENT OF LABOR

FRANCES PERKINS, Secretary

BUREAU OF LABOR STATISTICS

ISADOR LUBIN, Commissioner

TREND OF EMPLOYMENT

DECEMBER 1933



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LEWIS E. TALBERT, Chief

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TREND OF EMPLOYMENT

December 1933

THE Bureau of Labor Statistics of the United States Department of Labor presents herewith data compiled from pay-roll reports supplied by representative establishments in 89 of the principal manufacturing industries of the country and 16 nonmanufacturing industries, covering the pay period ending nearest the 15th of the month. Additional information is presented concerning employment on public-works projects, public roads, the Federal service, and class I steam railroads.

Employment in Selected Manufacturing Industries in December 1933

Comparison of Employment and Pay-Roll Totals in December 1933 with November 1933 and December 1932

FACTORY employment decreased 1.8 percent in December 1933 as compared with November 1933 and pay rolls decreased 1 percent over the month interval, according to reports received from representative establishments in 89 important manufacturing industries of the country. Comparing the indexes of employment in December 1933 and December 1932, the level of employment in the former month is 20.2 percent above the level in December 1932. The December 1933 pay-roll index, compared with the December 1932 pay-roll index indicates an increase of 32.1 percent in pay rolls over the corresponding month of the preceding year.

The index of employment in December 1933 was 70.1, as compared with 71.4 in November 1933, 74 in October 1933 and 58.3 in December 1932; the pay-roll index in December 1933 was 49.8, as compared with 50.3 in November 1933, 53.6 in October 1933, and 37.7 in December 1932. The 12-month average for 1926 equals 100.

These changes in employment and pay rolls in December 1933 are based on reports supplied by 18,015 establishments in 89 of the principal manufacturing industries of the United States. These establishments reported 3,125,093 employees on their pay rolls during the pay period ending nearest December 15 whose combined weekly earnings were \$56,352,943. The employment reports received from these cooperating establishments cover approximately 50 percent of the total wage earners in all manufacturing industries of the country.

Declines in factory employment in December as compared with November have been recorded in 7 of the 10 preceding years for which data are available. The decrease, therefore, in employment over the

month interval is not unexpected, although the decline of 1.8 percent in December is greater than the average decrease of 0.8 percent shown in December over the 10-year period 1923-32. The decrease of 1 percent in pay rolls in December 1933 is contrary to the average change in pay rolls between November and December over the preceding 10-year period (an average increase of less than one tenth of 1 percent).

This percentage decrease in factory employment between November and December represents the release of approximately 113,000 workers from gainful employment in manufacturing establishments over the month interval. The percentage decline in pay rolls reduces the estimated amount of weekly wages disbursed in December by \$880,000 as compared with November.

The index of factory employment in December 1933 compared with the March employment index (55.1) shows a gain of 27.2 percent in employment over this 9-month interval. A similar comparison of the pay-roll indexes in these 2 months indicates an increase in December of 49.1 percent over the March pay-roll index (33.4). These percentage gains indicate an increase in actual number of workers over this interval of approximately 1,338,000 and in weekly pay rolls of approximately \$36,200,000.

Increases in employment were reported in 25 of the 89 manufacturing industries surveyed, and 37 industries reported increases in pay rolls over the month interval. While 64 industries reported decreased employment, a number of the decreases were of seasonal character, the clothing industries regularly reporting declines in employment at this time of year as do the industries connected with building construction, i.e., brick, cement, sawmills, millwork, and steam fittings. Other seasonal declines were reported in the confectionery, ice cream, baking, flour, shoe, paper box, stove, and furniture industries. The most pronounced gains in both employment and pay rolls between November and December were in the automobile industry, in which increases of 16.7 percent in employment and 16.3 percent in pay rolls were reported. These sharp increases reflect the increased operations in automobile plants, marking the production of new models. The electric- and steam-car building industry reported a gain of 11.9 percent in employment and a corresponding gain in pay-roll totals, and the agricultural implement industry reported an increase of 9.2 percent in number of workers with a larger gain in earnings. The most pronounced decline in employment over the month interval (19.7 percent) was reported in the men's furnishings industry. The stove industry reported a drop of 15.4 percent in number of employees, and the radio and cement industries reported decreases of 11.6 and 11.3 percent, respectively. Decreases in employment ranging from 10 to 10.6 percent were reported in the shirt

and collar, women's clothing, cane-sugar refining, and confectionery industries. The highly seasonal beet-sugar industry reported a decrease of 9 percent in employment, denoting the slackening in operations following the November peak activities.

Two of the 14 groups into which the manufacturing industries are classified showed gains in employment between November and December, the remaining 12 groups reporting decreased employment over the month interval. The increase in employment in the transportation group was quite pronounced (14.4 percent) and was due primarily to sharp increases in employment in the automobile, electric- and steam-car building, and shipbuilding industries. The increase in employment in the paper and printing group was small (0.3 percent) and was due to increased employment in the book and job and the newspaper and periodical printing industries, which more than offset the declines in employment in the paper box and the paper and pulp industries. The most pronounced decline in employment (6 percent) over the month interval in the 12 groups reporting decreased employment was shown in the tobacco manufactures group, in which decreases in both the cigar and cigarette and the chewing and smoking tobacco industries were reported. The textile group reported a decline of 4.8 percent in employment between November and December, each of the 14 industries in this group reporting decreased employment. A number of the decreases in this group were seasonal. The lumber group reported a decrease of 4.5 percent in employment, due chiefly to declines in the furniture and sawmill industries, and the nonferrous metals group reported a decrease of 3.4 percent, each of the eight industries comprising this group reporting decreased employment. The food group reported a decrease of 3 percent in employment between November and December, due largely to seasonal declines in the confectionery, ice cream, beet sugar, and baking industries. The rubber products group reported a decrease of 2.9 percent, due chiefly to the sharp decline in the rubber goods, other than shoes and tires, industry, and the stone-clay-glass group reported a decrease of 2.6 percent reflecting the seasonal declines in the brick, cement, and marble-slate-granite industries. The railroad repair shop group reported a decrease of 2.2 percent in employment between November and December. The iron and steel and machinery groups reported decreases of 1.6 percent each. In the former group, the iron and steel industry reported a decrease of 1.3 percent in employment, coupled with an increase of 1.9 percent in pay rolls, reflecting improved operating time in certain plants, while in the latter group, the foundry and machine-shop and the electrical-machinery industries reported decreases of 1.9 and 1.4 percent, respectively. Among the industries which reported increased employment in this last-named group are two industries, agricultural implements and machine tools, in which

the changes are of especial significance. Both of these industries have shown consistent expansion since the early part of this year, and while still employing only approximately 50 percent of the number normally employed in the industry, have reached in December the highest point registered in these industries since 1931.

A comparison of the indexes of employment and pay roll in manufacturing industries in December 1933 with December 1932 shows that 81 of the 89 industries surveyed reported increased employment over the year interval while 82 industries had increased pay rolls. The beverage industry showed the most pronounced gain in employment over the year interval, 120.3 percent, due to legalizing the manufacture of beer. Other outstanding percentage gains in employment over the year interval were shown in radios, typewriters, fertilizers, agricultural implements, machine tools, textile machinery, forgings, and engines-turbines-tractors. Increases in employment ranging from 35 to 46.1 percent were reported in the turpentine and rosin, glass, chemicals, smelting, plumbers' supplies, wirework, iron and steel, aircraft, cash registers, stoves, carpets, tools, rubber tires, and sawmill industries. Decreases in both employment and pay roll over the 12-month period were reported in seven industries—women's clothing, corsets and allied garments, men's furnishings, millinery, electric-railroad repair shops, marble-granite-slate, and cigars and cigarettes. The shirt and collar industry reported a decrease in employment in December 1933, compared with December 1932, coupled with an increase in pay rolls.

In table 1, which follows, are shown the number of identical establishments reporting in both November and December 1933 in the 89 manufacturing industries surveyed, together with the total number of employees on the pay rolls of these establishments during the pay period ending nearest December 15, the amount of their earnings for 1 week in December, the percentages of change over the month and year intervals, and the indexes of employment and pay roll in December 1933.

The monthly percentages of change for each of the 89 separate industries are computed by direct comparison of the total number of employees and of the amount of weekly pay roll reported in identical establishments for the 2 months considered. The percentages of change over the month interval in the several groups and in the total of the 89 manufacturing industries are computed from the index numbers of these groups, which are obtained by weighting the index numbers of the several industries in the groups by the number of employees or wages paid in the industries. The percentages of change over the year interval in the separate industries, in the groups and in the totals, are computed from the index numbers of employment and pay-roll totals.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING ESTABLISHMENTS IN DECEMBER 1933 WITH NOVEMBER 1933 AND DECEMBER 1932

Industry	Estab- lish- ments report- ing in both Novem- ber and Decem- ber	Employment			Pay-roll totals			Index num- bers Decem- ber 1933 (av- erage 1926= 100)	
		Num- ber on pay roll Decem- ber 1933	Percent of change		Amount of pay roll (1 week) Decem- ber 1933	Percent of change		Em- ploy- ment	Pay- roll totals
			No- vem- ber to Decem- ber 1933	Decem- ber to Decem- ber 1933		No- vem- ber to Decem- ber 1933	Decem- ber to Decem- ber 1933		
Food and kindred prod- ucts	2,951	237,711	-3.0	+18.4	\$6,046,322	+1.0	+25.1	98.5	81.2
Baking.....	982	66,898	-1.4	+10.1	1,464,472	-8	+11.0	86.9	71.7
Beverages.....	382	23,033	+3.1	+120.3	652,116	+8.6	+150.2	140.8	126.6
Butter.....	275	4,128	-1.5	+7.8	80,436	-2.9	+1.4	101.1	74.6
Confectionery.....	290	37,069	-10.6	+1.5	566,860	-3.3	+12.1	87.7	71.4
Flour.....	408	16,721	-2.1	+13.5	342,400	+2	+12.2	94.0	74.7
Ice cream.....	309	8,155	-5.1	+6.9	205,179	-4.3	+6.0	66.2	49.8
Slaughtering and meat packing.....	235	102,975	-9	+23.9	2,185,465	+7.1	+34.8	106.8	91.8
Sugar, beet.....	57	20,198	-9.0	+30.8	370,924	-14.0	+56.9	263.1	175.6
Sugar refining, cane.....	13	8,534	-10.4	+10.0	178,470	-11.2	+2	82.2	61.3
Textiles and their products	3,266	710,249	-4.8	+11.8	\$9,964,016	-7.4	+26.6	79.7	56.7
Fabrics	1,967	591,154	-4.0	+17.5	8,233,041	-5.9	+32.7	86.7	65.8
Carpets and rugs.....	27	16,659	-7.0	+36.6	274,312	-10.2	+57.1	71.6	48.7
Cotton goods.....	696	297,787	-3.0	+27.5	3,670,596	-5.3	+54.5	95.9	77.1
Cotton small wares.....	113	9,650	-5.1	+8.6	144,703	-3.9	+17.7	85.6	64.4
Dyeing and finishing textiles.....	154	39,840	-1.4	+17.1	714,688	-3.5	+23.8	91.3	66.0
Hats, fur-felt.....	31	5,357	-2.3	+6.3	104,816	-7.4	+9.2	69.3	45.3
Knit goods.....	454	109,130	-6.0	+1.9	1,607,568	-11.2	+12.1	86.8	66.5
Silk and rayon goods.....	262	49,544	-5.6	+3.2	686,689	-7.8	+18.2	61.6	45.5
Woolen and worsted goods.....	240	63,187	-4.0	+18.7	1,049,669	-9	+26.5	84.9	65.4
Wearing apparel	1,299	119,095	-7.5	-3.4	1,710,975	-12.0	+9.9	63.0	38.8
Clothing, men's.....	382	59,640	-5.9	+3.2	832,599	-15.2	+27.7	67.1	39.2
Clothing, women's.....	558	25,461	-10.1	-11.3	434,490	-11.4	-6	56.6	35.8
Corsets and allied gar- ments.....	30	5,001	-9	-9	69,224	+2.7	-5.5	97.4	72.4
Men's furnishings.....	75	6,331	-19.7	-23.6	76,745	-24.7	-17.2	53.1	33.7
Millinery.....	138	7,275	-1.3	-3	116,456	-8	-3	59.7	35.2
Shirts and collars.....	116	15,387	-10.0	-2.0	181,461	-15.1	+14.5	62.7	47.4
Iron and steel and their products, not including machinery	1,383	401,717	-1.6	+35.8	7,086,366	+9	+78.9	69.8	43.3
Bolts, nuts, washers, and rivets.....	79	13,103	-3.7	+34.6	228,321	-5.3	+62.9	82.8	54.9
Cast-iron pipe.....	42	6,611	+4.4	+20.3	102,691	+15.8	+52.0	34.9	22.5
Cutlery (not including silver and plated cut- lery) and edge tools.....	131	11,286	-2.2	+25.1	217,057	+1.6	+40.2	76.7	55.1
Forgings, iron and steel.....	66	8,040	+1.6	+58.1	156,023	+5.3	+104.3	84.4	56.8
Hardware.....	82	26,479	+5.5	+16.5	463,342	+15.8	+41.2	58.0	35.3
Iron and steel.....	205	240,865	-1.3	+39.9	4,213,822	+1.9	+102.7	72.9	44.4
Plumbers' supplies.....	73	8,079	-4.6	+42.3	118,428	-9	+61.1	65.6	34.0
Steam and hot-water heat- ing apparatus and steam fittings.....	97	24,440	-3.4	+28.8	450,524	+6	+46.8	43.8	27.9
Stoves.....	160	19,993	-15.4	+37.4	338,065	-21.9	+52.3	68.0	39.3
Structural and ornamen- tal metalwork.....	195	16,163	-1.2	+23.5	291,572	-3.6	+44.0	49.4	31.4
Tin cans and other tin- ware.....	60	10,394	+3.0	+22.9	205,894	+9.1	+30.6	87.4	55.5
Tools (not including edge tools, machine tools, files, and saws).....	120	8,568	-2	+36.2	155,737	+1.3	+57.1	83.2	54.5
Wirework.....	73	7,696	+4	+40.9	144,890	+8.0	+88.4	123.0	99.5

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING ESTABLISHMENTS IN DECEMBER 1933 WITH NOVEMBER 1933 AND DECEMBER 1932—Continued

Industry	Estab- lish- ments report- ing in both Nov- ember and Decem- ber	Employment			Pay-roll totals			Index num- bers Decem- ber 1933 (av- erage 1926= 100)	
		Num- ber on pay roll Decem- ber 1933	Percent of change		Amount of pay roll (1 week) Decem- ber 1933	Percent of change		Em- ploy- ment	Pay- roll totals
			Nov- ember to Dec- ember 1933	Dec- ember 1932 to Dec- ember 1933		Nov- ember to Dec- ember 1933	Dec- ember 1932 to Dec- ember 1933		
Machinery, not including transportation equipment	1,777	340,033	-1.6	+39.0	86,608,956	-1.4	+58.9	63.1	42.9
Agricultural implements	76	10,473	+9.2	+69.6	195,783	+11.7	+118.3	44.1	39.3
Cash registers, adding machines, and calculating machines	33	15,641	+6	+38.2	394,490	+2.4	+58.1	87.2	72.1
Electrical machinery, apparatus, and supplies	282	103,821	-1.4	+27.0	1,934,347	-3.5	+38.2	61.7	44.9
Engines, turbines, tractors, and water wheels	91	20,861	+5.1	+53.4	468,658	+10.7	+70.8	61.5	42.7
Foundry and machine-shop products	1,033	111,203	-1.9	+32.0	2,062,997	-1.2	+54.9	58.2	36.1
Machine tools	155	16,787	+2.1	+67.1	361,753	+4.4	+101.1	52.3	37.8
Radios and phonographs	44	36,306	-11.6	+112.5	679,684	-14.6	+121.2	149.6	112.6
Textiles machinery and parts	50	12,121	-3.2	+59.8	250,725	-5.2	+86.4	86.6	64.5
Typewriters and supplies	13	12,820	+2.3	+73.4	290,519	+8.8	+121.2	89.8	71.0
Nonferrous metals and their products	627	101,243	-3.4	+27.5	1,842,671	-3.6	+44.0	67.7	48.4
Aluminum manufactures	17	3,695	-1.0	+31.4	60,493	-2.7	+41.4	62.4	41.0
Brass, bronze, and copper products	218	38,449	-3.8	+31.8	725,280	-6	+56.4	67.2	46.3
Clocks and watches and time-recording devices	26	8,671	-8.9	+10.9	154,448	-13.0	+36.6	48.0	38.8
Jewelry	119	7,406	-8.6	+8.5	142,319	-8.7	+12.7	40.7	30.2
Lighting equipment	52	3,631	-4	+26.8	67,202	+3.0	+37.3	85.2	64.0
Silverware and plated ware	55	8,818	-4.9	+23.2	174,897	-6.7	+39.9	76.6	52.9
Smelting and refining—copper, lead, and zinc	40	13,421	-2.9	+43.2	239,767	-6.1	+37.7	84.2	51.9
Stamped and enameled ware	100	17,152	-1.9	+16.8	278,265	-4.1	+48.0	69.7	51.2
Transportation equipment	414	265,738	+14.4	+28.4	5,363,313	+14.0	+32.2	58.7	41.5
Aircraft	25	7,145	-3	+38.5	176,938	-3.5	+19.4	259.9	231.0
Automobiles	226	215,482	+16.7	+29.7	4,304,091	+16.3	+35.7	59.9	42.2
Cars, electric- and steam-railroad	51	9,803	+11.9	+22.5	175,906	+11.8	+22.4	24.5	14.2
Locomotives	11	2,599	-7.5	+34.5	48,942	-10.7	+27.4	18.7	12.1
Shipbuilding	101	30,709	+6.0	+20.7	637,436	+5.5	+16.7	80.6	60.1
Railroad repair shops	892	90,268	-2.2	-4	2,148,217	-2.9	+4.9	49.7	40.9
Electric railroad	359	19,045	+1	-2.7	488,690	+1.0	-4.0	64.1	52.3
Steam railroad	533	71,223	-2.5	+8	1,659,527	-3.5	+5.8	48.6	40.0
Lumber and allied products	1,565	148,143	-4.5	+28.1	2,049,383	-7.7	+46.3	46.9	27.5
Furniture	456	49,698	-8.9	+17.2	694,815	-11.0	+27.7	53.8	30.4
Lumber:									
Millwork	489	20,514	-2.5	+14.5	302,534	-9	+25.7	37.8	23.0
Sawmills	599	76,135	-4.1	+35.0	1,030,365	-8.5	+68.4	45.1	26.6
Turpentine and rosin	21	1,796	+6.5	+46.1	21,669	+7.8	+50.8	66.9	56.4
Stone, clay, and glass products	1,276	97,630	-2.6	+20.6	1,610,957	-2.6	+26.4	49.1	30.2
Brick, tile, and terra cotta	640	17,923	-7.3	+12.6	221,685	-7.2	+25.3	26.8	12.4
Cement	129	10,851	-11.3	+2.1	172,067	-17.1	+2.3	33.6	17.6
Glass	172	46,300	+9	+44.1	840,270	+2.2	+57.6	82.4	60.5
Marble, granite, slate, and other products	217	4,743	-3.5	-8.3	84,147	-1.7	-21.4	39.6	22.1
Pottery	118	17,813	+(1)	+19.1	292,788	-2.8	+26.8	74.2	46.8

¹ Less than one tenth of 1 percent.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING ESTABLISHMENTS IN DECEMBER 1933 WITH NOVEMBER 1933 AND DECEMBER 1932—Continued

Industry	Estab- lish- ments report- ing in both Nov- em- ber and Dec- em- ber	Employment			Pay-roll totals			Index num- bers Decem- ber 1933 (av- erage 1926 = 100)	
		Num- ber on pay roll Decem- ber 1933	Percent of change		Amount of pay roll (1 week) Decem- ber 1933	Percent of change		Em- ploy- ment	Pay- roll totals
			Nov- em- ber to Dec- em- ber 1933	Dec- em- ber 1932 to Dec- em- ber 1933		Nov- em- ber to Dec- em- ber 1933	Dec- em- ber 1932 to Dec- em- ber 1933		
Leather and its manufac- tures	468	124,905	- .3	+7.6	32,062,903	+1.9	+29.5	74.6	52.7
Boots and shoes.....	314	93,711	-1.5	+2.6	1,436,556	+ .2	+25.3	70.8	46.6
Leather.....	154	31,194	+3.5	+27.2	626,347	+6.2	+39.7	89.9	74.2
Paper and printing	1,920	230,618	+ .3	+13.8	5,193,523	+2.1	+10.6	90.5	71.8
Boxes, paper.....	322	25,334	-5.4	+16.3	440,676	-3.9	+19.7	83.6	69.4
Paper and pulp.....	432	103,317	-1.2	+26.0	1,817,073	- .9	+31.5	92.0	61.4
Printing and publishing: Book and job.....	735	46,181	+3.8	+6.3	1,177,032	+6.2	+5.7	77.3	62.7
Newspapers and peri- odicals.....	431	55,786	+1.4	+9.5	1,758,742	+2.2	+3.8	107.3	89.1
Chemicals and allied prod- ucts	1,093	180,230	- .8	+28.7	3,858,992	+ .4	+29.3	97.3	77.2
Chemicals.....	110	27,492	- .5	+43.4	644,863	+1.8	+47.0	121.3	87.9
Cottonseed—oil, cake, and meal.....	108	5,579	-4.2	+2.3	55,441	-6.7	+7.2	52.3	47.5
Druggists' preparations.....	56	8,213	+1.2	+16.8	158,672	+ .2	+15.7	83.4	82.0
Explosives.....	31	4,399	-2.8	+30.3	87,480	-5.6	+36.2	103.3	70.4
Fertilizers.....	169	8,789	+4.3	+72.6	109,153	+8.7	+58.2	75.1	48.1
Paints and varnishes.....	339	15,242	-1.0	+17.2	314,895	+ .8	+20.5	77.0	59.4
Petroleum refining.....	148	61,457	+1.1	+18.7	1,562,791	- .5	+15.4	74.2	59.8
Rayon and allied prod- ucts.....	23	34,195	-3.0	+30.6	625,159	+ .9	+42.4	191.8	174.5
Soap.....	109	14,864	-4.7	+13.1	300,538	-3.7	+11.4	106.9	88.2
Rubber products	146	93,408	-2.9	+31.2	1,817,773	+2.1	+45.8	84.6	59.2
Rubber boots and shoes.....	10	15,321	+ .8	+19.5	276,969	+2.7	+29.4	70.4	63.3
Rubber goods, other than boots, shoes, tires, and inner tubes.....	98	23,718	-7.4	+29.8	409,224	-5.4	+29.1	108.5	72.7
Rubber tires and inner tubes.....	38	54,369	- .9	+35.7	1,131,580	+5.6	+60.7	79.1	53.5
Tobacco manufactures	237	53,200	-6.0	-1.8	699,551	-7.3	+ .2	69.5	53.6
Chewing and smoking to- bacco and snuff.....	32	9,726	-2.3	+1.2	133,284	+2.2	+6.3	87.8	73.8
Cigars and cigarettes.....	205	43,474	-6.5	-2.3	566,267	-8.7	- .8	67.2	51.2
Total, 89 industries	18,015	3,125,093	-1.8	+20.2	56,352,943	-1.0	+32.1	70.1	49.8

Per Capita Earnings in Manufacturing Industries

PER capita weekly earnings in December 1933 for each of the 89 manufacturing industries surveyed by the Bureau of Labor Statistics and for all industries combined, together with the percentages of change in December 1933 as compared with November 1933 and December 1932, are shown in table 2.

These earnings must not be confused with full-time weekly rates of wages. They are per capita weekly earnings, computed by dividing the total amount of pay roll for the week by the total number of employees (part-time as well as full-time workers).

TABLE 2.—PER CAPITA WEEKLY EARNINGS IN MANUFACTURING INDUSTRIES IN DECEMBER 1933 AND COMPARISON WITH NOVEMBER 1933 AND DECEMBER 1932

Industry	Per capita weekly earnings in December 1933	Percent of change	
		November 1933-December 1933	December 1932-December 1933
Food and kindred products:			
Baking.....	\$21.89	+0.6	+0.8
Beverages.....	28.31	+5.3	+13.5
Butter.....	19.49	-1.4	-6.0
Confectionery.....	15.29	+8.1	+10.1
Flour.....	20.48	+2.4	-1.1
Ice cream.....	25.16	+1.9	-1.5
Slaughtering and meat packing.....	21.22	+8.0	+8.8
Sugar, beet.....	18.36	-5.5	+19.6
Sugar refining, cane.....	20.91	-1.9	-8.7
Textiles and their products:			
Fabrics:			
Carpets and rugs.....	16.47	-3.5	+15.0
Cotton goods.....	12.33	-2.4	+20.5
Cotton small wares.....	15.00	+1.2	+7.9
Dyeing and finishing textiles.....	17.94	-2.2	+6.0
Hats, fur-felt.....	19.57	-5.2	+2.7
Knit goods.....	14.73	-5.6	+9.7
Silk and rayon goods.....	13.86	-2.4	+14.3
Woolen and worsted goods.....	16.61	+3.2	+6.1
Wearing apparel:			
Clothing, men's.....	13.96	-9.9	+23.7
Clothing, women's.....	17.06	-1.5	+12.5
Corsets and allied garments.....	13.84	+3.7	-4.5
Men's furnishings.....	12.12	-6.2	+8.4
Millinery.....	16.01	+1.6	+1.2
Shirts and collars.....	11.79	-5.6	+16.8
Iron and steel and their products, not including machinery:			
Bolts, nuts, washers, and rivets.....	17.43	-1.6	+20.8
Cast-iron pipe.....	15.53	+10.8	+26.2
Cutlery (not including silver and plated cutlery) and edge tools.....	19.23	+3.9	+11.7
Forgings, iron and steel.....	19.41	+3.7	+29.7
Hardware.....	17.50	+9.8	+21.3
Iron and steel.....	17.49	+3.2	+45.6
Plumbers' supplies.....	14.66	+3.9	+13.4
Steam and hot-water heating apparatus and steam fittings.....	18.43	+4.1	+14.2
Stoves.....	16.91	-7.7	+11.2
Structural and ornamental metalwork.....	18.04	-2.4	+16.5
Tin cans and other tinware.....	19.81	+5.9	+6.2
Tools (not including edge tools, machine tools, files, and saws).....	18.18	+1.6	+15.7
Wirework.....	18.83	+7.5	+33.5
Machinery, not including transportation equipment:			
Agricultural implements.....	18.69	+2.2	+28.7
Cash registers, adding machines, and calculating machines.....	25.22	+1.8	+14.2
Electrical machinery, apparatus, and supplies.....	18.63	-2.1	+8.6
Engines, turbines, tractors, and water wheels.....	22.47	+5.3	+11.5
Foundry and machine-shop products.....	18.55	+1.7	+17.3
Machine tools.....	21.55	+2.3	+19.7
Radios and phonographs.....	18.72	-3.4	+4.0
Textile machinery and parts.....	20.69	-2.1	+16.6
Typewriters and supplies.....	20.32	+6.3	+28.0
Nonferrous metals and their products:			
Aluminum manufactures.....	16.37	-1.7	+7.5
Brass, bronze, and copper products.....	18.86	+3.3	+18.8
Clocks and watches and time-recording devices.....	17.81	-4.6	+23.1
Jewelry.....	19.22	-1	+3.6
Lighting equipment.....	18.51	+3.4	+8.0
Silverware and plated ware.....	19.83	-1.9	+13.6
Smelting and refining—copper, lead, and zinc.....	17.87	-3.3	-3.7
Stamped and enameled ware.....	16.22	-2.2	+26.8
Transportation equipment:			
Aircraft.....	24.76	-3.2	-13.9
Automobiles.....	19.97	-1.4	+5.0
Cars, electric and steam-railroad.....	17.94	-1	-3
Locomotives.....	18.83	-3.4	-5.7
Shipbuilding.....	21.41	-1.4	-3.3
Railroad repair shops:			
Electric railroad.....	25.66	+1.9	-1.5
Steam railroad.....	23.30	-1.0	+4.7
Lumber and allied products:			
Furniture.....	13.98	-2.4	+8.8
Lumber:			
Millwork.....	14.75	+1.7	+9.8
Sawmills.....	13.53	-4.7	+24.4
Turpentine and rosin.....	12.07	+1.3	+3.0

TABLE 2.—PER CAPITA WEEKLY EARNINGS IN MANUFACTURING INDUSTRIES IN DECEMBER 1933 AND COMPARISON WITH NOVEMBER 1933 AND DECEMBER 1932—Continued

Industry	Per capita weekly earnings in December 1933	Percent of change	
		November 1933—December 1933	December 1932—December 1933
Stone, clay, and glass products:			
Brick, tile, and terra cotta.....	\$12.37	+0.1	+11.2
Cement.....	15.86	-6.6	+2
Glass.....	18.15	+1.3	+9.5
Marble, granite, slate, and other products.....	17.74	+1.9	-13.9
Pottery.....	16.44	-2.8	+6.2
Leather and its manufactures:			
Boots and shoes.....	15.33	+1.7	+21.8
Leather.....	20.08	+2.7	+10.3
Paper and printing:			
Boxes, paper.....	17.39	+1.6	+2.7
Paper and pulp.....	17.59	+3	+4.4
Printing and publishing:			
Book and job.....	25.49	+2.4	-5
Newspapers and periodicals.....	31.53	+9	-5.3
Chemicals and allied products:			
Chemicals.....	23.46	+2.4	+2.9
Cottonseed—oil, cake, and meal.....	9.94	-2.5	+5.3
Druggists' preparations.....	19.32	-1.0	-8
Explosives.....	19.89	-2.8	+4.5
Fertilizers.....	12.42	+4.3	-8.1
Paints and varnishes.....	20.66	+1.7	+2.7
Petroleum refining.....	25.43	-1.7	-2.8
Rayon and allied products.....	18.28	+4.0	+8.8
Soap.....	20.22	+1.0	-1.7
Rubber products:			
Rubber boots and shoes.....	18.08	+1.9	+7.9
Rubber goods, other than boots, shoes, tires, and inner tubes.....	17.25	+2.1	-4
Rubber tires and inner tubes.....	20.81	+6.6	+18.3
Tobacco manufactures:			
Chewing and smoking tobacco and snuff.....	13.70	+4.6	+5.3
Cigars and cigarettes.....	13.03	-2.4	+1.8
Total, 89 industries.....	18.03	+9	+9.7

¹ Weighted.

General Index Numbers of Employment and Pay-Roll Totals in Manufacturing Industries

GENERAL index numbers of employment and pay-roll totals in manufacturing industries, by months, from January 1926 to December 1933, inclusive, together with average indexes for each of the years from 1926 to 1933, inclusive, are shown in the following table. In computing these general indexes the index numbers of each of the separate industries are weighted according to their relative importance in the total.

TABLE 3.—GENERAL INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES, JANUARY 1926 TO DECEMBER 1933

[12-month average, 1926=100]

Month	Employment								Pay rolls							
	1926	1927	1928	1929	1930	1931	1932	1933	1926	1927	1928	1929	1930	1931	1932	1933
January.....	100.4	97.3	91.6	95.2	90.7	74.6	64.8	56.6	98.0	94.9	89.6	94.5	88.1	63.7	48.6	35.8
February.....	101.5	99.0	93.0	97.4	90.9	75.3	65.6	57.5	102.2	100.0	93.9	101.8	91.3	68.1	49.6	36.4
March.....	102.0	99.5	93.7	98.6	90.5	75.9	64.5	55.1	103.4	102.0	95.2	103.9	91.6	69.6	48.2	33.4
April.....	101.0	98.6	93.3	99.1	89.9	75.7	62.2	56.0	101.5	100.8	93.8	104.6	90.7	68.5	44.7	34.9
May.....	99.8	97.6	93.0	99.2	88.6	75.2	59.7	58.7	99.8	99.8	94.1	104.8	88.6	67.7	42.5	38.9
June.....	99.3	97.0	93.1	98.8	86.5	73.4	57.5	62.8	99.7	97.4	94.2	102.8	85.2	63.8	39.3	43.1
July.....	97.7	95.0	92.2	98.2	82.7	71.7	55.2	67.3	95.2	93.0	91.2	98.2	77.0	60.3	36.2	46.5
August.....	98.7	95.1	93.6	98.6	81.0	71.2	56.0	71.6	98.7	95.0	94.2	102.1	75.0	59.7	36.3	51.9
September.....	100.3	95.8	95.0	99.3	80.9	70.9	58.5	73.9	99.3	94.1	95.4	102.6	75.4	56.7	38.1	53.3
October.....	100.7	95.3	95.9	98.4	79.9	68.9	59.9	74.0	102.9	95.2	99.0	102.4	74.0	55.3	39.9	53.6
November.....	99.5	93.5	95.4	95.0	77.9	67.1	59.4	71.4	99.6	91.6	96.1	95.4	69.6	52.5	38.6	50.3
December.....	98.9	92.6	95.5	92.3	70.6	66.7	58.3	70.1	99.8	93.2	97.7	92.4	68.8	52.2	37.7	49.8
Average ...	100.0	96.4	93.8	97.5	84.7	72.2	60.1	64.6	100.0	96.5	94.5	100.5	81.3	61.5	41.6	44.0

Index numbers showing relatively the variation in employment and pay rolls for each of the 89 industries included in the Bureau's survey, for each of the 14 groups of industries, and for all manufacturing industries combined, are shown in table 4, by months, for the years of 1931, 1932, and 1933, together with average indexes for each of the years from 1923 through 1933, where available.

The expansion of the Bureau's employment survey in 1931 to include 35 additional manufacturing industries, affected the comparability of certain group indexes over the entire period. The group indexes for years prior to 1931 are therefore not presented in the following tables except where the index numbers are strictly comparable with the group indexes now published.

The average general index of employment for the 12 months of 1933 for the 89 industries combined was 7.5 percent above the average index for 1932, and the pay-roll index was 5.8 percent higher than the average index for 1932.

