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WAGES AND HOURS OF LABOR SERIES

WAGES AND HOURS OF LABOR
IN THE MOTOR-VEHICLE
INDUSTRY: 1928



DECEMBER, 1928

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WAGES AND HOURS OF LABOR IN THE MOTOR- VEHICLE INDUSTRY, 1928

INTRODUCTION AND SUMMARY

This bulletin presents the results of a study of hours of labor and of earnings of employees in the motor-vehicle industry in the United States in 1928. The results were compiled from wage data of employees in establishments engaged in the manufacture of passenger cars, trucks, busses, or of bodies or other parts of motor vehicles.

The figures were compiled from data collected by agents of the bureau from pay rolls and other records of 94 establishments in 8 States. According to the 1925 Census of Manufactures, 91 per cent of the wage earners in the industry were employed in these States.

The 1928 wage figures are for a total of 153,962 wage earners (including 4,134 females) or 36.1 per cent of the whole number in the motor-vehicle industry in 1925.

A summary of the 1928 average full-time hours per week, average earnings per hour, and average full-time earnings per week for each occupation and for all occupations combined is shown in Table 1 in comparison with like figures for 1922 and 1925. Detailed 1922 and 1925 figures are given in Bulletins Nos. 348 and 438.

Average full-time hours per week of males in all occupations combined, as shown at the end of Table 1, increased from 50.1 in 1922 to 50.3 in 1925 and then decreased to 49.4 in 1928. Those for females decreased from 50.3 in 1922 to 50.1 in 1925 and then increased to 50.3 in 1928. Those for both sexes combined, or for the industry, increased from 50.1 in 1922 to 50.3 in 1925, and decreased to 49.4 in 1928.

Average earnings per hour of males in all occupations combined increased from 66.2 cents in 1922 to 72.9 cents in 1925 and to 75.6 cents in 1928; of females increased from 43.8 cents in 1922 to 46.7 cents in 1925 and to 48.7 cents in 1928; and of all males and females in all occupations combined increased from 65.7 cents in 1922 to 72.3 cents in 1925 and 75 cents in 1928. Between 1925 and 1928 average earnings per hour of males increased 3.7 per cent, of females increased 4.3 per cent, and of both sexes combined increased 3.7 per cent.

Average full-time earnings per week of males in all occupations combined increased from \$33.19 in 1922 to \$36.67 in 1925 and \$37.35 in 1928; of females increased from \$22.05 in 1922 to \$23.40 in 1925 and to \$24.50 in 1928; and of all males and females combined, or the industry, increased from \$32.92 in 1922 to \$36.37 in 1925 and to \$37.05 in 1928.

In 1922 the occupational average earnings per hour for males ranged from 38.5 cents for "apprentices" to 93.1 for "letterers, strippers, and varnishers"; in 1925 from 51.2 cents for "apprentices" to \$1.037 for "ding men"; and in 1928 from 57.2 cents for "apprentices" to \$1.128 for "ding men." Average earnings per hour for females in 1922 ranged from 35.2 cents for "inspectors" to 68 cents for "other skilled occupations"; in 1925 from 36.1 cents for "inspectors" to 57.3 cents for "drill-press operators"; and in 1928 from 39 cents for "inspectors" to 63.6 cents for "lacquer rubbers."

TABLE 1.—Average hours and earnings, 1922, 1925, and 1928, by occupation and sex

Occupation	Sex	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Apprentices.....	M.	1922	19	300	52.5	\$0.385	\$20.21
	M.	1925	46	644	50.0	.512	25.60
	M.	1928	49	1,167	48.6	.572	27.80
Assemblers, axle.....	M.	1922	30	763	49.8	.675	33.62
	M.	1925	46	1,922	50.3	.729	36.67
	M.	1928	48	2,703	50.2	.755	37.90
	F.	1925	2	24	50.0	.496	24.80
	F.	1928	3	13	50.3	.451	22.69
Assemblers, body-frame ¹	M.	1925	49	3,091	50.8	.739	37.54
	M.	1928	47	3,256	50.4	.799	40.27
	F.	1928	6	12	49.8	.419	20.87
Assemblers, chassis.....	M.	1922	41	1,857	50.2	.647	32.48
	M.	1925	54	2,902	49.9	.694	34.63
	M.	1928	53	4,593	49.0	.758	37.14
	F.	1925	3	34	50.0	.520	26.00
Assemblers, final.....	F.	1928	7	109	49.8	.529	26.34
	M.	1922	46	3,108	50.3	.672	33.82
	M.	1925	74	7,400	50.1	.731	36.62
	M.	1928	66	8,198	50.1	.774	38.78
	F.	1922	7	170	49.1	.621	30.52
Assemblers, frame.....	F.	1925	13	318	49.8	.507	25.25
	F.	1928	22	575	49.3	.507	25.00
	M.	1922	29	364	49.0	.673	33.01
	M.	1925	47	1,115	50.0	.753	37.65
	M.	1928	45	1,125	49.5	.770	38.12
Assemblers, motor.....	M.	1922	41	2,147	50.0	.661	33.03
	M.	1925	61	4,851	49.8	.747	37.20
	M.	1928	59	4,859	50.1	.762	38.18
	F.	1922	2	2	52.5	.485	25.47
	F.	1925	6	48	50.0	.489	24.45
Automatic operators, lathe and screw machine.	F.	1928	9	81	50.4	.460	23.18
	M.	1922	34	1,673	50.2	.688	34.56
	M.	1925	65	2,622	49.7	.764	37.97
Bench hands, machine shop.....	M.	1928	54	1,842	49.0	.806	39.49
	M.	1922	35	2,176	50.0	.670	33.47
	M.	1925	70	2,439	50.2	.716	35.94
	M.	1928	67	2,178	50.3	.724	36.42
	F.	1922	4	14	49.6	.546	27.10
Blacksmiths.....	F.	1925	8	35	49.3	.568	28.00
	F.	1928	7	42	49.3	.538	26.52
	M.	1922	34	388	50.0	.810	40.54
	M.	1925	80	1,040	49.6	.957	47.47
	M.	1928	79	850	48.9	.973	47.58
Boring-mill operators.....	M.	1922	30	392	50.2	.701	35.22
	M.	1925	53	828	50.6	.765	38.71
	M.	1928	56	1,129	47.3	.808	38.22
Bumpers ²	M.	1925	35	323	49.8	.945	47.06
Crane operators ¹	M.	1928	43	358	49.6	1.042	51.68
	M.	1925	29	145	49.7	.726	36.08
	M.	1928	37	217	49.3	.707	34.86
Cutters, cloth and leather ¹	M.	1925	44	219	50.5	.803	40.55
	M.	1928	39	205	49.1	.831	40.80
	F.	1925	5	18	51.8	.517	26.78
	F.	1928	4	12	52.8	.461	24.34
	M.	1925	19	274	49.9	.797	39.77
Ding men ²	M.	1928	22	224	47.4	.849	40.24
	M.	1925	32	209	50.6	1.037	52.47
	M.	1928	36	235	51.0	1.128	57.53
Door hangers ¹	M.	1925	32	659	51.2	.827	42.34
	M.	1928	41	672	50.9	.861	43.82
	M.	1922	42	3,443	49.6	.644	31.96
Drill-press operators.....	M.	1925	84	8,688	50.3	.712	35.81
	M.	1928	78	8,488	49.6	.784	36.41

See footnotes at end of table.