Following table 4 are two charts which show the course of employment and pay-roll totals in all manufacturing industries combined for each month of the years 1926 to 1933, inclusive.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING IN DISTRICTS—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933

[12-month average 1926=100]

Month and year	General index		Food and kindred products									
			Group index		Baking		Beverages		Butter		Confectionery	
	Em- p- loy- ment	Pay- roll totals	Em- p- loy- ment	Pay- roll totals	Em- p- loy- ment	Pay- roll totals	Em- p- loy- ment	Pay- roll totals	Em- p- loy- ment	Pay- roll totals	Em- p- loy- ment	Pay- roll totals
1923 average.....	108.8	104.3	(1)	(1)	99.2	94.8	(1)	(1)	(1)	(1)	116.3	107.0
1924 average.....	98.2	94.6	(1)	(1)	100.5	98.4	(1)	(1)	(1)	(1)	103.2	99.9
1925 average.....	99.2	97.7	(1)	(1)	98.7	97.1	(1)	(1)	(1)	(1)	98.1	96.4
1926 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
1927 average.....	96.4	96.5	(1)	(1)	101.4	102.2	(1)	(1)	(1)	(1)	96.5	97.9
1928 average.....	93.8	94.5	(1)	(1)	100.9	101.6	(1)	(1)	(1)	(1)	93.0	93.3
1929 average.....	97.5	100.5	(1)	(1)	102.1	103.5	(1)	(1)	(1)	(1)	92.3	94.1
1930 average.....	84.7	81.3	(1)	(1)	96.8	98.5	(1)	(1)	(1)	(1)	85.9	86.2
1931 average.....	72.2	61.5	88.7	85.6	90.5	87.1	85.7	80.4	105.9	100.1	82.4	75.6
1932 average.....	60.1	41.6	82.1	69.5	81.8	70.9	74.2	62.2	97.3	83.1	76.3	59.7
1933 average.....	64.6	44.0	89.0	70.9	81.7	66.2	128.2	114.2	98.4	74.2	82.0	59.3
1931												
January.....	74.6	63.7	90.5	90.2	90.5	89.6	79.7	74.1	97.5	96.3	83.1	81.1
February.....	75.3	68.1	87.9	87.8	90.6	89.5	80.6	75.7	97.1	98.8	83.9	79.1
March.....	75.9	69.6	86.9	85.7	90.6	88.9	81.9	78.0	99.5	98.1	82.3	77.2
April.....	76.7	68.5	86.6	85.2	90.1	87.5	86.3	82.8	106.8	102.1	78.1	73.2
May.....	75.2	67.7	87.8	86.8	91.7	89.7	89.2	86.0	107.7	103.9	78.6	73.3
June.....	73.4	63.8	88.3	87.1	91.9	89.7	93.1	88.9	110.9	106.2	77.3	72.5
July.....	71.7	60.3	88.3	86.3	92.5	88.8	97.5	95.7	116.3	106.3	69.2	59.8
August.....	71.2	59.7	88.3	84.9	91.6	86.7	94.5	91.3	113.6	103.4	74.0	67.1
September.....	70.9	56.7	89.7	85.1	91.2	86.7	89.5	84.5	113.7	104.0	89.5	82.6
October.....	68.9	55.3	91.0	84.5	90.1	85.1	83.9	75.2	105.5	95.6	93.0	83.4
November.....	67.1	52.5	90.0	82.7	88.0	82.7	77.0	67.6	103.7	95.6	90.3	79.1
December.....	66.7	52.2	89.2	81.0	86.8	80.4	75.3	64.5	98.2	90.7	89.2	79.0
1932												
January.....	64.8	48.6	83.1	75.2	84.3	77.8	73.3	61.6	91.5	82.7	75.7	66.2
February.....	65.6	49.6	81.1	72.8	83.2	76.4	72.1	60.6	84.2	79.6	74.5	62.9
March.....	64.5	48.2	80.2	71.3	83.5	75.8	72.3	61.5	93.7	84.9	71.2	59.3
April.....	62.2	44.7	79.8	70.3	82.9	73.0	76.2	65.1	97.3	85.9	68.6	56.5
May.....	59.7	42.5	80.5	70.9	82.8	72.4	77.9	69.6	100.7	90.1	65.4	52.5
June.....	57.5	39.3	80.9	69.9	82.4	71.4	82.1	74.8	103.4	89.0	65.2	51.2
July.....	55.2	36.2	79.4	66.8	81.6	68.8	79.8	70.0	104.7	87.2	58.7	43.2
August.....	56.0	36.3	80.6	66.2	80.7	67.6	74.8	63.8	103.5	85.6	71.5	53.3
September.....	58.5	38.1	83.6	68.7	80.4	68.7	77.0	62.0	101.8	83.4	88.9	69.1
October.....	59.9	39.9	87.1	69.7	80.9	68.5	72.6	55.2	96.8	78.5	97.3	73.6
November.....	59.4	38.6	85.4	66.7	79.4	66.2	68.0	51.4	95.7	76.7	92.6	64.9
December.....	58.3	37.7	83.2	64.9	78.9	64.6	63.9	50.6	93.8	73.6	86.4	63.7
1933												
January.....	56.6	35.8	78.7	62.1	77.3	63.4	63.5	49.4	88.6	71.0	76.3	54.0
February.....	57.5	36.4	77.4	60.1	77.0	62.1	64.8	49.7	89.0	68.8	75.5	52.6
March.....	55.1	33.4	76.4	58.1	76.4	60.3	76.2	58.4	88.9	68.3	70.7	44.7
April.....	56.0	34.9	80.1	63.9	77.3	61.5	117.3	112.1	91.8	68.9	73.8	48.5
May.....	58.7	38.9	83.2	67.1	78.2	62.5	136.1	132.1	94.6	71.5	74.1	51.0
June.....	62.8	43.1	86.5	69.7	79.3	63.7	160.8	151.6	102.0	75.7	73.6	48.6
July.....	67.3	46.5	88.1	71.8	80.4	65.5	166.9	155.7	102.9	77.3	70.8	47.5
August.....	71.5	51.9	94.0	74.7	82.9	66.5	163.0	148.9	105.9	77.6	85.6	63.2
September.....	73.9	53.3	100.1	80.1	87.9	72.3	161.4	141.6	107.3	79.5	94.8	75.7
October.....	74.0	53.6	103.7	81.7	89.0	72.5	150.9	127.7	106.0	80.7	102.4	80.1
November.....	71.4	50.3	101.5	80.4	88.2	72.3	136.6	116.6	102.7	76.8	98.1	73.8
December.....	70.1	49.8	98.5	81.2	86.9	71.7	140.8	126.6	101.1	74.6	87.7	71.4

1 Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING INDUSTRIES**—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Food and kindred products—Continued									
	Flour		Ice cream		Slaughtering and meat packing		Sugar, beet		Sugar refining, cane	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	114.2	110.9	103.9	95.8	122.9	118.4	(1)	(1)	106.8	104.6
1924 average.....	108.1	108.2	100.3	93.1	115.1	111.8	(1)	(1)	104.6	105.4
1925 average.....	103.1	102.5	101.3	98.3	104.4	102.6	(1)	(1)	104.5	104.6
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	99.3	99.4	94.0	93.4	99.5	99.9	(1)	(1)	98.8	98.8
1928 average.....	100.0	102.1	92.4	93.1	99.5	101.0	(1)	(1)	91.1	94.9
1929 average.....	102.1	105.3	91.9	93.0	101.0	103.2	(1)	(1)	94.0	98.5
1930 average.....	97.0	99.9	87.6	87.5	97.1	100.2	(1)	(1)	91.6	94.4
1931 average.....	88.2	84.2	80.6	78.2	90.8	89.8	83.7	72.5	81.7	80.0
1932 average.....	83.9	70.2	72.8	61.7	86.9	72.9	84.6	59.9	76.3	66.9
1933 average.....	87.3	67.7	71.1	53.2	95.4	75.8	113.1	78.5	80.9	65.3
1931										
January.....	90.4	87.7	74.3	73.9	96.6	101.7	138.1	95.6	81.4	79.3
February.....	89.0	87.9	74.7	76.2	94.0	96.3	33.0	40.0	79.9	82.3
March.....	87.7	85.2	76.2	76.9	90.2	90.2	29.4	36.5	82.2	84.5
April.....	87.9	84.4	78.5	79.4	89.4	90.0	29.5	33.9	83.5	83.5
May.....	86.3	84.1	83.7	82.6	90.6	91.6	30.3	35.1	79.1	79.5
June.....	85.3	81.5	90.3	87.3	90.2	91.0	34.6	38.8	80.7	81.6
July.....	90.5	86.7	94.5	90.7	89.1	89.5	39.8	41.6	84.2	86.8
August.....	90.0	86.4	93.2	87.6	88.2	86.5	52.7	50.0	84.3	82.1
September.....	88.9	83.3	86.8	82.4	88.3	85.3	54.9	55.8	82.8	79.7
October.....	88.5	84.0	76.7	71.8	89.0	84.9	177.9	129.8	79.8	75.4
November.....	87.9	83.3	70.1	66.1	90.4	82.9	203.3	177.5	82.2	74.3
December.....	85.7	75.3	68.7	63.8	93.3	87.1	180.3	135.5	80.0	70.6
1932										
January.....	85.1	73.6	68.2	62.8	91.5	83.0	51.0	42.4	79.2	68.2
February.....	84.3	72.2	68.4	62.8	89.8	79.2	25.6	30.5	75.7	67.4
March.....	84.8	71.2	68.3	62.8	85.9	74.8	26.5	28.3	70.6	69.7
April.....	84.7	72.7	71.0	64.3	84.7	74.3	29.1	29.8	74.4	67.4
May.....	84.5	72.7	76.7	67.2	86.8	76.0	33.5	34.7	76.0	68.7
June.....	82.8	68.3	84.7	70.9	86.2	73.6	39.7	35.7	74.7	66.7
July.....	83.2	68.8	83.4	69.0	85.2	69.9	40.8	33.1	75.8	69.4
August.....	82.5	67.9	81.6	66.4	85.0	67.8	52.3	41.0	76.4	68.9
September.....	84.6	68.9	76.5	61.5	87.1	70.8	62.6	49.4	77.4	68.5
October.....	84.7	72.3	68.5	55.0	87.7	70.8	213.9	125.7	77.8	64.7
November.....	83.0	67.7	64.1	50.4	86.2	66.9	238.5	156.3	76.4	62.5
December.....	82.8	66.6	61.9	47.0	86.2	68.1	201.1	111.9	74.7	61.2
1933										
January.....	82.2	66.5	61.3	47.1	84.5	67.1	114.4	66.7	71.8	56.2
February.....	81.0	61.9	61.7	46.6	84.6	65.9	49.1	33.6	74.1	57.7
March.....	80.5	60.9	61.9	46.0	82.5	61.4	35.4	30.1	74.6	65.0
April.....	83.3	66.8	63.2	47.1	83.3	65.9	39.3	32.2	75.1	65.1
May.....	84.0	66.2	67.4	50.9	87.5	69.6	43.6	33.8	78.0	68.1
June.....	82.8	62.6	78.0	58.8	90.3	72.6	48.9	36.2	78.3	68.8
July.....	87.9	70.6	80.0	59.8	92.8	74.4	52.5	40.1	80.4	71.5
August.....	85.3	62.1	82.5	61.5	102.6	80.7	81.5	59.2	84.3	67.9
September.....	94.0	70.8	83.9	61.1	111.4	87.5	91.8	66.9	86.6	65.1
October.....	96.2	75.3	76.8	57.5	110.5	87.0	248.8	163.0	93.2	68.0
November.....	96.0	74.5	69.8	52.0	107.8	85.7	289.1	204.1	91.8	69.1
December.....	94.0	74.7	66.2	49.8	106.8	91.8	263.1	175.6	82.2	61.3

¹ Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Textiles and their products													
	Textile group index		Fabrics group index		Carpets and rugs		Cotton goods		Cotton small wares		Dyeing and finishing textiles		Hats, fur-felt	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	(1)	(1)	(1)	(1)	106.5	110.1	120.3	123.5	(1)	(1)	102.1	99.9	(1)	(1)
1924 average.....	(1)	(1)	(1)	(1)	98.1	95.2	99.9	99.6	(1)	(1)	94.0	91.8	(1)	(1)
1925 average.....	(1)	(1)	(1)	(1)	100.7	101.2	101.1	101.1	(1)	(1)	101.7	102.3	(1)	(1)
1926 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
1927 average.....	(1)	(1)	(1)	(1)	102.5	104.1	105.0	108.5	(1)	(1)	100.9	102.8	(1)	(1)
1928 average.....	(1)	(1)	(1)	(1)	101.0	95.9	95.2	91.7	(1)	(1)	99.5	101.0	(1)	(1)
1929 average.....	(1)	(1)	(1)	(1)	106.8	101.4	95.5	94.3	(1)	(1)	101.8	102.2	(1)	(1)
1930 average.....	(1)	(1)	(1)	(1)	81.9	66.0	80.6	73.3	(1)	(1)	93.0	87.9	(1)	(1)
1931 average.....	77.7	66.0	77.3	67.4	72.2	57.2	75.4	64.9	93.2	84.6	88.0	80.7	82.2	56.7
1932 average.....	65.1	46.1	69.0	48.1	54.4	32.6	69.1	47.7	78.4	57.7	77.2	57.2	65.8	39.6
1933 average.....	79.0	53.8	83.2	59.6	63.4	43.0	89.1	66.3	88.3	64.0	82.0	58.2	71.1	45.2
1931														
January.....	76.0	65.2	75.5	66.7	67.0	50.2	73.2	65.3	94.0	89.1	92.9	85.9	87.1	63.1
February.....	79.2	72.7	78.0	72.7	71.7	62.8	73.3	65.8	99.4	98.2	95.5	96.2	88.8	66.6
March.....	81.5	75.9	79.9	74.1	76.1	64.6	76.8	69.8	104.1	105.5	95.4	94.5	89.5	60.4
April.....	80.6	71.8	79.1	71.9	77.2	64.6	77.3	71.4	104.0	99.6	93.5	90.6	87.9	51.0
May.....	80.3	69.2	80.1	72.8	78.2	65.4	79.1	72.6	100.4	94.8	91.2	84.7	81.5	53.4
June.....	77.9	65.8	78.1	68.0	77.1	63.0	77.0	68.1	94.4	84.9	86.0	76.2	77.9	52.5
July.....	77.5	64.5	77.3	67.1	75.2	60.4	76.2	65.8	90.5	79.7	82.7	73.7	83.9	60.4
August.....	77.5	67.0	77.7	68.3	76.9	59.0	75.0	64.3	88.4	75.8	84.1	77.4	85.7	67.0
September.....	75.6	65.3	77.5	65.0	69.7	52.6	75.4	62.4	87.9	74.2	86.0	76.6	88.8	69.1
October.....	76.4	62.0	75.6	62.4	69.5	50.9	74.1	60.1	86.5	75.3	82.9	70.9	78.4	51.1
November.....	74.0	56.6	74.8	59.4	65.1	48.1	73.5	56.1	85.6	69.8	82.5	70.4	70.0	43.1
December.....	73.1	56.0	74.5	59.3	63.1	44.9	73.8	56.8	82.9	68.8	83.0	71.5	69.8	42.5
1932														
January.....	72.2	54.0	73.4	56.7	62.9	44.5	72.9	55.3	84.8	71.9	83.0	70.0	69.1	42.3
February.....	75.1	57.6	75.9	59.8	61.8	40.6	75.6	58.5	87.5	75.1	86.2	75.4	67.0	40.2
March.....	73.4	55.3	73.1	55.2	62.4	41.3	75.0	57.0	86.6	70.0	85.8	72.4	67.0	41.5
April.....	67.9	46.2	67.1	46.1	58.1	36.3	69.3	48.5	81.8	59.3	80.7	59.7	62.2	29.2
May.....	62.7	39.1	62.1	39.6	54.9	30.1	63.6	40.9	75.2	52.3	74.9	49.4	56.9	24.6
June.....	59.6	35.2	59.1	36.4	52.0	26.2	57.4	35.2	71.6	47.9	71.5	49.5	56.4	27.7
July.....	55.3	32.1	56.5	34.4	44.4	23.3	55.5	32.9	69.3	44.8	64.1	37.8	59.4	32.6
August.....	62.3	40.1	63.9	42.1	47.1	24.2	61.2	38.4	68.5	44.3	68.1	47.3	68.0	44.0
September.....	71.1	49.5	72.5	51.4	47.2	25.3	71.9	50.3	73.0	53.1	77.8	60.0	74.4	57.0
October.....	74.7	52.1	76.1	54.7	54.2	34.6	75.9	53.6	81.0	61.5	77.9	57.6	74.1	51.7
November.....	73.0	47.4	74.9	51.3	55.1	33.2	75.5	51.6	82.3	57.5	78.1	54.0	69.4	42.9
December.....	71.3	44.8	73.8	49.6	52.4	31.0	75.2	49.9	78.8	54.7	78.0	53.3	65.2	41.5
1933														
January.....	69.6	42.2	72.5	46.2	51.2	27.0	74.8	48.4	76.0	50.8	77.3	52.5	64.9	38.8
February.....	72.1	45.8	73.5	48.1	49.6	25.2	74.3	48.0	79.8	56.8	78.2	56.7	66.5	37.1
March.....	67.5	39.0	67.8	40.2	47.8	25.6	72.0	44.0	74.8	48.0	75.3	49.4	64.3	33.4
April.....	69.5	42.0	69.3	42.4	47.3	25.3	73.5	45.7	76.2	48.9	76.4	53.4	66.6	34.1
May.....	73.3	45.4	75.4	49.6	51.2	32.9	79.3	52.5	81.2	58.9	77.2	55.2	67.2	36.4
June.....	80.7	53.7	85.4	60.1	59.1	42.3	91.7	65.1	89.2	66.4	81.0	60.2	68.5	43.8
July.....	86.4	57.6	93.7	66.9	70.2	50.6	101.4	73.7	99.4	76.4	88.5	64.6	70.5	46.1
August.....	88.5	66.3	96.2	76.5	74.6	57.2	103.5	87.8	105.4	82.2	93.1	65.8	82.6	57.3
September.....	88.5	68.9	94.3	74.6	78.4	61.2	101.4	85.6	101.8	78.4	77.4	62.7	84.8	63.7
October.....	87.9	67.7	93.6	74.4	82.8	65.7	102.6	86.4	99.6	77.4	75.7	54.0	76.8	57.6
November.....	83.7	61.2	90.3	69.9	77.0	54.3	98.8	81.4	90.2	67.0	92.6	68.4	71.0	48.9
December.....	79.7	56.7	86.7	65.8	71.6	48.7	95.9	77.1	85.6	64.4	91.3	66.0	69.3	45.3

¹ Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Textiles and their products—Continued									
	Knit goods		Silk and rayon goods		Woolen and worsted goods		Wearing apparel group index		Clothing, men's	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	102.1	91.3	99.8	93.9	124.5	126.7	(1)	(1)	118.6	128.4
1924 average.....	92.6	82.9	94.1	88.6	113.3	114.1	(1)	(1)	106.9	111.0
1925 average.....	100.2	96.4	103.1	102.7	110.7	110.6	(1)	(1)	103.1	105.8
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	99.0	102.2	98.4	99.2	99.7	100.6	(1)	(1)	97.8	97.3
1928 average.....	94.7	97.3	96.9	100.2	95.0	94.4	(1)	(1)	92.2	89.0
1929 average.....	98.1	104.3	98.0	100.9	96.0	96.3	(1)	(1)	91.9	88.2
1930 average.....	87.5	84.6	86.5	81.7	77.7	72.7	(1)	(1)	80.4	67.9
1931 average.....	81.3	89.9	73.9	64.5	75.4	68.1	78.4	63.3	74.6	56.2
1932 average.....	79.6	56.5	56.6	38.1	65.4	48.5	66.2	42.3	65.3	37.3
1933 average.....	86.5	60.9	62.1	42.6	85.9	63.9	68.9	42.4	70.5	41.8
1931										
January.....	75.0	64.4	81.6	70.8	68.8	61.9	77.0	62.4	71.2	53.9
February.....	79.3	72.0	84.3	78.6	74.8	71.9	82.6	72.9	75.6	62.9
March.....	80.1	73.4	83.2	76.2	76.4	73.0	85.3	79.5	77.5	66.2
April.....	80.6	72.9	80.7	71.9	71.7	65.4	84.4	71.5	76.1	58.2
May.....	81.4	74.7	76.9	66.9	77.4	72.4	80.7	62.2	72.8	50.7
June.....	81.9	72.4	67.4	58.1	80.9	74.5	77.5	59.4	73.3	55.6
July.....	79.9	64.4	63.6	55.6	84.8	78.6	74.5	59.3	76.3	62.1
August.....	81.3	67.2	65.3	58.9	86.6	81.4	78.3	64.5	78.7	65.0
September.....	81.6	67.4	69.5	59.2	81.4	68.3	81.1	65.9	79.8	59.3
October.....	84.5	70.6	73.0	62.4	68.6	58.1	78.4	61.2	77.0	54.8
November.....	85.8	70.3	70.7	57.2	67.4	55.9	72.0	51.2	69.7	43.0
December.....	84.5	68.8	70.9	57.9	66.0	55.2	69.9	49.5	66.8	42.8
1932										
January.....	80.1	59.2	69.5	52.9	67.3	56.9	69.4	48.8	66.6	43.4
February.....	81.6	63.4	69.3	51.3	73.8	63.4	73.1	53.4	71.8	47.8
March.....	81.6	62.5	58.0	38.6	66.5	53.4	74.2	55.6	71.2	47.4
April.....	79.3	56.8	52.9	34.4	54.0	37.7	69.8	46.6	65.5	36.2
May.....	75.8	50.1	46.0	28.6	50.7	34.5	64.2	38.1	59.8	30.2
June.....	74.7	49.1	41.2	24.9	49.2	32.6	59.8	32.8	55.9	25.9
July.....	67.5	40.4	41.4	25.8	56.9	38.4	52.2	27.5	56.4	26.0
August.....	72.7	46.2	53.7	36.8	70.4	60.4	58.6	36.4	62.3	35.7
September.....	80.9	58.3	61.2	41.3	76.1	56.4	67.9	45.7	68.3	42.9
October.....	86.8	66.7	64.9	44.9	76.9	56.7	71.5	47.0	70.9	43.9
November.....	89.1	66.1	60.8	39.6	71.3	49.7	68.3	39.8	69.7	38.0
December.....	85.2	59.3	59.7	38.5	71.5	51.7	65.2	35.3	65.0	30.7
1933										
January.....	79.3	48.4	59.7	35.8	71.4	49.9	62.9	34.4	62.1	31.3
February.....	79.7	50.1	59.6	36.5	78.3	57.1	68.7	41.1	68.2	39.1
March.....	77.2	46.0	51.3	29.5	59.9	35.5	66.9	36.5	66.5	35.7
April.....	78.9	48.7	51.7	29.5	62.6	39.5	69.8	41.3	66.0	32.5
May.....	82.7	54.0	57.0	35.7	75.6	52.6	68.4	37.1	64.6	31.1
June.....	89.2	59.6	59.7	39.3	93.3	72.1	69.4	38.0	69.9	36.9
July.....	90.6	59.2	68.1	46.6	105.5	82.2	69.0	39.3	76.2	45.4
August.....	89.0	68.6	73.9	58.2	108.6	86.6	71.3	46.3	77.8	51.9
September.....	95.1	75.4	72.5	54.4	102.8	82.1	74.6	57.5	78.7	56.4
October.....	96.6	79.5	65.2	50.5	99.6	78.1	74.3	54.5	77.1	55.3
November.....	92.4	74.9	65.3	49.3	88.4	66.0	68.1	44.1	71.3	46.2
December.....	86.8	66.5	61.6	45.5	84.9	65.4	63.0	38.8	67.1	39.2

1 Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING INDUSTRIES**—YEARLY AVERAGES 1932 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Textiles and their products—Continued									
	Clothing, women's		Corsets and allied garments		Men's furnishings		Millinery and lace goods		Shirts and collars	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	126.3	124.4	(1)	(1)	(1)	(1)	138.1	133.1	118.9	117.1
1924 average.....	111.9	108.6	(1)	(1)	(1)	(1)	120.3	117.1	100.6	97.5
1925 average.....	105.6	109.3	(1)	(1)	(1)	(1)	117.1	115.8	103.3	103.2
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	105.4	107.4	(1)	(1)	(1)	(1)	95.6	96.8	95.0	96.3
1928 average.....	105.4	105.2	(1)	(1)	(1)	(1)	93.5	92.7	92.2	89.9
1929 average.....	105.4	105.1	(1)	(1)	(1)	(1)	93.1	91.1	92.7	90.8
1930 average.....	94.2	87.2	(1)	(1)	(1)	(1)	85.1	78.4	81.1	70.9
1931 average.....	85.3	70.3	102.8	95.9	73.9	66.1	76.4	63.8	72.3	57.1
1932 average.....	66.7	44.3	100.0	79.2	61.1	40.4	68.6	48.6	58.4	37.6
1933 average.....	66.5	40.6	100.2	76.0	62.5	37.8	68.1	43.1	64.0	44.4
1931										
January.....	87.8	72.1	99.0	92.7	72.4	62.5	76.8	63.3	67.2	52.9
February.....	93.6	85.3	101.2	103.6	78.2	75.4	82.4	73.0	71.5	59.1
March.....	98.6	93.8	104.1	117.1	79.7	80.3	88.3	86.1	74.2	62.4
April.....	98.3	83.7	109.1	121.8	77.7	66.4	84.4	77.7	75.1	62.8
May.....	93.2	72.4	108.2	102.5	77.4	69.5	76.5	60.9	74.9	62.7
June.....	84.9	62.4	104.2	97.9	74.2	62.7	72.4	56.6	72.7	57.8
July.....	74.1	57.2	99.3	85.0	68.7	60.9	67.9	51.4	71.4	59.4
August.....	80.1	63.5	101.4	85.8	66.2	59.4	77.4	66.6	72.4	59.1
September.....	85.4	73.6	105.1	84.0	70.6	60.7	79.6	68.3	74.6	59.0
October.....	80.2	67.4	103.3	91.7	76.9	68.4	75.2	60.0	75.9	57.0
November.....	73.5	56.6	100.8	87.2	72.1	66.7	68.1	51.9	71.8	50.3
December.....	73.5	55.4	98.0	81.7	72.4	59.9	67.5	49.9	65.3	42.9
1932										
January.....	71.5	50.1	101.4	86.1	62.4	46.8	77.0	60.9	60.0	40.0
February.....	74.4	55.4	105.6	95.5	64.3	48.5	82.0	65.9	60.8	41.9
March.....	77.5	61.9	108.1	95.2	66.1	51.0	84.3	67.3	60.3	41.1
April.....	76.2	54.2	105.2	86.7	61.7	40.5	75.8	58.4	57.1	36.8
May.....	71.6	44.5	101.4	80.0	56.9	34.8	62.6	41.6	55.5	33.5
June.....	64.8	36.6	99.0	71.6	56.8	35.7	55.7	35.2	55.0	34.1
July.....	45.4	25.6	90.9	63.2	46.6	28.4	47.1	28.5	51.3	30.5
August.....	53.4	34.9	92.6	61.6	46.3	26.0	62.4	43.1	50.7	31.8
September.....	66.8	45.5	96.2	70.7	60.2	37.7	75.7	59.4	57.4	34.7
October.....	70.6	48.1	101.0	85.6	68.8	45.4	76.7	49.9	63.8	42.0
November.....	64.8	38.4	99.7	77.0	73.2	49.1	64.1	37.6	65.3	43.7
December.....	63.8	36.0	98.3	76.6	69.5	40.7	59.9	35.3	64.0	41.4
1933										
January.....	63.6	34.8	96.6	68.6	61.7	32.1	64.9	39.8	53.4	30.2
February.....	69.5	42.2	102.6	80.7	63.3	33.8	72.0	43.2	58.2	34.5
March.....	67.0	35.8	102.4	68.1	60.3	32.2	69.8	37.5	57.9	34.7
April.....	74.6	46.7	101.4	72.4	59.2	31.0	77.5	54.5	58.8	35.1
May.....	74.2	39.3	100.5	76.2	58.4	33.0	71.4	44.3	59.3	36.1
June.....	68.2	33.9	100.8	77.5	63.0	37.4	68.8	42.4	65.1	43.0
July.....	59.3	31.0	99.4	73.4	66.7	37.3	58.6	33.6	70.8	44.4
August.....	59.8	34.1	101.3	83.9	68.3	47.7	72.5	49.5	69.3	54.3
September.....	70.6	58.9	105.7	88.1	62.7	42.1	72.2	57.5	69.6	54.6
October.....	71.7	54.5	95.5	80.6	67.1	48.9	69.6	43.9	73.4	62.8
November.....	63.0	40.4	98.2	70.5	66.1	44.8	60.5	35.5	69.7	55.9
December.....	56.6	35.8	97.4	72.4	53.1	33.7	59.7	35.2	62.7	47.4

¹ Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING INDUSTRIES**—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Iron and steel and their products, not including machinery									
	Group index		Bolts, nuts, washers, and rivets		Cast-iron pipe		Cutlery and edge tools		Forgings, iron and steel	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	(1)	(1)	(1)	(1)	94.3	92.8	(1)	(1)	(1)	(1)
1924 average.....	(1)	(1)	(1)	(1)	98.2	97.8	(1)	(1)	(1)	(1)
1925 average.....	(1)	(1)	(1)	(1)	95.6	96.2	(1)	(1)	(1)	(1)
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	(1)	(1)	(1)	(1)	89.8	88.1	(1)	(1)	(1)	(1)
1928 average.....	(1)	(1)	(1)	(1)	80.1	75.9	(1)	(1)	(1)	(1)
1929 average.....	(1)	(1)	(1)	(1)	76.1	75.5	(1)	(1)	(1)	(1)
1930 average.....	(1)	(1)	(1)	(1)	67.4	65.6	(1)	(1)	(1)	(1)
1931 average.....	70.1	52.5	78.2	60.7	55.6	46.3	74.7	60.6	68.1	51.0
1932 average.....	55.7	28.7	64.1	36.5	33.8	19.7	68.1	46.9	58.2	31.3
1933 average.....	61.4	35.9	74.9	45.5	29.1	16.1	65.5	43.0	66.3	39.2
1931										
January.....	73.8	58.1	81.5	64.6	53.8	46.8	76.6	65.2	73.4	56.7
February.....	74.0	62.1	82.2	68.6	56.8	50.6	77.2	65.5	68.5	54.1
March.....	75.0	64.2	83.1	71.1	58.5	54.6	77.9	68.2	66.5	55.3
April.....	74.7	63.4	82.7	70.9	60.6	58.2	79.0	65.6	65.9	59.6
May.....	73.1	60.0	82.9	69.7	61.0	55.8	75.4	65.0	64.9	55.3
June.....	70.8	54.2	82.4	66.7	59.2	48.6	74.2	60.2	62.6	47.2
July.....	68.6	50.3	78.0	58.6	58.0	48.6	72.9	59.7	63.7	47.1
August.....	69.0	49.0	77.2	58.0	56.5	44.2	71.8	55.8	68.6	50.5
September.....	67.2	44.2	72.6	50.7	53.3	37.7	72.9	52.6	70.1	44.6
October.....	65.9	43.4	73.1	50.6	51.1	36.7	73.2	57.5	68.7	45.8
November.....	64.6	40.9	71.5	48.9	49.7	36.2	73.1	56.7	73.2	49.2
December.....	64.0	40.5	71.4	49.4	49.1	37.0	72.3	54.7	70.5	46.9
1932										
January.....	62.1	36.0	71.5	47.7	45.5	30.5	70.7	52.3	67.2	41.8
February.....	62.3	36.8	70.8	46.6	42.1	27.8	74.3	56.4	66.9	41.7
March.....	61.0	35.2	68.0	42.5	38.1	25.4	74.9	55.1	67.7	39.9
April.....	59.1	32.0	66.3	39.2	35.0	22.9	75.2	55.5	58.6	32.0
May.....	56.8	30.5	59.8	34.7	33.7	19.9	73.9	53.2	60.2	32.2
June.....	54.9	26.9	64.1	35.7	31.3	17.5	68.9	46.4	58.2	31.0
July.....	51.6	23.1	62.6	31.7	32.1	17.1	62.2	40.4	54.8	30.2
August.....	50.8	23.1	60.3	29.2	30.7	15.8	63.0	39.5	53.0	25.1
September.....	51.8	24.2	61.0	29.5	28.1	15.8	63.6	39.1	49.9	21.9
October.....	53.1	26.6	62.3	33.6	29.6	14.9	64.4	43.8	55.2	25.9
November.....	53.2	26.0	61.4	34.4	30.1	14.3	64.2	42.3	53.1	26.3
December.....	51.4	24.2	61.5	33.7	29.0	14.8	61.3	39.3	53.4	27.8
1933										
January.....	49.0	22.6	59.9	30.9	27.0	13.1	57.8	35.3	52.9	27.0
February.....	51.3	24.5	61.1	32.6	23.4	11.2	59.3	37.6	51.4	24.9
March.....	49.1	22.5	59.2	28.1	19.4	11.0	54.2	26.7	50.1	22.8
April.....	50.2	24.2	61.0	29.5	23.5	12.4	55.9	31.4	50.8	23.3
May.....	53.3	29.5	64.9	36.4	24.5	13.2	58.2	37.0	56.2	31.7
June.....	58.5	36.0	73.0	47.3	29.4	16.1	60.6	41.7	63.1	39.2
July.....	64.9	41.1	82.5	53.2	32.1	18.0	61.8	44.6	67.1	41.7
August.....	71.7	49.7	88.8	57.6	32.7	19.0	69.1	47.0	76.1	50.1
September.....	74.8	47.1	90.7	58.7	34.1	18.2	75.4	51.1	83.2	48.7
October.....	73.2	47.3	88.8	58.8	35.1	19.0	79.0	54.3	76.7	49.6
November.....	70.9	42.9	85.9	57.9	33.4	19.4	78.5	54.3	83.1	54.0
December.....	69.8	43.3	82.8	54.9	34.9	22.5	76.7	55.1	84.4	56.8