TABLE 1.—Average hours and earnings, 1922, 1925, and 1928, by occupation and sex—Continued

Occupation	Sex	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Drill-press operators (Continued)	F.	1922	5	44	51.4	\$0.447	\$22.99
	F.	1925	17	99	49.8	.573	28.54
	F.	1928	15	184	50.5	.466	23.53
Forge-shop helpers	M.	1922	34	656	49.6	.698	34.42
	M.	1925	55	1,661	51.0	.753	38.40
	M.	1928	58	1,833	51.7	.735	37.26
Gear-cutters operators	M.	1922	30	497	50.2	.678	34.07
	M.	1925	48	1,331	50.6	.746	37.75
	M.	1928	50	1,121	49.5	.760	37.62
Grinding-machine operators	M.	1922	38	2,574	50.0	.710	35.77
	M.	1925	69	5,422	50.1	.765	38.33
	M.	1928	70	5,419	48.8	.792	38.65
	F.	1922	2	3	52.9	.572	30.28
	F.	1925	3	9	49.9	.471	23.50
	F.	1928	4	8	50.3	.457	22.99
Hardeners	M.	1922	29	667	51.7	.676	34.97
	M.	1925	54	945	53.7	.725	38.93
	M.	1928	56	720	54.5	.749	40.82
Helpers	M.	1922	43	1,042	50.8	.531	26.95
	M.	1925	81	3,019	50.9	.603	30.69
	M.	1928	74	4,085	48.1	.621	29.87
	F.	1925	2	25	50.0	.491	24.55
	F.	1928	4	17	52.0	.463	24.08
Inspectors	M.	1922	44	2,808	50.1	.608	30.45
	M.	1925	93	7,676	50.1	.682	34.17
	M.	1928	90	7,579	49.4	.723	35.72
	F.	1922	7	197	51.2	.352	18.03
	F.	1925	24	437	49.6	.361	17.91
Laborers	F.	1928	29	503	50.7	.390	19.77
	M.	1922	47	5,982	50.2	.495	24.86
	M.	1925	97	16,592	50.4	.570	28.73
	M.	1928	92	15,535	49.4	.589	29.10
	F.	1922	5	46	50.5	.385	19.46
Lacquer rubbers *	F.	1925	13	105	50.2	.403	20.23
	F.	1928	21	119	49.5	.465	23.02
	M.	1925	38	709	50.2	.871	43.72
	M.	1928	43	1,465	50.3	.841	42.30
	F.	1928	3	36	52.4	.636	33.33
Lathe operators	M.	1922	41	2,950	49.5	.689	34.13
	M.	1925	72	6,260	50.0	.762	38.10
	M.	1928	69	5,553	49.0	.789	38.66
Letterers, strippers, and varnishers	M.	1922	87	762	50.8	.931	47.26
	M.	1925	56	990	50.1	.996	49.90
	M.	1928	59	650	50.0	1.115	55.75
	F.	1928	6	26	49.8	.588	29.28
Machinists	M.	1922	41	1,291	50.0	.715	35.78
	M.	1925	73	3,604	50.0	.806	40.30
	M.	1928	81	3,465	47.9	.844	40.43
Metal finishers †	M.	1925	36	3,397	50.6	.851	43.06
	M.	1928	55	4,606	50.5	.893	45.10
Metal panelers †	M.	1925	32	1,655	51.5	.770	39.66
	M.	1928	34	1,947	49.8	.830	41.33
Milling-machine operators	M.	1922	89	1,691	50.0	.659	32.94
	M.	1925	74	3,549	50.4	.737	37.14
	M.	1928	70	3,231	49.5	.764	37.82
Molders, belt and drip †	M.	1925	19	266	51.0	.823	41.97
	M.	1928	30	672	50.6	.914	46.25
	M.	1922	47	2,114	50.7	.733	37.17
Painters, general	M.	1925	77	1,934	50.6	.776	39.27
	M.	1928	77	2,155	50.7	.770	39.04
	F.	1925	5	16	47.8	.519	24.81
	F.	1928	3	8	50.3	.415	20.87
	M.	1922	24	177	50.6	.723	36.56
Paint sprayers	M.	1925	69	993	50.0	.850	42.50
	M.	1928	71	1,581	50.4	.824	41.53
	F.	1928	5	19	48.9	.565	27.63
Planer and shaper operators	M.	1922	21	165	49.3	.738	36.40
	M.	1925	32	308	49.7	.786	39.06
	M.	1928	38	401	49.1	.791	38.84
Platers †	M.	1925	27	181	50.1	.734	36.77
	M.	1928	33	358	49.5	.756	37.42
Polishers and buffers	M.	1922	28	564	50.4	.756	38.08
	M.	1925	35	1,095	50.4	.908	45.76
	M.	1928	56	2,030	49.2	.936	46.05
Punch-press operators	M.	1922	27	1,096	49.4	.715	35.31
	M.	1925	61	4,416	49.6	.718	35.61
	M.	1928	61	4,268	47.9	.746	35.73
	F.	1925	6	103	50.0	.457	22.85
	F.	1928	6	100	51.3	.491	25.19

See footnotes at end of table.

TABLE 1.—Average hours and earnings, 1922, 1925, and 1928, by occupation and sex—Continued