1 Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Iron and steel and their products, not including machinery—Continued									
	Hardware		Iron and steel		Plumber's supplies		Steam and hot-water heating apparatus and steam fittings		Stoves.	
	Em- ploy- ment	Pay-roll totals	Em- ploy- ment	Pay-roll totals	Em- ploy- ment	Pay-roll totals	Em- ploy- ment	Pay-roll totals	Em- ploy- ment	Pay-roll totals
1923 average.....	113.4	102.0	102.1	97.3	(1)	(1)	103.3	98.0	116.3	113.9
1924 average.....	104.2	95.7	95.4	91.3	(1)	(1)	98.6	95.4	100.3	101.0
1925 average.....	103.6	98.4	97.9	96.4	(1)	(1)	100.1	97.4	97.8	97.8
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	92.2	90.9	92.9	91.4	(1)	(1)	92.5	91.9	91.2	90.4
1928 average.....	88.9	88.4	90.9	92.7	(1)	(1)	82.2	81.9	87.6	84.7
1929 average.....	91.9	93.7	94.7	99.3	(1)	(1)	78.5	78.8	90.8	87.3
1930 average.....	78.8	68.5	84.5	79.8	(1)	(1)	65.2	58.7	74.3	64.1
1931 average.....	65.3	47.4	70.0	51.8	76.5	59.8	54.8	40.7	60.6	44.7
1932 average.....	52.3	27.8	55.9	25.7	60.1	34.3	37.5	22.4	49.2	28.5
1933 average.....	53.0	28.2	63.6	36.6	68.4	38.7	39.9	24.0	59.0	35.8
1931										
January.....	69.7	53.5	74.8	58.8	82.4	63.2	60.9	49.8	52.7	38.5
February.....	69.2	54.1	75.1	64.9	82.3	65.5	60.0	49.9	60.0	47.1
March.....	69.3	55.2	76.2	67.8	81.2	63.1	60.1	47.4	64.7	50.3
April.....	68.8	53.6	76.2	67.3	76.7	59.2	57.7	44.7	65.4	50.0
May.....	68.0	53.2	74.2	62.1	75.8	60.6	55.8	41.9	64.8	50.3
June.....	66.7	48.8	70.7	54.1	76.0	60.2	54.6	40.0	62.6	46.0
July.....	64.4	44.3	69.7	48.3	77.2	63.5	53.2	38.5	54.8	39.4
August.....	62.0	44.2	68.2	46.2	75.0	62.9	51.4	37.4	60.0	43.4
September.....	61.5	39.3	65.6	40.4	73.2	56.1	51.0	34.3	63.8	48.0
October.....	61.8	42.2	63.5	38.3	75.0	59.6	53.4	38.3	64.3	48.7
November.....	61.2	40.8	62.5	36.3	73.1	52.7	51.4	34.3	60.0	41.0
December.....	60.4	40.1	63.0	37.1	70.0	50.4	48.0	31.5	53.5	33.8
1932										
January.....	59.3	37.8	62.5	32.9	70.6	43.3	44.1	26.9	44.4	26.4
February.....	58.5	36.0	62.8	34.3	68.9	42.7	45.0	28.4	50.6	30.7
March.....	57.6	34.8	61.6	32.8	65.5	39.2	43.6	26.0	51.4	30.6
April.....	55.9	31.2	59.8	29.4	64.7	37.5	39.2	23.7	51.6	29.4
May.....	53.3	28.1	57.6	28.3	64.1	37.4	33.8	20.4	49.9	28.1
June.....	52.4	26.9	54.9	23.3	63.6	37.3	33.7	20.5	46.3	25.1
July.....	47.6	21.6	51.7	19.7	61.4	30.9	32.5	18.5	40.7	21.7
August.....	46.4	20.9	50.4	19.5	59.0	34.4	33.1	18.8	43.7	23.8
September.....	48.2	22.7	51.3	20.4	59.2	27.5	35.5	20.4	51.7	31.6
October.....	49.2	24.3	53.0	23.2	51.2	28.7	37.3	23.6	55.4	37.2
November.....	49.9	24.5	53.2	23.0	55.5	31.8	38.4	22.3	55.0	31.7
December.....	49.8	25.0	52.1	21.9	46.1	21.1	34.0	19.0	49.5	25.8
1933										
January.....	48.3	22.4	50.6	21.4	44.1	19.3	31.3	16.7	37.8	18.5
February.....	49.0	23.2	53.0	23.6	54.5	25.9	34.8	18.2	43.0	23.2
March.....	47.0	20.7	50.1	21.3	58.8	32.5	30.5	16.0	41.9	21.7
April.....	47.2	21.0	51.3	23.3	53.4	27.3	34.0	18.0	45.1	25.0
May.....	48.6	24.6	54.2	28.7	66.8	41.7	36.7	21.8	48.7	29.2
June.....	52.6	29.5	59.4	35.9	77.9	51.9	40.0	25.1	53.4	33.6
July.....	55.9	33.2	67.6	42.8	81.7	48.5	43.0	27.4	60.2	38.1
August.....	59.9	34.5	75.9	54.8	80.9	48.7	46.6	30.6	69.1	43.9
September.....	59.0	33.2	78.1	49.3	87.6	53.3	48.3	30.3	78.3	50.2
October.....	55.3	30.6	76.4	49.5	81.6	46.5	44.6	27.8	82.7	56.4
November.....	55.0	30.5	73.8	43.6	68.8	34.3	45.4	27.8	80.3	50.4
December.....	58.0	35.3	72.9	44.4	65.6	34.0	43.8	27.9	68.0	39.3

¹ Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Iron and steel and their products, not including machinery—Con.							
	Structural and ornamental metal work		Tin cans and other tinware		Tools (not including edge or machine tools)		Wirework	
	Em- p- loy- ment	Pay-roll totals	Em- p- loy- ment	Pay-roll totals	Em- p- loy- ment	Pay-roll totals	Em- p- loy- ment	Pay-roll totals
1923 average.....	100.8	93.9	(1)	(1)	(1)	(1)	(1)	(1)
1924 average.....	91.7	86.3	(1)	(1)	(1)	(1)	(1)	(1)
1925 average.....	92.5	91.5	(1)	(1)	(1)	(1)	(1)	(1)
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	94.9	95.0	(1)	(1)	(1)	(1)	(1)	(1)
1928 average.....	95.0	97.9	(1)	(1)	(1)	(1)	(1)	(1)
1929 average.....	102.1	104.4	(1)	(1)	(1)	(1)	(1)	(1)
1930 average.....	92.2	89.0	(1)	(1)	(1)	(1)	(1)	(1)
1931 average.....	71.1	57.4	84.6	56.7	85.4	61.3	99.1	87.5
1932 average.....	47.6	28.7	74.7	45.8	65.8	38.6	93.6	67.2
1933 average.....	43.3	24.2	79.6	48.1	69.1	41.6	107.0	82.2
1931								
January.....	78.9	67.4	87.2	59.7	88.8	63.4	91.4	81.1
February.....	75.8	64.6	88.7	58.2	88.2	65.9	89.1	81.8
March.....	75.4	63.9	88.8	61.8	88.6	66.9	92.3	88.9
April.....	74.1	60.7	91.1	63.3	88.5	67.2	93.2	85.6
May.....	72.5	60.8	89.4	59.3	85.4	64.8	94.4	87.4
June.....	71.2	58.7	87.0	58.2	85.6	62.2	96.4	89.0
July.....	71.9	61.0	86.7	57.7	86.2	61.3	97.8	87.3
August.....	72.1	57.8	87.6	57.6	82.4	57.9	108.1	95.8
September.....	69.3	54.1	81.7	55.3	84.3	54.8	105.5	88.0
October.....	65.6	49.0	77.1	51.1	82.9	57.9	106.4	90.8
November.....	63.7	46.1	74.2	48.7	81.4	56.2	107.9	87.7
December.....	62.2	44.5	76.2	49.2	82.2	56.5	106.8	87.1
1932								
January.....	58.8	40.3	74.4	48.0	77.5	49.6	100.6	77.1
February.....	55.6	36.6	72.8	45.3	76.8	50.9	102.3	85.2
March.....	54.3	34.4	73.4	46.7	73.2	47.4	98.1	81.8
April.....	51.9	32.4	73.7	46.0	71.8	44.3	95.2	70.9
May.....	49.4	30.4	71.9	43.8	68.8	40.2	94.4	71.2
June.....	47.7	27.1	76.7	46.8	65.3	37.6	93.7	65.9
July.....	45.2	25.0	75.1	43.5	59.2	29.1	87.3	53.4
August.....	44.6	25.0	75.5	45.2	54.4	26.6	90.2	59.5
September.....	42.7	23.9	81.2	52.4	59.0	32.4	92.7	63.2
October.....	41.2	23.6	76.8	47.4	60.2	35.1	91.5	64.4
November.....	40.3	23.5	73.2	41.7	61.8	35.7	90.1	61.3
December.....	40.0	21.8	71.1	42.5	61.1	34.7	87.3	52.8
1933								
January.....	38.1	18.5	67.7	39.8	59.4	33.0	84.7	50.6
February.....	37.3	17.4	70.3	39.7	59.2	30.6	89.1	58.6
March.....	37.8	17.2	68.4	38.4	55.7	27.2	87.4	52.1
April.....	38.5	18.5	71.3	41.3	56.1	27.2	87.5	58.3
May.....	38.0	19.8	73.8	45.7	58.0	31.0	93.0	72.3
June.....	39.4	21.0	78.9	50.3	63.0	40.0	104.3	87.5
July.....	42.6	22.1	82.7	52.8	69.9	46.0	113.5	97.1
August.....	46.1	27.4	90.8	55.0	77.5	50.0	122.0	112.2
September.....	50.6	31.1	93.4	55.8	80.2	51.5	128.8	102.2
October.....	51.2	33.0	85.9	51.5	83.1	54.0	128.2	103.9
November.....	50.0	32.6	84.9	50.9	83.3	53.8	122.5	92.1
December.....	49.4	31.4	87.4	55.5	83.2	54.5	123.0	99.5

¹ Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING INDUSTRIES**—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Machinery, not including transportation equipment									
	Group index		Agricultural implements		Cash registers, adding machines, and calculating machines		Electrical machinery, apparatus, and supplies		Engines, turbines, tractors, and water-wheels	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average	(1)	(1)	101.3	89.8	(1)	(1)	101.3	97.0	(1)	(1)
1924 average	(1)	(1)	81.2	75.2	(1)	(1)	95.1	94.7	(1)	(1)
1925 average	(1)	(1)	93.6	90.8	(1)	(1)	92.1	92.2	(1)	(1)
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	(1)	(1)	91.9	92.2	(1)	(1)	95.1	95.7	94.4	91.7
1928 average	(1)	(1)	106.8	111.8	(1)	(1)	93.9	95.9	97.4	96.3
1929 average	(1)	(1)	121.1	125.3	(1)	(1)	118.3	121.5	112.1	113.5
1930 average	(1)	(1)	92.3	85.6	(1)	(1)	101.6	102.0	99.0	94.0
1931 average	70.7	56.6	47.8	37.4	80.6	67.9	80.9	71.4	67.6	54.0
1932 average	50.9	32.2	28.2	21.3	69.6	49.8	58.9	41.9	44.0	27.6
1933 average	52.3	33.3	32.0	24.7	73.4	55.4	53.3	37.9	46.5	29.6
1931										
January	79.2	65.5	77.6	66.8	86.4	76.4	87.9	78.8	83.2	71.3
February	79.0	66.9	75.8	66.6	84.3	73.8	87.7	80.5	82.3	73.2
March	77.5	66.5	66.4	53.7	83.7	73.8	87.0	80.5	81.4	72.4
April	76.2	64.5	59.9	43.6	83.6	73.2	86.2	78.9	76.2	66.0
May	74.3	63.0	49.7	36.3	82.0	72.7	84.3	78.1	68.7	58.8
June	71.8	58.4	43.9	32.0	81.0	72.2	82.4	73.0	66.7	54.7
July	68.8	53.8	35.2	27.6	77.0	63.1	79.7	68.9	64.9	48.7
August	66.2	51.7	31.3	24.0	80.9	68.0	77.1	69.0	60.7	43.7
September	65.2	48.4	31.0	23.2	77.9	57.6	77.3	64.3	57.5	40.8
October	64.4	47.9	32.0	23.5	76.5	60.8	75.6	62.7	56.8	40.1
November	62.9	46.1	34.2	24.8	76.7	61.0	73.3	61.7	55.1	38.3
December	62.4	46.3	36.8	26.7	76.8	62.3	72.7	60.5	57.2	39.7
1932										
January	59.8	42.4	38.8	27.6	77.7	59.6	71.9	57.9	44.2	30.7
February	59.8	42.3	41.4	35.3	77.3	55.7	70.8	56.5	52.0	34.8
March	58.1	39.8	40.8	34.0	75.3	54.5	69.3	53.2	51.4	33.9
April	55.3	36.7	36.4	28.2	73.7	52.3	65.7	48.9	48.5	32.1
May	53.1	33.9	28.5	22.7	74.3	51.9	63.1	44.5	46.6	29.5
June	50.1	30.6	22.1	16.4	71.1	47.5	59.6	40.9	45.0	27.6
July	47.3	27.4	19.8	14.0	70.4	47.0	55.5	37.0	41.7	23.9
August	45.2	25.7	21.7	15.5	62.1	45.1	53.5	33.4	39.4	23.1
September	45.3	26.2	21.0	14.6	62.9	45.4	50.6	32.9	39.3	22.6
October	45.6	27.1	19.4	14.0	63.8	46.8	49.3	32.8	39.8	24.9
November	45.8	26.7	22.6	15.7	63.4	45.6	49.1	32.5	39.7	23.6
December	45.4	27.0	26.0	18.0	63.1	45.6	48.6	32.5	40.1	25.0
1933										
January	43.4	25.0	27.4	18.9	62.2	42.9	46.4	30.5	39.9	24.3
February	43.9	25.4	29.9	21.6	62.5	42.7	46.4	30.3	40.0	24.7
March	42.4	23.2	28.8	19.0	61.5	41.0	45.3	28.9	37.9	22.8
April	42.8	23.9	27.6	18.5	62.4	44.9	45.7	30.0	38.2	23.1
May	44.6	27.0	25.5	18.4	64.6	48.1	47.3	33.0	38.5	23.9
June	48.2	31.3	27.7	21.7	70.6	53.5	49.8	36.6	42.4	27.9
July	51.9	34.6	28.9	21.6	73.8	56.9	53.4	40.4	45.4	29.5
August	57.4	38.2	31.3	24.3	79.7	61.0	57.1	42.4	45.2	27.7
September	61.7	40.8	34.7	27.2	83.7	64.4	60.7	44.7	55.2	34.1
October	64.0	43.6	37.7	31.1	85.7	67.4	62.9	46.9	55.4	36.4
November	64.1	43.5	40.4	35.2	86.7	70.4	62.6	46.6	58.5	38.6
December	63.1	42.9	44.1	39.3	87.2	72.1	61.7	44.9	61.5	42.7

¹ Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING INDUSTRIES**—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Machinery, not including transportation equipment—Continued									
	Foundry and machine-shop products		Machine tools		Radios and phonographs		Textile machinery and parts		Typewriters and supplies	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	(1)	(1)	98.1	88.5	(1)	(1)	(1)	(1)	(1)	(1)
1924 average.....	(1)	(1)	82.0	74.9	(1)	(1)	(1)	(1)	(1)	(1)
1925 average.....	(1)	(1)	85.8	83.4	(1)	(1)	(1)	(1)	(1)	(1)
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	93.8	92.1	92.8	92.2	(1)	(1)	95.1	95.5	(1)	(1)
1928 average.....	93.7	93.9	100.8	107.5	(1)	(1)	92.4	93.5	(1)	(1)
1929 average.....	104.3	107.6	129.8	139.8	213.1	213.0	111.6	121.1	(1)	(1)
1930 average.....	87.9	80.7	98.7	90.2	123.3	130.3	91.3	84.7	(1)	(1)
1931 average.....	65.8	49.2	62.6	48.4	92.5	86.0	73.5	61.2	81.4	60.9
1932 average.....	47.9	27.1	35.9	22.9	68.2	55.0	56.3	37.7	61.3	35.7
1933 average.....	50.0	28.7	37.0	24.1	103.2	74.9	70.7	50.0	65.6	43.1
1931										
January.....	72.8	56.8	74.4	56.6	100.3	92.2	76.8	67.7	90.6	71.4
February.....	73.1	58.9	73.0	57.6	94.9	84.9	77.5	67.9	89.2	70.3
March.....	72.4	59.5	72.9	58.3	74.6	73.9	78.1	68.0	89.1	67.6
April.....	71.4	57.8	70.8	56.1	81.8	81.0	76.9	64.8	84.2	67.0
May.....	71.0	56.8	68.7	54.5	75.4	78.9	76.5	66.7	82.9	67.0
June.....	67.8	51.7	65.3	50.6	82.1	81.7	74.5	64.1	82.5	65.1
July.....	64.6	46.9	61.1	49.1	90.6	84.4	67.5	56.5	78.5	58.3
August.....	61.1	43.3	54.3	44.1	99.2	92.8	74.5	61.4	76.4	54.5
September.....	60.8	40.8	55.8	39.8	114.1	95.3	72.6	54.4	76.6	51.8
October.....	58.7	40.1	54.4	40.2	111.5	106.7	69.7	53.2	73.6	53.0
November.....	57.7	38.4	50.2	36.6	104.1	86.5	68.7	52.1	75.8	53.5
December.....	57.7	39.3	50.1	37.2	81.0	73.3	68.3	58.1	77.2	51.0
1932										
January.....	55.0	34.5	47.8	34.8	77.9	73.0	68.0	56.9	74.1	46.3
February.....	54.7	34.9	47.3	34.4	72.0	61.4	68.7	55.6	72.1	48.3
March.....	53.2	33.1	44.6	30.1	64.1	51.1	66.1	50.6	71.4	45.8
April.....	51.2	30.8	40.5	26.6	57.3	46.3	61.3	43.7	70.6	43.5
May.....	49.6	29.1	35.5	22.0	61.0	53.6	56.0	33.7	68.4	38.2
June.....	46.9	26.1	34.5	20.3	63.9	54.0	52.0	27.4	58.9	31.6
July.....	45.3	23.3	30.7	17.8	62.5	47.8	41.5	21.6	57.2	28.9
August.....	42.8	21.9	28.6	16.9	63.1	44.9	49.3	28.9	40.7	21.7
September.....	43.4	22.2	30.2	17.7	68.1	56.1	52.3	33.0	55.8	29.1
October.....	44.0	23.3	29.6	17.1	79.8	62.9	53.6	34.0	55.9	30.4
November.....	44.3	23.0	30.5	18.3	77.7	58.4	52.9	32.2	59.2	32.7
December.....	44.1	23.3	31.3	18.8	70.4	50.9	54.2	34.6	61.8	32.1
1933										
January.....	41.6	20.9	31.7	19.6	57.9	41.9	54.5	33.8	57.4	32.7
February.....	42.3	21.6	31.0	18.8	61.9	45.5	55.0	32.7	53.8	29.8
March.....	40.8	19.4	27.8	15.0	61.0	42.0	63.2	29.2	52.0	27.5
April.....	41.3	19.7	26.9	14.7	67.2	50.5	51.3	28.3	52.4	26.3
May.....	43.0	23.0	27.8	15.5	81.3	62.3	54.1	33.5	55.1	30.4
June.....	46.5	27.3	31.2	20.2	92.1	65.5	62.5	47.2	64.0	31.7
July.....	50.3	30.8	33.3	22.0	94.1	55.7	72.9	58.9	57.7	36.4
August.....	56.4	34.8	39.1	25.6	108.2	73.9	87.9	65.7	69.6	49.6
September.....	59.2	36.1	44.5	30.1	133.6	91.2	90.8	69.1	76.1	55.0
October.....	60.4	37.8	48.0	33.1	162.4	125.2	90.0	69.3	81.2	61.3
November.....	59.4	36.5	51.2	36.2	169.3	131.9	89.5	68.1	87.7	65.2
December.....	58.2	36.1	52.3	37.8	149.6	112.6	86.6	64.5	89.8	71.0

¹ Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING INDUSTRIES**—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Nonferrous metals and their products											
	Group index		Aluminum manufactures		Brass, bronze, and copper products		Clocks, watches, and time-recording devices		Jewelry		Lighting equipment	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	(1)	(1)	(1)	(1)	101.3	98.9	(1)	(1)	(1)	(1)	(1)	(1)
1924 average.....	(1)	(1)	(1)	(1)	95.2	92.9	(1)	(1)	(1)	(1)	(1)	(1)
1925 average.....	(1)	(1)	(1)	(1)	99.2	99.1	(1)	(1)	(1)	(1)	(1)	(1)
1926 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
1927 average.....	(1)	(1)	(1)	(1)	94.5	92.0	(1)	(1)	(1)	(1)	(1)	(1)
1928 average.....	(1)	(1)	(1)	(1)	94.4	98.0	(1)	(1)	(1)	(1)	(1)	(1)
1929 average.....	(1)	(1)	(1)	(1)	101.1	107.4	(1)	(1)	(1)	(1)	(1)	(1)
1930 average.....	(1)	(1)	(1)	(1)	79.7	74.9	(1)	(1)	(1)	(1)	(1)	(1)
1931 average.....	65.3	53.5	69.5	56.9	66.7	54.2	61.1	52.6	50.8	41.7	89.3	76.9
1932 average.....	55.2	37.1	49.6	29.5	53.9	33.7	44.9	29.9	39.5	27.7	67.7	49.4
1933 average.....	59.7	39.7	55.4	35.7	59.9	38.9	42.6	29.1	38.0	25.2	70.3	49.3
1931												
January.....	71.7	63.3	75.6	59.1	70.2	60.1	63.5	58.8	52.4	45.5	93.7	84.4
February.....	72.4	67.2	79.1	74.6	69.8	60.6	63.2	58.7	53.9	42.8	93.5	81.0
March.....	72.3	69.0	80.3	76.1	70.7	62.7	62.7	57.9	52.7	45.7	92.8	82.4
April.....	71.8	66.8	80.7	74.7	69.7	61.5	61.8	53.3	52.1	43.8	92.8	82.4
May.....	70.3	63.9	78.4	67.1	69.5	60.7	59.8	50.4	50.4	41.8	91.0	80.3
June.....	69.3	60.4	76.8	63.7	67.7	56.3	57.4	48.9	49.7	40.7	90.0	79.7
July.....	67.3	53.4	75.9	60.5	66.3	52.2	58.1	46.8	48.8	33.9	88.0	76.5
August.....	65.3	53.2	60.6	46.7	64.2	50.0	57.9	49.6	49.6	39.6	88.5	74.1
September.....	65.9	53.0	58.9	45.7	64.4	47.7	61.5	54.0	52.5	43.1	88.5	73.5
October.....	65.6	53.1	58.2	38.3	63.3	47.0	62.3	54.3	52.2	43.8	85.0	71.2
November.....	64.3	49.8	55.0	36.9	62.6	46.1	63.6	53.1	49.2	40.3	85.4	68.8
December.....	63.2	49.2	54.8	39.4	62.3	45.6	61.7	45.0	46.0	39.9	82.9	68.5
1932												
January.....	60.8	44.4	54.6	38.7	60.9	43.5	56.0	37.8	41.7	33.3	77.5	59.2
February.....	61.4	45.6	55.1	39.3	60.8	43.4	54.7	38.0	43.8	34.6	76.4	58.9
March.....	60.6	43.1	55.5	33.1	59.6	40.1	52.0	33.1	43.3	31.9	74.7	57.8
April.....	58.0	39.9	52.7	31.5	56.3	35.9	47.7	32.4	40.6	27.9	72.8	53.6
May.....	55.4	36.7	48.6	26.8	53.9	32.9	44.7	26.8	37.1	24.2	68.6	50.1
June.....	53.7	34.4	46.7	23.9	51.9	30.7	42.5	26.1	35.8	22.9	68.5	50.7
July.....	48.9	29.9	44.4	21.8	49.8	28.6	30.6	19.0	31.0	19.6	48.3	34.2
August.....	50.2	30.6	46.3	23.5	49.3	27.8	41.6	26.4	35.4	21.9	60.6	41.4
September.....	52.4	33.6	47.5	25.8	50.3	29.3	40.1	26.9	40.7	27.9	63.2	45.1
October.....	54.0	37.0	47.7	29.5	51.1	31.5	41.6	31.4	44.0	32.6	66.6	46.8
November.....	54.4	36.1	48.3	30.5	51.9	31.0	43.5	32.5	42.7	29.2	67.5	48.5
December.....	53.1	33.6	47.5	29.0	51.0	29.6	43.3	28.4	37.5	26.8	67.2	46.6
1933												
January.....	50.1	29.9	46.8	28.0	48.6	27.1	39.1	23.0	33.0	20.9	62.6	42.5
February.....	50.8	30.4	47.8	29.6	48.7	26.5	38.0	22.3	34.8	21.1	60.5	40.4
March.....	48.7	28.1	47.6	28.5	46.0	24.3	34.9	16.6	33.2	19.1	55.7	35.1
April.....	49.9	29.4	48.1	28.0	47.8	26.4	33.5	16.6	33.1	20.0	57.9	36.6
May.....	52.0	34.2	49.4	31.5	51.5	33.6	35.7	19.6	33.8	21.4	60.5	41.9
June.....	55.8	38.5	52.2	35.3	57.7	40.2	40.0	23.9	36.0	22.9	64.8	47.8
July.....	59.5	40.9	55.7	37.2	64.5	46.0	40.6	27.9	34.2	22.0	68.6	49.8
August.....	66.9	45.6	62.0	41.4	71.1	49.9	46.0	33.1	40.1	26.0	75.8	53.5
September.....	71.8	49.0	65.1	41.7	73.0	50.9	49.9	38.6	45.2	31.2	82.1	58.6
October.....	73.0	51.4	64.2	43.6	72.4	49.5	52.6	43.7	47.8	34.7	84.1	59.4
November.....	70.1	50.2	63.0	42.1	69.8	46.5	52.7	44.6	44.6	33.0	85.5	62.1
December.....	67.7	48.4	62.4	41.0	67.2	46.3	48.0	38.8	40.7	30.2	85.2	64.0

¹ Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Nonferrous metals, and their products—Continued						Transportation equipment					
	Silverware and plated ware		Smelting and refining—copper, lead, and zinc		Stamped and enameled ware		Group index		Aircraft		Automobiles	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	(1)	(1)	(1)	(1)	105.2	109.3	(1)	(1)	(1)	(1)	93.0	92.0
1924 average.....	(1)	(1)	(1)	(1)	94.7	93.2	(1)	(1)	(1)	(1)	87.0	83.8
1925 average.....	(1)	(1)	(1)	(1)	99.0	100.2	(1)	(1)	(1)	(1)	99.0	102.4
1926 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
1927 average.....	(1)	(1)	(1)	(1)	88.9	90.6	(1)	(1)	(1)	(1)	91.2	90.3
1928 average.....	(1)	(1)	(1)	(1)	88.8	90.4	(1)	(1)	(1)	(1)	111.3	114.4
1929 average.....	(1)	(1)	(1)	(1)	90.4	91.1	(1)	(1)	(1)	(1)	116.9	118.7
1930 average.....	(1)	(1)	(1)	(1)	77.9	71.8	(1)	(1)	(1)	(1)	83.7	74.6
1931 average.....	74.3	59.1	73.5	69.3	70.6	58.8	66.8	53.5	272.8	283.8	67.7	53.0
1932 average.....	61.8	40.5	61.1	41.2	62.1	41.2	54.0	35.9	196.0	200.8	55.2	38.9
1933 average.....	63.4	39.5	68.4	44.1	68.1	43.9	52.2	37.6	230.6	215.6	54.2	39.3
1931												
January.....	77.8	58.6	81.8	87.7	68.6	54.8	70.2	43.7	313.5	305.6	69.9	38.9
February.....	79.9	67.4	79.7	85.8	72.7	67.0	70.9	59.9	298.5	301.6	71.5	59.4
March.....	80.0	68.6	78.1	90.2	72.7	67.3	73.7	65.0	303.2	335.1	75.2	65.9
April.....	76.2	65.7	77.7	83.1	73.8	67.3	75.1	67.5	292.9	309.0	76.8	68.8
May.....	75.5	60.8	74.6	79.5	72.3	63.9	76.1	70.8	302.3	320.1	79.1	73.5
June.....	75.8	56.9	73.5	74.3	72.6	62.0	72.4	59.8	317.7	341.2	74.3	60.4
July.....	70.5	51.2	69.3	51.7	70.8	55.6	67.5	51.9	274.2	282.2	68.8	51.8
August.....	71.2	54.9	68.0	55.7	70.2	56.7	65.3	49.3	236.9	242.4	67.0	49.0
September.....	71.3	57.6	68.1	55.3	70.7	56.3	64.1	42.1	244.0	245.8	65.4	40.4
October.....	71.6	61.1	71.4	59.7	69.2	54.5	52.8	42.0	225.0	230.8	51.7	40.3
November.....	71.1	51.5	70.5	57.0	66.9	50.9	52.4	42.4	229.9	249.7	51.1	41.2
December.....	70.6	54.5	69.1	52.0	66.2	49.8	60.8	47.1	235.4	243.5	61.6	46.7
1932												
January.....	64.3	44.0	69.3	50.5	63.0	43.5	62.7	46.3	228.2	233.5	64.9	46.4
February.....	65.1	46.6	69.1	51.3	65.6	48.1	64.8	49.8	224.5	227.9	67.2	50.6
March.....	64.6	46.6	66.8	45.9	67.1	49.4	63.3	49.0	229.9	234.5	65.2	49.9
April.....	63.7	43.4	64.7	44.1	65.2	46.6	59.4	46.2	214.3	218.8	60.2	45.8
May.....	61.9	39.0	61.8	42.9	64.3	43.8	59.6	50.2	208.3	206.7	61.1	52.1
June.....	60.6	36.3	60.5	40.1	61.8	40.6	59.0	44.6	196.6	202.6	61.0	45.8
July.....	53.3	31.8	58.0	36.7	56.7	33.8	56.8	41.4	180.5	181.3	59.2	42.3
August.....	57.5	34.0	53.9	33.1	57.0	34.6	50.5	32.0	170.7	183.2	52.0	31.8
September.....	60.5	37.9	54.9	35.7	61.7	40.0	45.0	23.6	161.5	167.2	45.3	21.6
October.....	63.7	45.5	58.8	39.3	60.4	40.1	39.5	24.7	166.8	174.1	38.2	22.7
November.....	64.0	43.4	57.0	37.5	62.9	39.2	42.1	27.7	183.5	186.3	41.5	26.9
December.....	62.2	37.8	58.8	37.7	59.7	34.6	45.7	31.4	187.6	193.5	46.2	31.1
1933												
January.....	55.1	30.0	58.7	36.8	54.8	30.8	49.5	34.1	182.7	181.1	51.6	35.3
February.....	58.7	31.8	55.9	35.0	60.5	35.9	48.5	30.6	185.8	187.7	50.8	31.3
March.....	58.0	31.3	56.6	33.4	55.9	31.7	43.5	26.3	196.4	197.4	44.9	26.3
April.....	56.8	30.3	56.8	35.0	59.8	35.1	43.6	30.2	206.4	205.7	45.4	31.4
May.....	59.1	35.0	56.5	36.4	62.4	39.2	46.9	36.9	244.8	232.5	48.9	39.3
June.....	60.2	37.0	56.8	38.6	67.1	43.4	49.9	39.0	251.2	233.1	52.8	42.1
July.....	50.4	31.4	63.8	45.6	71.2	45.3	56.2	41.7	251.4	223.4	59.8	44.8
August.....	56.9	35.8	74.4	51.2	79.5	52.3	59.1	47.5	241.8	226.0	62.3	51.1
September.....	70.6	46.0	84.4	53.8	82.3	52.7	61.8	46.0	238.7	207.5	64.9	48.7
October.....	77.5	55.2	86.3	55.9	83.1	55.9	56.9	41.2	247.3	222.6	58.2	42.2
November.....	80.6	56.7	86.7	55.2	71.0	58.4	51.3	36.4	260.7	239.3	51.3	36.3
December.....	76.6	52.9	84.2	51.9	69.7	51.2	58.7	41.5	259.9	231.0	59.9	42.2

1 Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Transportation equipment—Contd.						Railroad repair shops					
	Cars, electric and steam-railroad		Locomotives		Shipbuilding		Group index		Electric railroad		Steam railroad	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average.....	(1)	(1)	(1)	(1)	108.6	103.0	(1)	(1)	(1)	(1)	(1)	(1)
1924 average.....	(1)	(1)	(1)	(1)	90.2	88.8	(1)	(1)	(1)	(1)	(1)	(1)
1925 average.....	(1)	(1)	(1)	(1)	92.6	90.3	(1)	(1)	(1)	(1)	(1)	(1)
1926 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
1927 average.....	79.1	79.1	79.5	73.1	104.8	105.8	93.0	95.3	100.4	99.9	92.4	94.9
1928 average.....	63.4	60.8	56.1	50.4	82.8	83.0	87.4	90.0	96.5	97.4	86.7	89.5
1929 average.....	83.1	84.1	70.5	72.0	105.3	108.1	86.0	93.5	93.7	95.2	85.4	93.4
1930 average.....	68.1	65.4	62.9	63.6	114.9	116.4	74.6	77.0	89.0	89.3	73.5	76.0
1931 average.....	27.5	18.9	28.6	25.2	95.8	88.0	61.7	58.9	78.1	75.0	60.4	57.6
1932 average.....	20.2	12.2	17.6	13.7	79.1	63.9	49.6	39.1	68.9	59.2	48.1	37.6
1933 average.....	19.5	10.7	14.1	9.0	66.3	47.4	48.3	38.2	63.7	50.7	47.1	37.2
1931												
January.....	33.9	26.1	33.4	26.1	103.7	98.3	68.5	64.2	82.5	79.4	67.4	63.0
February.....	32.5	25.0	33.9	28.3	100.3	96.2	67.7	63.1	82.4	80.5	66.6	67.1
March.....	32.8	24.2	36.7	32.9	97.6	92.3	66.1	66.5	82.1	81.6	64.9	65.3
April.....	33.2	24.6	34.6	31.7	100.3	94.9	65.3	66.0	81.6	80.2	64.0	64.9
May.....	26.4	17.8	31.0	28.5	98.2	96.6	64.3	63.9	80.6	78.6	63.0	62.8
June.....	27.5	18.1	29.6	27.9	98.0	89.8	62.5	61.1	79.3	76.8	61.2	59.9
July.....	26.5	16.4	28.8	26.1	94.8	84.0	60.3	56.6	77.0	73.2	59.0	55.3
August.....	27.0	17.7	26.4	23.1	88.9	81.4	59.2	55.2	75.0	70.0	58.0	54.1
September.....	26.3	17.8	24.5	21.9	90.5	77.4	59.4	52.4	74.8	68.5	57.1	51.1
October.....	22.8	14.7	22.1	19.2	89.8	82.0	57.2	51.7	74.2	69.4	55.9	50.3
November.....	20.2	12.4	21.1	17.8	93.3	80.0	55.6	51.1	74.2	70.8	54.2	49.6
December.....	20.8	12.4	21.5	18.8	93.9	83.3	54.9	49.6	73.6	70.5	53.4	48.0
1932												
January.....	17.5	10.3	20.8	17.4	90.1	79.7	51.5	44.4	73.3	67.4	49.8	42.6
February.....	21.3	13.7	21.1	17.9	90.0	77.8	52.2	42.6	72.4	65.2	50.6	40.9
March.....	22.8	14.8	20.6	18.2	88.7	73.7	52.5	42.9	71.4	65.8	51.0	41.1
April.....	22.0	14.1	21.4	18.4	91.1	80.4	52.9	43.3	71.3	64.6	51.5	41.6
May.....	20.5	13.0	20.2	17.0	87.0	69.7	51.4	43.2	70.0	62.5	50.0	41.7
June.....	19.0	11.3	18.0	14.3	83.9	66.2	48.3	38.3	69.4	60.9	46.7	36.5
July.....	19.7	11.4	16.6	12.1	76.2	63.7	47.1	34.2	68.2	57.1	45.5	32.4
August.....	18.6	11.1	15.9	11.6	71.5	52.6	44.8	33.0	66.7	54.6	43.1	31.3
September.....	19.3	11.1	14.5	9.4	69.0	51.6	46.5	33.5	66.5	53.7	44.9	31.9
October.....	21.1	12.4	13.8	9.4	67.7	52.4	48.6	36.2	65.5	51.8	47.3	35.0
November.....	21.1	11.7	14.1	9.7	66.7	47.9	50.2	39.1	65.6	52.5	49.8	38.1
December.....	20.0	11.6	13.9	9.5	66.8	51.5	49.5	39.0	65.9	54.5	48.2	37.8
1933												
January.....	18.0	10.0	12.7	8.3	65.0	45.8	48.1	35.8	65.6	52.9	46.7	34.5
February.....	17.2	9.0	11.8	7.6	61.1	43.4	47.3	35.9	65.0	52.5	45.9	34.6
March.....	17.2	9.2	10.3	6.5	57.8	39.6	47.0	34.8	64.4	52.1	45.7	33.5
April.....	17.4	9.6	10.0	6.1	53.2	36.7	44.8	33.2	64.0	49.7	43.3	31.9
May.....	17.5	9.3	9.9	6.2	57.0	39.6	46.2	35.6	63.6	51.1	44.9	34.4
June.....	15.2	7.5	10.6	6.8	57.5	39.6	45.0	34.9	63.0	49.8	43.6	33.7
July.....	19.0	9.4	11.9	8.2	62.7	44.1	48.0	36.5	62.6	48.7	46.9	35.6
August.....	22.6	12.6	15.8	9.3	69.0	48.7	50.3	42.0	62.1	49.1	49.4	41.4
September.....	21.9	12.0	16.8	10.2	76.9	55.8	51.1	41.4	62.5	48.8	50.2	40.8
October.....	21.4	12.6	20.3	13.2	79.1	57.8	51.0	44.7	63.2	50.0	50.1	44.3
November.....	21.9	12.7	20.2	13.5	76.1	57.0	50.8	42.1	64.0	51.7	49.8	41.4
December.....	24.5	14.2	18.7	12.1	80.6	60.1	49.7	40.9	64.1	52.3	48.6	40.0

1 Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Lumber and allied products									
	Group index		Furniture		Lumber, saw-mills		Lumber, mill-work		Turpentine and rosin	
	Em- ploy- ment	Pay-roll totals	Em- ploy- ment	Pay-roll totals	Em- ploy- ment	Pay-roll totals	Em- ploy- ment	Pay-roll totals	Em- ploy- ment	Pay-roll totals
1923 average.....	(1)	(1)	100.4	94.2	115.1	106.5	101.5	95.5	(1)	(1)
1924 average.....	(1)	(1)	95.2	90.7	108.0	102.8	101.2	98.0	(1)	(1)
1925 average.....	(1)	(1)	99.1	95.6	103.6	101.7	103.0	101.8	(1)	(1)
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	(1)	(1)	96.1	98.2	91.0	92.4	89.2	89.2	(1)	(1)
1928 average.....	(1)	(1)	92.5	93.2	86.7	88.0	85.5	85.6	(1)	(1)
1929 average.....	(1)	(1)	95.9	97.0	85.9	86.9	83.1	82.8	(1)	(1)
1930 average.....	(1)	(1)	75.2	66.6	67.7	65.0	63.9	61.0	(1)	(1)
1931 average.....	52.0	41.0	61.0	46.6	48.3	37.1	52.2	43.0	55.1	54.8
1932 average.....	38.7	21.9	47.3	26.4	35.5	18.9	36.9	22.7	44.7	37.7
1933 average.....	41.5	23.2	50.4	27.6	38.8	21.3	35.9	20.5	51.9	41.9
1931										
January.....	54.3	43.4	62.7	48.4	50.9	40.0	53.6	44.9	60.3	55.1
February.....	54.4	45.1	63.7	52.2	50.6	40.3	54.8	47.1	58.1	63.4
March.....	54.2	45.7	63.4	52.4	50.3	41.2	55.0	47.6	57.3	66.3
April.....	54.6	44.4	62.2	49.7	51.1	40.1	55.2	47.7	61.2	64.9
May.....	54.8	45.3	61.5	48.7	51.6	41.8	56.0	49.1	60.2	61.5
June.....	54.2	44.1	60.4	45.8	51.6	41.9	54.3	47.3	58.7	55.9
July.....	52.2	41.4	60.5	43.6	49.3	38.7	53.1	44.6	56.2	58.3
August.....	51.7	40.7	58.5	45.6	48.3	37.1	52.6	43.5	50.2	49.4
September.....	50.8	39.7	61.4	46.9	47.0	36.1	49.3	38.7	53.2	50.3
October.....	49.7	37.6	61.5	46.3	45.7	33.2	48.0	36.6	49.1	48.3
November.....	48.1	33.9	59.4	40.8	43.8	29.9	47.7	34.7	49.0	43.3
December.....	44.8	30.7	56.9	38.6	39.7	25.4	46.5	34.3	47.3	40.6
1932										
January.....	42.2	26.3	53.3	33.4	37.4	21.1	43.3	30.1	47.7	40.0
February.....	41.7	25.6	56.2	33.7	36.0	20.4	41.4	27.5	46.8	41.6
March.....	40.1	24.1	51.8	31.4	35.3	19.9	40.4	25.1	45.1	35.4
April.....	39.6	23.0	48.4	27.5	36.1	20.0	38.5	24.1	44.8	37.2
May.....	38.5	22.1	45.0	24.0	35.8	20.0	38.1	24.0	43.9	39.5
June.....	37.8	20.9	43.0	22.1	35.8	19.3	36.5	22.3	44.0	36.4
July.....	36.4	19.1	40.7	19.2	34.7	17.8	34.8	20.8	44.7	39.1
August.....	36.4	19.3	41.6	21.8	34.5	17.3	34.6	19.9	41.5	36.7
September.....	37.7	20.8	45.3	25.7	35.2	18.1	34.5	20.0	42.1	35.1
October.....	39.0	22.2	48.4	28.7	36.1	19.1	34.2	20.1	45.2	37.6
November.....	38.1	20.8	47.4	25.6	35.1	18.1	33.9	20.0	44.8	36.8
December.....	36.6	18.8	45.9	23.8	33.4	15.8	33.0	18.3	45.8	37.4
1933										
January.....	33.9	16.3	42.2	19.8	31.0	14.0	30.4	16.2	43.5	36.8
February.....	33.4	16.2	43.1	21.2	29.8	13.3	31.2	15.8	40.9	32.1
March.....	31.9	14.4	39.9	16.7	29.0	12.8	28.7	13.8	42.0	33.4
April.....	32.8	15.6	40.1	18.5	30.2	13.5	30.6	16.1	39.5	30.5
May.....	35.3	17.9	43.8	21.9	32.0	15.3	33.1	18.2	44.7	36.0
June.....	39.9	21.6	48.5	25.8	36.9	19.2	36.3	21.1	50.4	38.3
July.....	44.0	24.4	51.0	27.3	41.7	22.7	40.3	23.8	51.9	39.4
August.....	47.6	28.5	56.0	33.3	45.4	26.9	41.3	25.0	55.5	41.9
September.....	51.1	32.7	63.0	40.0	48.2	30.9	41.5	25.3	60.6	49.9
October.....	51.8	33.2	64.1	41.7	49.0	31.0	40.3	24.6	64.6	55.8
November.....	49.1	29.8	59.0	34.2	47.0	29.0	38.7	23.2	62.8	52.3
December.....	46.9	27.5	53.8	30.4	45.1	26.6	37.8	23.0	66.9	56.4

¹ Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING INDUSTRIES**—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Stone, clay, and glass products											
	Group index		Brick, tile, and terra cotta		Cement		Glass		Marble, granite, slate, and other products		Pottery	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	(1)	(1)	99.3	95.1	109.0	104.2	101.1	92.6	(1)	(1)	93.7	85.8
1924 average.....	(1)	(1)	97.4	98.5	108.9	107.9	91.4	88.2	(1)	(1)	100.6	95.1
1925 average.....	(1)	(1)	98.9	99.1	105.3	104.9	94.4	93.4	(1)	(1)	98.3	96.3
1926 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
1927 average.....	(1)	(1)	94.3	94.1	95.8	96.5	94.2	93.4	(1)	(1)	94.5	94.2
1928 average.....	(1)	(1)	84.9	82.8	87.7	88.3	92.9	94.3	(1)	(1)	95.3	93.4
1929 average.....	(1)	(1)	80.5	76.9	81.1	81.0	94.6	97.3	(1)	(1)	94.2	91.0
1930 average.....	(1)	(1)	63.1	55.3	74.1	71.5	81.3	78.3	(1)	(1)	84.7	74.7
1931 average.....	62.8	52.3	46.8	32.6	59.2	50.4	70.4	62.6	83.3	75.4	76.0	58.8
1932 average.....	44.8	28.6	29.3	13.7	41.2	25.6	58.5	43.1	49.8	34.8	61.1	37.4
1933 average.....	45.1	26.9	26.7	11.8	37.8	20.5	69.4	49.7	38.9	22.7	64.6	38.2
1931												
January.....	61.5	52.0	43.9	32.0	56.1	44.4	67.3	59.3	88.0	84.0	78.5	60.1
February.....	62.8	55.8	44.5	34.0	56.9	50.3	70.1	67.3	89.2	83.0	79.5	65.4
March.....	65.2	58.5	47.7	36.8	60.0	53.2	72.2	69.1	92.3	86.6	79.1	67.4
April.....	67.5	60.5	51.1	38.5	63.9	57.6	72.9	68.1	93.7	91.0	80.6	70.6
May.....	68.9	61.1	52.7	39.4	66.1	61.1	74.0	69.0	93.9	89.4	82.1	69.0
June.....	68.4	58.7	52.9	37.9	64.2	60.4	76.1	69.5	91.8	85.7	77.9	58.5
July.....	64.0	51.7	50.9	34.6	64.5	56.3	69.1	61.3	82.6	72.3	71.7	48.9
August.....	63.3	50.9	48.8	32.5	61.3	52.8	70.9	61.9	80.6	69.9	73.9	53.7
September.....	62.3	48.9	46.9	30.8	58.2	48.2	72.3	61.4	79.1	67.7	73.8	51.7
October.....	59.5	46.7	43.2	27.6	56.9	45.3	69.3	58.0	75.1	65.6	73.5	55.2
November.....	56.4	43.0	41.5	25.7	52.7	40.8	65.3	53.7	69.1	57.5	72.4	54.2
December.....	53.3	39.3	37.3	21.8	49.1	34.9	65.4	52.6	64.0	52.2	69.0	50.7
1932												
January.....	47.1	32.0	31.0	15.9	44.2	29.2	60.1	45.7	52.3	39.2	65.5	44.4
February.....	47.9	33.6	29.5	14.8	43.3	29.3	63.4	51.9	53.6	39.3	69.1	48.2
March.....	48.1	33.2	29.5	14.2	43.1	28.4	64.9	50.8	52.4	40.3	69.2	48.4
April.....	48.1	32.9	30.9	14.9	43.4	27.9	63.2	50.0	53.4	41.4	67.7	45.1
May.....	46.0	30.6	31.6	15.7	41.4	28.0	58.9	46.9	49.0	34.6	63.8	38.6
June.....	43.5	27.0	29.8	13.8	41.5	26.6	57.8	43.9	42.1	27.2	58.1	31.6
July.....	41.8	24.8	29.4	13.1	40.6	24.1	54.5	37.6	47.5	32.3	48.3	24.3
August.....	42.3	25.5	29.9	13.7	38.0	23.4	52.7	36.5	52.2	35.6	52.0	26.7
September.....	42.5	26.0	29.6	13.7	41.9	24.5	54.3	36.4	52.9	35.6	54.6	29.8
October.....	44.6	27.5	28.8	13.0	42.9	25.2	57.0	39.4	51.8	35.3	60.2	37.5
November.....	43.7	25.9	27.4	11.5	41.0	23.2	57.9	40.2	46.6	28.9	62.7	37.8
December.....	40.7	23.9	23.8	9.9	32.9	17.2	57.2	38.4	43.2	28.1	62.3	36.9
1933												
January.....	35.4	20.1	19.2	7.7	30.0	15.0	53.1	36.6	33.6	20.9	54.8	28.1
February.....	36.7	20.8	19.4	7.7	29.7	14.9	55.4	37.9	36.6	21.3	57.3	31.0
March.....	37.1	20.7	19.3	7.2	30.0	15.3	56.6	37.4	37.4	22.5	57.0	30.4
April.....	38.4	21.0	21.2	8.0	35.5	17.1	59.5	40.6	31.8	16.7	56.7	29.9
May.....	41.2	23.8	24.1	9.7	37.2	19.7	64.2	46.7	32.8	18.2	58.8	31.3
June.....	46.0	27.8	27.7	12.3	42.7	23.4	70.6	52.9	38.4	22.7	61.8	34.9
July.....	49.3	29.2	32.9	15.2	46.1	25.7	71.5	50.6	42.3	25.7	63.9	35.6
August.....	52.9	33.0	35.2	17.0	48.8	29.5	77.3	56.1	43.6	26.3	69.9	45.7
September.....	52.9	32.5	34.4	16.2	44.0	23.9	79.8	58.4	44.6	26.2	72.0	46.6
October.....	51.7	32.8	31.5	14.7	38.0	22.9	80.6	59.6	45.4	27.3	74.7	50.2
November.....	50.4	31.0	28.9	13.4	37.8	21.2	81.7	59.2	41.0	22.5	74.2	48.1
December.....	49.1	30.2	26.8	12.4	33.6	17.6	82.4	60.5	39.6	22.1	74.2	46.8

1 Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING INDUSTRIES**—YEARLY AVERAGES 1932 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Leather and its manufactures					
	Group index		Boots and shoes		Leather	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average.....	110.7	113.9	111.1	117.0	109.6	107.0
1924 average.....	100.3	100.6	101.6	102.8	96.9	95.7
1925 average.....	101.9	101.8	102.9	103.6	98.7	97.5
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	97.9	97.4	97.7	97.6	98.4	97.2
1928 average.....	92.8	89.7	91.9	88.0	95.4	93.7
1929 average.....	92.8	89.9	92.9	89.0	92.2	93.2
1930 average.....	85.0	72.9	85.0	70.1	85.2	83.0
1931 average.....	79.2	62.7	79.9	60.6	76.6	70.0
1932 average.....	74.7	49.6	76.2	48.8	68.4	52.6
1933 average.....	78.7	53.9	78.3	51.4	80.5	62.9
1931						
January.....	76.7	58.6	76.5	55.4	77.6	69.9
February.....	79.4	66.5	79.9	64.9	77.6	72.0
March.....	82.3	70.9	83.3	70.1	78.4	73.8
April.....	81.5	68.2	82.5	66.8	77.6	73.3
May.....	79.9	66.5	80.6	64.4	77.3	73.8
June.....	78.8	64.5	79.2	62.1	77.3	73.1
July.....	83.6	70.2	84.7	69.0	79.2	74.2
August.....	85.7	72.9	87.1	72.1	80.1	75.7
September.....	83.3	65.4	84.7	63.9	77.5	70.6
October.....	78.3	54.6	79.2	51.5	74.6	65.6
November.....	68.9	45.6	68.2	41.4	71.6	60.1
December.....	72.4	48.6	73.0	46.0	69.9	57.9
1932						
January.....	74.9	51.5	76.0	50.4	70.3	55.4
February.....	79.1	59.3	80.9	59.4	71.7	58.8
March.....	80.2	60.2	82.6	60.9	70.7	57.7
April.....	77.8	53.8	79.7	53.5	70.3	54.8
May.....	71.9	44.1	73.0	42.6	67.3	49.5
June.....	69.7	43.4	71.3	42.5	63.4	46.6
July.....	70.8	44.7	72.7	44.3	63.1	45.9
August.....	75.2	49.8	77.9	50.3	64.4	48.2
September.....	77.0	52.7	79.5	53.0	67.0	51.5
October.....	78.1	53.1	80.1	52.5	69.9	55.4
November.....	71.9	42.4	72.0	39.0	71.7	54.1
December.....	69.3	40.7	69.0	37.2	70.7	53.1
1933						
January.....	72.5	42.3	73.1	40.1	70.1	50.1
February.....	76.5	48.4	77.7	47.0	71.6	53.1
March.....	75.8	45.5	77.3	44.4	69.7	49.5
April.....	74.1	44.3	76.2	44.2	65.7	44.7
May.....	75.6	49.1	76.3	47.2	73.0	55.7
June.....	78.9	55.5	78.5	52.7	80.3	65.4
July.....	84.5	62.1	84.3	59.7	85.5	70.3
August.....	87.8	67.0	87.0	65.0	91.2	73.9
September.....	85.7	66.4	84.3	64.4	91.6	73.6
October.....	84.1	62.0	82.5	58.5	90.5	74.1
November.....	74.8	51.7	71.8	46.5	86.8	69.8
December.....	74.6	52.7	70.8	46.6	89.9	74.2

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING INDUSTRIES**—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Paper and printing									
	Group index		Paper boxes		Paper and pulp		Printing, book and job		Printing, newspaper and periodicals	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	96.5	89.7	98.9	91.3	104.6	97.6	96.1	87.8	89.5	84.5
1924 average.....	96.7	91.7	98.2	93.3	98.6	94.4	97.9	90.8	93.1	89.7
1925 average.....	97.3	94.3	98.8	95.6	98.7	96.8	97.5	93.1	95.4	93.0
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	100.1	101.2	96.8	99.0	97.5	96.6	100.3	102.1	103.4	104.6
1928 average.....	99.2	101.5	94.0	99.4	94.4	94.9	99.2	101.6	105.2	107.4
1929 average.....	101.3	106.0	96.0	103.3	95.5	98.2	102.6	105.8	108.3	112.8
1930 average.....	98.3	101.9	89.7	92.9	91.3	89.8	99.5	102.6	108.5	112.3
1931 average.....	90.5	89.0	82.1	79.6	80.8	70.3	89.7	87.6	105.6	106.6
1932 average.....	81.2	69.6	71.2	60.4	74.9	52.8	76.1	64.6	98.6	89.5
1933 average.....	82.6	64.5	77.8	63.0	82.2	55.5	70.5	55.1	99.1	80.9
1931										
January.....	93.6	93.9	82.8	79.8	82.5	74.9	96.8	97.3	107.1	108.1
February.....	92.6	93.3	81.7	80.6	82.4	77.9	94.8	94.0	105.8	107.2
March.....	92.4	94.5	81.9	83.0	82.0	77.1	93.0	94.4	107.9	110.4
April.....	92.0	93.4	82.0	82.1	82.0	75.5	91.9	92.6	107.6	110.2
May.....	92.0	92.7	81.4	81.7	82.6	75.2	91.5	90.9	107.7	110.3
June.....	90.2	89.6	80.9	79.8	81.0	71.2	88.7	87.5	106.2	107.9
July.....	89.5	86.8	80.1	76.9	81.1	68.1	88.1	85.2	104.5	104.8
August.....	89.2	86.3	81.1	78.0	81.2	69.5	88.4	85.0	102.6	102.2
September.....	88.4	86.3	81.1	77.7	79.5	64.2	86.0	80.8	103.0	103.2
October.....	89.0	84.9	81.7	82.8	79.6	65.4	85.3	79.8	105.1	105.0
November.....	88.6	84.2	83.9	78.4	78.4	63.6	85.7	80.6	104.9	104.4
December.....	88.4	84.4	81.5	74.6	77.6	61.5	86.7	83.2	105.1	105.1
1932										
January.....	86.5	79.4	74.6	65.6	77.4	57.9	85.9	79.6	102.8	98.5
February.....	85.0	77.5	73.4	65.1	77.7	61.2	82.4	74.4	101.4	95.9
March.....	84.2	76.5	73.3	65.9	77.8	61.0	80.1	71.9	101.1	95.3
April.....	83.1	74.1	72.5	63.4	76.4	57.2	78.7	69.0	100.4	94.4
May.....	81.6	71.6	69.1	58.6	75.0	54.8	77.4	66.9	99.4	92.0
June.....	79.9	67.7	69.1	57.8	73.3	49.9	75.1	62.8	97.7	88.4
July.....	78.4	64.2	66.5	52.8	72.2	45.9	73.9	59.9	96.0	85.1
August.....	77.3	62.7	66.6	52.8	72.2	46.7	70.9	56.8	95.1	83.0
September.....	78.8	65.1	69.8	59.0	74.1	49.4	71.7	58.6	96.3	84.7
October.....	80.2	66.7	73.6	63.8	75.2	52.0	72.6	59.5	97.4	85.4
November.....	80.1	65.3	74.1	61.6	75.0	50.3	71.8	57.0	97.9	85.7
December.....	79.5	64.9	71.9	58.0	73.0	46.7	72.7	59.3	98.0	85.8
1933										
January.....	78.2	62.3	67.3	51.4	72.2	45.0	71.7	57.6	97.1	82.6
February.....	78.1	61.2	68.3	53.7	72.5	46.5	71.0	54.9	96.8	80.2
March.....	76.8	58.8	68.9	51.4	72.5	45.2	67.5	51.9	95.8	77.8
April.....	76.5	58.1	67.0	51.1	72.6	45.6	66.7	50.2	96.5	77.1
May.....	77.4	60.3	69.1	55.8	74.8	50.2	66.7	51.9	96.5	77.5
June.....	78.9	61.9	73.6	61.4	77.3	54.1	67.4	52.2	96.2	77.5
July.....	80.5	63.0	77.9	65.7	81.9	58.4	66.9	52.4	95.8	76.3
August.....	84.8	65.8	86.1	71.5	88.8	65.1	70.2	53.4	96.5	77.2
September.....	88.7	69.3	90.9	76.3	83.9	66.4	72.4	56.6	100.8	82.5
October.....	90.5	70.6	92.6	76.0	94.8	66.3	73.5	57.8	104.1	85.3
November.....	90.2	70.3	88.4	72.2	93.1	62.0	74.5	59.0	105.8	87.2
December.....	90.5	71.8	83.6	69.4	92.0	61.4	77.3	62.7	107.3	89.1

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING INDUSTRIES**—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Chemicals and allied products											
	Group index		Chemicals		Cotton-seed—oil, cake, and meal		Druggists' preparations		Explosives		Fertilizers	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	96.2	91.8
1924 average.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	86.9	83.6
1925 average.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	95.1	90.6
1926 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
1927 average.....	(1)	(1)	102.5	104.0	(1)	(1)	95.5	106.1	107.2	107.8	91.2	94.0
1928 average.....	(1)	(1)	103.5	104.7	(1)	(1)	88.1	98.8	115.5	108.9	95.4	97.1
1929 average.....	(1)	(1)	110.9	107.4	(1)	(1)	93.4	105.1	131.5	131.2	95.2	94.7
1930 average.....	(1)	(1)	104.4	95.0	(1)	(1)	86.1	98.2	112.9	99.8	89.5	87.5
1931 average.....	86.0	82.5	95.8	82.2	47.0	48.9	83.0	91.6	99.3	80.8	62.9	56.2
1932 average.....	75.2	63.2	85.5	63.9	41.8	39.8	73.0	72.8	76.0	50.9	49.5	34.9
1933 average.....	85.5	67.2	102.2	72.9	40.6	37.4	73.4	71.5	87.3	58.7	65.4	39.2
1931												
January.....	92.5	87.9	101.5	85.7	87.8	81.4	84.9	95.0	110.4	76.5	73.5	66.6
February.....	90.8	88.9	100.8	87.5	67.4	60.7	86.4	98.7	108.8	88.8	74.2	66.5
March.....	89.5	87.2	98.6	86.9	57.8	52.9	86.0	98.5	104.8	87.8	93.7	78.3
April.....	92.8	89.5	96.2	84.1	54.5	52.6	81.9	93.1	104.0	84.4	116.4	105.4
May.....	88.1	87.5	95.1	83.6	37.8	40.5	80.4	90.2	98.4	80.9	72.9	66.5
June.....	84.0	83.3	95.1	82.6	28.4	31.3	77.7	86.4	94.7	78.9	44.5	44.2
July.....	83.0	81.0	95.2	81.6	26.0	28.8	79.6	86.9	98.3	80.8	41.3	40.7
August.....	81.5	79.3	92.1	78.5	22.1	29.3	82.2	88.5	97.1	82.8	44.2	40.8
September.....	82.9	78.7	95.2	81.0	30.6	37.6	86.5	91.3	96.0	81.5	50.1	44.0
October.....	83.1	79.0	95.9	82.3	40.5	48.2	86.5	94.7	95.0	81.9	49.0	41.3
November.....	82.2	74.4	93.4	77.1	56.8	63.0	83.8	88.6	94.3	78.3	46.8	38.3
December.....	81.0	73.4	91.0	75.1	53.7	60.7	80.4	87.0	89.9	67.1	48.5	41.2
1932												
January.....	80.2	70.1	89.9	71.1	45.5	49.0	80.7	82.8	86.8	56.0	51.2	40.6
February.....	80.3	70.6	88.9	70.7	48.2	49.5	78.8	81.2	84.3	58.6	56.6	40.4
March.....	79.9	69.7	88.9	70.9	46.5	45.3	79.6	79.7	77.9	56.4	63.9	42.7
April.....	80.6	68.2	87.7	68.0	41.1	40.4	74.2	74.5	75.4	51.5	90.0	58.2
May.....	76.1	65.5	86.1	65.6	34.7	34.3	73.3	73.4	75.0	54.3	58.3	41.1
June.....	69.3	60.4	83.6	61.6	23.8	26.4	70.5	70.6	71.3	45.5	32.5	25.1
July.....	68.0	56.5	82.1	58.6	28.1	28.3	66.1	64.2	66.6	42.8	30.4	24.0
August.....	67.6	56.1	81.3	58.6	27.5	28.1	68.2	65.7	69.2	43.6	34.2	25.2
September.....	73.4	59.5	82.3	58.5	46.3	40.3	69.7	68.1	71.6	44.8	42.5	29.6
October.....	75.5	60.9	84.7	61.7	54.1	44.9	71.7	70.4	75.7	51.2	45.1	30.1
November.....	76.0	60.8	85.3	61.6	54.7	47.0	71.9	71.8	79.0	54.1	46.0	30.8
December.....	75.6	59.7	84.6	59.8	51.1	44.3	71.4	70.9	79.3	51.7	43.5	30.4
1933												
January.....	75.2	59.5	85.4	60.4	36.6	33.1	73.9	72.5	75.9	46.6	49.9	32.5
February.....	76.5	59.7	86.8	61.4	40.6	34.1	70.5	70.0	76.2	47.0	56.7	32.6
March.....	76.4	58.5	86.4	60.2	38.4	33.0	69.8	66.5	75.7	47.7	67.4	36.3
April.....	79.1	58.6	85.2	59.4	27.8	23.3	67.7	62.3	75.1	44.9	117.4	59.4
May.....	77.3	61.1	88.4	63.7	23.2	22.0	66.2	63.1	75.0	46.9	67.2	36.8
June.....	78.8	64.4	94.3	69.1	27.9	27.7	67.0	66.1	75.4	51.2	44.3	27.9
July.....	83.1	67.2	103.0	75.5	31.4	30.9	69.9	66.6	83.3	58.5	46.5	29.8
August.....	89.5	71.0	113.6	82.2	37.3	36.0	71.7	71.5	91.3	67.8	50.9	32.6
September.....	95.9	74.2	118.6	81.8	54.4	49.8	76.9	75.4	103.8	71.7	65.2	42.5
October.....	98.7	77.8	120.9	57.0	62.9	60.3	80.8	80.3	105.9	77.4	72.1	48.0
November.....	98.1	76.9	121.9	86.3	54.6	50.9	82.4	81.8	106.3	74.6	72.0	44.2
December.....	97.3	77.2	121.3	87.9	52.3	47.5	83.4	82.0	103.3	70.4	75.1	48.1

* Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

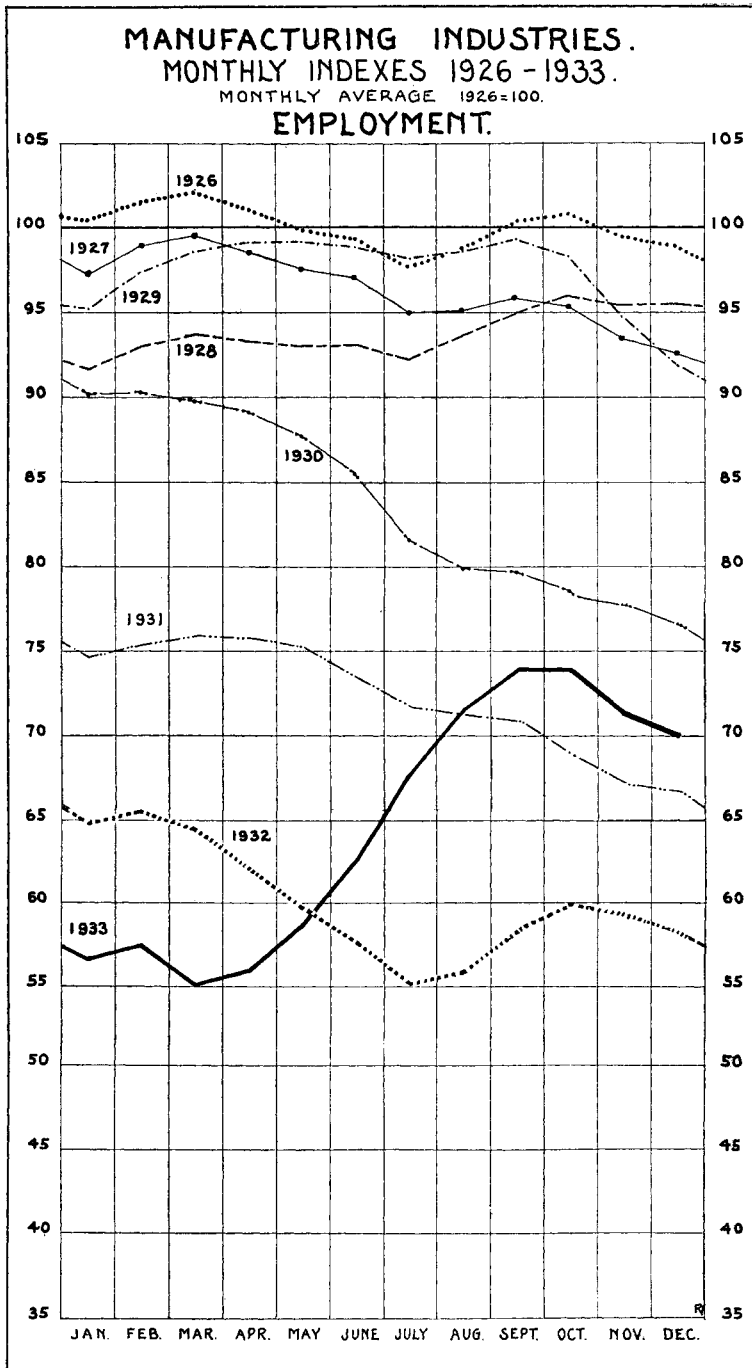
Month and year	Chemicals and allied products—Continued							
	Paints and varnishes		Petroleum refining		Rayon and allied products		Soap	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	(1)	(1)	99.7	192.1	(1)	(1)	(1)	(1)
1924 average.....	(1)	(1)	91.8	81.7	(1)	(1)	(1)	(1)
1925 average.....	(1)	(1)	94.0	95.2	(1)	(1)	(1)	(1)
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	(1)	(1)	94.6	95.6	(1)	(1)	(1)	(1)
1928 average.....	(1)	(1)	84.8	87.2	(1)	(1)	(1)	(1)
1929 average.....	(1)	(1)	96.5	99.1	171.3	173.2	(1)	(1)
1930 average.....	(1)	(1)	92.6	95.9	162.6	168.5	(1)	(1)
1931 average.....	80.6	77.8	73.5	73.4	149.5	148.4	100.3	103.1
1932 average.....	70.2	57.5	64.1	57.2	129.2	110.8	95.6	85.6
1933 average.....	73.2	55.5	66.7	55.6	167.9	141.2	103.0	83.8
1931								
January.....	81.0	77.9	81.0	81.8	137.3	141.2	98.9	109.7
February.....	81.9	81.9	79.7	83.1	138.0	141.6	99.4	107.9
March.....	82.9	84.0	71.5	74.8	144.8	150.4	99.3	107.3
April.....	84.2	84.7	77.9	79.7	148.0	149.8	101.6	109.1
May.....	86.3	87.8	78.1	79.2	151.4	158.6	103.4	112.2
June.....	85.6	85.3	75.4	75.1	154.5	157.7	100.1	105.5
July.....	80.9	78.2	73.7	73.8	156.5	157.0	100.5	96.9
August.....	78.5	74.3	71.6	70.5	158.6	158.4	99.2	103.0
September.....	78.3	72.5	69.9	68.4	153.5	148.8	102.8	100.9
October.....	77.6	71.4	68.8	66.6	153.5	152.6	101.6	101.7
November.....	75.3	68.0	67.4	64.2	149.5	132.6	99.0	92.0
December.....	74.6	67.3	67.3	64.1	147.9	132.6	97.7	90.5
1932								
January.....	73.4	63.2	67.2	62.5	149.9	128.5	95.9	87.9
February.....	73.9	64.3	66.4	61.9	149.2	136.5	96.5	89.7
March.....	74.2	65.0	65.2	60.1	143.7	133.1	96.8	89.4
April.....	72.8	62.8	65.1	58.7	138.8	125.6	96.5	90.5
May.....	73.1	64.4	64.8	59.8	129.9	110.6	94.2	85.4
June.....	72.3	61.8	64.7	59.4	93.4	78.3	95.7	90.5
July.....	68.9	53.0	64.1	56.8	92.9	71.2	93.1	82.6
August.....	66.0	48.7	62.8	56.2	92.8	74.5	93.9	81.5
September.....	66.9	51.6	63.4	54.6	130.9	110.8	94.5	83.3
October.....	68.2	54.6	61.8	52.2	139.6	118.3	96.9	84.4
November.....	67.1	51.7	61.5	52.0	142.8	120.2	98.3	83.0
December.....	65.7	49.3	62.5	51.8	146.9	122.5	94.5	79.2
1933								
January.....	63.6	45.9	62.1	53.3	149.3	123.5	94.2	77.0
February.....	64.2	47.3	62.7	53.0	149.1	121.0	95.1	78.0
March.....	63.3	43.5	62.8	53.2	142.0	114.5	93.7	76.3
April.....	65.3	48.7	62.9	52.6	133.1	103.1	94.0	76.8
May.....	71.6	57.9	63.6	53.7	147.0	117.8	95.8	78.8
June.....	76.4	62.3	64.7	54.6	154.9	130.1	99.5	83.2
July.....	78.7	61.5	64.7	54.5	167.6	140.1	101.5	84.9
August.....	80.0	60.2	66.0	55.0	188.3	156.3	110.9	86.0
September.....	80.4	59.2	70.0	57.6	196.7	168.3	116.0	91.9
October.....	80.4	61.0	72.7	59.8	197.3	172.4	116.7	92.6
November.....	77.8	58.9	73.4	60.1	197.7	172.9	112.1	91.6
December.....	77.0	59.4	74.2	59.8	191.8	174.5	106.9	88.2