Occupation	Sex	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Sand blasters, etc.....	M.	1922	32	480	50.6	\$0.618	\$31.29
	M.	1925	51	954	50.8	.680	34.54
	M.	1928	44	1,026	48.7	.727	35.40
Sanders and rough-stuff rubbers ¹	M.	1922	44	1,937	50.5	.843	42.57
	M.	1925	54	2,716	49.7	.807	40.11
	M.	1928	4	18	51.4	.540	27.76
Sewing-machine operators.....	F.	1922	11	101	49.0	.748	36.66
	M.	1925	14	378	48.4	.718	34.75
	M.	1928	13	228	42.4	.833	35.32
Sheet-metal workers.....	F.	1922	27	505	50.5	.442	22.32
	F.	1925	48	1,113	50.7	.472	23.93
	F.	1928	43	861	51.0	.513	26.16
Straighteners ²	M.	1922	35	1,304	50.2	.656	32.92
	M.	1925	60	3,111	50.3	.783	39.38
	M.	1928	54	2,441	50.5	.807	40.75
Testers, final and road.....	F.	1922	3	39	49.5	.490	24.26
	F.	1925	7	56	49.6	.489	24.25
	M.	1928	42	628	50.9	.753	38.33
Testers, motor.....	M.	1922	45	531	49.8	.780	38.84
	M.	1925	41	668	50.5	.610	30.80
	M.	1928	45	741	50.8	.639	32.46
Tool and die makers.....	M.	1922	48	538	49.9	.699	34.88
	M.	1925	38	489	51.2	.633	32.43
	M.	1928	41	1,433	50.5	.712	35.96
Top builders.....	M.	1922	41	749	51.4	.726	37.32
	M.	1925	40	1,097	50.0	.769	38.47
	M.	1928	80	2,689	50.2	.875	43.93
Trim bench hands.....	M.	1922	77	3,523	48.8	.919	44.85
	M.	1925	36	1,410	50.8	.778	39.55
	M.	1928	64	4,415	50.6	.808	40.88
Varnish rubbers.....	M.	1922	56	4,090	49.6	.840	41.66
	F.	1922	5	18	51.8	.468	24.26
	F.	1925	14	155	51.4	.481	24.72
Welders and brazers ³	F.	1922	11	287	49.5	.536	26.53
	M.	1922	19	182	49.4	.595	29.40
	M.	1925	35	473	49.2	.754	37.10
Welders, spot and butt ⁴	M.	1922	25	385	49.4	.770	38.04
	F.	1922	18	202	50.6	.438	22.14
	F.	1925	26	474	49.7	.479	23.81
Woodworking-machine operators ⁵	F.	1922	29	669	50.8	.483	24.54
	M.	1922	25	501	50.9	.870	44.27
	M.	1925	34	553	50.3	.901	45.32
Other skilled occupations.....	M.	1922	26	357	49.4	.836	41.30
	M.	1925	68	783	50.3	.810	40.74
	M.	1928	66	1,197	47.6	.852	40.56
Other employees.....	M.	1922	33	677	50.2	.792	39.76
	M.	1925	41	825	49.5	.789	39.06
	M.	1928	42	1,942	51.2	.674	34.51
All occupations.....	M.	1922	47	1,815	50.6	.729	36.81
	M.	1925	37	1,659	49.5	.710	35.15
	M.	1928	91	3,771	50.0	.774	38.70
All occupations, male and female.....	M.	1922	93	5,615	48.9	.773	37.80
	F.	1922	3	15	49.0	.680	33.34
	F.	1925	3	8	50.0	.536	26.80
All occupations, male and female.....	F.	1928	4	8	51.0	.509	25.96
	M.	1922	47	3,611	49.9	.644	32.13
	M.	1925	97	10,171	49.9	.692	34.53
All occupations, male and female.....	M.	1928	93	12,819	48.8	.702	34.26
	F.	1922	11	137	49.0	.461	22.59
	F.	1925	26	305	49.6	.460	22.32
All occupations, male and female.....	F.	1928	30	391	49.2	.506	24.90
	M.	1922	49	54,930	50.1	.662	33.19
	M.	1925	99	140,930	50.3	.729	36.67
All occupations, male and female.....	M.	1928	94	149,823	49.4	.756	37.35
	F.	1922	29	1,379	50.3	.438	22.05
	F.	1925	59	3,432	50.1	.467	23.40
All occupations, male and female.....	F.	1928	62	4,134	50.3	.487	24.50
		1922	49	56,309	50.1	.657	32.92
		1925	99	144,362	50.3	.723	36.37
	1928	94	153,962	49.4	.750	37.05	

¹ Included in "body builders" in 1922.

² Included in "sheet-metal workers, skilled," 1922.

³ Included in "other skilled occupations" or in "other employees" in 1922.

⁴ Included in "trim bench hands" in 1922.

⁵ Not found in 1922; process developed since.

⁶ Included in "painters, general" in 1922.

AVERAGE HOURS AND EARNINGS, BY STATE

Table 2 shows for the males, for the females, and also for all the males and females combined that were included in the study of the industry in each State in 1925 and 1928, average full-time hours per week, average earnings per hour, and average full-time earnings per week.

The purpose of this table is to give State averages for each sex and for both sexes combined, or the industry, and thus make easy the comparison of the averages of males, of females, and of both sexes, one State with another, and also a comparison of the averages of males with those of females.

TABLE 2.—Number of establishments and of wage earners and average hours and earnings, 1925 and 1928, by sex and State

State and sex	Number of establishments		Number of wage earners		Average full-time hours per week		Average earnings per hour		Average weekly earnings	
	1925	1928	1925	1928	1925	1928	1925	1928	1925	1928
MALES										
Illinois.....	9	8	3,596	3,381	51.4	49.2	\$0.682	\$0.704	\$35.05	\$34.64
Indiana.....	12	9	10,028	10,258	50.6	50.9	.690	.662	31.91	33.19
Michigan.....	29	33	82,268	92,781	50.1	48.8	.756	.790	37.88	38.55
New Jersey.....	6	6	5,412	5,629	50.2	46.3	.720	.720	36.14	32.84
New York.....	14	13	10,878	10,142	51.1	50.9	.685	.734	35.00	37.36
Ohio.....	15	12	16,929	11,624	48.5	49.6	.786	.734	35.70	36.41
Pennsylvania.....	8	6	6,075	8,127	52.1	52.8	.593	.644	30.90	34.00
Wisconsin.....	6	7	5,111	4,903	53.4	53.3	.674	.717	35.99	38.22
Total.....	99	94	140,930	149,828	50.3	49.4	.729	.756	36.67	37.35
FEMALES										
Illinois.....	4	3	20	60	50.9	54.4	.394	.441	20.05	23.99
Indiana.....	9	6	277	842	49.9	50.4	.474	.457	23.65	23.03
Michigan.....	18	25	2,354	2,840	50.5	50.5	.464	.487	23.43	24.59
New Jersey.....	3	3	137	51	49.7	50.0	.479	.505	23.81	25.25
New York.....	10	8	110	226	50.8	49.8	.477	.507	24.23	25.25
Ohio.....	9	10	416	412	48.8	48.4	.477	.516	23.04	24.97
Pennsylvania.....	3	4	50	95	50.1	51.8	.420	.460	21.04	23.83
Wisconsin.....	3	5	68	108	48.2	49.2	.467	.511	22.51	25.14
Total.....	59	64	3,432	4,134	50.1	50.3	.467	.487	23.40	24.50
MALES AND FEMALES										
Illinois.....	9	8	3,616	3,421	51.4	49.3	.680	.699	34.95	34.46
Indiana.....	12	9	10,305	10,600	50.5	50.9	.684	.647	34.47	32.93
Michigan.....	29	33	84,622	95,621	50.1	48.9	.748	.782	37.57	38.24
New Jersey.....	6	6	5,549	5,680	50.2	46.3	.714	.723	35.84	32.75
New York.....	14	13	10,988	10,368	51.1	50.9	.683	.729	34.90	37.11
Ohio.....	15	12	17,345	15,036	48.5	49.6	.730	.728	35.41	36.11
Pennsylvania.....	8	6	6,725	8,222	52.0	52.8	.592	.643	30.78	33.95
Wisconsin.....	6	7	5,212	5,011	53.4	53.2	.669	.714	35.72	37.98
Total.....	99	94	144,362	153,962	50.3	49.4	.723	.750	36.37	37.05

Average full-time hours per week of males in 1925 ranged by States from 48.5 to 53.4; of females from 48.2 to 50.9; and of both sexes combined from 48.5 to 53.4. In 1928 the averages of males ranged from 45.3 to 53.3; of females from 48.4 to 54.4; and of both sexes combined ranged from 45.3 to 53.2. Average full-time hours per week of males in all States were 50.3 in 1925 and 49.4 in 1928; of females were 50.1 in 1925 and 50.3 in 1928; and of both sexes were 50.3 in 1925 and 49.4 in 1928.

Average earnings per hour of males in 1925 ranged by States from 59.3 to 75.6 cents, of females from 39.4 to 47.9 cents, and of males and females combined ranged from 59.2 to 74.8 cents. In 1928 the averages for males ranged by States from 64.4 to 79 cents, for females from 44.1 to 51.6 cents, and for both sexes combined ranged from 64.3 to 78.2 cents. Averages for males in all States were 72.9 cents in 1925 and 75.6 cents in 1928; for females were 46.7 cents in 1925 and 48.7 cents in 1928; and for both sexes were 72.3 cents in 1925 and 75 cents in 1928.