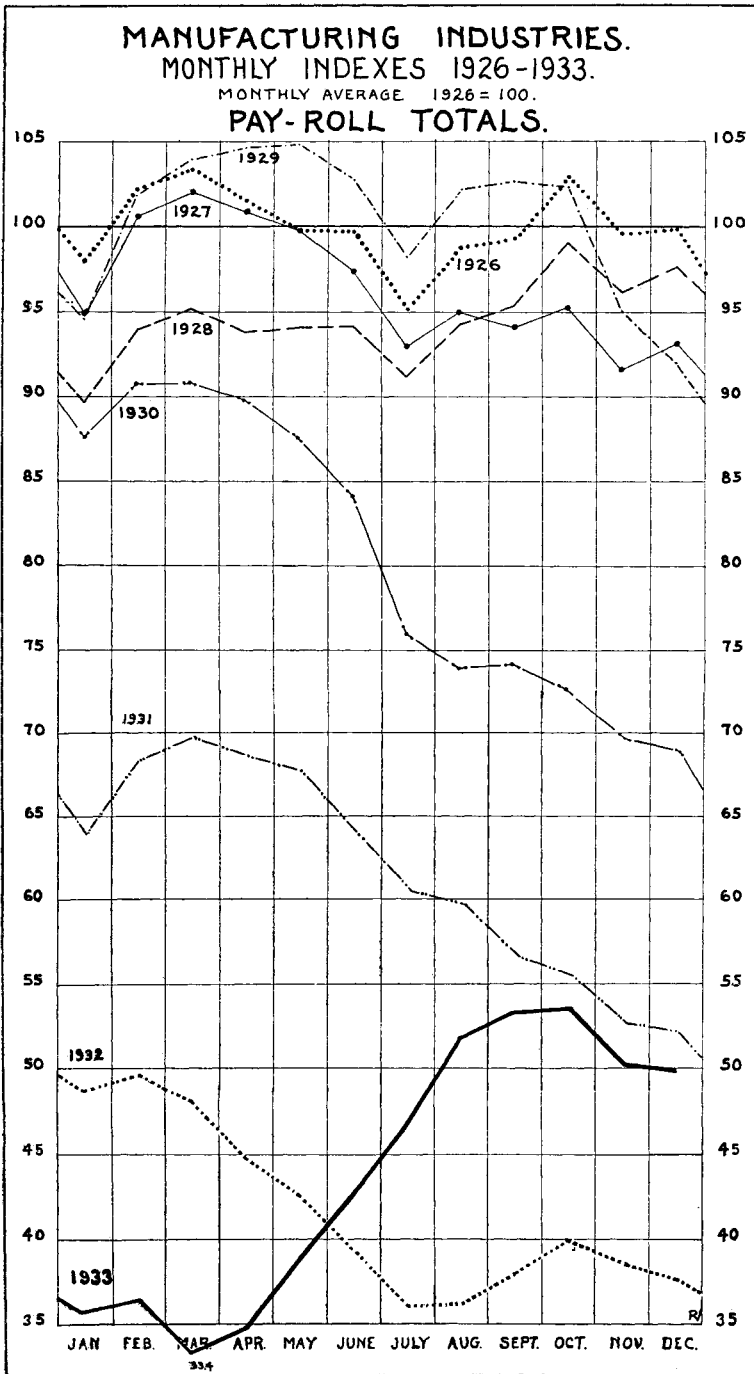
¹ Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Rubber products								Tobacco manufactures							
	Group index		Rubber boots and shoes		Rubber goods, other than boots, shoes, tires, and inner tubes		Rubber tires and inner tubes		Group index		Chewing and smoking tobacco and snuff		Cigars and cigarettes			
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average....	(1)	(1)	116.7	107.2	(1)	(1)	91.1	88.2	116.9	114.0	105.4	100.1	118.3	115.9		
1924 average....	(1)	(1)	82.7	76.6	(1)	(1)	88.6	88.1	109.8	108.9	105.2	101.2	110.4	109.9		
1925 average....	(1)	(1)	97.1	97.7	(1)	(1)	102.2	100.4	107.5	105.7	97.0	98.3	109.0	106.7		
1926 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		
1927 average....	(1)	(1)	103.3	107.7	(1)	(1)	97.3	98.2	98.1	97.1	97.7	97.7	98.1	97.0		
1928 average....	(1)	(1)	101.1	101.0	(1)	(1)	103.3	105.7	96.0	93.5	95.2	94.1	96.0	93.4		
1929 average....	(1)	(1)	97.6	99.3	(1)	(1)	104.1	101.8	93.6	92.8	89.3	89.6	94.2	93.2		
1930 average....	(1)	(1)	80.2	74.2	(1)	(1)	77.6	73.4	89.5	84.1	89.5	87.7	89.5	83.7		
1931 average....	73.0	59.6	66.3	50.0	88.6	72.0	68.6	57.6	81.3	69.3	86.1	79.3	80.7	68.1		
1932 average....	66.2	45.1	56.3	39.7	81.5	56.1	62.9	42.5	71.7	54.6	88.9	73.7	69.5	52.2		
1933 average....	74.6	50.4	54.6	44.7	97.2	63.6	71.3	47.2	66.9	48.9	87.0	70.5	64.3	46.3		
1931																
January.....	74.0	61.8	69.7	54.7	89.4	74.6	68.9	59.0	77.7	68.2	93.7	87.2	75.6	65.9		
February.....	73.2	61.8	68.1	47.4	89.2	74.2	68.1	60.9	85.6	69.3	93.8	88.1	84.6	67.0		
March.....	71.3	61.9	58.8	34.9	90.1	76.0	68.3	63.3	85.0	72.4	92.2	84.3	84.1	71.0		
April.....	72.7	64.1	61.7	43.9	89.7	74.7	69.0	65.1	82.1	69.5	79.8	73.9	82.4	69.0		
May.....	75.2	67.2	63.5	45.6	90.2	75.1	72.5	69.4	82.7	72.3	84.6	78.7	82.4	71.5		
June.....	76.1	68.1	66.2	48.1	90.3	74.5	73.3	70.5	81.7	72.6	81.8	77.1	81.7	72.0		
July.....	74.7	61.6	67.0	51.1	89.0	72.5	71.1	60.2	81.3	71.4	80.7	76.8	81.4	70.8		
August.....	72.5	59.7	62.4	51.8	87.4	70.0	69.4	58.0	81.0	70.2	83.3	78.5	80.7	69.2		
September.....	72.7	53.7	69.5	57.1	88.0	67.5	67.3	48.1	81.4	66.4	82.4	75.1	81.3	65.4		
October.....	71.5	53.8	69.5	57.0	87.4	70.9	65.5	47.1	81.8	68.5	84.9	78.0	81.4	67.3		
November.....	71.6	50.4	72.4	54.9	86.6	67.2	65.1	43.5	81.4	68.4	87.4	74.6	80.6	67.6		
December.....	70.8	51.6	69.8	53.0	85.9	66.5	64.9	46.1	73.7	62.5	88.8	79.2	71.8	60.5		
1932																
January.....	69.6	51.4	65.6	45.2	82.9	61.8	65.3	49.2	71.2	56.5	92.0	83.6	68.5	53.2		
February.....	69.6	52.2	62.0	41.4	84.4	61.6	65.8	51.4	74.0	56.9	92.4	81.1	71.6	54.0		
March.....	68.5	49.8	59.8	43.4	83.3	60.3	65.1	47.7	72.5	55.5	88.9	72.6	70.4	53.4		
April.....	67.5	46.7	57.3	38.3	81.1	56.1	64.9	45.4	70.5	52.4	87.0	72.2	68.4	50.0		
May.....	66.7	46.4	55.6	38.9	79.6	53.3	64.7	45.8	69.3	51.5	87.1	71.6	67.0	49.1		
June.....	67.6	51.1	55.8	35.4	80.5	53.5	65.8	53.9	71.1	55.5	89.4	73.3	68.7	53.3		
July.....	65.5	43.8	50.6	28.8	77.5	50.1	65.0	45.1	70.3	54.6	87.7	69.9	68.1	52.8		
August.....	64.1	40.1	53.8	33.4	76.2	47.7	62.2	39.0	70.3	52.5	88.7	71.8	67.9	50.2		
September.....	62.3	37.6	49.5	37.3	78.8	53.3	59.3	32.2	72.0	54.2	87.5	74.2	70.0	51.8		
October.....	63.9	41.1	52.0	39.7	84.3	61.2	59.0	34.5	73.9	55.8	89.8	73.3	71.9	53.7		
November.....	64.6	40.2	55.2	45.2	85.4	58.0	58.8	32.8	74.8	55.7	89.2	71.8	72.9	53.7		
December.....	64.5	40.6	58.9	48.9	83.6	56.3	58.3	33.3	70.8	53.5	86.8	69.4	68.8	51.6		
1933																
January.....	62.2	36.6	51.4	35.5	81.6	51.8	57.4	31.5	62.4	40.9	90.0	74.2	58.9	36.9		
February.....	62.6	36.8	49.2	34.0	82.0	51.7	58.6	32.3	65.6	42.8	86.0	65.4	63.0	40.1		
March.....	60.2	32.2	45.3	26.8	79.7	46.1	56.7	28.7	59.7	38.5	83.7	59.5	56.6	35.9		
April.....	60.1	34.8	45.6	28.3	78.6	47.7	56.8	31.9	58.3	38.4	80.7	62.1	55.4	35.5		
May.....	63.0	44.4	39.8	32.5	81.6	52.1	62.4	44.5	66.3	48.6	84.6	69.9	63.9	46.0		
June.....	70.4	54.4	42.2	36.0	88.1	61.3	71.6	56.2	68.4	50.4	87.4	70.8	66.0	47.9		
July.....	78.7	61.6	48.8	44.3	96.0	68.5	80.6	63.2	67.5	50.3	84.0	68.1	65.4	48.1		
August.....	87.5	62.5	57.0	52.9	113.9	75.3	85.8	60.3	69.6	51.3	88.5	76.0	67.2	48.3		
September.....	89.4	61.6	67.4	59.3	118.6	76.8	84.0	56.9	69.1	55.6	89.5	77.0	66.5	53.0		
October.....	89.1	62.8	68.6	61.7	120.9	82.6	82.2	56.2	72.3	59.0	91.7	77.0	69.8	56.8		
November.....	87.1	58.0	69.9	61.7	117.2	76.9	79.8	50.6	73.9	57.8	89.8	72.3	71.9	56.0		
December.....	84.6	59.2	70.4	63.3	108.5	72.7	79.1	53.5	69.5	53.6	87.8	73.8	67.2	51.2		

1 Data not available.





Time Worked in Manufacturing Industries December 1933

REPORTS as to working time in December were received from 14,486 establishments in 89 manufacturing industries. Of these establishments 3 percent were idle, 67 percent operated on a full-time basis, and 31 percent worked on a part-time schedule.

An average of 92 percent of full-time operation in December was shown by reports received from all the operating establishments included in table 5. The establishments working part time in December averaged 75 percent of full-time operation.

TABLE 5.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN DECEMBER 1933

Industry	Establishments reporting		Percent of establishments operating—		Average percent of full time reported by—	
	Total number	Percent idle	Full time	Part time	All operating establishments	Establishments operating part time
Food and kindred products	2,546	(¹)	75	24	95	80
Baking.....	906	(¹)	84	15	98	86
Beverages.....	325	(¹)	58	42	91	79
Butter.....	217	1	57	42	90	80
Confectionery.....	248	-----	68	32	93	77
Flour.....	358	(¹)	88	12	96	68
Ice cream.....	246	1	67	32	93	78
Slaughtering and meat packing.....	192	-----	74	26	95	82
Sugar, beet.....	42	-----	98	2	100	80
Sugar refining, cane.....	12	-----	67	33	93	80
Textiles and their products	2,619	5	70	24	92	67
Fabrics:						
Carpets and rugs.....	20	10	75	15	93	57
Cotton goods.....	646	2	66	32	90	67
Cotton small wares.....	102	2	69	29	92	72
Dyeing and finishing textiles.....	139	2	71	27	93	73
Hats, fur-felt.....	19	-----	26	74	77	69
Knit goods.....	402	2	78	20	94	70
Silk and rayon goods.....	216	6	87	8	97	68
Woolen and worsted goods.....	214	(¹)	82	17	95	72
Wearing apparel:						
Clothing, men's.....	262	8	69	23	90	61
Clothing, women's.....	357	18	60	22	88	55
Corsets and allied garments.....	22	-----	23	77	75	67
Men's furnishings.....	52	10	52	38	89	75
Millinery.....	84	5	73	23	94	76
Shirts and collars.....	84	5	70	17	94	67
Iron and steel and their products not including machinery	1,114	4	46	50	86	73
Bolts, nuts, washers, and rivets.....	65	-----	37	63	83	72
Cast-iron pipe.....	40	25	30	45	77	61
Cutlery (not including silver and plated cutlery) and edge tools.....	111	4	38	59	83	77
Forgings, iron and steel.....	37	-----	38	62	84	75
Hardware.....	61	-----	44	56	84	72
Iron and steel.....	135	11	61	27	93	77
Plumbers' supplies.....	59	-----	36	64	77	64
Steam and hot-water heating apparatus and steam fittings.....	80	-----	35	65	79	68
Stoves.....	141	-----	45	55	84	71
Structural and ornamental metal work.....	178	4	71	24	95	81
Tin cans and other tinware.....	55	-----	44	56	88	77
Tools (not including edge tools, machine tools, files, and saws).....	102	3	29	68	80	75
Wirework.....	50	-----	44	56	84	72

¹ Less than one half of 1 percent.

TABLE 5.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN DECEMBER 1933—Continued

Industry	Establishments reporting		Percent of establishments operating—		Average percent of full time reported by—	
	Total number	Percent idle	Full time	Part time	All operating establishments	Establishments operating part time
Machinery, not including transportation equipment	1,469	1	62	37	91	74
Agricultural implements	54	2	83	15	96	75
Cash registers, adding machines, and calculating machines	26	—	46	54	88	78
Electrical machinery, apparatus, and supplies	230	—	65	35	94	83
Engines, turbines, tractors, and water wheels	70	1	29	70	79	72
Foundry and machine-shop products	872	1	62	37	90	72
Machine tools	134	—	67	33	91	74
Radios and phonographs	41	—	88	12	98	86
Textile machinery and parts	35	—	57	43	91	79
Typewriters and supplies	7	—	71	29	96	86
Nonferrous metals and their products	530	(1)	52	47	89	76
Aluminum manufactures	14	—	43	57	91	77
Brass, bronze, and copper products	202	(1)	65	34	93	78
Clocks and watches and time-recording devices	19	—	5	95	81	79
Jewelry	96	1	29	70	84	77
Lighting equipment	43	—	40	60	84	74
Silverware and plated ware	47	—	32	68	83	75
Smelting and refining—copper, lead, and zinc	24	—	79	21	95	76
Stamped and enameled ware	85	—	69	31	92	72
Transportation equipment	313	2	67	31	95	82
Aircraft	25	—	68	32	94	82
Automobiles	164	1	71	29	96	84
Cars, electric- and steam-railroad	29	10	17	72	74	78
Locomotives	7	—	—	100	72	72
Shipbuilding	88	2	82	16	98	88
Railroad repair shops	665	1	51	48	90	80
Electric railroad	242	—	93	7	99	82
Steam railroad	423	1	27	72	86	80
Lumber and allied products	1,284	2	66	32	92	75
Furniture	370	2	73	25	93	72
Lumber:						
Millwork	405	2	62	36	91	76
Sawmills	493	1	65	34	92	76
Turpentine and rosin	16	6	31	63	87	80
Stone, clay, and glass products	710	14	55	31	90	73
Brick, tile, and terra cotta	229	25	51	24	91	72
Cement	65	15	68	17	93	64
Glass	148	1	83	16	97	83
Marble, granite, slate, and other products	178	16	19	65	78	72
Pottery	90	3	78	19	94	71
Leather and its manufactures	380	7	74	19	93	66
Boots and shoes	244	9	66	25	90	63
Leather	136	1	90	8	99	85
Paper and printing	1,672	1	81	19	96	76
Boxes, paper	278	(1)	75	24	94	77
Paper and pulp	369	3	62	36	90	74
Printing and publishing:						
Book and job	642	(1)	88	12	97	74
Newspapers and periodicals	383	—	91	9	99	87
Chemicals and allied products	862	2	70	28	94	78
Chemicals	78	1	95	4	100	91
Cottonseed—oil, cake, and meal	87	10	62	28	91	72
Druggists' preparations	29	—	52	48	91	81
Explosives	15	—	27	73	81	74
Fertilizers	157	—	96	4	99	73
Paints and varnishes	302	1	52	47	89	78
Petroleum refining	97	2	91	7	99	91
Rayon and allied products	15	—	100	—	100	—
Soap	82	—	56	44	91	80
Rubber products	124	—	40	60	84	73
Rubber boots and shoes	9	—	89	11	99	90
Rubber goods, other than boots, shoes, tires, and inner tubes	89	—	37	63	82	72
Rubber tires and inner tubes	26	—	31	69	82	75
Tobacco manufactures	198	3	58	40	89	74
Chewing and smoking tobacco and snuff	31	3	52	45	90	78
Cigars and cigarettes	167	2	59	39	89	73
Total, 89 industries	14,486	3	67	31	92	75

¹ Less than one half of 1 percent.

Employment in Nonmanufacturing Industries in December 1933

INCREASED employment in December, as compared with November, was reported in 6 of the 15 nonmanufacturing industries surveyed monthly by the Bureau of Labor Statistics and increased pay rolls were reported in 10 industries. Data for the building-construction industry are not presented here but are shown in more detail under the section "Building construction."

The most pronounced percentage gains in employment and pay rolls over the month interval were shown in the retail-trade industry. Reports received from 19,062 retail establishments indicated a net increase of 15.1 percent in employment and 10.6 percent in pay rolls in these establishments between November 15 and December 15. These pronounced percentage gains are due largely to seasonal fluctuations in the group of retail establishments composed of department, variety, general merchandise stores and mail-order houses, in which the Christmas trade resulted in an increase of 23.1 percent in employment and 17.6 percent in pay rolls. The remaining retail establishments surveyed showed a gain of 1.2 percent in employment over the month interval combined with an increase of 0.7 percent in pay rolls. The crude-petroleum-producing industry reported gains of 3.8 percent in employment and 5.7 percent in pay rolls, and the hotel industry reported increases of 2.4 percent in number of workers and 4.2 percent in pay rolls. The bituminous-coal mining and the telephone and telegraph industries reported increases in employment of 0.8 percent each combined with smaller gains in pay rolls, and the metalliferous-mining industry reported an increase of less than one tenth of 1 percent in employment combined with an increase of 2.6 percent in pay rolls. The most pronounced declines in employment and pay rolls in this group of nonmanufacturing industries were seasonal declines. The canning industry reported decreases of 28.7 percent in employment and 23.2 percent in pay rolls. The quarrying and nonmetallic-mining industry reported a seasonal decrease of 11.3 percent in employment and 13.7 percent in pay rolls. Employment in the anthracite-mining industry decreased 10.6 percent between November and December and the dyeing and cleaning industry reported a decline, largely seasonal, of 7.3 percent. The power and light industry reported a decrease of 1 percent in employment. In the remaining four industries in which decreases in employment occurred (electric-railroad and motor-bus operation, wholesale trade, banks-brokerage-insurance-real-estate, and laundries), the decreases were three tenths of 1 percent or less.

Eleven of the 15 nonmanufacturing industries appearing in the following table reported increased employment and pay rolls between December 1932 and December 1933, the canning, crude-petroleum,

and metalliferous-mining industries reporting the largest percentage gains in employment over the year interval. Four industries (electric-railroad and motor-bus operation and maintenance, laundries, anthracite mining, and telephone and telegraph) reported fewer employees and smaller pay-roll totals in December 1933 than in December 1932.

In the following table are presented employment and pay-roll data for the nonmanufacturing industries surveyed, exclusive of building construction.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY ROLLS IN **NONMANUFACTURING** ESTABLISHMENTS IN DECEMBER 1933 WITH NOVEMBER 1933 AND DECEMBER 1932

Industrial group	Estab- ments report- ing in both Novem- ber and Decem- ber 1933	Employment			Pay-roll totals			Index num- bers, Decem- ber 1933 (av- erage 1929= 100)	
		Number on pay roll De- cember 1933	Percent of change		Amount of pay roll (1 week) December 1933	Percent of change		Em- ploy- ment	Pay- roll totals
			Novem- ber to Decem- ber 1933	De- cem- ber 1932 to De- cem- ber 1933		Novem- ber to Decem- ber 1933	De- cem- ber 1932 to De- cem- ber 1933		
Coal mining:									
Anthracite.....	161	75,765	-10.6	-12.5	\$1,794,015	-7.2	-21.2	54.5	44.3
Bituminous.....	1,503	232,031	+8	+7.7	4,020,905	+2	+34.7	75.4	50.8
Metalliferous mining.....	288	27,555	(¹)	+21.9	574,014	+2.6	+40.1	40.6	26.2
Quarrying and nonmetallic mining.....	1,162	30,658	-11.3	+7.1	434,751	-13.7	+10.4	45.3	24.4
Crude-petroleum producing.....	253	28,207	+3.8	+31.1	758,568	+5.7	+27.6	75.0	53.2
Public utilities:									
Telephone and telegraph.....	8,192	248,039	+8	-7.2	6,554,172	+1	-7.9	69.4	67.7
Power and light.....	3,135	204,734	-1.0	+4.3	5,907,376	-1	+1.6	81.8	74.4
Electric-railroad and motor-bus operation and maintenance.....	498	131,741	-2	-8	3,542,879	+3	-3.7	70.8	59.6
Trade:									
Wholesale.....	3,036	88,845	-2	+8.2	2,315,049	+6	+3.0	83.3	64.5
Retail.....	19,062	513,941	+15.1	+10.7	9,477,847	+10.6	+9.1	105.4	80.3
Hotels (cash payments only) ²	2,356	129,718	+2.4	+6.0	1,697,276	+4.2	+1.8	77.6	57.6
Canning and preserving.....	803	39,319	-28.7	+46.6	496,713	-23.2	+52.3	49.4	39.9
Laundries.....	1,239	66,024	-1	-9	972,648	+6	-7	75.2	58.3
Dyeing and cleaning.....	342	10,134	-7.3	+1.5	170,186	-9.8	+3.3	76.3	50.0
Banks, brokerage, insurance, and real estate.....	4,395	175,190	³ -1.3	³ +1.3	5,819,731	³ +1.5	³ +2.2	³ 99.3	³ 87.4

¹ Less than one tenth of 1 percent.

² The additional value of board, room, and tips cannot be computed.

³ Weighted.

Per capita weekly earnings in December 1933 for 15 nonmanufacturing industries included in the Bureau's monthly trend-of-employment survey, together with the percents of change in December 1933 as compared with November 1933 and December 1932, are given in the table following. These per capita weekly earnings must not be confused with full-time weekly rates of wages; they are per capita weekly earnings computed by dividing the total amount of pay roll for the week by the total number of employees (part-time as well as full-time workers).

TABLE 2.—PER CAPITA WEEKLY EARNINGS IN 15 **NONMANUFACTURING** INDUSTRIES IN DECEMBER 1933 AND COMPARISON WITH NOVEMBER 1933 AND DECEMBER 1932

Industrial group	Per capita weekly earnings in December 1933	Percent of change	
		November 1933 to December 1933	December 1932 to December 1933
Coal mining:			
Anthracite.....	\$23.68	+3.9	-9.9
Bituminous.....	17.33	-.6	+25.0
Metalliferous mining.....	20.83	+2.6	+14.8
Quarrying and nonmetallic mining.....	14.18	-2.7	+3.3
Crude-petroleum producing.....	26.89	+1.7	-2.7
Public utilities:			
Telephone and telegraph.....	26.42	-.7	-.7
Power and light.....	28.85	+ .9	-2.6
Electric-railroad and motor-bus operation and maintenance.....	26.89	+ .5	-2.9
Trade:			
Wholesale.....	26.06	+ .9	-4.8
Retail.....	18.44	-3.9	-1.4
Hotels (cash payments only) ¹	13.08	+1.8	-4.0
Canning and preserving.....	12.63	+7.8	+3.8
Laundries.....	14.73	+ .7	+ .3
Dyeing and cleaning.....	16.79	-2.7	+1.7
Banks, brokerage, insurance, and real estate.....	33.22	² +1.9	² +.9

¹ The additional value of board, room, and tips cannot be computed.

² Weighted.

Indexes of Employment and Pay-Roll Totals for Nonmanufacturing Industries

INDEX numbers of employment and pay-roll totals for 15 non-manufacturing industries are presented in the following table. These index numbers show the variation in employment and pay rolls by months, from January 1930 to December 1933, in all nonmanufacturing industries except the laundry, dyeing and cleaning, and the banks, brokerage, insurance, and real-estate industries for which information over the entire period is not available. The Bureau has secured data concerning employment and pay rolls for the index base year 1929 from establishments in these industries and has computed index numbers for those months for which data are available from the Bureau's files. These indexes are shown in this tabulation.

TABLE 3.—INDEXES OF EMPLOYMENT AND PAY ROLLS FOR NONMANUFACTURING INDUSTRIES, JANUARY TO DECEMBER 1930, 1931, 1932, AND 1933

[12-month average, 1929=100]

Month	Anthracite mining								Bituminous-coal mining							
	Employment				Pay rolls				Employment				Pay rolls			
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
January.....	102.1	90.6	76.2	52.5	105.8	89.3	61.5	43.2	102.5	93.9	80.8	69.8	101.4	73.3	47.0	36.1
February.....	106.9	89.5	71.2	58.7	121.5	101.9	57.3	56.8	102.4	91.5	77.4	69.3	102.1	68.3	47.0	37.2
March.....	82.6	82.0	73.7	54.6	78.5	71.3	61.2	43.8	98.6	88.8	75.2	67.6	86.4	65.2	46.8	30.7
April.....	84.1	85.2	70.1	51.6	75.0	75.2	72.0	37.4	94.4	85.9	65.5	63.7	81.7	58.6	33.9	26.6
May.....	93.8	80.3	66.9	43.2	98.8	76.1	58.0	30.0	90.4	82.4	62.6	61.2	77.5	54.4	30.7	26.9
June.....	90.8	76.1	53.0	39.5	94.3	66.7	37.4	34.3	88.4	78.4	60.5	61.9	75.6	52.4	27.3	29.2
July.....	91.6	65.1	44.5	43.8	84.0	53.7	34.5	38.2	88.0	76.4	58.6	63.2	68.9	50.4	24.4	33.6
August.....	80.2	67.3	49.2	47.7	78.8	56.4	41.4	46.6	88.2	77.0	59.4	68.6	71.1	50.6	26.4	43.3
September.....	93.8	80.0	55.8	56.8	91.6	64.9	47.0	60.7	90.5	80.4	62.4	71.8	74.9	53.6	30.2	44.1
October.....	99.0	86.8	63.9	56.9	117.2	91.1	66.7	61.6	91.8	81.3	67.0	68.0	79.4	56.2	37.8	44.1
November.....	97.2	83.5	62.7	61.0	98.0	79.5	51.0	47.8	92.5	81.1	69.4	74.8	79.1	54.6	38.0	50.7
December.....	99.1	79.8	62.3	54.5	100.0	78.4	56.2	44.3	92.5	81.2	70.0	75.4	77.7	52.3	37.7	50.8
Average.....	93.4	80.5	62.5	51.7	95.3	75.4	53.7	45.8	93.4	83.2	67.4	67.9	81.3	57.5	35.6	37.8
Month	Metalliferous mining								Quarrying and nonmetallic mining							
	Employment				Pay rolls				Employment				Pay rolls			
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
January.....	95.7	68.3	49.3	32.4	92.7	55.0	29.7	18.1	79.6	64.4	48.9	35.1	71.9	50.4	30.2	18.1
February.....	92.3	65.3	46.9	31.5	92.5	54.6	27.8	17.8	79.8	66.6	47.4	34.8	73.5	54.4	29.6	17.4
March.....	90.9	63.5	45.0	30.0	90.8	52.8	26.5	17.4	83.0	70.0	46.0	35.1	80.0	58.2	28.7	17.8
April.....	89.3	63.9	43.3	29.4	88.3	51.4	25.0	16.4	87.4	76.1	48.6	39.3	85.4	62.6	30.0	20.2
May.....	87.5	62.4	38.3	30.0	85.6	49.3	23.8	17.0	90.8	75.0	50.6	43.4	90.2	62.3	32.3	23.8
June.....	84.6	60.0	32.2	31.5	81.6	46.1	20.1	18.3	90.3	72.3	49.5	47.3	90.9	60.1	30.0	27.5
July.....	80.5	56.2	29.5	33.0	71.9	41.3	16.9	19.0	89.9	71.0	49.5	49.5	85.5	57.3	29.1	28.4
August.....	79.0	55.8	28.6	36.8	71.0	40.2	16.5	21.9	89.3	68.9	51.1	51.6	85.8	55.1	29.7	29.9
September.....	78.1	55.5	29.3	38.9	69.9	40.0	17.0	23.9	87.7	66.6	52.4	52.6	82.5	51.2	30.5	29.3
October.....	77.2	52.8	30.5	40.7	68.6	37.4	18.0	25.9	84.7	64.5	52.4	53.2	79.3	48.7	30.1	31.2
November.....	72.8	52.8	31.9	40.6	63.4	35.1	18.7	25.6	78.3	59.3	49.4	51.1	66.8	43.3	27.1	28.3
December.....	70.1	51.2	33.3	40.6	59.9	34.3	18.7	26.2	70.2	53.9	42.3	45.3	59.9	36.9	22.1	24.4
Average.....	83.2	59.1	36.5	34.6	78.0	44.8	21.6	20.6	84.3	67.4	49.0	44.9	79.3	53.4	29.1	24.7
Month	Crude-petroleum producing								Telephone and telegraph							
	Employment				Pay rolls				Employment				Pay rolls			
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
January.....	92.7	74.8	54.9	57.2	94.0	71.5	46.5	39.9	101.6	90.5	83.0	74.6	105.1	96.3	89.1	71.7
February.....	90.8	73.2	54.4	57.0	88.6	70.0	46.9	41.7	100.3	89.2	82.0	73.9	101.9	94.8	89.6	71.9
March.....	89.3	72.2	51.4	56.5	91.3	73.2	43.2	42.5	99.4	88.6	81.7	73.2	105.8	97.9	88.2	71.6
April.....	86.8	69.8	54.9	56.8	86.6	66.3	44.5	40.1	98.9	88.1	81.2	72.3	103.4	95.0	83.4	67.8
May.....	89.8	67.8	54.5	56.9	85.4	64.7	47.1	41.6	99.7	87.4	80.6	70.1	103.2	94.1	82.8	68.5
June.....	90.2	65.0	54.2	58.0	87.1	62.7	44.8	40.6	99.8	86.9	79.9	69.9	103.4	95.0	82.1	66.6
July.....	89.9	65.3	55.4	59.5	88.5	59.2	44.6	42.2	100.0	86.6	79.1	68.5	106.6	93.3	79.6	66.7
August.....	87.7	62.4	57.4	60.8	86.0	56.3	42.9	42.5	98.8	85.9	78.1	68.1	102.5	92.3	79.1	66.1
September.....	85.0	61.2	56.2	66.2	84.0	55.2	41.9	44.4	96.8	85.0	77.4	68.3	102.2	92.1	75.9	64.6
October.....	85.2	60.4	56.8	70.6	82.6	54.4	42.5	50.1	94.5	84.1	76.2	68.7	100.9	91.6	75.7	67.0
November.....	83.6	57.6	56.5	72.2	80.0	52.0	42.4	50.3	93.0	83.5	75.5	68.9	97.9	89.7	74.3	67.7
December.....	77.4	58.2	57.2	75.0	77.2	54.9	41.7	53.2	91.6	83.1	74.8	69.4	101.3	92.7	73.5	67.7
Average.....	87.4	65.7	55.3	62.2	85.9	61.7	44.1	44.1	97.9	86.6	79.1	70.4	102.9	93.7	81.1	68.2
Month	Power and light								Electric-railroad and motor-bus operation and maintenance ¹							
	Employment				Pay rolls				Employment				Pay rolls			
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
January.....	99.6	99.2	89.3	77.7	99.7	98.6	88.4	73.0	97.1	86.9	79.5	70.6	97.8	85.6	75.4	60.9
February.....	98.8	97.8	87.2	77.4	100.4	99.7	86.0	71.6	95.1	86.6	78.9	70.4	95.7	87.1	74.8	60.6
March.....	99.7	96.7	85.5	77.9	102.1	102.4	85.4	71.9	94.4	84.6	77.6	69.8	95.4	88.1	73.6	59.4
April.....	100.7	97.1	84.8	76.9	102.6	97.6	82.4	69.4	95.2	86.8	78.0	69.5	97.1	86.6	71.8	58.1
May.....	103.4	97.6	84.0	76.9	104.5	98.7	84.2	69.9	95.2	85.9	76.9	69.1	96.0	85.1	72.2	58.2
June.....	104.6	97.2	83.2	77.3	107.8	98.3	80.5	69.9	94.8	85.3	76.5	69.3	97.0	84.8	70.2	58.0
July.....	105.9	96.7	82.3	77.5	106.7	97.4	78.7	70.0	95.3	85.6	75.6	69.4	95.6	83.3	66.4	57.4
August.....	106.4	95.9	81.5	78.1	106.6	96.2	76.7	70.9	92.9	84.8	74.1	69.5	92.1	81.9	63.8	58.2
September.....	105.2	94.7	81.0	80.3	106.1	94.3	74.7	71.8	91.8	84.0	73.5	69.7	90.5	81.2	62.5	57.8
October.....	104.8	92.7	79.9	82.2	105.6	93.2	74.4	76.2	91.0	82.7	72.3	70.6	88.9	79.0	61.5	59.8
November.....	103.4	91.3	79.1	82.6	103.7	93.3	73.2	74.5	89.3	81.2	71.8	71.0	87.7	79.7	61.7	59.4
December.....	103.2	90.3	78.4	81.8	106.3	91.2	73.2	74.4	88.8	79.9	71.4	70.8	88.6	77.8	61.9	59.6
Average.....	103.0	95.6	83.0	78.8	104.3	96.7	79.8	72.0	93.4	84.7	75.5	70.9	93.5	83.4	68.0	58.9

¹ Not including electric-railroad-car building and repairing; see transportation equipment and railroad repair-shop groups, manufacturing industries, table 1.