Average full-time earnings per week for males in 1925 ranged by States from \$30.90 to \$37.88, for females from \$20.05 to \$24.23, and for males and females combined ranged from \$30.78 to \$37.47. Averages for males in all States were \$36.67 in 1925 and \$37.35 in 1928; for females were \$23.40 in 1925 and \$24.50 in 1928; and for all males and females were \$36.37 in 1925 and \$37.05 in 1928.

Table 3 shows for each of 18 specified occupations the number of establishments and wage earners, average earnings per hour, and the per cent of wage earners earning each classified amount per hour in 1928, as compared with like figures for 1922 and 1925.

Data are shown for males in all of the 18 occupations and for females in 12. Females were reported in 15 of the 18 occupations, but were too few in number in 3 of the 15 to be representative and are omitted from this table. They are included in other tables in the group designated as "other employees." The males in the 18 occupations represent 55.5 per cent of the total number of males covered in each of the years 1922 and 1925 and 51.1 per cent of the number in 1928. The females represent 73.4 per cent of the total number of females included in the report in 1922, 69.4 per cent of the number in 1925, and 69 per cent of the number included in the 1928 study. The males and females combined in this table represent 56 per cent of the total in 1922, 55.8 per cent in 1925, and 51.5 per cent of the total number in 1928. These occupations were selected as representative of all the occupations in the industry with reference to the range or spread of average and percentage distribution of wage earners in all occupations in the industry. The classification of the wage earners in the other occupations was omitted from this table and Tables 4, 9, B, C, D, and E to save time and space.

Axle assemblers, male, or the employees in the first occupation in the table, earned an average of 67.5 cents per hour in 1922, 72.9 cents in 1925, and an average of 75.5 cents per hour in 1928, an increase of 8 per cent between 1922 and 1925 and of 3.6 per cent between 1925 and 1928. The per cent of the employees in this occupation that earned an average of less than 70 cents per hour decreased from approximately 54 in 1922 to 38 in 1925 and to 32 per cent in 1928. The per cent of those that earned an average of 90 cents or more per hour increased from approximately 1 in 1922 to 6 in 1925 and to 12 per cent in 1928.

TABLE 3.—Average and classified earnings per hour in 18 specified occupations, 1922, 1925, and 1928, by sex

Occupation and sex	Number of establishments	Number of wage earners	Average earnings per hour	Per cent of wage earners whose average earnings per hour were—																	
				Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 40 cents	40 and under 50 cents	50 and under 60 cents	60 and under 70 cents	70 and under 80 cents	80 and under 90 cents	90 cents and under \$1	\$1 and under \$1.10	\$1.10 and under \$1.20	\$1.20 and under \$1.30	\$1.30 and under \$1.40	\$1.40 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2	\$2 and over
Assemblers, axle, male:																					
1922.....	30	763	\$. 675			(1)	1	6	18	29	31	14	1	(1)							
1925.....	45	1,922	.729			(1)	1	2	11	24	34	23	5								
1928.....	48	2,703	.755			(1)		2	6	24	30	28	10	1	(1)						
Assemblers, axle, female:																					
1928.....	3	13	.451			23	8	8	62												
Assemblers, body-frame, male:¹																					
1925.....	49	3,091	.739		(1)	(1)	1	3	18	18	26	20	9	3	(1)	(1)	(1)	(1)			
1928.....	47	3,256	.799	(1)		(1)		4	6	18	17	23	18	9	2	(1)	(1)	(1)	(1)		
Assemblers, body-frame, female:																					
1928.....	5	12	.419	8	8																
Assemblers, chassis, male:																					
1922.....	41	1,357	.647			(1)	2	11	20	33	17	15	2	(1)							
1925.....	54	2,902	.694			(1)		4	19	28	28	15	5	(1)					(1)		
1928.....	53	4,593	.758			(1)		3	10	19	31	19	16	1	(1)	(1)	(1)	(1)			
Assemblers, chassis, female:																					
1928.....	7	109	.629				4	34	60	1	1	1									
Assemblers, frame, male:																					
1922.....	29	364	.673				1	7	22	31	23	12	4								
1925.....	47	1,115	.753				1	5	11	17	29	21	14	3			(1)	(1)			
1928.....	45	1,125	.770				(1)	2	13	11	36	22	9	2	3	(1)	(1)	(1)			
Assemblers, motor, male:																					
1922.....	41	2,147	.661			(1)	1	11	15	34	25	14	1	(1)	(1)	(1)	(1)	(1)	(1)		
1925.....	61	4,851	.747			(1)		2	11	18	29	31	6	1	(1)	(1)	(1)	(1)	(1)		(1)
1928.....	59	4,859	.762		(1)	(1)	1	2	8	11	32	37	8	1	(1)	(1)	(1)	(1)	(1)		
Assemblers, motor, female:																					
1928.....	9	81	.460			12	11	41	35	1											
Automatic operators, lathe and screw machine, male:																					
1922.....	34	1,673	.688	(1)			1	4	17	33	26	13	5	(1)							
1925.....	65	2,622	.764			(1)	(1)	3	10	18	24	28	13	2	1	(1)					
1928.....	54	1,842	.806					1	8	12	25	31	15	7	1	(1)	(1)	(1)	(1)		
Drill-press operators, male:																					
1922.....	42	3,443	.644			(1)	4	13	22	21	23	15	2	(1)	(1)			(1)	(1)		
1925.....	84	8,688	.712			(1)	1	7	14	24	26	20	5	1	(1)	(1)	(1)	(1)			
1928.....	78	8,488	.734			(1)	(1)	4	11	19	27	29	7	1	(1)	(1)	(1)	(1)			

¹ Less than 1 per cent.

² Included in "body builders" in 1922.

TABLE 3.—Average and classified earnings per hour in 18 specified occupations, 1922, 1925, and 1928, by sex—Continued

Occupation and sex	Number of establishments	Number of wage earners	Average earnings per hour	Per cent of wage earners whose average earnings per hour were—																	
				Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 40 cents	40 and under 50 cents	50 and under 60 cents	60 and under 70 cents	70 and under 80 cents	80 and under 90 cents	90 cents and under \$1	\$1 and under \$1.10	\$1.10 and under \$1.20	\$1.20 and under \$1.30	\$1.30 and under \$1.40	\$1.40 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2	\$2 and over
Drill-press operators, female:																					
1922.....	5	44	\$0.447		2	23	57	16		2											
1925.....	17	99	.573		4	8	28	21		17											
1928.....	15	164	.466		4	15	53	17		9											
Grinding-machine operators, male:																					
1922.....	38	2,574	.710		(1)	1	4	18	24	28	19	5	1	(1)	(1)						
1925.....	69	5,422	.765				3	10	19	26	25	11	4	(1)	(1)						
1928.....	70	5,419	.792		(1)	(1)	2	6	15	23	29	17	6	1	(1)						
Grinding-machine operators, female:																					
1928.....	4	8	.457					75	25												
Inspectors, male:																					
1922.....	44	2,808	.608		(1)	(1)	14	32	33	12	4	2	1	(1)							
1925.....	93	7,676	.682		(1)	(1)	5	18	36	21	12	5	2	(1)	(1)						
1928.....	90	7,579	.723			(1)	3	12	31	25	14	9	4	(1)	(1)						
Inspectors, female:																					
1922.....	7	197	.352		4	71	25														
1925.....	24	437	.361		2	73	24	1													
1928.....	29	503	.390		1	59	36	2	1	(1)											
Laborers, male:																					
1922.....	47	5,982	.495		(1)	1	11	48	22	7	5	4	1	(1)							
1925.....	97	16,592	.570	(1)	(1)	3	30	30	15	10	10	1	1	(1)	(1)						
1928.....	92	15,535	.589		(1)	(1)	2	25	32	15	11	8	5	1	(1)						
Laborers, female:																					
1922.....	5	46	.385			50	48	2													
1925.....	13	105	.403		1	43	48	8													
1928.....	21	119	.465		1	14	47	33	5												
Lathe operators, male:																					
1922.....	41	2,950	.639			1	6	18	28	26	16	4	1	(1)							
1925.....	72	6,260	.762		(1)	1	2	8	19	31	27	10	2	(1)	(1)						
1928.....	69	5,553	.789		(1)	(1)	2	6	15	25	32	14	4	1	(1)						
Letterers, strippers, and varnishers, male:																					
1922.....	37	762	.931				1	4	10	16	18	13	13	12	8	4	1	(1)	(1)		
1925.....	58	990	.906				(1)	2	7	15	12	12	19	12	7	3	4	(1)	(1)	1	
1928.....	59	650	1.115			(1)	1	4	2	12	12	17	10	9	9	6	1	4	4	4	8
Letterers, strippers, and varnishers, female:																					
1928.....	6	26	.588				23	54	12												

MOTOR-VEHICLE INDUSTRY

Machinists, male:																						
1922	41	1,291	.715				1	3	11	31	29	13	8	3	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
1925	73	3,604	.806					(1)	4	14	29	28	14	8	2	(1)	(1)	(1)	(1)	(1)	(1)	(1)
1928	81	3,465	.844				(1)	1	3	11	23	23	16	14	6		2	(1)	(1)	(1)	(1)	(1)
Milling-machine operators, male:																						
1922	39	1,591	.659		(1)		2	10	22	25	25	11	2	2	(1)		(1)	(1)	(1)	(1)	(1)	(1)
1925	74	3,549	.737		(1)		1	6	11	21	28	23	7	3	1		(1)	(1)	(1)	(1)	(1)	(1)
1928	70	3,231	.764		(1)		(1)	3	8	16	28	30	9	3	2		1	(1)	(1)	(1)	(1)	(1)
Sewing-machine operators, male:																						
1922	11	101	.748		1	1		4	9	17	15	49	4	1								
1925	14	373	.718					(1)	5	38	22	33	1	1	(1)							
1928	13	228	.853					1	6	6	17	32	32	5								
Sewing-machine operators, female:																						
1922	27	505	.442		2	6	26	38	22	5	1	(1)	(1)									
1925	48	1,113	.472		1	2	27	31	26	11	2	1	(1)									
1928	43	861	.513	(1)	1	1	15	27	36	17	2	(1)	(1)									
Tool and die makers, male:																						
1922	40	1,097	.769				(1)	(1)	4	23	39	20	7	3								
1925	80	3,689	.875				(1)	(1)	1	8	19	29	24	11	4		(1)	(1)	(1)	(1)	(1)	(1)
1928	77	3,523	.919				(1)	(1)	1	5	16	24	24	16	7		4	(1)	(1)	(1)	(1)	(1)
Top builders, male:																						
1922	36	1,410	.778		(1)	(1)	1	4	8	15	28	23	15	5	1		(1)	(1)	(1)	(1)	(1)	(1)
1925	64	4,415	.808	(1)	(1)	(1)	(1)	3	8	13	24	24	18	8	2		(1)	(1)	(1)	(1)	(1)	(1)
1928	56	4,090	.840		(1)		1	2	5	15	20	21	20	13	3		1	(1)	(1)	(1)	(1)	(1)
Top builders, female:																						
1922	5	18	.468			6	17	28	39	6		6										
1925	14	155	.481				18	52	22	7		1										
1928	11	287	.536		(1)		6	36	38	15	5	1	(1)	1								
Trim-bench hands, male:																						
1922	19	182	.595			3	9	12	25	29	8	10	4	1								
1925	35	473	.754			1	4	10	22	17	31	9	5	5	(1)		(1)	(1)	(1)	(1)	(1)	(1)
1928	25	385	.770			3	5	9	22	18	15	17	10									(1)
Trim-bench hands, female:																						
1922	18	202	.438		1	4	30	36	26	3												
1925	26	474	.479		1	5	19	34	27	11												
1928	29	669	.483	(1)	2	1	25	27	30	13	1	(1)										

¹ Less than 1 per cent.

REGULAR OR CUSTOMARY HOURS OF OPERATION

The regular or customary full-time hours of operation per day and per week in a motor-vehicle establishment are those established by a regular time of beginning and of ending work on each day per week less the regular time off duty for the midday dinner or lunch. Changes by a plant in the customary hours per week from a 6 to a 5 day week or from a full to a short day on Saturday for a period of 3 months or less in summer in any year were not considered in arriving at the full-time hours per week of the plant for the year.

The regular full-time hours per week of each wage earner were used in computing average full-time hours for all employees in an occupation in a State, or for the industry, even though the individual in the week covered by the study actually worked more or less than his regular full-time hours per week. An employee may in a week work more than full time by working the regular full-time hours on each day of the week and by working overtime on one or more days in the week. An employee may work less than full time in a week by being sick, disabled, laid off part time, absent of own accord, or in service part time, on one or more days in the week.

Table 4 shows for each of the 18 specified occupations for 1922, 1925, and 1928, the number of establishments and of wage earners, average full-time hours per week, and the per cent of wage earners in each classified group of full-time hours per week.

Inspecting the figures for axle assemblers, male, the first occupation in the table, it is seen that average full-time hours per week increased from 49.8 in 1922 to 50.3 in 1925 and then decreased to 50.2 in 1928; that the full-time hours of 59 per cent in 1922, of 64 per cent in 1925, and of 57 per cent in 1928 were 50 per week; that in 1922 the hours of 25 per cent, in 1925 the hours of 21 per cent, and in 1928 the hours of approximately 17 per cent were 48 or less per week; also that in 1922 the hours of 6 per cent were 55 per week, in 1925 the hours of 5 per cent were 55 and of 9 per cent were $57\frac{1}{2}$ per week, and in 1928 the hours of 3 per cent were 55, of 12 per cent were $57\frac{1}{2}$, and of 1 per cent were 60 per week.