TABLE 3.—INDEXES OF EMPLOYMENT AND PAY ROLLS FOR NONMANUFACTURING INDUSTRIES, JANUARY TO DECEMBER 1930, 1931, 1932, AND 1933—Continued

	Wholesale trade								Retail trade							
	Employment				Pay rolls				Employment				Pay rolls			
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
January.....	100.0	89.5	81.8	75.3	100.0	87.5	74.1	61.7	98.9	90.0	84.3	76.9	99.7	89.4	78.0	62.7
February.....	98.5	88.2	80.9	74.1	98.3	88.4	72.5	58.6	94.4	87.1	80.5	73.4	96.0	86.7	73.7	58.4
March.....	97.7	87.4	79.8	73.1	97.7	89.1	71.3	57.1	93.9	87.8	81.4	71.4	95.5	87.5	73.4	55.1
April.....	97.3	87.4	78.9	73.3	97.9	85.2	68.9	56.0	97.3	90.1	81.6	73.6	97.5	88.3	72.7	60.4
May.....	96.8	87.1	77.9	74.0	97.4	84.7	69.7	57.4	96.7	89.9	80.9	77.0	96.8	88.0	71.1	59.5
June.....	96.5	87.1	77.0	75.7	98.6	84.1	66.7	57.3	93.9	89.1	79.4	75.3	96.8	87.6	68.2	60.5
July.....	96.0	86.8	76.6	76.9	96.0	83.3	64.7	50.1	89.0	83.9	74.6	74.6	91.7	83.3	63.8	58.1
August.....	95.0	86.5	76.4	79.7	93.6	82.1	63.2	60.8	85.6	81.8	72.6	73.1	87.6	80.3	62.7	60.2
September.....	94.8	86.1	77.1	82.1	93.6	81.4	63.1	62.3	82.0	86.6	77.8	86.0	92.4	83.5	64.7	69.2
October.....	94.2	85.2	77.8	83.5	92.9	79.9	63.9	66.0	95.5	89.8	81.3	89.6	95.1	84.6	67.1	72.3
November.....	92.6	84.1	77.6	83.4	91.0	79.7	63.3	64.1	98.4	90.9	81.7	91.6	96.8	85.4	66.9	72.6
December.....	92.0	83.7	77.0	83.3	91.3	77.8	62.6	64.5	115.1	106.2	95.2	105.4	107.7	94.1	73.6	80.3
Average.....	96.0	86.6	78.2	77.9	95.9	83.6	67.0	60.4	95.9	89.4	80.9	81.7	96.2	86.6	69.4	64.3
	Hotels								Canning and preserving							
	Employment				Pay rolls				Employment				Pay rolls			
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
January.....	100.4	95.0	83.2	73.8	100.3	91.0	73.9	55.7	46.1	48.9	35.0	34.1	50.3	46.1	31.8	24.8
February.....	102.4	96.8	84.3	73.8	103.8	93.7	73.9	55.9	45.7	48.3	37.1	35.1	51.5	48.6	32.7	25.9
March.....	102.4	96.8	84.0	72.4	104.4	93.4	72.4	53.5	49.7	53.0	36.3	33.2	50.8	50.3	31.9	24.2
April.....	100.1	95.9	82.7	71.9	100.3	89.9	69.6	51.7	74.8	59.6	47.0	49.2	72.6	67.1	37.9	33.5
May.....	98.0	92.5	80.1	71.9	98.4	87.7	67.0	51.8	65.7	66.0	40.5	45.5	66.9	56.0	36.0	31.8
June.....	98.0	91.6	78.0	73.6	98.1	85.4	63.8	52.3	83.0	70.6	55.5	55.6	81.5	58.6	40.5	36.7
July.....	101.3	93.3	78.4	75.6	99.8	85.2	61.8	53.3	126.3	102.2	73.0	76.6	112.7	74.2	47.5	46.2
August.....	101.5	92.8	77.6	77.1	98.6	83.8	59.6	54.0	185.7	142.9	99.0	112.7	172.0	104.7	65.6	68.3
September.....	100.1	90.6	77.0	78.7	97.1	81.9	59.1	55.6	246.6	180.1	125.3	175.6	214.8	129.4	75.1	127.0
October.....	97.5	87.4	75.4	77.0	95.5	79.7	58.6	56.2	164.7	138.1	81.1	126.3	140.0	77.6	51.8	87.1
November.....	95.2	84.9	74.3	75.8	93.6	77.1	57.5	55.2	96.7	60.8	50.5	69.3	82.9	48.1	34.4	50.8
December.....	93.5	83.1	73.2	77.6	91.5	75.4	56.6	57.6	61.6	40.7	33.7	49.4	57.4	36.9	25.6	39.0
Average.....	99.2	91.7	79.0	74.9	98.5	85.4	64.5	54.4	103.9	80.9	59.5	71.9	96.1	65.6	42.6	49.6
	Laundries								Dyeing and cleaning							
	Employment				Pay rolls				Employment				Pay rolls			
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
January.....	90.5	84.7	75.4	86.6	76.4	57.9	88.9	82.1	73.0	77.7	65.8	46.6	98.3	97.5	93.5	85.2
February.....	90.0	82.9	74.4	85.6	73.3	55.5	87.4	80.5	70.9	75.1	62.2	42.4	98.3	96.8	93.0	84.3
March.....	89.5	82.0	73.0	85.6	71.6	52.9	88.0	80.6	71.2	75.6	61.7	41.0	98.9	96.5	92.9	83.7
April.....	90.5	82.0	73.4	86.8	71.4	54.0	95.7	83.3	81.1	86.3	65.9	54.6	98.6	96.2	92.1	82.9
May.....	90.3	81.4	73.5	86.5	70.6	54.5	96.7	84.5	82.0	86.6	67.3	53.9	98.0	96.2	92.7	83.2
June.....	91.0	81.0	76.0	87.1	68.6	56.7	99.0	85.1	85.6	89.1	65.8	56.7	97.9	97.3	90.0	84.4
July.....	91.8	80.3	76.3	87.4	66.3	56.1	98.6	82.4	82.9	86.2	60.0	52.8	98.4	97.7	89.8	84.8
August.....	90.2	78.9	77.9	84.6	63.9	57.6	93.5	79.5	83.1	80.0	56.3	52.8	98.5	98.3	88.2	84.4
September.....	89.3	78.6	79.3	84.1	62.9	60.6	95.3	83.3	88.6	82.6	61.0	60.3	98.4	99.0	87.1	84.5
October.....	88.1	77.5	78.0	81.8	61.2	59.7	94.2	82.3	88.4	81.4	58.8	60.6	98.6	99.4	86.3	84.7
November.....	86.2	76.2	75.3	78.9	59.1	57.9	90.1	78.0	82.4	74.7	52.3	55.4	98.0	99.6	85.7	86.1
December.....	85.3	75.9	75.2	77.4	58.7	58.3	84.9	75.2	76.3	67.9	48.4	50.0	98.0	99.3	85.5	87.4
Average.....	89.4	80.1	75.6	84.4	67.0	56.8	92.7	81.4	80.5	80.3	60.5	52.3	98.3	97.8	89.7	84.6
	Banks, brokerage, insurance, and real estate															
	Employment				Pay rolls				Employment				Pay rolls			
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
January.....	90.5	84.7	75.4	86.6	76.4	57.9	88.9	82.1	73.0	77.7	65.8	46.6	98.3	97.5	93.5	85.2
February.....	90.0	82.9	74.4	85.6	73.3	55.5	87.4	80.5	70.9	75.1	62.2	42.4	98.3	96.8	93.0	84.3
March.....	89.5	82.0	73.0	85.6	71.6	52.9	88.0	80.6	71.2	75.6	61.7	41.0	98.9	96.5	92.9	83.7
April.....	90.5	82.0	73.4	86.8	71.4	54.0	95.7	83.3	81.1	86.3	65.9	54.6	98.6	96.2	92.1	82.9
May.....	90.3	81.4	73.5	86.5	70.6	54.5	96.7	84.5	82.0	86.6	67.3	53.9	98.0	96.2	92.7	83.2
June.....	91.0	81.0	76.0	87.1	68.6	56.7	99.0	85.1	85.6	89.1	65.8	56.7	97.9	97.3	90.0	84.4
July.....	91.8	80.3	76.3	87.4	66.3	56.1	98.6	82.4	82.9	86.2	60.0	52.8	98.4	97.7	89.8	84.8
August.....	90.2	78.9	77.9	84.6	63.9	57.6	93.5	79.5	83.1	80.0	56.3	52.8	98.5	98.3	88.2	84.4
September.....	89.3	78.6	79.3	84.1	62.9	60.6	95.3	83.3	88.6	82.6	61.0	60.3	98.4	99.0	87.1	84.5
October.....	88.1	77.5	78.0	81.8	61.2	59.7	94.2	82.3	88.4	81.4	58.8	60.6	98.6	99.4	86.3	84.7
November.....	86.2	76.2	75.3	78.9	59.1	57.9	90.1	78.0	82.4	74.7	52.3	55.4	98.0	99.6	85.7	86.1
December.....	85.3	75.9	75.2	77.4	58.7	58.3	84.9	75.2	76.3	67.9	48.4	50.0	98.0	99.3	85.5	87.4
Average.....	89.4	80.1	75.6	84.4	67.0	56.8	92.7	81.4	80.5	80.3	60.5	52.3	98.3	97.8	89.7	84.6

A comparison of the yearly average indexes of employment for 1932 and 1933 indicates that employment in four of the 15 nonmanufacturing industries was higher in 1933 than in 1932. These four industries were canning and preserving, crude-petroleum producing, retail trade, and bituminous-coal mining. The increases in employment in the canning and preserving and the crude-petroleum-producing industries were pronounced, while the 1933 average indexes of employment in retail trade and bituminous-coal mining were only slightly above the 1932 level. Yearly indexes of pay rolls were higher in 1933 than in 1932 in only two industries, canning and preserving and bituminous-coal mining. The greatest decrease in employment in the comparison of these annual averages was shown in the anthracite-mining industry in which the 1933 average index was 17.3 percent below the average of the year 1932. Other large percentage declines in employment in this comparison were shown in the telephone and telegraph (11 percent), quarrying and nonmetallic mining (8.4 percent), and electric-railroad and motor-bus operation and maintenance (7.3 percent). Employment in 1933 in the metaliferous mining, power and light, hotel, and laundry industries ranged from 5.1 to 5.6 percent below the annual average of 1932. The decreases in employment in the remaining three industries in which the 12-month averages for 1933 were below the 1932 averages were small. The most pronounced decrease in pay rolls in this comparison was in the telephone and telegraph group (15.9 percent), although the decreases in the quarrying, hotel, and laundry industries were only slightly less.

Average Man-Hours Worked and Average Hourly Earnings

IN THE following tables the Bureau presents a tabulation of man-hours worked per week and average hourly earnings based on reports supplied by identical establishments in November and December 1933 in 15 industrial groups and 78 separate manufacturing industries. Man-hour data for the building-construction group and for the insurance, real estate, banking, and brokerage group are not available, and data for several of the 89 manufacturing industries surveyed monthly are omitted from these tables due to lack of adequate information.

The total number of establishments supplying man-hour data in these 15 industrial groups represents approximately 50 percent of the establishments supplying monthly employment data.

The tabulations are based on reports supplying actual man-hours worked and do not include nominal man-hour totals, obtained by multiplying the total number of employees in the establishment by the plant operating time.

Table 1 shows the average hours worked per employee per week and average hourly earnings in 15 industrial groups and for all groups combined. The average hours per week and average hourly earnings for the combined total of the 15 industrial groups are weighted averages, wherein the average man-hours and average hourly earnings in each industrial group are multiplied by the total number of employees in the group in the current month and the sum of these products divided by the total number of employees in the combined 15 industrial groups. The average man-hours and hourly earnings for the combined 89 manufacturing industries have been weighted in the same manner as the averages for all industrial groups combined, table 1.

In presenting information for the separate manufacturing industries shown in table 2, data are published for only those industries in which the available man-hour information covers 20 percent or more of the total number of employees in the industry at the present time.

TABLE 1.—AVERAGE HOURS WORKED PER WEEK PER EMPLOYEE AND AVERAGE HOURLY EARNINGS IN 15 INDUSTRIAL GROUPS, NOVEMBER AND DECEMBER 1933

Industrial group	Average hours per week		Average hourly earnings	
	November 1933	December 1933	November 1933	December 1933
	<i>Hours</i>	<i>Hours</i>	<i>Cents</i>	<i>Cents</i>
Manufacturing.....	34.4	34.2	52.3	52.6
Coal mining:				
Anthracite.....	28.1	29.8	80.8	80.1
Bituminous.....	29.7	29.9	57.8	58.9
Metalliferous mining.....	37.8	38.8	53.0	53.0
Quarrying and nonmetallic mining.....	32.5	31.3	45.7	46.1
Crude-petroleum producing.....	35.1	35.1	76.5	77.3
Public utilities:				
Telephone and telegraph.....	37.5	37.4	71.9	71.5
Power and light.....	42.4	43.0	67.1	66.9
Electric-railroad and motor-bus operation and maintenance.....	45.5	45.3	58.5	58.8
Trade:				
Wholesale.....	42.2	41.9	60.0	61.1
Retail.....	39.7	41.9	48.7	44.4
Hotels.....	50.5	49.8	24.3	24.9
Canning and preserving.....	32.0	32.7	37.3	39.3
Laundries.....	37.7	37.9	37.5	37.9
Dyeing and cleaning.....	40.5	39.2	43.1	43.6
Average.....	37.1	37.7	52.3	51.2

Per capita weekly earnings, computed by multiplying the average man-hours worked per week by the average hourly earnings, are not identical with the per capita weekly earnings appearing elsewhere in this trend-of-employment compilation, which are obtained by dividing the total weekly earnings in all establishments reporting by the total number of employees in those establishments. As already noted, the basic information upon which the average weekly man-hours and average hourly earnings are computed covers approximately 50 percent of the establishments reporting monthly employment data.

TABLE 2.—AVERAGE HOURS WORKED PER WEEK PER EMPLOYEE AND AVERAGE HOURLY EARNINGS IN SELECTED MANUFACTURING INDUSTRIES, NOVEMBER AND DECEMBER 1933

Industry	Average hours per week		Average hourly earnings	
	Novem- ber 1933	Decem- ber 1933	Novem- ber 1933	Decem- ber 1933
Food and kindred products:	<i>Hours</i>	<i>Hours</i>	<i>Cents</i>	<i>Cents</i>
Baking.....	40.9	40.8	50.5	50.7
Beverages.....	37.6	38.2	73.1	76.7
Confectionery.....	33.9	37.1	39.5	40.3
Flour.....	38.5	38.1	49.7	51.4
Ice cream.....	40.8	42.1	63.1	61.1
Slaughtering and meat packing.....	39.8	40.2	49.4	52.6
Sugar, beet.....	49.7	47.9	40.3	41.9
Sugar refining, cane.....	36.0	34.7	56.2	57.6
Textiles and their products:				
Carpets and rugs.....	32.7	32.0	51.1	51.1
Cotton goods.....	34.6	33.5	36.6	36.9
Cotton small wares.....	35.0	35.1	43.5	44.4
Dyeing and finishing textiles.....	35.8	35.5	51.9	51.6
Knit goods.....	36.0	33.9	45.8	45.7
Silk and rayon goods.....	33.7	31.7	42.3	42.9
Woolen and worsted goods.....	32.9	34.3	49.0	48.4
Iron and steel and their products, not including machinery:				
Bolts, nuts, washers, and rivets.....	34.6	33.8	50.5	50.3
Cast-iron pipe.....	27.5	33.2	51.0	47.4
Cutlery (not including silver and plated cutlery) and edge tools.....	37.1	37.4	51.0	52.4
Forgings, iron and steel.....	33.9	34.6	56.1	56.7
Hardware.....	32.1	34.3	50.8	53.3
Iron and steel.....	28.9	30.0	58.3	58.5
Plumbers' supplies.....	28.1	28.7	50.0	51.4
Steam and hot-water heating apparatus and steam fittings.....	31.9	32.9	55.5	55.7
Stoves.....	35.6	31.9	51.5	52.5
Structural and ornamental metal work.....	33.7	32.6	55.1	55.3
Tin cans and other tinware.....	35.6	37.2	52.0	52.0
Tools (not including edge tools, machine tools, files, and saws).....	37.4	35.1	48.8	51.2
Wirework.....	32.3	35.2	53.6	53.2
Machinery, not including transportation equipment:				
Agricultural implements.....	35.5	35.8	51.8	52.5
Cash registers, adding machines, and calculating machines.....	38.8	39.7	64.8	64.6
Electrical machinery, apparatus, and supplies.....	32.8	31.8	56.6	57.5
Engines, turbines, tractors, and water wheels.....	35.4	37.1	60.6	60.9
Foundry and machine-shop products.....	35.2	33.1	56.2	56.8
Machine tools.....	36.4	37.1	57.9	57.7
Radio and phonographs.....	34.6	31.6	50.0	51.2
Textile machinery and parts.....	38.1	36.9	59.6	60.0
Typewriters and supplies.....	38.8	40.7	49.5	50.2
Nonferrous metals and their products:				
Aluminum manufactures.....	35.3	34.4	47.3	47.7
Brass, bronze, and copper products.....	34.7	35.3	52.5	53.3
Clocks and watches and time-recording devices.....	41.2	38.1	44.6	45.7
Jewelry.....	38.5	36.8	48.7	51.1
Lighting equipment.....	37.3	38.1	49.1	50.2
Silverware and plated ware.....	39.2	39.7	50.6	49.8
Smelting and refining—copper, lead, and zinc.....	36.0	33.9	50.6	51.5
Stamped and enameled ware.....	35.7	33.9	46.2	47.7
Transportation equipment:				
Aircraft.....	37.5	38.4	65.3	63.4
Automobiles.....	30.6	30.4	65.6	64.2
Cars, electric and steam railroad.....	34.2	33.2	57.9	58.2
Locomotives.....	32.8	32.1	60.7	59.8
Shipbuilding.....	29.5	31.2	67.6	65.1
Railroad repair shops:				
Electric railroad.....	43.7	44.1	57.8	58.0
Steam railroad.....	37.6	37.6	62.4	61.7
Lumber and allied products:				
Furniture.....	35.1	33.0	42.7	43.7
Lumber:				
Millwork.....	34.1	34.5	43.2	43.3
Sawmills.....	34.5	33.1	42.5	42.4
Stone, clay, and glass products:				
Brick, tile, and terra cotta.....	30.4	30.1	39.7	40.9
Cement.....	32.0	28.5	52.8	54.2
Glass.....	33.1	34.0	52.1	52.6
Marble, granite, slate, and other products.....	31.7	31.6	59.2	61.0
Pottery.....	39.0	37.3	44.1	45.0
Leather and its manufactures:				
Leather.....	37.8	38.2	50.5	51.5

TABLE 2.—AVERAGE HOURS WORKED PER WEEK PER EMPLOYEE AND AVERAGE HOURLY EARNINGS IN SELECTED **MANUFACTURING** INDUSTRIES, NOVEMBER AND DECEMBER 1933—Continued

Industry	Average hours per week		Average hourly earnings	
	November 1933	December 1933	November 1933	December 1933
Paper and printing:	<i>Hours</i>	<i>Hours</i>	<i>Cents</i>	<i>Cents</i>
Boxes, paper.....	36.6	36.4	46.9	48.2
Paper and pulp.....	36.6	35.3	48.1	49.7
Printing and publishing:				
Book and job.....	35.8	36.6	70.3	70.8
Newspapers and periodicals.....	36.5	36.9	83.0	83.0
Chemicals and allied products:				
Chemicals.....	39.1	39.7	59.1	60.0
Cottonseed—oil, cake, and meal.....	42.0	40.4	25.1	26.1
Druggists' preparations.....	39.1	38.1	47.4	46.9
Explosives.....	33.4	33.7	62.2	60.6
Fertilizers.....	32.3	33.1	37.3	37.1
Paints and varnishes.....	37.9	38.2	53.7	53.9
Petroleum refining.....	35.3	35.8	69.0	68.7
Rayon and allied products.....	37.6	37.9	46.8	48.2
Soap.....	38.5	37.9	50.9	52.2
Rubber products:				
Rubber goods, other than boots, shoes, tires, and inner tubes.....	33.9	34.8	49.5	48.8
Rubber tires and inner tubes.....	28.5	29.5	70.7	72.4
Tobacco manufactures:				
Chewing and smoking tobacco and snuff.....	34.5	34.9	37.6	38.3
Cigars and cigarettes.....	37.0	36.9	35.7	36.1

Employment in Building Construction in December 1933

EMPLOYMENT in the building-construction industry decreased 17.7 percent in December as compared with November and pay rolls decreased 19.7 percent over the month interval.

The percent of change in employment and pay-roll totals in December as compared with November are based on returns made by 10,840 firms engaged on public and private projects not aided by public-works funds. These firms employed in December 67,768 workers in the various trades in the building-construction industry whose combined weekly earnings during the pay period ending nearest December 15 were \$1,448,123. These reports cover building operation in various localities in 34 States and the District of Columbia.

COMPARISON OF EMPLOYMENT AND TOTAL PAY ROLL IN THE **BUILDING CONSTRUCTION** INDUSTRY IN IDENTICAL FIRMS, NOVEMBER AND DECEMBER 1933

Locality	Number of firms reporting	Number on pay roll		Percent of change	Amount of pay roll		Percent of change
		Nov. 15	Dec. 15		Nov. 15	Dec. 15	
Alabama: Birmingham.....	72	387	246	-36.4	\$5,296	\$3,129	-40.9
California:							
Los Angeles ¹	23	946	1,186	+25.4	17,550	24,243	+38.1
San Francisco-Oakland ¹	32	890	745	-16.3	21,023	15,669	-25.5
Other reporting localities ¹	16	363	333	-8.3	7,910	7,232	-8.6
Colorado: Denver.....	202	772	598	-22.5	14,079	12,379	-12.1
Connecticut:							
Bridgeport.....	124	580	371	-36.0	11,920	7,417	-37.8
Hartford.....	257	1,199	827	-31.0	25,826	16,522	-36.0
New Haven.....	178	963	801	-16.8	22,526	16,272	-27.8
Delaware: Wilmington.....	111	853	592	-30.6	17,374	10,505	-39.5
District of Columbia.....	498	7,357	6,105	-17.0	205,800	157,287	-23.6
Florida:							
Jacksonville.....	59	406	377	-7.1	6,465	6,936	+7.3
Miami.....	83	1,007	846	-16.0	19,519	16,634	-14.8

¹ Data supplied by cooperating State Bureaus.

COMPARISON OF EMPLOYMENT AND TOTAL PAY ROLL IN THE BUILDING CONSTRUCTION INDUSTRY IN IDENTICAL FIRMS, NOVEMBER AND DECEMBER 1933—Continued

Locality	Number of firms reporting	Number on pay roll		Percent of change	Amount of pay roll		Percent of change
		Nov. 15	Dec. 15		Nov. 15	Dec. 15	
Georgia: Atlanta.....	137	947	821	-13.3	\$13,897	\$13,356	-3.9
Illinois:							
Chicago ¹	116	1,661	1,233	-25.8	49,793	29,903	-39.9
Other reporting localities ¹	67	1,925	1,385	-28.1	64,089	43,657	-31.9
Indiana:							
Evansville.....	54	318	142	-55.3	5,177	2,412	-53.4
Fort Wayne.....	87	332	323	-2.7	5,572	6,198	+11.2
Indianapolis.....	158	899	865	-3.8	18,031	16,245	-9.9
South Bend.....	41	260	255	-1.9	4,125	4,896	+18.7
Iowa: Des Moines.....	94	384	262	-31.8	6,880	5,212	-24.2
Kansas: Wichita.....	67	219	168	-23.3	3,650	2,685	-26.4
Kentucky: Louisville.....	146	1,139	854	-25.0	20,192	15,351	-24.0
Louisiana: New Orleans.....	121	912	683	-25.1	15,844	11,262	-28.3
Maine: Portland.....	99	348	303	-12.9	6,997	6,028	-13.8
Maryland: Baltimore ¹	106	822	631	-23.2	14,297	10,683	-25.3
Massachusetts: All reporting localities ¹	703	4,617	4,011	-13.1	105,289	91,794	-12.8
Michigan:							
Detroit.....	484	3,580	3,126	-12.7	70,009	63,678	-9.0
Flint.....	53	254	183	-28.0	4,412	2,860	-35.2
Grand Rapids.....	106	429	292	-31.9	6,847	4,278	-37.5
Minnesota:							
Duluth.....	54	299	210	-29.8	4,677	4,415	-5.6
Minneapolis.....	223	1,490	1,081	-27.4	28,350	20,224	-28.7
St. Paul.....	169	890	741	-16.7	18,608	15,618	-16.1
Missouri:							
Kansas City ¹	293	1,708	1,367	-20.0	37,083	29,584	-20.2
St. Louis.....	598	3,386	2,785	-17.7	85,007	74,020	-12.9
Nebraska: Omaha.....	152	703	657	-6.5	14,115	14,378	+1.9
New York:							
New York City ¹	334	5,807	4,655	-19.8	181,825	137,172	-24.6
Other reporting localities ¹	253	5,906	5,327	-9.8	130,501	118,618	-9.1
North Carolina: Charlotte.....	57	332	264	-23.5	5,311	3,985	-25.0
Ohio:							
Akron.....	79	298	236	-20.8	5,278	4,073	-22.8
Cincinnati ²	470	1,907	1,504	-21.1	42,332	32,960	-22.2
Cleveland.....	610	2,276	2,003	-12.0	53,196	47,467	-10.8
Dayton.....	120	403	394	-2.2	7,273	6,708	-7.8
Youngstown.....	75	294	206	-29.9	5,104	3,198	-37.3
Oklahoma:							
Oklahoma City.....	94	567	434	-23.5	9,595	7,867	-18.0
Tulsa.....	57	238	184	-22.7	3,776	3,139	-16.9
Oregon: Portland.....	184	994	716	-28.0	19,452	15,179	-22.0
Pennsylvania:							
Erie area ¹	25	494	515	+4.3	3,310	3,340	+0.9
Philadelphia area ¹	419	5,118	4,165	-18.6	95,930	76,026	-20.7
Pittsburgh area ¹	209	1,358	1,329	-4.3	31,746	28,482	-10.3
Reading-Lebanon area ¹	48	275	288	+4.7	4,235	4,969	+17.3
Scranton area ¹	21	108	98	-9.3	2,271	1,957	-13.8
Other reporting areas ¹	285	2,425	2,155	-11.1	45,580	37,013	-18.8
Rhode Island: Providence.....	253	1,550	1,268	-18.8	33,847	25,205	-25.5
Tennessee:							
Chattanooga.....	38	191	126	-34.0	2,734	1,751	-36.0
Knoxville.....	49	362	293	-19.1	5,204	4,068	-21.8
Memphis.....	81	455	398	-12.5	7,674	4,945	-35.6
Nashville.....	85	563	528	-6.2	8,010	8,085	+0.9
Texas:							
Dallas.....	183	717	567	-20.9	10,543	7,668	-27.3
El Paso.....	29	173	106	-38.7	2,172	1,568	-27.8
Houston.....	174	1,367	973	-28.8	25,249	16,531	-34.5
San Antonio.....	116	383	370	-4.6	4,976	5,158	+3.7
Utah: Salt Lake City.....	86	278	223	-19.8	5,134	3,649	-28.9
Virginia:							
Norfolk-Portsmouth.....	87	720	475	-34.0	13,013	7,451	-42.7
Richmond.....	136	921	651	-29.3	17,075	11,745	-31.2
Washington:							
Seattle.....	157	667	557	-16.5	12,378	10,393	-16.0
Spokane.....	54	306	231	-24.5	6,022	4,808	-20.2
Tacoma.....	81	163	250	+53.4	2,601	3,807	+46.4
West Virginia: Wheeling.....	46	208	90	-56.7	3,944	1,533	-61.1
Wisconsin: All reporting localities ¹	57	1,219	804	-34.0	17,289	14,543	-15.9
Total, all localities.....	10,840	82,323	67,768	-17.7	1,802,859	1,448,123	-19.7

¹ Data supplied by cooperating State Bureaus.

² Includes both Kansas City, Mo., and Kansas City, Kans.

³ Includes Covington and Newport, Ky.

⁴ Each separate area includes from 2 to 8 counties.

Trend of Employment in December 1933, by States

IN THE following table are shown the fluctuations in employment and pay-roll totals in December 1933 as compared with November 1933, in certain industrial groups by States. These tabulations have been prepared from data secured directly from reporting establishments and from information supplied by cooperating State agencies. The combined total of all groups does not include building-construction data, information concerning which is published elsewhere in a separate tabulation by city and State totals. In addition to the combined total of all groups, the trend of employment and pay rolls in the manufacturing, public utility, hotel, wholesale trade, retail trade, bituminous-coal mining, crude-petroleum producing, quarrying and nonmetallic mining, metalliferous mining, laundry, and dyeing and cleaning groups is presented. In this State compilation, the totals of the telephone and telegraph, power and light, and electric-railroad operation groups have been combined and are presented as one group—public utilities. Due to the extreme seasonal fluctuations in the canning and preserving industry, and the fact that during certain months the activity in this industry in a number of States is negligible, data for this industry are not presented separately. The number of employees and the amount of weekly pay roll in November and December 1933 as reported by identical establishments in this industry are included, however, in the combined total of "all groups."

The percents of change shown in the accompanying table, unless otherwise noted, are unweighted percentages of change; that is, the industries included in the groups, and the groups comprising the total of all groups, have not been weighted according to their relative importance in the combined totals.

The State totals for the anthracite-mining industry, which is confined entirely to the State of Pennsylvania, will be found in table 1, nonmanufacturing industries.

When the identity of any reporting company would be disclosed by the publication of a State total for any industrial group, figures for the group do not appear in the separate industrial-group tabulation, but are included in the State totals for "all groups." Data are not presented for any industrial group when the representation in the State covers less than three establishments.

**COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS
IN NOVEMBER AND DECEMBER 1933, BY STATES**

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Total, all groups					Manufacturing				
	Number of estab- lish- ments	Num- ber on pay roll Decem- ber 1933	Per- cent of change	Amount of pay roll (1 week) Decem- ber 1933	Per- cent of change	Number of estab- lish- ments	Num- ber on pay roll Decem- ber 1933	Per- cent of change	Amount of pay roll (1 week) Decem- ber 1933	Per- cent of change
Alabama.....	523	67,126	+3.0	\$894,717	+7.0	210	47,943	+3.7	\$618,553	+7.8
Arizona.....	401	9,479	+5.4	186,110	+4.0	44	2,074	+9	38,448	+2.8
Arkansas.....	<i>1,124</i>	<i>18,896</i>	-5	<i>243,217</i>	-3.9	<i>176</i>	<i>12,681</i>	-3	<i>157,341</i>	-4
California.....	<i>1,839</i>	<i>265,267</i>	-4	<i>6,029,891</i>	-2	<i>1,091</i>	<i>196,891</i>	-4.6	<i>3,055,151</i>	-2.8
Colorado.....	822	36,539	-9	737,810	-4	119	15,065	-3.1	292,487	-2.1
Connecticut.....	1,112	158,629	-2.6	3,009,486	-1.2	639	136,959	-3.4	2,455,788	-1.9
Delaware.....	157	10,579	-1.7	220,625	+4	49	7,333	-2.7	143,563	+4
Dist. of Columbia.....	619	33,968	+0	735,983	+3.9	46	1,983	-1.5	61,751	+2.1
Florida.....	636	29,232	+5.3	470,903	+4.3	127	13,975	-8.6	197,184	-8.8
Georgia.....	1,007	89,107	-2.2	1,183,439	-3.5	307	70,806	-2.5	826,851	-5.1
Idaho.....	232	10,122	-1.9	188,106	-4.0	35	5,359	-2.3	93,505	-8.6
Illinois.....	<i>3,1716</i>	<i>331,334</i>	-1.0	<i>6,855,415</i>	-4	<i>1,100</i>	<i>203,270</i>	-1.2	<i>3,912,821</i>	+6
Indiana.....	1,321	130,369	-2.9	2,358,426	-3.4	559	95,408	-2.7	1,683,782	-4.5
Iowa.....	1,164	47,338	+1.9	882,780	+2.6	395	24,968	-3	453,822	+1.7
Kansas.....	<i>1,338</i>	<i>70,188</i>	-1.3	<i>1,559,760</i>	-1.9	<i>452</i>	<i>27,543</i>	-2.9	<i>532,687</i>	-1.0
Kentucky.....	866	69,946	-1.9	1,098,207	-4.4	194	24,466	-1.8	399,366	+8.8
Louisiana.....	458	35,206	-1.5	558,478	-2.6	197	21,913	-2.4	296,419	-7.3
Maine.....	546	45,617	-6	764,741	+2.4	175	38,855	+2.4	625,692	+3.7
Maryland.....	829	89,063	-8	<i>1,755,740</i>	+3	<i>458</i>	<i>61,347</i>	-4.8	<i>1,161,438</i>	-2.5
Massachusetts.....	<i>4,8027</i>	<i>378,178</i>	-2.0	<i>7,712,818</i>	-1.9	<i>1,137</i>	<i>188,018</i>	-5.2	<i>3,437,588</i>	-5.2
Michigan.....	1,669	303,580	+9.6	6,216,914	+9.2	<i>686</i>	<i>257,361</i>	+9.7	<i>5,110,448</i>	+10.2
Minnesota.....	1,144	71,130	-2.3	1,464,292	+2	290	31,241	-5.3	625,564	-6
Mississippi.....	369	9,800	-1.8	126,902	-7.5	71	6,194	-5.7	70,237	-14.3
Missouri.....	1,216	111,967	+2	2,229,309	+2.4	509	57,679	-2.5	1,055,536	+1.3
Montana.....	343	11,436	-8	270,621	-(6)	54	3,907	-8	79,268	+7
Nebraska.....	730	24,636	-1.7	505,089	-2.2	116	12,165	-5.9	248,960	-4.2
Nevada.....	133	1,517	-6.8	37,567	-3.2	20	248	-7.1	6,047	-8
New Hampshire.....	486	35,059	-2.7	568,159	-3.5	182	30,436	-3.5	469,733	-4.4
New Jersey.....	1,539	214,945	+1.1	4,730,542	+2	<i>7,691</i>	<i>194,283</i>	-1.0	<i>4,079,719</i>	-1.3
New Mexico.....	189	4,940	+8.5	93,147	+13.7	24	657	-7.9	10,585	-14.6
New York.....	8,203	590,871	+2.3	13,841,863	+1.7	<i>8,1806</i>	<i>347,890</i>	-1.8	<i>7,804,088</i>	-1.0
North Carolina.....	920	137,566	-2.2	1,725,369	-3.9	562	131,815	-3.5	1,632,719	-4.1
North Dakota.....	338	4,086	-3.4	81,431	-3.1	57	879	-8.6	17,545	-7.6
Ohio.....	4,896	424,945	+3	8,142,449	+2.9	1,838	302,145	-1.1	5,571,784	+2.2
Oklahoma.....	804	31,430	-1	617,457	+5	127	10,144	-2.4	180,052	-1.9
Oregon.....	697	30,673	-9.8	604,140	-7.4	155	17,835	-9.3	316,410	-9.7
Pennsylvania.....	4,661	655,709	-2.0	12,615,326	-1.5	<i>1,7514</i>	<i>377,833</i>	-3.0	<i>6,559,171</i>	-2.7
Rhode Island.....	883	54,626	-5.9	998,053	-5.1	252	41,377	-8.7	691,538	-8.2
South Carolina.....	414	59,140	-1.7	732,680	-3.2	174	54,505	-2.4	665,131	-4.0
South Dakota.....	259	6,232	-2	151,424	+2.0	44	2,168	-8	45,356	+6.1
Tennessee.....	727	65,160	-7	983,642	-1	252	46,451	-2.9	666,431	-2.3
Texas.....	785	<i>54,804</i>	+4	<i>1,069,673</i>	+1.8	378	<i>33,698</i>	-8	<i>633,544</i>	+1.7
Utah.....	327	15,511	-4.4	312,582	-(6)	76	6,235	-7.7	115,631	-2.8
Vermont.....	378	9,966	-1.7	179,049	-2.1	110	5,240	-1.2	92,187	+1.7
Virginia.....	1,259	89,094	-9	1,459,656	-4	391	61,813	-8	952,271	-4
Washington.....	1,137	57,607	+4	1,139,799	-8	246	29,045	+2.1	531,991	-8
West Virginia.....	869	117,868	-1.1	2,133,488	-4.5	177	45,062	-5	827,394	-2.9
Wisconsin.....	<i>9,1043</i>	<i>143,612</i>	-8	<i>2,571,242</i>	-1.5	<i>775</i>	<i>117,616</i>	-2.3	<i>1,932,815</i>	-4.0
Wyoming.....	192	6,192	-3.9	151,621	+2.3	25	1,525	-15.0	38,216	-15.0

¹ Includes automobile dealers and garages, and sand, gravel, and building construction.

² Includes banks, insurance, and office employment.

³ Includes building and contracting.

⁴ Includes construction, municipal, agricultural, and office employment, amusement and recreation, professional, and transportation services.

⁵ Weighted percent of change.

⁶ Less than one tenth of 1 percent.

⁷ Includes laundries.

⁸ Includes laundering and cleaning.