TABLE 4.—Average and classified full-time hours per week in 18 specified occupations, 1922, 1925, and 1928, by sex

Occupation and sex	Number of establishments	Number of wage earners	Average full-time hours per week	Per cent of wage earners whose full-time hours per week were—															
				40	44½	45	47	48	Over 48 under 49½	49½	50	Over 50 under 54	54	55	55½	57½	Over 57½ under 60	60	Over 60
Assemblers, axle, male:																			
1922	30	763	49.8		9			16		1	59	1	8	6					
1925	45	1,922	50.8		3	(1)		18		1	64		(1)	5		9		(1)	
1928	48	2,703	50.2	8	1	(1)	(1)	8	1	2	57	4	1	3		12		1	
Assemblers, axle, female:																			
1928	3	13	50.3								92		8						
Assemblers, body-frame, male:																			
1925	49	3,091	50.8		(1)	1		19	(1)	5	47	2	14	11			1		
1928	47	3,266	50.4	5				17	1	2	48	10	1	15		(1)		1	
Assemblers, body-frame, female:																			
1928	5	12	49.8					8			92								
Assemblers, chassis, male:																			
1922	41	1,857	50.2		7			16	(1)	5	49	3	8	12					
1925	54	2,902	49.9		1	2		20	1	6	60		3	6			1		
1928	53	4,533	49.0	13	1	(1)	(1)	10	(1)	8	56	5	1	6				1	
Assemblers, chassis, female:																			
1928	7	109	49.8				4	31		16	33		17						
Assemblers, frame, male:																			
1922	29	364	49.0		23			27	1	2	28	2	2	15					
1925	47	1,115	50.0		2	1		19		2	67		1	8			1		
1928	45	1,125	49.5	10	3		(1)	11	1	3	53	3	3	10				2	
Assemblers, motor, male:																			
1922	41	2,147	50.0		5			27	(1)	6	45	1	8	9					
1925	61	4,851	49.8		2	(1)		24	2	3	60	2	2	5		(1)		(1)	
1928	59	4,859	50.1	5	2	(1)	(1)	8	2	5	58	8	1	5	3	(1)		(1)	
Assemblers, motor, female:																			
1928	9	81	50.4					2			77	20		1					
Automatic operators, lathe and screw machine, male:																			
1922	34	1,673	50.2		9			19		1	47	(1)	6	18					
1925	65	2,622	49.7		2	(1)		39	1	1	45	3	1	4		3	(1)	1	
1928	54	1,842	49.0	17	3	1	(1)	8	2	1	53	2	1	5	(1)	5	(1)	2	
Drill-press operators, male:																			
1922	42	3,443	49.6		9			26	(1)	4	47	(1)	3	11					
1925	84	8,688	50.3		3	1		23	1	2	55	2	1	6		6	(1)	1	
1928	78	8,488	49.6	14	2	(1)	(1)	8	(1)	2	51	7	1	8	1	8	1	2	

See footnotes at end of table.

REGULAR OR CUSTOMARY HOURS OF OPERATION

TABLE 4.—Average and classified full-time hours per week in 18 specified occupations, 1922, 1925, and 1928, by sex—Continued

Occupation and sex	Number of establishments	Number of wage earners	Average full-time hours per week	Per cent of wage earners whose full-time hours per week were—														
				40	44½	45	47	48	Over 48 under 49½	49½	50	Over 50 under 54	54	55	55½	57½	Over 57½ under 60	60
Drill-press operators, female:																		
1922	5	44	51.4					2	23		11	57		7				
1925	17	99	49.8					23			67	8	2					
1928	16	164	50.5					38	1	2	30	4	7	17				
Grinding-machine operators, male:																		
1922	38	2,574	50.0		5			30	(1)	2	46	(1)	2	15				
1925	69	5,422	50.1		3	1		24	2	1	55	2	1	5		4		1
1928	70	5,419	48.8	19	2	(1)		8	2	1	48	5	1	7	1	2	(1)	2
Grinding-machine operators, female:																		
1928	4	8	50.3								63	25						
Inspectors, male:																		
1922	44	2,808	50.1		6			21		5	50	(1)						
1925	93	7,676	50.1		2	1		23	1	3	57	3	2	4		3	(1)	1
1928	90	7,579	49.4	14	2	(1)	(1)	10	1	3	50	7	1	8	1	2	(1)	2
Inspectors, female:																		
1922	7	197	51.2						3	7	45	38		7				
1925	24	437	49.6		3			14	2	4	74	3	1					
1928	29	503	50.7	1				10	(1)	2	57	11	14	4	1			
Laborers, male:																		
1922	47	5,982	50.2		3			26	(1)	5	46	(1)	4	14			(1)	(1)
1925	97	10,592	50.4	(9)	1	(1)		25	1	4	52	2	2	4		2	(1)	3
1928	92	15,535	49.4	17	1	(1)	(1)	9	(9)	3	44	7	1	12	6	1	(1)	2
Laborers, female:																		
1922	5	46	50.5								80	17		2				
1925	13	105	50.2	11	1					8	66		7	2				2
1928	21	119	49.5	7		1		10	1	1	74		4	3				4
Lathe operators, male:																		
1922	41	2,950	49.5		10			30	(1)	4	42	(1)	2	12				
1925	72	6,260	50.0		5	2		24	2	1	52	2	1	5		4	(1)	1
1928	69	5,553	49.0	18	4	1		7	1	2	46	5	2	9	1	1	(1)	2
Letterers, strippers, and varnishers, male:																		
1922	37	762	50.8		3			19	(1)	9	38	1	13	16				
1925	56	990	50.1		2	(1)		20	1	3	61	1	8	4			(1)	(1)
1928	59	650	50.0	3	(1)			14	1	8	55	6	2	8			(1)	1
Letterers, strippers, and varnishers, female:																		
1928		26	49.8					23			62	15						

Machinists, male:																			
1922	41	1,291	50.0		5			29	(¹)	2	46	(¹)	3	15					
1925	73	3,604	50.0		1	(¹)		37	2	1	43	4	1	4		3	(¹)	2	(¹)
1928	81	3,465	47.9	27	1	(¹)		8	2	1	42	6	1	6	1	1	(¹)	2	(¹)
Milling-machine operators, male:																			
1922	39	1,591	50.0		9			24	(¹)	5	47	(¹)	4	10					
1925	74	3,549	50.4		4	1		21	1	2	55	2	2	5		5		1	1
1928	70	3,231	49.5	14	3	1	(¹)	8	1	2	50	5	3	8	1	2	(¹)	2	1
Sewing-machine operators, male:																			
1922	11	101	49.0					76			11		12	1					
1925	14	378	48.4					92	1	(¹)	1		6						
1928	13	228	42.4	77				1	8		7	3	1	3					
Sewing-machine operators, female:																			
1922	27	505	50.5		2			18	1	14	39	10	4	12					
1925	48	1,113	50.7		(¹)	4		11	2	11	42	(¹)	25	5					
1928	43	861	51.0		(¹)	2	(¹)	10		4	54	2	11	17					
Tool and die makers, male:																			
1922	40	1,097	50.0		2			28	(¹)	6	52	(¹)	6	8					
1925	80	3,689	50.2		(¹)			27	1	3	54	2	1	6			2	(¹)	2
1928	77	3,523	48.8	21	1	(¹)		9	1	3	43	7	1	8	1	1	(¹)	4	(¹)
Top builders, male:																			
1922	36	1,410	50.8		1			18	(¹)	13	39	1	11	17					
1925	64	4,415	50.6		(¹)	(¹)		17	(¹)	7	53	1	7	13			(¹)		
1928	56	4,090	49.6	13	(¹)			12	2	3	40	9	2	17				(¹)	
Top builders, female:																			
1922	5	18	51.8						22		17	22	39						
1925	14	155	51.4					1			64		35	1					
1928	11	287	49.5					27	(¹)		72			(¹)					
Trim-bench hands, male:																			
1922	19	182	49.4		3			54		7	18	2	15	2					
1925	35	473	49.2			1		52	1	(¹)	39	1	1	5			(¹)		
1928	25	335	49.4	9				16	2	1	56	5		10				1	
Trim-bench hands, female:																			
1922	18	202	50.6		1			14			5	49	25	2	4				
1925	26	474	49.7			4		18			9	1	4	1					
1928	29	669	50.8			(¹)		13		2	60	1	10	14					

- ¹ Less than 1 per cent.
- ² Included in "body builders" in 1922
- ³ Less than 1 per cent and tabulated in 1925 as "under 44½ hours."
- ⁴ Including 10 employees, less than 1 per cent, at 56 hours.
- ⁵ Less than 1 per cent and including 1 employee at 49¾ hours.
- ⁶ Includes 1 employee, less than 1 per cent, at 56 hours.
- ⁷ Tabulated in 1925 as "under 44½ hours."
- ⁸ Full-time hours are 42 per week.
- ⁹ Including 3 employees, less than 1 per cent, at 47½ hours.
- ¹⁰ Including 1 employee, less than 1 per cent, at 47½ hours.

The hours per day of employees in different establishments may vary on account of the difference in the time of beginning or quitting work, of amount of time off duty for dinner or lunch, or of a short day on Saturday. The hours per day of some establishments vary and yet are the same per week. In Table 5 it is seen that there are five different groups of hours per day, each making a total of 48 hours per week.

The purpose of Table 5 is to show the variations in the regular or customary hours per week and per day of the establishments in the different States.

The full-time hours of the 94 plants included in the 1928 study of the industry ranged from 40 to 58 per week, and the hours per day Monday to Friday ranged from 8 to 10, and on Saturday ranged from 4½ to 9. The five-day week of 8 hours Monday to Friday, or 40 hours, was in operation in 1 establishment in Illinois, 2 in Michigan, and 1 in New Jersey; of 9½ hours Monday to Friday, or 48 per week, was in operation in 1 establishment in New York. The hours per day and per week of 44 establishments were 9 Monday to Friday and 5 Saturday, or 50 per week; of 12 were 10 per day Monday to Friday and 5 Saturday, or 55 per week; of 1 were 10 Monday to Friday and 8 Saturday, or 58 per week.

TABLE 5.—Number of establishments in each State working specified full-time hours per week and per day, 1928

Full-time hours			Number of establishments working specified hours per day and per week in—							Total	
Per week	Per day		Illinois	Indiana	Michigan	New Jersey	New York	Ohio	Pennsylvania		Wisconsin
	Monday to Friday	Saturday									
40	8	0	1		2	1					4
44½	8	4½						1			1
47	8½	4½							1		1
48	8½	5½					1				1
48	8½	5						1			1
48	8½	4½					1				1
48	8½	4½			4		1				5
48	9½	0					1				1
48½	8½	4½					1				1
49½	9	4½	3	1	1			2			8
50	9	5	2	5	19	5	5	5	2	1	44
50½	9½	4½			1						1
52	9½	4½			1			1	1		3
52½	9½	5			1			1		2	4
53½	9½	4½								1	1
53½	9½	5	1								1
54	9	9			1						1
54	9½	5					1				1
55	10	5	1	3	3		1		1	3	12
55½	10	5½							1		1
58	10	8						1			1
Total			8	9	33	6	18	12	6	7	94

CHANGES IN HOURS SINCE SEPTEMBER 30, 1925

Nine of the 94 establishments for which data are shown in this bulletin reported changes in full-time hours per week between September 30, 1925, and the period of the 1928 study of the industry. In 4 establishments the hours were reduced from a 6-day week of 8 hours each, or 48 hours per week, to a 5-day week of 8 hours each,

or 40 hours per week; in 1 reduced from 48 to 47, in 1 increased from 45 to 50, in 1 increased from 50 to 55, and in 1 increased from 55 to 58 per week. In 1 establishment the hours of one portion of the employees were increased from 49½ to 52 and of the other portion were increased from 50 to 52 per week.

CHANGES IN WAGE RATES SINCE SEPTEMBER 30, 1925

Eleven establishments reported general wage changes between September 30, 1925, and the period of the 1928 study. The rates of all employees in 7 establishments were increased 5 per cent, in 2 were increased 10 per cent, in 1 were reduced approximately 2 per cent, and in 1 the piece rates of the employees in the clutch department were reduced 5 per cent.

OVERTIME AND WORK ON SUNDAY AND HOLIDAYS

Any time worked by an employee in excess of the regular or customary full-time hours per day or per week of an establishment or any time worked on Sunday or holidays is *generally* considered overtime and paid for at a higher rate than is paid for regular working time.

TABLE 6.—Pay for overtime and for work on Sunday and holidays, employees entitled, and rate, 1928

Number of establishments	Employees entitled	Times regular rate for—		Number of establishments	Employees entitled	Times regular rate for—	
		Overtime	Work on Sunday and holidays			Overtime	Work on Sundays and holidays
14	All.....	1½	1½	1	All except janitors.....	1½	1½
11	Time workers.....	1½	1½	1	All except glass, sweep- ing, fire-prevention, elevator, mill, and lumberyard depart- ments.....	1½	1½
3	All.....	1½	(¹)		Toolmakers, black- smiths, welders, and maintenance time workers.....	1½	1½
4	do.....	1	1½				
2	Nonproductive.....	1½	1½		Stockmen, receiving, shipping, and tool- crib time workers.....	1½	1½
1	Productive.....	1½	1½				
4	Time workers.....	1½	(¹)		Time workers in certain departments.....	1½	(¹)
2	do.....	1½	(¹)				
1	All.....	1½	1½	1	Night workers.....	1½	1½
1	do.....	1½	1½	1	All except piece work- ers, inspectors, heat treaters, and night workers.....	1½	1
1	All except apprentices.....	1½	1½	1	Piece workers, inspec- tors, heat treaters, and night workers.....	1	1½
1	All except watchmen and sweepers.....	1½	1½	1			
1	All.....	1½	1½	1			
1	All except watchmen and drive-away men.....	1½	1½	1			
1	(Pattern shop.....)	1½	2	1			
1	(Others.....)	1½	1½	1			
1	Pattern, tool, and die makers.....	1½	1½	1			
1	All except sweepers.....	1½	(¹)	1			
1	Day workers.....	1½	1½	1			
1	All.....	1½	1½	1			

¹ Not reported.
² Night workers with regular hours of 12 are paid this rate for any time after 9 hours.
³ Night workers with regular hours of 60 per week are paid this rate after 54 hours.
⁴ Night workers with regular hours of 9, Monday to Friday, and 5 Saturday, are paid this rate after 11 hours.

Of the 94 establishments included in the 1928 study of the motor-vehicle industry, 55 reported a higher rate for overtime to all or a specified part of their employees and 48 reported a higher rate for work on Sunday and holidays than for regular working time. The

others, except 11 for which the rate for work on Sunday and holidays was not given, reported the same rate for regular working time, overtime, and for work on Sunday and holidays. The rate paid for overtime to part or all of the employees of each establishment, as shown in Table 6, was $\frac{1}{4}$ or $1\frac{1}{2}$ times the regular rate, and $1\frac{1}{2}$, $1\frac{1}{2}$, and 2 times the regular rate for work on Sunday and holidays,

In 1 establishment in which the regular hours were 12 per night the regular rate was paid for 9 hours and $1\frac{1}{2}$ times the regular rate was paid for any time thereafter.