⁹ Includes construction but does not include hotels and restaurants, and public works.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS
IN NOVEMBER AND DECEMBER 1933, BY STATES—Continued[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued
by cooperating State organizations]

State	Wholesale trade					Retail trade				
	Number of establishments	Number on pay roll December 1933	Per-cent of change	Amount of pay roll (1 week) December 1933	Per-cent of change	Number of establishments	Number on pay roll December 1933	Per-cent of change	Amount of pay roll (1 week) December 1933	Per-cent of change
Alabama.....	14	594	+2.9	\$16,872	+12.6	67	2,735	+16.8	\$43,991	+11.8
Arizona.....	24	220	+5.8	5,548	-9	181	2,161	+18.1	32,259	+3.8
Arkansas.....	21	540	-2.5	14,099	-8.1	119	1,709	-9	19,411	-3.6
California.....	105	5,802	-3	161,342	-2	117	30,441	+22.0	591,713	+16.8
Colorado.....	28	936	-2.4	25,837	-2.3	278	4,887	+12.4	89,319	+7.4
Connecticut.....	56	1,011	+1.8	29,620	+1.4	120	5,875	+10.8	110,316	+6.3
Delaware.....	7	115	+2.7	2,331	+1.7	33	722	+16.3	13,458	+9.8
Dist. of Columbia.....	29	423	+1.0	12,471	+1.0	415	14,724	+12.9	277,891	+7.4
Florida.....	69	990	-3.0	22,568	+6	100	2,758	+21.6	47,929	+18.1
Georgia.....	34	638	-2.9	16,211	-5	367	5,533	+8.2	83,999	+2.8
Idaho.....	10	133	-4.3	3,396	-1	67	927	+1.1	14,759	+(⁶)
Illinois.....	47	2,318	-6.4	55,778	-4.5	150	25,054	+6.5	541,641	+6.1
Indiana.....	78	1,736	-3.0	39,991	-1.9	190	8,467	+16.4	142,013	+11.5
Iowa.....	38	1,132	-4	27,713	+1.4	122	3,896	+11.6	63,592	+7.1
Kansas.....	82	2,101	-1.5	48,866	-4	456	7,058	+9.1	117,836	+2.7
Kentucky.....	23	474	+9.2	9,964	+5.3	72	4,149	+12.9	65,786	+6.3
Louisiana.....	24	666	+5	15,404	+2.2	23	3,688	+2.3	56,712	+7.9
Maine.....	19	452	+2	10,661	+1.8	64	1,162	+7.7	20,425	+7.5
Maryland.....	34	756	-3	17,026	+2.6	38	8,838	+20.4	144,709	+16.6
Massachusetts.....	711	15,317	-1.5	394,607	-8	4,166	74,992	+10.2	1,405,178	+7.1
Michigan.....	66	2,993	+12.6	73,406	+13.3	156	16,451	+25.0	295,355	+18.3
Minnesota.....	78	5,255	-3	134,518	-2	283	10,012	+2.0	158,336	+2.4
Mississippi.....	4	126	+10.5	2,386	+7.7	46	595	+24.2	5,729	+9.8
Missouri.....	61	4,892	-5	125,285	+1	138	12,619	+12.9	228,999	+11.1
Montana.....	14	244	+8	7,323	+3.0	69	1,053	+9.5	19,133	+4.3
Nebraska.....	35	1,068	+4.6	26,572	+9	192	2,360	+11.4	40,483	+3.8
Nevada.....	8	113	-1.7	3,426	+7	40	261	+4.0	5,756	+5.4
New Hampshire.....	16	168	(¹⁰)	4,377	+1.1	70	1,124	+14.2	14,712	+5.1
New Jersey.....	24	651	-8	17,996	+1	417	11,193	+23.4	224,755	+16.3
New Mexico.....	6	79	-9.2	2,938	-2.1	49	249	+4	5,975	+7
New York.....	441	13,910	+4	422,554	+2.1	4,095	103,867	+20.9	2,044,653	+13.7
North Carolina.....	16	189	-2.1	4,034	-1.9	157	776	+10.4	14,000	-4.2
North Dakota.....	15	248	-1.2	6,538	+2.1	13	349	+8.0	4,899	+7.3
Ohio.....	241	5,553	+2	135,729	-5	1,510	44,617	+16.5	791,080	+12.8
Oklahoma.....	53	1,014	-4	22,125	+2.7	157	3,142	+7.6	55,585	+1.3
Oregon.....	51	1,377	-1	35,418	+1.7	178	2,454	+5.2	46,339	+4
Pennsylvania.....	125	3,606	+1	94,851	+4	372	37,102	+15.1	697,049	+13.3
Rhode Island.....	42	1,101	+1.6	26,575	+2.7	475	6,153	+9.3	110,291	+3.6
South Carolina.....	14	205	-2.4	4,846	-6	115	1,653	+21.5	16,487	+10.2
South Dakota.....	9	115	-2.5	2,916	-3	15	162	+5.9	2,587	+1.3
Tennessee.....	37	863	-2.7	17,850	-4	58	4,845	+23.5	72,879	+19.1
Texas.....	144	3,249	+1.1	78,642	+7	76	7,414	+7.6	193,489	+4.7
Utah.....	14	500	-1.2	12,423	+4	71	575	+8.3	12,494	+4.1
Vermont.....	5	117	+1.7	2,709	+4	39	547	+20.2	8,314	+18.4
Virginia.....	41	1,150	-4.2	25,328	-3.5	476	6,052	+15.0	106,035	+8.4
Washington.....	108	2,333	+5	60,221	+6	389	8,612	+28.9	142,598	+13.8
West Virginia.....	27	610	+2.2	15,986	+3.5	52	1,174	+23.8	17,882	+12.1
Wisconsin.....	46	2,225	-1.2	46,907	-1.8	51	13,173	+18.8	174,286	+13.8
Wyoming.....	8	61	(¹⁰)	1,717	-6	44	271	+4.2	5,825	-1.0

⁶ Less than one tenth of 1 percent.¹⁰ No change.

**COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS
IN NOVEMBER AND DECEMBER 1933, BY STATES—Continued**

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Quarrying and nonmetallic mining					Metalliferous mining				
	Number of establishments	Number on pay roll December 1933	Per-cent of change	Amount of pay roll (1 week) December 1933	Per-cent of change	Number of establishments	Number on pay roll December 1933	Per-cent of change	Amount of pay roll (1 week) December 1933	Per-cent of change
Alabama.....	20	798	-7.4	\$9,492	+11.9	9	1,630	-7.1	\$22,382	+(⁹)
Arizona.....	3	51	+27.5	530	+2.5	21	2,294	-7	54,738	+6.6
Arkansas.....	9	239	+46.6	3,061	+72.9					
California.....	37	1,032	-7.8	16,554	-23.7	35	2,996	-5	72,743	-1
Colorado.....	5	30	-31.8	319	-51.4	14	1,044	-2.3	27,583	+3.4
Connecticut.....	26	257	-25.9	3,887	-31.0					
Delaware.....	3	60	-17.8	810	-37.9					
Dist. of Columbia.....										
Florida.....	18	952	+7.7	11,250	+7.4					
Georgia.....	23	1,142	-3.0	11,137	-6.3					
Idaho.....						9	2,144	-7	49,535	+1.7
Illinois.....	23	633	-10.1	10,096	-16.2					
Indiana.....	71	1,324	-16.6	19,393	-17.5					
Iowa.....	33	390	-18.1	5,193	-20.2					
Kansas.....	26	1,184	-5.4	21,864	-1.2	14	1,156	+6.1	23,429	-2.0
Kentucky.....	38	945	-10.0	10,392	-8.0					
Louisiana.....	7	603	-4.7	9,113	-9					
Maine.....	9	422	+3.4	6,383	-3.8					
Maryland.....	14	212	-27.2	2,610	-35.6					
Massachusetts.....	22	337	-22.9	6,505	-27.1					
Michigan.....	47	1,039	-25.0	14,988	-33.1	39	4,187	+5.4	61,344	+9.1
Minnesota.....	27	321	-15.5	4,944	-16.9	32	1,467	+2.2	25,104	-2.2
Mississippi.....	11	219	+2.8	2,521	+9.9					
Missouri.....	52	1,261	-5.8	17,214	-7.8	15	1,725	(¹⁰)	22,844	-3.2
Montana.....	9	44	-21.4	647	-15.1	16	2,378	-4.7	68,483	+1.3
Nebraska.....	10	136	-50.7	1,879	-51.9					
Nevada.....						14	361	-14.5	8,740	-11.8
New Hampshire.....	11	135	-17.7	2,531	-29.2					
New Jersey.....	39	583	-18.8	9,820	-26.6	3	17	+21.4	339	+1.2
New Mexico.....						5	924	-2.9	17,834	+5.7
New York.....	80	1,815	-17.6	36,128	-3.1					
North Carolina.....	14	385	-12.5	4,709	-2.2					
North Dakota.....										
Ohio.....	131	2,971	-16.0	41,821	-14.5					
Oklahoma.....	14	206	-23.1	1,574	-30.2	32	1,552	+2.6	25,734	+5.5
Oregon.....	5	62	-18.4	1,116	-1.2	7	83	(¹⁰)	1,677	+1.7
Pennsylvania.....	158	4,716	-10.3	58,611	-19.0					
Rhode Island.....										
South Carolina.....	4	64	-3.0	435	-24.9					
South Dakota.....	4	34	-19.0	524	-25.5					
Tennessee.....	22	1,254	-8	16,634	+1.1	4	311	-3	5,820	-5.0
Texas.....	21	599	+33.7	12,196	+41.4					
Utah.....	7	162	-15.2	2,541	+4	12	2,035	+1.9	41,349	+3.1
Vermont.....	38	2,050	-7.6	36,306	-12.7					
Virginia.....	30	1,100	-14.3	9,171	-20.1					
Washington.....	14	169	-36.5	3,109	-34.7					
West Virginia.....	20	785	-8.2	9,322	-17.7					
Wisconsin.....	14	144	-27.5	2,194	-18.9	(¹¹)	231	+12.7	5,098	+16.8
Wyoming.....										

⁹ Less than one tenth of 1 percent.

¹⁰ No change.

¹¹ Not available.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN **IDENTICAL** ESTABLISHMENTS
IN NOVEMBER AND DECEMBER 1933, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Bituminous-coal mining					Crude-petroleum producing				
	Number of establishments	Number on pay roll December 1933	Per cent of change	Amount of pay roll (1 week) December 1933	Per cent of change	Number of establishments	Number on pay roll December 1933	Per cent of change	Amount of pay roll (1 week) December 1933	Per cent of change
Alabama.....	47	8,622	-0.8	\$110,460	+5.1					
Arizona.....										
Arkansas.....	3	99	-30.7	3,513	-23.3	8	461	+1.3	\$10,540	-1.8
California.....						36	7,886	+4	234,359	+2.4
Colorado.....	52	5,419	(¹⁰)	95,551	+4					
Connecticut.....										
Delaware.....										
Dist. of Columbia.....										
Florida.....										
Georgia.....										
Idaho.....										
Illinois.....	32	7,423	+3.2	142,732	+6.7	9	226	+10.2	4,651	+8.3
Indiana.....	51	5,918	+3.0	128,498	+5.6	4	24	-14.3	348	-12.1
Iowa.....	20	2,069	-3.7	37,062	+3.0					
Kansas.....	27	1,431	-1.8	26,980	-1.3	26	1,637	+6.2	36,808	+3.3
Kentucky.....	152	28,907	-4.7	396,677	-18.2	5	242	+5.7	3,387	+10.9
Louisiana.....						8	232	+3.6	5,681	+6.6
Maine.....										
Maryland.....	16	1,544	+5	28,453	+22.2					
Massachusetts.....										
Michigan.....	3	884	+9.0	18,854	+21.5					
Minnesota.....										
Mississippi.....										
Missouri.....	20	1,791	+3.9	25,100	+2.8					
Montana.....	10	773	-4	20,323	-6.2	3	28	+3.7	456	-4.8
Nebraska.....										
Nevada.....										
New Hampshire.....										
New Jersey.....										
New Mexico.....	14	1,838	+36.8	34,979	+52.2	4	35	(¹⁰)	891	-1.9
New York.....						5	218	+10.1	4,583	-8.7
North Carolina.....										
North Dakota.....	8	486	-15.6	9,857	-12.9					
Ohio.....	78	12,353	-6.7	229,319	-4.4	6	59	-11.9	768	+3
Oklahoma.....	19	804	-11.3	13,238	-15.0	62	5,986	+2.1	144,699	+4.7
Oregon.....										
Pennsylvania.....	456	71,627	+7.7	1,276,022	+11.8	19	807	-4	17,319	-7.8
Rhode Island.....										
South Carolina.....										
South Dakota.....										
Tennessee.....	21	2,445	-1.5	31,830	-5					
Texas.....	5	352	-1.1	5,696	-4.6	42	9,770	+8.5	280,549	+11.4
Utah.....	15	2,238	+5.9	53,766	+7.8					
Vermont.....										
Virginia.....	38	8,405	-5.4	145,303	-3.1					
Washington.....	11	1,328	+8	33,708	+4.1					
West Virginia.....	366	61,864	-2.0	1,073,693	-6.8	8	410	-5.3	8,538	+1.1
Wisconsin.....										
Wyoming.....	31	3,316	+3	82,996	+14.2	7	177	-1.1	4,761	-1.9

¹⁰ No change.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS
IN NOVEMBER AND DECEMBER 1933, BY STATES—ContinuedFigures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued
by cooperating State organizations]

State	Public utilities					Hotels				
	Number of establishments	Number on pay roll December 1933	Percent of change	Amount of pay roll (1 week) December 1933	Percent of change	Number of establishments	Number on pay roll December 1933	Percent of change	Amount of pay roll (1 week) December 1933	Percent of change
Alabama.....	89	1,769	+1.0	\$36,820	-0.4	25	1,271	+8.2	\$10,625	+9.8
Arizona.....	68	1,558	+6.4	36,030	+2.4	19	455	+6.1	6,724	+8.5
Arkansas.....	67	1,876	-1.2	35,585	-2.4	16	696	+8.3	5,684	+7.0
California.....	46	42,784	+6	1,179,186	+(*)	167	8,396	+7	129,890	-6
Colorado.....	192	5,286	+5	131,615	+6	51	1,259	+1.9	17,088	+5
Connecticut.....	135	9,639	+1.0	292,511	+5	25	1,030	+1.4	12,683	+2.2
Delaware.....	28	1,116	-7	31,307	-1	6	261	+2.4	3,615	+5.3
Dist. of Columbia.	21	8,666	+1.3	231,475	+9	44	4,199	+4.2	62,070	+7.8
Florida.....	184	4,464	+6	112,564	+2.9	71	1,856	+27.0	20,206	+42.9
Georgia.....	186	6,519	-2	179,161	-5	22	898	+12.1	7,059	+17.1
Idaho.....	56	773	+9	15,174	+1.7	20	343	-1.2	4,022	+1.3
Illinois.....	82	70,641	-9	1,901,346	-2.3	12	8,395	-5.2	131,698	-1.7
Indiana.....	135	9,116	-2.7	217,703	-9	74	2,778	-3.0	28,030	-6
Iowa.....	431	10,316	+9.1	221,912	+5.8	56	2,196	-1.8	20,314	-2.4
Kansas.....	12	7,490	-8	172,172	-9	31	696	+1.6	7,418	-3
Kentucky.....	289	6,139	-8	139,751	-8	34	1,938	+7.3	19,893	+10.0
Louisiana.....	148	5,487	+(*)	137,195	+2.2	21	1,655	+6	17,433	+2.7
Maine.....	168	2,692	+1.5	70,401	-1.5	22	701	-12.2	8,727	-6.0
Maryland.....	95	12,401	-1.9	345,248	+1.5	25	1,349	+4.1	15,701	+9
Massachusetts.....	131	45,199	-5	1,272,868	+1.4	31	5,061	+4.5	69,761	+5.3
Michigan.....	414	22,717	+(*)	663,944	-2.1	93	4,618	+3.1	55,043	+9.4
Minnesota.....	232	12,491	-1.1	313,027	+4	73	3,223	-1.2	36,926	-1.3
Mississippi.....	190	1,760	+5.0	35,574	+2.0	17	395	-4.6	2,725	-3.2
Missouri.....	179	19,239	-1	502,393	+5	35	4,412	+3.5	52,761	+4.1
Montana.....	100	1,968	-7	55,987	-2.0	28	433	+1.2	5,704	+1
Nebraska.....	299	5,593	-2	138,847	-7	40	1,800	+19.9	16,435	+12.3
Nevada.....	38	386	-8.3	10,763	-2.1	8	82	-5.7	1,456	-6.8
New Hampshire.....	140	2,269	+1.9	59,350	+2.5	10	169	-6.1	2,134	-2
New Jersey.....	265	21,388	+1.1	595,420	+6	54	2,988	+7.7	34,663	+9.2
New Mexico.....	53	565	-2.1	11,606	-5	14	315	-2.5	3,221	-1.3
New York.....	857	98,620	+4	3,015,387	+1	240	30,895	+3.0	486,977	+6.0
North Carolina.....	92	1,694	+3	35,240	-1.2	33	1,284	+15.4	10,474	+15.6
North Dakota.....	171	1,221	-5	29,052	+(*)	22	398	+3.9	3,634	+2
Ohio.....	481	33,521	+3	886,897	+2.4	140	8,898	+2.9	109,630	+6.2
Oklahoma.....	242	6,854	+1	132,290	+3	49	1,147	+6	11,742	-1.3
Oregon.....	183	5,495	-7	136,411	-6	58	1,144	-2.2	14,263	+9
Pennsylvania.....	597	48,560	-(*)	1,195,878	+4	158	9,102	+1.3	115,323	+3.8
Rhode Island.....	42	3,339	+1.2	97,905	+3.5	11	145	+6.6	1,761	+10.8
South Carolina.....	70	1,671	+4.5	34,178	+1	16	412	-5	3,442	+8.5
South Dakota.....	129	1,023	-2.3	24,808	-1.4	18	298	+3.1	3,623	+3.7
Tennessee.....	245	4,513	+7	100,408	+4	36	2,096	+7	17,749	+3.5
Texas.....	126	5,664	-3.9	150,289	-6	38	2,899	-9	36,283	-3.2
Utah.....	69	1,840	-3.5	37,132	-3.4	11	393	+2.1	4,810	+2.0
Vermont.....	122	1,112	+3	26,103	-3.2	24	510	-6.6	4,933	-7.3
Virginia.....	179	5,910	+3	140,675	-4	29	1,751	-7.8	18,636	-4.9
Washington.....	196	9,651	-1	259,359	+8	30	2,495	+1.9	28,967	+2.8
West Virginia.....	117	5,608	+9	142,090	+1.5	36	1,100	+2.1	11,680	+2.8
Wisconsin.....	14	10,550	-8	294,815	-1.8	12	1,260	-2	(11)	-
Wyoming.....	48	453	+2	10,444	+(*)	7	102	-4.7	1,382	-2.2

* Less than one tenth of 1 percent.

† Not available.

‡ Includes restaurants.

§ Includes steam railroads.

|| Includes railways and express.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN **IDENTICAL** ESTABLISHMENTS
IN NOVEMBER AND DECEMBER 1933, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Laundries					Dyeing and cleaning				
	Number of establishments	Number on pay roll December 1933	Per-cent of change	Amount of pay roll (1 week) December 1933	Per-cent of change	Number of establishments	Number on pay roll December 1933	Per-cent of change	Amount of pay roll (1 week) December 1933	Per-cent of change
Alabama.....	18	1,027	-1.2	\$9,143	+0.4	4	98	-15.5	\$1,075	-5.9
Arizona.....	11	422	+2.4	5,743	+3.3					
Arkansas.....	12	820	+1.3	3,141	+11.7	3	36	-14.3	416	-11.1
California.....	15 28	5,365	-1.9	96,960	-1.5					
Colorado.....	29	1,176	- .8	15,413	-(⁶)	10	140	-4.1	2,403	-2.6
Connecticut.....	44	1,663	-1.5	26,352	-1	7	185	-10.2	3,531	-14.3
Delaware.....	3	232	- .9	4,008	+ .6					
Dist. of Columbia.....	18	2,517	- .5	39,813	+ .1	5	113	-2.6	2,040	-4.6
Florida.....	21	970	+6.8	9,292	+13.7	12	123	+1.7	2,017	+10.2
Georgia.....	29	2,282	-1.6	23,898	+2.3	3	87	+1.2	1,018	+2.8
Idaho.....	16	293	+1.7	4,385	+ .5					
Illinois.....	15 26	1,515	-1.6	21,093	- .8					
Indiana.....	46	1,919	-1.7	25,041	-1.4	10	173	-12.2	2,725	-13.6
Iowa.....	31	1,086	-1.1	14,614	- .3	6	221	-1.3	3,634	-3.9
Kansas.....	15 38	904	-2.0	11,847	+2.6					
Kentucky.....	31	1,502	+ .5	18,609	+3.3	4	153	+2.7	2,281	+7.6
Louisiana.....	6	377	-1.3	3,827	- .2	4	75	-1.3	833	-1.8
Maine.....	27	566	-2.2	8,051	- .5					
Maryland.....	23	1,779	+1.5	26,603	-1.7	10	160	-11.6	2,676	-11.7
Massachusetts.....	114	3,797	-1.2	61,429	-(⁶)	80	1,793	-9.6	27,392	-21.3
Michigan.....	58	2,458	- .8	32,885	+ .6	15	491	-5.9	9,136	-6.9
Minnesota.....	38	1,509	- .3	22,339	+ .1	13	401	-7.8	6,598	-6.3
Mississippi.....	11	325	-2.9	2,925	-11.2					
Missouri.....	50	2,939	+23.9	39,603	+22.4	13	450	+ .9	7,417	-2.4
Montana.....	14	325	+ .3	5,459	+ .6	3	20	(¹⁰)	432	-2.7
Nebraska.....	13	720	-5.4	9,325	-7.5	4	99	+1.0	1,723	-3.1
Nevada.....	3	37	+2.8	616	- .2					
New Hampshire.....	16	268	-1.5	3,926	-1.5					
New Jersey.....	41	4,543	- .9	82,466	- .6	8	209	-11.1	4,815	-13.9
New Mexico.....	4	189	- .5	2,760	+ .4					
New York.....	68	6,704	-1.4	116,631	-1.7	16	406	-9.8	7,323	-14.4
North Carolina.....	14	762	-2.1	8,125	-1.8					
North Dakota.....	11	207	-1.0	2,953	-5.5					
Ohio.....	74	3,799	- .7	57,666	+2.7	38	1,459	-3.2	25,227	-3.8
Oklahoma.....	17	790	-1.4	9,685	+(⁶)	8	168	-5.1	2,360	-3.6
Oregon.....	8	303	-1.9	4,392	+ .5	3	42	-8.7	781	-6.0
Pennsylvania.....	39	2,749	-1.6	41,785	- .8	18	865	-3.7	14,169	-8.6
Rhode Island.....	23	1,159	-2.4	18,753	-4.8	5	271	-13.7	4,463	-21.8
South Carolina.....	8	336	-1.5	3,391	+3.0					
South Dakota.....	7	179	-3.2	2,272	-6.2					
Tennessee.....	13	1,178	-1.4	11,057	+1.3	4	51	-1.9	621	-3.9
Texas.....	21	983	- .2	10,138	-1.1	13	419	-5.4	6,929	+ .3
Utah.....	11	644	+1.9	9,294	+3.0	7	97	-11.8	1,558	-15.6
Vermont.....	9	141	+ .7	1,695	-3.7					
Virginia.....	17	989	-4.2	10,925	-4.3	18	265	-10.8	3,713	-8.5
Washington.....	11	389	-1.0	6,456	- .6	7	52	-7.1	831	-8.5
West Virginia.....	16	551	+2.0	6,814	+2.2	7	203	-2.9	2,689	-2.4
Wisconsin.....	15 28	922	-1.8	12,023	+ .1					
Wyoming.....	7	142	+4.4	2,288	+5.5					

⁶ Less than one tenth of 1 percent.¹⁰ No change.¹⁵ Includes dyeing and cleaning.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS
IN NOVEMBER AND DECEMBER 1933, BY STATES—Continued[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued
by cooperating State organizations]

State	Banks, brokerage, insurance, and real estate				
	Number of establishments	Number on pay roll December 1933	Percent of change	Amount of pay roll (1 week) December 1933	Percent of change
Alabama.....	17	470	+0.4	\$13,641	+2.4
Arizona.....	27	194	(¹⁰)	5,210	+1.6
Arkansas.....	19	243	+1.7	5,796	+2
California.....	1,138	23,127	-5	755,456	-5
Colorado.....	29	1,002	+8	35,328	-2.6
Connecticut.....	59	1,999	+8	74,569	+6.8
Delaware.....	15	561	-2	19,308	-3
District of Columbia.....	41	1,343	-3	48,472	+1.9
Florida.....	18	574	+7	18,573	+7.9
Georgia.....	29	1,121	(¹⁰)	33,466	+3.0
Idaho.....	15	136	+2.3	3,269	+1.4
Illinois.....	94	10,735	-1.0	381,887	+1.6
Indiana.....	44	1,573	-10.9	50,138	-8.5
Iowa.....	17	972	-1.1	31,290	+2
Kansas.....	32	801	-1	25,233	+1.2
Kentucky.....	21	836	-1	30,158	+2.6
Louisiana.....	10	385	+1.6	14,653	+7.0
Maine.....	16	256	+1.2	6,562	-3
Maryland.....	24	855	-2	31,980	+2.2
Massachusetts.....	¹⁰ 273	7,328	(¹⁰)	216,428	+6
Michigan.....	94	4,367	+1.1	139,885	+4.4
Minnesota.....	56	4,766	+2.8	132,444	+3.1
Mississippi.....	16	189	(¹⁰)	4,175	+2
Missouri.....	85	4,744	+2	148,048	+6.5
Montana.....	21	244	(¹⁰)	6,961	+1.2
Nebraska.....	18	537	-6	18,714	+2.4
Nevada.....					
New Hampshire.....	39	460	-9	10,996	-4
New Jersey.....	126	12,691	+5	363,095	+1
New Mexico.....	15	81	+3.8	2,340	+2.4
New York.....	726	53,209	-2	1,884,034	+1.2
North Carolina.....	29	611	+1.5	15,560	+1.7
North Dakota.....	38	273	-7	6,546	-3
Ohio.....	295	8,075	-2	273,992	+3.7
Oklahoma.....	24	623	+2.0	18,373	+3.0
Oregon.....	25	1,191	+9	39,446	+13.6
Pennsylvania.....	578	18,387	-1	592,705	+1.6
Rhode Island.....	31	1,063	-4	46,479	+3.6
South Carolina.....	11	118	+5.4	3,252	-2.3
South Dakota.....	31	239	+1.3	5,950	+3
Tennessee.....	34	1,152	+2	42,347	+6.4
Texas.....	30	1,525	+1	43,129	+1
Utah.....	14	463	+4	17,255	+7.0
Vermont.....	28	226	(¹⁰)	6,442	-4
Virginia.....	32	1,362	+1	44,622	+2.0
Washington.....	38	1,383	-4	43,841	+2.8
West Virginia.....	43	601	+2	17,400	-3
Wisconsin.....	17	918	+2	31,690	+2.6
Wyoming.....	11	88	-3.3	2,693	-2.8

¹⁰ No change.¹⁰ Does not include brokerage and real estate.

Employment and Pay Rolls in December 1933 in Cities of Over 500,000 Population

IN THE following table are presented the fluctuations in employment and pay-roll totals in December 1933 as compared with November 1933 in 13 cities of the United States having a population of 500,000 or over. These changes are computed from reports received from identical establishments in each of the months considered.

In addition to including reports received from establishments in the several industrial groups regularly covered in the Bureau's survey, excluding building construction, reports have also been secured from other establishments in these cities for inclusion in these totals. Information concerning employment in building construction is not available for all cities at this time and therefore has not been included.

FLUCTUATIONS IN EMPLOYMENT AND PAY ROLLS IN DECEMBER 1933 AS COMPARED WITH NOVEMBER 1933

Cities.	Number of establishments reporting in both months	Number on pay roll		Percent of change	Amount of pay roll (1 week)		Percent of change
		November 1933	December 1933		November 1933	December 1933	
New York City.....	5,189	347,628	361,420	+4.0	9,030,127	9,213,669	+2.0
Chicago, Ill.....	1,822	240,889	234,196	-2.8	5,546,811	5,529,152	-.3
Philadelphia, Pa.....	780	147,704	145,521	-1.5	3,206,773	3,164,030	-1.3
Detroit, Mich.....	546	163,388	181,260	+10.9	3,538,993	3,879,661	+9.6
Los Angeles, Calif.....	805	74,182	76,758	+3.5	1,759,821	1,781,071	+1.2
Cleveland, Ohio.....	1,121	95,813	99,640	+4.0	1,915,801	1,994,564	+4.1
St. Louis, Mo.....	512	67,353	68,297	+1.4	1,364,751	1,410,909	+3.4
Baltimore, Md.....	562	53,658	53,135	-.1	1,052,879	1,054,049	+.1
Boston, Mass.....	3,569	94,185	94,759	+.6	2,291,559	2,290,904	-(.1)
Pittsburgh, Pa.....	381	52,694	54,880	+4.1	1,082,889	1,111,407	+2.6
San Francisco, Calif.....	1,126	49,151	49,735	+1.2	1,179,965	1,197,390	+1.5
Buffalo, N. Y.....	425	42,065	42,870	+1.9	919,549	962,458	+4.7
Milwaukee, Wis.....	449	43,825	43,706	-.3	874,697	886,262	+1.3

¹ Less than one tenth of 1 percent.

Employment in the Various Branches of the Federal Government, December 1933

THERE were 591,675 employees on the pay rolls of the executive departments of the United States Government on December 31, 1933. This is an increase of 27,572 employees or 4.9 percent as compared with December 31, 1932, and an increase of 3,640 employees or 0.6 percent, as compared with November 30, 1933.

The information shown in table 1 is compiled by the various departments and offices of the United States Government and sent to the United States Civil Service Commission where it is assembled. The figures were tabulated by the Bureau of Labor Statistics and are published here in compliance with the direction of Congress.

Table 1 shows the number of employees in the executive departments of the Federal Government inside of the District of Columbia,

the number outside the District of Columbia, and the total number of such employees.

Approximately 12 percent of the workers in the executive branch of the United States Government are located in the city of Washington.

TABLE 1.—EMPLOYEES IN THE EXECUTIVE CIVIL SERVICE OF THE UNITED STATES
DECEMBER 1932 AND NOVEMBER AND DECEMBER 1933

Item	District of Columbia			Outside the District			Entire Service		
	Perma- nent	Tempo- rary ¹	Total	Perma- nent	Tempo- rary ¹	Total	Perma- nent	Tempo- rary ¹	Total
Number of employees:									
December 1932.....	64,214	2,088	66,302	468,769	29,032	497,801	532,983	31,120	564,103
November 1933.....	65,830	7,301	73,131	459,965	54,939	514,904	525,795	62,240	588,035
December 1933.....	66,894	8,556	75,450	463,618	52,607	516,225	530,512	61,163	591,675
Gain or loss:									
December 1932-December 1933.....	+2,680	+6,468	+9,148	-5,151	+23,575	+18,424	-2,471	+30,043	+27,572
November 1933-December 1933.....	+1,064	+1,255	+2,319	+3,653	-2,332	+1,321	+4,717	-1,077	+3,640
Percent of change:									
December 1932-December 1933.....	+4.2	+309.8	+13.8	-1.1	+81.2	+3.7	-.5	+96.5	+4.9
November 1933-December 1933.....	+1.6	+17.2	+3.2	+.8	-4.2	+.3	+.9	-1.7	+.6
Labor Turnover—December 1933:									
Additions.....	1,900	1,881	3,781	7,451	24,819	32,270	9,610	26,700	36,310
Separations.....	836	626	1,462	4,057	27,151	31,208	4,893	27,777	32,670
Turnover rate per 100.....	1.26	7.90	1.97	.88	46.16	6.05	.93	43.27	5.54

¹ Not including field employees of the Post Office Department.

Comparing December 1933 with December 1932, there was an increase of 9,148 or 13.8 percent in the number of employees on the pay rolls of the executive departments of the United States Government in the District of Columbia. The number of permanent employees increased 4.2 percent while temporary employees increased over 300 percent during the same period. The increase in the number of temporary employees is due to the creation of the emergency Government units such as the Public Works Administration, National Recovery Administration, Agricultural Adjustment Administration, etc.

Comparing December 1933 with November 1933, there was an increase of 1.6 percent in the number of permanent employees, an increase of 17.2 percent in the number of temporary employees, and an increase of 3.2 percent in total employment in the executive departments in the District of Columbia.

The turnover rate for the entire executive service within the District of Columbia was 1.97.

Outside of the District of Columbia the number of permanent employees decreased 1.1 percent and the number of temporary employees increased 81.2 percent, comparing December 1933 with December 1932.

Comparing December 1933 with November 1933, there was an increase of 0.8 percent in the number of permanent employees

and an increase of 4.2 percent in the number of temporary employees, making a net increase of 0.3 percent in employment in the executive Federal departments outside of the District of Columbia.

The pay roll for the executive departments throughout the United States for the month of November was \$75,977,254. December pay rolls totalled \$80,414,086.

Table 2 shows employment in the executive departments of the United States, by months, for the calendar year 1933.

TABLE 2.—EMPLOYMENT IN THE EXECUTIVE DEPARTMENTS OF THE UNITED STATES BY MONTHS, 1933, FOR DISTRICT OF COLUMBIA, OUTSIDE DISTRICT OF COLUMBIA, AND TOTALS

Months	District of Columbia	Outside District of Columbia	Totals	Months	District of Columbia	Outside District of Columbia	Totals
January.....	66,800	496,361	563,161	July.....	66,062	488,990	555,052
February.....	66,802	496,685	563,487	August.....	67,715	488,624	556,339
March.....	67,557	499,429	566,986	September.....	69,740	496,616	566,356
April.....	67,063	501,665	568,728	October.....	71,054	508,116	577,170
May.....	66,560	507,346	573,906	November.....	73,131	514,904	588,035
June.....	65,437	499,995	565,432	December.....	75,450	530,512	601,675

The high point in employment in the executive departments of the Federal Government for 1933 occurred in December. The peak employment both inside and outside the District occurred that month.

The low point in employment during 1933 occurred in July, when there were 555,052 on the pay rolls of the executive departments throughout the United States. The low for the District of Columbia occurred in June, while outside the District of Columbia fewer people were on the pay rolls in August than any other month of the year.

Table 3 shows the number of employees and amounts of pay rolls in the various branches of the United States Government during November and December 1933.

TABLE 3.—NUMBER OF EMPLOYEES AND AMOUNTS OF PAY ROLLS IN THE VARIOUS BRANCHES OF THE UNITED STATES GOVERNMENT, NOVEMBER AND DECEMBER 1933

Branch of service	Employees		Pay roll	
	November	December	November	December
Executive service.....	588,035	591,675	\$75,977,254	\$80,414,086
Military service.....	263,017	263,622	18,271,482	17,656,909
Judicial service.....	1,864	1,872	425,219	432,435
Legislative service.....	(¹)	3,864	(¹)	886,781
Total.....	² 852,916	861,033	² 94,673,955	99,390,211

¹ Data not available.

² See notes to details.

Employment on Class I Steam Railroads in the United States

REPORTS of the Interstate Commerce Commission for class I railroads show that the number of employees (exclusive of executives and officials) decreased from 985,434 on November 15, 1933, to 952,275 on December 15, 1933, or 3.4 percent. Data are not yet available concerning total compensation of employees for December 1933. The latest pay-roll information available shows a decrease from \$121,981,119 in October to \$114,470,607 in November, or 6.2 percent.

The monthly trend of employment from January 1923 to December 1933 on class I railroads—that is, all roads having operating revenues of \$1,000,000 or over—is shown by index numbers published in the following table. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the 12-month average for 1926 as 100.

TABLE 1.—INDEXES OF EMPLOYMENT ON CLASS I STEAM RAILROADS IN THE UNITED STATES, JANUARY 1923 TO DECEMBER 1933

[12-month average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
January.....	98.3	96.6	95.6	95.8	95.5	89.4	88.2	86.3	73.3	61.2	53.0
February.....	98.6	97.0	95.4	96.0	95.3	89.0	88.9	85.4	72.7	60.3	52.7
March.....	100.5	97.4	95.2	96.7	95.8	89.9	90.1	85.5	72.9	60.5	51.5
April.....	102.0	98.9	96.6	98.9	97.4	91.7	92.2	87.0	73.5	60.0	51.8
May.....	105.0	99.2	97.8	100.2	99.4	94.5	94.9	88.6	73.9	59.7	52.5
June.....	107.1	98.0	98.6	101.6	100.9	95.9	96.1	86.5	72.8	57.8	53.0
July.....	108.2	98.1	99.4	102.9	101.0	95.6	96.6	84.7	72.4	56.4	55.4
August.....	109.4	99.0	99.7	102.7	99.5	95.7	97.4	83.7	71.2	55.0	56.8
September.....	107.8	99.7	99.9	102.8	99.1	95.3	96.8	82.2	69.3	55.8	57.7
October.....	107.3	100.8	100.7	103.4	98.9	95.3	96.9	80.4	67.7	57.0	57.5
November.....	105.2	99.0	99.1	101.2	95.7	92.9	93.0	77.0	64.5	55.9	55.9
December.....	99.4	96.0	97.1	98.2	91.9	89.7	88.8	74.9	62.6	54.8	54.0
Average.....	104.1	98.3	97.9	100.0	97.5	92.9	93.3	83.5	70.6	57.9	54.4

Wage-Rate Changes in American Industries

Manufacturing Industries

THE following table presents information concerning wage-rate adjustments occurring between November 15 and December 15, 1933, as shown by reports received from manufacturing establishments supplying employment data to this Bureau.

Increases in wage rates averaging 10.2 percent and affecting 40,212 employees were reported by 174 of the 18,015 manufacturing establishments surveyed in December. Twenty-one establishments in the slaughtering and meat packing industry reported wage-rate increases averaging 10 percent and affecting 15,732 employees. Thirty-eight establishments in the paper and pulp industry reported increases in wage rates also averaging 10 percent and affecting 6,747 employees. Increased wage rates averaging 7.8 percent and affecting 7,143 employees were reported in 3 rayon establishments between November and December. Nine establishments in the

automobile industry reported increased wage rates averaging 9.1 percent and affecting 3,222 employees. Increases in wage rates averaging 12.6 percent and affecting 1,694 employees were reported in the foundry and machine-shop products industry. Two establishments in the soap industry reported wage-rate increases averaging 10.1 percent and affecting 1,202 employees. In each of the remaining establishments which reported wage rate increases in December, the employees affected numbered less than 1,000.

Of the 18,015 manufacturing establishments included in the December survey, 17,820 establishments, or 98.9 percent of the total, reported no change in wage rates over the month interval. The 3,084,213 employees not affected by changes in wage rates constituted 98.7 percent of the total number of employees covered by the December trend-of-employment survey of manufacturing industries.

Twenty-one manufacturing establishments in 11 industries reported wage-rate decreases affecting 668 employees between November and December.

TABLE 1.—WAGE-RATE CHANGES IN MANUFACTURING INDUSTRIES DURING MONTH ENDING DECEMBER 15, 1933

Industry	Establishments reporting	Total number of employees	Number of establishments reporting—			Number of employees having—		
			No wage-rate changes	Wage-rate increases	Wage-rate decreases	No wage-rate changes	Wage-rate increases	Wage-rate decreases
All manufacturing industries.....	18, 015	3, 125, 093	17, 820	174	21	3, 084, 213	40, 212	668
Percent of total.....	100. 0	100. 0	98. 9	1. 0	. 1	98. 7	1. 3	(1)
Food and kindred products:								
Baking.....	982	66, 898	982	—	—	66, 898	—	—
Beverages.....	382	23, 033	377	2	3	22, 962	39	32
Butter.....	275	4, 128	275	—	—	4, 128	—	—
Confectionery.....	290	37, 069	290	—	—	37, 069	—	—
Flour.....	408	16, 721	407	1	—	16, 561	160	—
Ice cream.....	309	8, 155	309	—	—	8, 155	—	—
Slaughtering and meat packing.....	235	102, 975	214	21	—	87, 243	15, 732	—
Sugar, beet.....	57	20, 198	57	—	—	20, 198	—	—
Sugar refining, cane.....	13	8, 534	13	—	—	8, 534	—	—
Textiles and their products:								
Fabrics:								
Carpets and rugs.....	27	16, 659	27	—	—	16, 659	—	—
Cotton goods.....	696	297, 787	696	—	—	297, 787	—	—
Cotton small wares.....	113	9, 650	111	2	—	9, 450	191	—
Dyeing and finishing textiles.....	154	39, 840	154	—	—	39, 840	—	—
Hats, fur-felt.....	31	5, 357	31	—	—	5, 357	—	—
Knit goods.....	454	109, 130	453	—	1	108, 923	—	207
Silk and rayon goods.....	252	49, 544	252	—	—	49, 544	—	—
Woolen and worsted goods.....	240	63, 187	240	—	—	63, 187	—	—
Wearing apparel:								
Clothing, men's.....	382	59, 640	380	2	—	59, 541	99	—
Clothing, women's.....	558	25, 461	549	5	4	25, 276	91	94
Corsets and allied garments.....	30	5, 001	30	—	—	5, 001	—	—
Men's furnishings.....	75	6, 331	74	—	1	6, 316	—	15
Millinery.....	138	7, 275	138	—	—	7, 275	—	—
Shirts and collars.....	116	15, 387	116	—	—	15, 387	—	—

Less than one tenth of 1 percent.

TABLE 1.—WAGE-RATE CHANGES IN MANUFACTURING INDUSTRIES DURING MONTH ENDING DECEMBER 15, 1933—Continued

Industry	Establishments reporting	Total number of employees	Number of establishments reporting—			Number of employees having—		
			No wage-rate changes	Wage-rate increases	Wage-rate decreases	No wage-rate changes	Wage-rate increases	Wage-rate decreases
Iron and steel and their products, not including machinery:								
Bolts, nuts, washers, and rivets.....	79	13, 103	79	-----	-----	13, 103	-----	-----
Cast-iron pipe.....	42	6, 611	42	-----	-----	6, 611	-----	-----
Cutlery (not including silver and plated cutlery) and edge tools.....	131	11, 286	127	4	-----	10, 923	363	-----
Forgings, iron and steel.....	66	8, 040	66	-----	-----	8, 040	-----	-----
Hardware.....	82	26, 479	80	2	-----	26, 405	74	-----
Iron and steel.....	205	240, 865	204	1	-----	240, 755	110	-----
Plumbers' supplies.....	73	8, 079	71	2	-----	8, 040	39	-----
Steam and hot-water heating apparatus and steam fittings.....	97	24, 440	97	-----	-----	24, 440	-----	-----
Stoves.....	160	19, 993	159	1	-----	19, 899	94	-----
Structural and ornamental metal work.....	195	16, 163	190	4	1	15, 948	105	110
Tin cans and other tinware.....	60	10, 394	60	-----	-----	10, 394	-----	-----
Tools (not including edge tools, machine tools, files, and saws).....	120	8, 568	119	1	-----	8, 555	13	-----
Wirework.....	73	7, 696	72	1	-----	7, 691	5	-----
Machinery, not including transportation equipment:								
Agricultural implements.....	76	10, 473	75	1	-----	10, 181	292	-----
Cash registers, adding machines, and calculating machines.....	33	15, 641	32	-----	1	15, 634	-----	7
Electrical machinery, apparatus, and supplies.....	282	103, 821	280	2	-----	103, 672	149	-----
Engines, turbines, tractors, and waterwheels.....	91	20, 861	91	-----	-----	20, 861	-----	-----
Foundry and machine-shop products.....	1, 033	111, 203	1, 019	14	-----	109, 509	1, 694	-----
Machine tools.....	155	16, 787	152	3	-----	16, 765	22	-----
Radios and phonographs.....	44	36, 306	44	-----	-----	36, 306	-----	-----
Textile machinery and parts.....	50	12, 121	50	-----	-----	12, 121	-----	-----
Typewriters and supplies.....	13	12, 820	13	-----	-----	12, 820	-----	-----
Nonferrous metals and their products:								
Aluminum manufactures.....	17	3, 695	16	1	-----	3, 686	9	-----
Brass, bronze, and copper products.....	218	38, 449	217	1	-----	38, 397	52	-----
Clocks and watches and time-recording devices.....	26	8, 671	26	-----	-----	8, 671	-----	-----
Jewelry.....	119	7, 406	118	1	-----	7, 349	57	-----
Lighting equipment.....	52	3, 631	52	-----	-----	3, 631	-----	-----
Silverware and plated ware.....	55	8, 818	55	-----	-----	8, 818	-----	-----
Smelting and refining—copper, lead, and zinc.....	40	13, 421	40	-----	-----	13, 421	-----	-----
Stamped and enameled ware.....	100	17, 152	98	2	-----	16, 643	509	-----
Transportation equipment:								
Aircraft.....	25	7, 145	25	-----	-----	7, 145	-----	-----
Automobiles.....	226	215, 482	216	9	1	212, 248	3, 222	12
Cars, electric and steam-railroad.....	51	9, 803	50	1	-----	9, 766	37	-----
Locomotives.....	11	2, 599	11	-----	-----	2, 599	-----	-----
Shipbuilding.....	101	30, 709	99	2	-----	30, 668	41	-----
Railroad repair shops:								
Electric railroad.....	359	19, 045	359	-----	-----	19, 045	-----	-----
Steam railroad.....	533	71, 223	530	-----	3	71, 215	-----	8
Lumber and allied products:								
Furniture.....	456	49, 698	452	4	-----	49, 297	401	-----
Lumber:								
Millwork.....	489	20, 514	488	1	-----	20, 504	10	-----
Sawmills.....	599	76, 135	596	3	-----	75, 949	186	-----
Turpentine and rosin.....	21	1, 796	20	1	-----	1, 790	6	-----

TABLE 1.—WAGE-RATE CHANGES IN MANUFACTURING INDUSTRIES DURING MONTH ENDING DECEMBER 15, 1933—Continued

Industry	Establishments reporting	Total number of employees	Number of establishments reporting—			Number of employees having		
			No wage rate changes	Wage-rate increases	Wage-rate decreases	No wage-rate changes	Wage-rate increases	Wage-rate decrease
Stone, clay, and glass products:								
Brick, tile, and terra cotta	640	17,923	617	20	3	17,097	672	154
Cement	129	10,851	129			10,851		
Glass	172	46,300	172			46,300		
Marble, granite, slate, and other products	217	4,743	216	1		4,732	11	
Pottery	118	17,813	116	2		17,489	324	
Leather and its manufactures:								
Boots and shoes	314	93,711	313	1		93,686	25	
Leather	154	31,194	153	1		31,188	6	
Paper and printing:								
Boxes, paper	322	25,334	320	2		25,279	55	
Paper and pulp	432	103,317	393	38	1	96,553	6,747	17
Printing and publishing:								
Book and job	735	46,181	735			46,181		
Newspapers and periodicals	431	55,786	429	2		55,654	132	
Chemicals and allied products:								
Chemicals	110	27,492	110			27,492		
Cottonseed—oil, cake, and meal	108	5,579	107	1		5,547	32	
Druggists' preparations	56	8,213	56			8,213		
Explosives	31	4,399	31			4,399		
Fertilizers	169	8,789	168	1		8,771	18	
Paints and varnishes	339	15,242	332	5	2	15,187	43	12
Petroleum refining	148	61,457	148			61,457		
Rayon and allied products	23	34,195	20	3		27,052	7,143	
Soap	109	14,864	107	2		13,662	1,202	
Rubber products:								
Rubber boots and shoes	10	15,321	10			15,321		
Rubber goods, other than boots, shoes, tires, and inner tubes	98	23,718	98			23,718		
Rubber tires and inner tubes	38	54,369	38			54,369		
Tobacco manufactures:								
Chewing and smoking tobacco and snuff	32	9,726	32			9,726		
Cigars and cigarettes	205	43,474	205			43,474		

Nonmanufacturing Industries

DATA concerning wage-rate changes occurring between November 15 and December 15, 1933, reported by cooperating establishments in 15 nonmanufacturing industries are presented in the following table.

No changes in wage rates were reported in the anthracite mining, metalliferous mining, crude-petroleum producing, and telephone and telegraph industries. Increases were reported in each of the remaining 11 industries and decreases were reported in 6 industries over the month interval. Wage-rate increases averaging 12.6 percent and affecting 1,747 employees were reported in the hotel industry. Increases averaging 17.1 percent and affecting 1,611 employees were reported in the bituminous coal-mining industry. The other increases or decreases in rates were not of especial significance.

TABLE 2.—WAGE-RATE CHANGES IN NONMANUFACTURING INDUSTRIES DURING MONTH ENDING DECEMBER 15, 1933

Industrial group	Establishments reporting	Total number of employees	Number of establishments reporting—			Number of employees having—		
			No wage-rate changes	Wage-rate increases	Wage-rate decreases	No wage-rate changes	Wage-rate increases	Wage-rate decreases
Anthracite mining.....	181	75,765	161	—	—	75,765	—	—
Percent of total.....	100.0	100.0	100.0	—	—	100.0	—	—
Bituminous-coal mining.....	1,503	232,031	1,496	7	—	230,420	1,611	—
Percent of total.....	100.0	100.0	99.5	.5	—	99.3	.7	—
Metalliferous mining.....	288	27,555	288	—	—	27,555	—	—
Percent of total.....	100.0	100.0	100.0	—	—	100.0	—	—
Quarrying and nonmetallic mining.....	1,162	30,658	1,149	12	1	30,431	214	13
Percent of total.....	100.0	100.0	98.9	1.0	.1	99.3	.7	(1)
Crude-petroleum producing.....	253	28,207	253	—	—	28,207	—	—
Percent of total.....	100.0	100.0	100.0	—	—	100.0	—	—
Telephone and telegraph.....	8,192	248,039	8,192	—	—	248,039	—	—
Percent of total.....	100.0	100.0	100.0	—	—	100.0	—	—
Power and light.....	3,135	204,734	3,126	9	—	204,659	75	—
Percent of total.....	100.0	100.0	99.7	.3	—	100.0	(1)	—
Electric-railroad and motor-bus operation and maintenance.....	498	131,741	496	2	—	131,642	99	—
Percent of total.....	100.0	100.0	99.6	.4	—	99.9	.1	—
Wholesale trade.....	3,036	88,845	3,031	4	1	88,724	112	6
Percent of total.....	100.0	100.0	99.8	.1	(1)	99.9	.1	(1)
Retail trade.....	19,062	513,941	19,057	4	(1)	513,880	27	34
Percent of total.....	100.0	100.0	(1)	(1)	(1)	100.0	(1)	(1)
Hotels.....	2,356	129,718	2,325	30	1	127,966	1,747	5
Percent of total.....	100.0	100.0	98.7	1.3	(1)	98.6	1.3	(1)
Canning and preserving.....	803	39,319	802	1	—	39,314	5	—
Percent of total.....	100.0	100.0	99.9	.1	—	100.0	(1)	—
Laundries.....	1,239	66,024	1,230	7	2	65,651	308	65
Percent of total.....	100.0	100.0	99.3	.6	.2	99.4	.5	1
Dyeing and cleaning.....	342	10,134	338	4	—	9,977	157	—
Percent of total.....	100.0	100.0	98.8	1.2	—	98.5	1.5	—
Banks, brokerage, insurance, and real estate.....	4,395	175,190	4,383	9	3	175,092	74	24
Percent of total.....	100.0	100.0	99.7	.2	.1	99.9	(1)	(1)

(1) Less than one tenth of 1 percent.

Employment Created by the Public-Works Fund

THE \$3,300,000,000 public-works fund was voted by Congress to create employment throughout the United States. It is the duty of the Bureau of Labor Statistics to publish each month the number of wage earners, the amounts of pay rolls, and the number of man-hours worked by persons employed from this fund.

Allotments for construction projects awarded by the Public Works Administration are divided into two groups—first, Federal allotments, and second, non-Federal allotments.

Projects to be built from Federal allotments are financed wholly by public-works funds. They are built either by force account (that is the Federal department which has charge of the work hires the laborers directly) or contracts are awarded to commercial firms by the Federal departments. They include such types of construction as post-office buildings; Federal courthouses; naval vessel; river, harbor, and flood-control projects; reclamation projects; and forestry service. They are supervised entirely by representatives of the Federal Government. Whenever a contract is awarded by one of the

Federal agencies the name and address of the contractor, type of project, and the amount of the contract is at once furnished the Bureau of Labor Statistics. A copy of the Bureau's form BLS 742 is then sent to each contractor asking for the number of wage earners employed, the amounts of pay rolls, and the number of man-hours worked, as well as the total amount of expenditures for materials for all pay-roll periods ending between the 15th of the past month and the 15th of the current month. The primary contractor also furnishes the names and addresses of the subcontractors. The Bureau in turn mails its questionnaires to each subcontractor. For work done under force account the Federal agency doing the work supplies the Bureau each month with the same information as is obtained from the contractors.

Information concerning non-Federal projects is obtained from the State engineers of the Public Works Administration. For the most part non-Federal projects are confined to building construction (such as school buildings, city and county buildings, housing projects, etc.), street and road paving, and water and sewerage plants. The Public Works Administration makes a direct grant of 30 percent of the total cost of non-Federal work, and in many cases will loan the remaining 70 percent.

Table 1 shows, by types of project, employment, pay rolls, and man-hours worked during December 1933 on projects financed from public-works funds.

TABLE 1.—EMPLOYMENT, PAY ROLLS, AND MAN-HOURS WORKED DURING DECEMBER 1933 ON PROJECTS FINANCED FROM PUBLIC-WORKS FUNDS, BY TYPE OF PROJECT

Type of project	Number of wage earners employed	Amount of pay roll	Number of man-hours worked	Average earnings per hour	Average number of hours worked in month	Expenditures for material
Building construction.....	17,816	\$893,326	1,288,996	\$0.693	72.4	\$2,105,737
Public roads.....	152,144	8,533,300	(¹)	(¹)	(¹)	(¹)
River, harbor, and flood control.....	48,270	2,462,384	4,812,722	.512	99.7	4,122,958
Streets and roads ²	7,682	324,377	571,172	.568	74.4	434,258
Naval vessels.....	4,060	431,055	562,798	.766	138.6	2,315,984
Reclamation.....	2,681	210,086	347,831	.604	129.7	530,909
Forestry.....	21,194	1,250,616	2,104,462	.594	99.3	746,912
Water and sewerage.....	6,096	302,972	495,724	.611	81.3	1,404,656
Miscellaneous.....	8,047	612,497	1,024,486	.598	127.3	³ 1,615,334
Total.....	267,990	15,020,613	11,208,191	.579	96.8	13,276,748

¹ Data not available.

² Other than those reported by the Bureau of Public Roads.

³ Includes \$1,133,578 worth of material which cannot be charged to any specific type of project.

⁴ Excluding data for Bureau of Public Roads

There were 267,990 employees directly engaged in construction projects financed by public-works funds during the month ending December 15, 1933. These figures exclude all clerks and office workers.

More than half of the total employment under public-works construction projects were engaged in building roads under the direction of the Bureau of Public Roads of the Department of Agriculture. Nearly 50,000 men were working on river, harbor, and flood-control projects, and over 20,000 in forestry work. Building construction employed nearly 18,000 workers.

The pay rolls for workers on all types of projects amounted to more than \$15,000,000. Workers on public roads received over \$8,500,000; workers on river, harbor, and flood-control projects nearly \$2,500,000; and forestry workers over \$1,200,000. On no other type of construction projects were the workers paid as much as \$1,000,000.

Data concerning man-hours were not obtained from the Bureau of Public Roads. Excluding workers on public roads, there were 115,846 employees on public-works construction projects. The average hourly earnings of these employees for the month of December was approximately 58 cents. Workers engaged on naval vessels received the highest hourly pay, earning nearly 77 cents per hour. The next highest hourly earnings were received by workers on building construction, where the rate paid was nearly 70 cents per hour. Workers on reclamation projects and water and sewerage systems received over 60 cents per hour. In no other case was the rate of pay less than 51 cents per hour.

The average hours worked during the month (excluding public-roads projects) was 96.8. Workers constructing naval vessels put in 139 hours per month, those on reclamation projects 130 hours per month, and those on miscellaneous projects 127 hours per month. No other type of work averaged as much as 100 hours per month.

Expenditures for materials during the month totaled over \$13,000,000. Contractors on river, harbor, and flood-control work spent approximately 30 percent of this total.

Table 2 shows employment, pay rolls, and man-hours worked during December on projects financed from public-works funds, by geographic divisions.

TABLE 2.—EMPLOYMENT, PAY ROLLS, AND MAN-HOURS WORKED DURING DECEMBER 1933 ON PROJECTS FINANCED FROM PUBLIC-WORKS FUNDS, BY GEOGRAPHIC DIVISION

Geographic division	Number of wage employed on—		Amount of pay roll on—		Number of man-hours worked ¹	Average earnings per hour ¹	Average number of hours worked in month ¹	Expenditures for materials ¹
	Public roads	Projects other than public roads	Public roads	Projects other than public roads				
New England.....	5,422	5,519	\$337,709	\$439,555	650,117	\$0.676	117.8	\$713,460
Middle Atlantic.....	23,406	6,013	1,273,874	451,420	657,888	.686	109.4	1,440,556
East North Central.....	12,133	10,179	877,235	585,038	915,997	.639	90.0	1,504,763
West North Central.....	28,893	18,146	1,389,927	819,060	1,507,680	.543	83.1	1,437,540
South Atlantic.....	16,983	13,948	704,274	869,226	1,440,016	.604	103.2	1,597,592
East South Central.....	16,321	19,383	358,752	1,005,475	2,111,532	.476	109.0	1,959,186
West South Central.....	27,297	14,656	1,258,616	698,933	1,380,816	.506	94.2	1,944,061
Mountain.....	20,687	11,301	1,724,379	545,741	941,092	.580	83.3	243,793
Pacific.....	7,102	15,323	608,534	968,540	1,351,033	.717	88.2	1,215,711
Total continental United States.....	152,144	² 114,516	8,533,300	² 6,389,386	¹ 10,963,581	² .583	² 95.7	³ 13,190,394
Outside continental United States.....	(1)	1,330	(1)	97,927	244,610	.400	183.9	86,354
Grand total.....	152,144	115,846	8,533,300	6,487,313	11,208,191	.579	96.8	13,276,748

¹ Excluding data for public roads which are not available.

² Including data for 48 wage earners which cannot be charged to any specific geographic division.

³ Includes \$1,133,578 worth of material which cannot be charged to any specific geographic division.

Of the 267,990 wage earners paid from public-works funds, more than 47,000 were working in the West North Central States during December. Nearly 42,000 were working in the West South Central States, and more than 30,000 each in the South Atlantic and Mountain States. Fewer workers were employed in the New England States than in any other geographic division.

Pay rolls reached a total of over \$2,000,000 in the West North Central States, the West South Central States, and the Mountain States. New England was the only geographic division having a pay roll of less than \$1,000,000.

Since data on man-hours were not available for public-roads work, the average earnings per hour as shown in the tables are for projects other than those under the supervision of the Bureau of Public Roads.

The Pacific Division had the highest hourly rate, 72 cents. Workers in the New England, Middle Atlantic, East North Central, and South Atlantic divisions averaged 60 cents per hour or more. The lowest hourly rate, 48 cents, was shown in the East South Central States.

Material orders placed by contractors in the East South Central and the West South Central States reached a higher total than any other geographic division.

Table 3 shows expenditures for materials during the month ending December 15, 1933, by types of material.

TABLE 3.—MATERIALS PURCHASED DURING MONTH ENDING DEC. 15, 1933, FOR PUBLIC-WORKS PROJECTS, BY TYPE OF MATERIAL

Type of material	Amount expended ¹
Auto trucks.....	\$97, 747
Cast-iron pipe and fittings.....	332, 981
Cement.....	361, 635
Clay products.....	254, 685
Concrete products.....	705, 572
Cordage and twine.....	10, 412
Crushed stone.....	40, 880
Doors, shutters, and window sash and frames, molding, and trim, metal.....	66, 527
Electrical machinery and supplies.....	238, 523
Explosives.....	40, 388
Firearms.....	301, 390
Forgings, iron and steel, not made in plants operated in connection with steel works or rolling mills.....	204, 024
Foundry and machine-shop products, not elsewhere classified.....	929, 827
Glass.....	18, 254
Hardware, miscellaneous.....	128, 229
Instruments, professional and scientific.....	39, 280
Lighting equipment.....	36, 079
Lumber and timber products.....	1, 671, 239
Machine tools.....	318, 111
Marble, granite, slate, and other stone products.....	1, 713, 412
Nonferrous-metal alloys; nonferrous-metal products, except aluminum, not elsewhere classified.....	32, 105
Paints and varnishes.....	30, 772
Paving materials and mixtures.....	135, 289
Planing-mill products.....	190, 076
Plumbing supplies.....	100, 437
Pumps and pumping equipment.....	305, 809
Roofing, built-up and roll; asphalt shingles; roof coatings other than paint.....	39, 261
Sand and gravel.....	313, 009
Sheet-metal work.....	31, 712
Steam and hot-water heating apparatus.....	229, 966
Steel-works and rolling-mill products, including structural and ornamental metal work.....	3, 301, 471
Tools, other than machine tools.....	15, 690
Wall plaster, wall board, insulating board, and floor composition.....	14, 935
Wire, drawn from purchased rods.....	245, 252
Wire work not elsewhere classified.....	43, 537
Other.....	730, 232
Total.....	13, 276, 748

¹ Excluding material purchased by Bureau of Public Roads.

During the month ending December 15, 1933, expenditures for materials by contractors on public-works projects, other than those working under the jurisdiction of the Bureau of Public Roads, totaled over \$13,000,000. Expenditures for steel products totaled over \$3,000,000; expenditures for stone products, and for lumber and timber products totaled over \$1,000,000.

It is estimated that the fabrication of materials purchased during this month will create approximately 40,000 man-months of labor.

Table 4 shows data concerning employment, pay rolls, and man-hours worked during each of the three months for which employment has been created by projects financed by public-works funds.

TABLE 4.—EMPLOYMENT, PAY ROLLS, AND MAN-HOURS WORKED DURING OCTOBER, NOVEMBER, AND DECEMBER 1933 ON PROJECTS FINANCED FROM PUBLIC WORKS FUNDS

Item	1933		
	October	November	December
Number of wage earners employed	120,555	251,851	267,990
Amount of pay roll	\$7,223,371	\$14,172,544	\$15,020,613
Number of man-hours worked ²	2,488,284	9,110,316	11,208,191
Average earnings per hour ²	\$0.634	\$0.583	\$0.579
Average number of hours worked in month ²	95.0	87.8	96.8
Expenditures for material ²	\$10,457,231	\$11,615,580	\$13,276,748

¹ Includes estimated pay roll for Bureau of Public Roads.

² Excluding data of Bureau of Public Roads.

In October there were slightly more than 120,000 employees working on public works projects. This number was more than doubled during November, while December showed an increase of approximately 16,000 as compared with the previous month.

Pay rolls were not available for public road work during October. The Bureau estimated the October pay roll at \$5,646,000. Pay rolls for other types of construction totaled slightly over \$1,500,000. During November and December total pay roll figures are available. Disbursements for this purpose totaled over \$14,000,000 in November and more than \$15,000,000 in December.

Materials purchases for the 3 months entailed an expenditure of more than \$35,000,000.

Civil Works Administration

THE Public Works Administration, early in November, made an allotment of \$400,000,000 to the Civil Works Administration. This money was to be used in providing jobs during the winter to people who were out of work. The greater part of the civil works employees were taken from the relief rolls throughout the United States. The people from the civil works rolls have now been given employment on needed projects and are entirely self supporting.

It is some time after a contract is awarded before the maximum employment is reached on the type of projects included under the regular Public Works Administration. The Civil Works Administration is giving jobs to people to bridge these gaps. Employees from the civil works rolls are engaged at the present in repairing buildings and bridges, in street and road work, working on slum clearance projects, landscaping, and mosquito eradication.

Table 5 shows the number of civil works employees on the pay rolls for weeks ending December 2, 1933, and January 18, 1934, as well as the pay roll for the week ending January 18, 1934.

TABLE 5.—CIVIL WORKS EMPLOYEES DECEMBER 2, 1933, AND JANUARY 18, 1934

Geographic division	Number		Pay rolls, week ending Jan. 18, 1934
	Dec. 2, 1933	Jan. 18, 1934	
New England.....	49, 539	232, 258	\$3, 762, 410
Middle Atlantic.....	208, 089	723, 480	11, 394, 489
East North Central.....	313, 023	865, 322	15, 652, 585
West North Central.....	118, 234	460, 446	7, 103, 739
South Atlantic.....	291, 481	532, 852	6, 898, 762
East South Central.....	94, 778	529, 463	3, 709, 471
West South Central.....	302, 499	512, 892	5, 763, 530
Mountain.....	46, 930	134, 681	2, 567, 669
Pacific.....	99, 394	248, 080	4, 493, 038
Total.....	1, 523, 967	4, 039, 474	61, 345, 693
Percent of change.....		+165.1	

During the week ending January 18, 1934, over 4,000,000 employees drew pay for work on civil-works projects. This is an increase of nearly 2,500,000 or 126 percent as compared with December 2. These employees were paid over \$61,000,000 for work performed during the week ending January 18, 1934.

The number of employees shown in the above table are those in the continental United States who drew pay during the week ending January 18, 1934. It does not represent the total number of people on public-works pay rolls for two reasons. In some localities the stagger system is used. That is, work is provided for a definite number of employees, and since it is impossible for the employers to provide jobs for all these employees at one time, one half are given jobs for one week and the other half the following week. This means that in some localities twice as many persons are given jobs as would draw pay for a given week. Weather conditions also affect employment, as most of the jobs are outside work and may be "rained out" for an entire week, therefore no pay would be drawn for that period.

No data are shown for localities outside the continental United States, although many people are doing work in outlying territories.

Emergency Conservation Work

EMPLOYEES on the rolls of the Emergency Conservation Work are now paid by allotments made from Public Works Fund.

Table 6 shows the employment and pay rolls in the Emergency Conservation Work during the months of November and December 1933.

TABLE 6.—EMPLOYMENT AND PAY ROLLS IN THE EMERGENCY CONSERVATION WORK, NOVEMBER AND DECEMBER 1933

Group	Number		Pay rolls	
	November	December	November	December
Enrolled personnel.....	296, 026	288, 855	\$9, 244, 887	\$9, 020, 943
Reserve officers, line.....	3, 494	3, 588	783, 682	(1)
Reserve officers, medical.....	1, 085	781		
Supervisory and technical.....	14, 054	13, 168	1, 657, 575	1, 362, 724
Carpenters and laborers.....	26, 054	11, 343	2, 400, 304	1, 215, 637
Total.....	340, 713	317, 735	14, 086, 448	² 11, 599, 304

¹ Data not available.² See notes to details.

There was a decrease of more than 10,000 people engaged in Emergency Conservation Work comparing December with November. This decrease was largely caused by the completion of the erection of cabins for winter quarters of the Civilian Conservation Corps, although there was a slight falling off in both the enlisted personnel and supervisory and technical force. There was an increase in line Reserve officers but a decrease in medical Reserve officers.

Information concerning employment and pay rolls in the Emergency Conservation Work is collected by the Bureau of Labor Statistics from the War Department, the Department of Agriculture, and the Department of the Interior.

The pay of the enlisted personnel is \$30 per month, except that 5 percent of the personnel of each company are paid \$45 and an additional 8 percent are paid \$36 per month. The pay roll of this branch of the service is figured on this basis.

The carpenters and laborers shown in the above table are constructing barracks to be used as winter quarters by the Civilian Conservation Corps. This work is practically finished. However, the construction of recreation buildings in a number of the camps has been started which will engage the services of a number of building tradesmen during the months of January and February.

Table 7 shows the monthly totals of the employees and pay rolls of the Emergency Conservation Work from the inception of the work in May to December 1933.

TABLE 7.—MONTHLY TOTALS OF EMPLOYEES AND PAY ROLLS IN THE EMERGENCY CONSERVATION WORK FROM MAY 1933 TO DECEMBER 1933

Months	Employees	Pay roll	Months	Employees	Pay roll
May.....	191, 113	¹ \$6, 217, 594	September.....	240, 901	\$9, 487, 755
June.....	281, 861	¹ 9, 392, 300	October.....	269, 644	10, 232, 875
July.....	314, 142	¹ 10, 767, 847	November.....	340, 713	14, 086, 448
August.....	305, 039	¹ 10, 835, 204	December.....	317, 735	¹ 11, 599, 304

¹ Subject to revision.

Employment on Public Roads (Other Than Public Works)

THE following table shows the number of employees, exclusive of those paid from Public Works Fund, engaged in building and maintaining public roads, State and Federal, during the months of November and December, by geographic divisions.

TABLE 1.—NUMBER OF EMPLOYEES ENGAGED IN THE CONSTRUCTION AND MAINTENANCE OF PUBLIC ROADS, STATE AND FEDERAL, DURING NOVEMBER AND DECEMBER 1933, BY GEOGRAPHIC DIVISIONS¹

Geographic division	Federal				State			
	Number		Pay rolls		Number		Pay rolls	
	Novem- ber	Decem- ber	Novem- ber	Decem- ber	Novem- ber	Decem- ber	Novem- ber	Decem- ber
New England.....	1,769	855	\$105,309	\$51,670	24,100	14,213	\$2,160,491	\$1,316,448
Middle Atlantic.....	3,441	1,619	255,313	113,030	45,729	32,632	3,924,922	1,677,643
East North Central.....	6,631	2,886	379,639	163,161	48,227	34,849	2,814,909	1,867,178
West North Central.....	2,555	1,854	158,030	104,243	33,462	29,600	1,803,261	1,567,817
South Atlantic.....	6,017	3,537	233,783	159,457	40,655	34,481	1,444,317	1,238,904
East South Central.....	4,288	3,311	173,296	127,665	12,142	13,040	594,930	514,117
West South Central.....	7,105	4,839	308,943	223,565	11,503	12,034	820,761	741,796
Mountain.....	3,650	1,525	286,126	117,174	6,065	8,167	507,396	538,683
Pacific.....	2,656	919	224,126	74,761	12,249	8,607	1,122,817	765,774
Total.....	38,112	21,345	2,124,565	1,134,726	234,132	187,623	15,193,804	10,228,360
Percent of change.....		-44.0		-46.6		-19.9		-32.7

¹ Excluding employment furnished by projects financed from Public Works Fund.

The number of employees engaged in Federal road building financed under the old State-aid law decreased 44 percent comparing December with November. It should be borne in mind that practically all of the new contracts awarded for road building are now financed from Public Works Fund.

There was an increase in the number of employees working on Federal road work financed from Public Works Fund comparing these two months. (See table 1, p. 61.) Pay rolls for Federal road projects other than public works, decreased 46.6 percent in December as compared with the previous month. There was a decrease of 19.9 percent in the number of employees engaged in road work financed by State governments. December pay rolls for these men decreased 32.7 percent as compared with November.

Seventy-five and one tenth percent of the workers engaged on State roads were working on maintenance and only 24.9 percent in building new roads.