In 1 establishment in which the regular hours were 9 per night, Monday to Friday, and 5 on Saturday, the regular rate was paid for all work up to and including 11 hours per night, Monday to Saturday, and $1\frac{1}{2}$ the regular rate was paid for any time after 11 hours per night.

BONUS SYSTEMS

A bonus to a wage earner is pay in addition to his usual earnings at stipulated time or piece rates. The additional pay in the establishments in which bonuses were in operation at the time of the 1928 study was earned by *production* in excess of a *set standard* in number of units, pieces, or parts; by *production* in excess of a specified per cent of the set standard; by *years of service*; or by *full-time attendance*.

The production bonus in some establishments was based on the work of each individual and in others on the work of a group of wage earners. The bonus earned by a group was divided among those in the group in proportion to individual earnings.

The *set standard* of production for the various units, pieces, parts, or kinds of work was established by a thorough time study of the work in each establishment or part of the establishment in which the bonus system was in operation. The time study was made by the efficiency engineer or the department of each establishment.

Forty-two (24 in Michigan, 6 in New York, 4 in Indiana, 3 in Ohio, 2 each in New Jersey and Pennsylvania, and 1 in Illinois) of the 94 establishments included in the report had bonus systems in operation in 1928.

Table 8 shows for each of the 42 establishments the basis of each bonus, the wage earners entitled to receive the bonus, the requirements necessary to get the bonus, and the amount of or per cent of earnings paid as a bonus.

A production bonus was in operation in each of the establishments Nos. 1 to 36 in the table; a production and also a years-of-service bonus were in operation in No. 37; a production bonus and also an attendance bonus were in operation in No. 38; and a years-of-service bonus was in operation in Nos. 39 to 42.

The bonus systems found in this study are described in the table. Establishments Nos. 1 to 10 had identical systems, and this common system is here discussed in text in order to make the table clear.

The basis of the bonus for each of the establishments Nos. 1 to 10 in the table is production. The bonus is limited to groups of productive employees. There are, owing to the great variation in the work, many groups of productive employees in an establishment. Groups vary much in number of wage earners, from a very few to as many as 50 or more. To earn a bonus it is necessary for the wage earners in a group to make a production of 75 per cent or more of the set standard for that group. For a production of 75 per cent of

the set standard each employee in the group is paid his earnings at his basic time rate and also a bonus of 1 per cent of such earnings. For a production of less than 75 per cent of the standard there is no bonus, but each employee in the group is paid his earnings at his basic time rate regardless of the quantity or percentage produced. For each per cent of production over 75 up to and including 90 of the set standard, earnings at basic time rates are increased 0.6 per cent. The bonus for a production of 76 per cent of the standard is therefore 1 per cent for 75 plus 0.6 per cent for the 1 per cent increase from 75 to 76, or 1.6 per cent of earnings at basic time rates. The bonus increases 0.6 per cent for each per cent of production from 76 to a total of 10 per cent of earnings at time rates for a production of 90 per cent of the standard. An additional bonus of 1 per cent of earnings is paid for each per cent of increase of the standard from 91 to 100 or from a bonus of 11 per cent for 91 to a bonus of 20 per cent for a production of 100 per cent of the standard. For each additional increase in production over 100 up to and including 200 a bonus of 1.2 per cent of earnings at basic time rates is paid, the bonus increasing from 21.2 per cent of earnings at basic time rates for a production of 101 to 140 per cent for a production of 200 per cent of the set standard. Illustrating the system by example, the employees in a group with a set standard of 80 units for the group produced 68 units or 85 per cent of the standard. An employee in the group earned at his basic time \$49.50. His bonus was 1 per cent of his earnings for 75 and also 0.6 per cent for each per cent of production from 76 to 85, inclusive, of the standard, or 7 per cent. His total earnings, including a bonus of \$3.47, were \$52.97.

TABLE 7.—Per cent of earnings at basic time rates paid as a bonus by establishments Nos. 1 to 10 for each per cent of production over 74 of the set standard

Per cent of—		Per cent of—		Per cent of—		Per cent of—		Per cent of—		Per cent of—		Per cent of—	
Pro- duc- tion	Earn- ings paid as bonus	Pro- duc- tion	Earn- ings paid as bonus	Pro- duc- tion	Earn- ings paid as bonus	Pro- duc- tion	Earn- ings paid as bonus	Pro- duc- tion	Earn- ings paid as bonus	Pro- duc- tion	Earn- ings paid as bonus	Pro- duc- tion	Earn- ings paid as bonus
75	1.0	93	13.0	111	33.2	129	54.8	147	76.4	165	98.0	183	119.6
76	1.6	94	14.0	112	34.4	130	56.0	148	77.6	166	99.2	184	120.8
77	2.2	95	15.0	113	35.6	131	57.2	149	78.8	167	100.4	185	122.0
78	2.8	96	16.0	114	36.8	132	58.4	150	80.0	168	101.6	186	123.2
79	3.4	97	17.0	115	38.0	133	59.6	151	81.2	169	102.8	187	124.4
80	4.0	98	18.0	116	39.2	134	60.8	152	82.4	170	104.0	188	125.6
81	4.6	99	19.0	117	40.4	135	62.0	153	83.6	171	105.2	189	126.8
82	5.2	100	20.0	118	41.6	136	63.2	154	84.8	172	106.4	190	128.0
83	5.8	101	21.2	119	42.8	137	64.4	155	86.0	173	107.6	191	129.2
84	6.4	102	22.4	120	44.0	138	65.6	156	87.2	174	108.8	192	130.4
85	7.0	103	23.6	121	45.2	139	66.8	157	88.4	175	110.0	193	131.6
86	7.6	104	24.8	122	46.4	140	68.0	158	89.6	176	111.2	194	132.8
87	8.2	105	26.0	123	47.6	141	69.2	159	90.8	177	112.4	195	134.0
88	8.8	106	27.2	124	48.8	142	70.4	160	92.0	178	113.6	196	135.2
89	9.4	107	28.4	125	50.0	143	71.6	161	93.2	179	114.8	197	136.4
90	10.0	108	29.6	126	51.2	144	72.8	162	94.4	180	116.0	198	137.6
91	11.0	109	30.8	127	52.4	145	74.0	163	95.6	181	117.2	199	138.8
92	12.0	110	32.0	128	53.6	146	75.2	164	96.8	182	118.4	200	140.0

As further explanation of Table 8, establishment No. 37 in the table had a bonus system in operation based on production and also another system based on years of service. Productive employees were entitled to both bonuses. Nonproductive employees were

entitled to the years-of-service bonus only. Establishment No. 38 had one system based on production and another based on attendance. Groups of employees were entitled to the production bonus and night workers only were entitled to the attendance bonus.

Establishments Nos. 39 to 42 had bonus systems in operation based on years of service only. These establishments paid a bonus of 5 per cent of earnings at time rates to each employee in service 1 to under 5 years, and 10 per cent to each one in service 5 or more years. An employee in service 3 years earned in 1 week at his regular time rate, say, \$38. His bonus was 5 per cent of \$38 or \$1.90. Thus, in the week, his earnings, including bonus, were \$39.90.

Establishment No. 38 paid a bonus of 10 per cent of earnings at regular rates to each employee on the night force who was on duty full time in a pay period. Assuming one of the night force on duty full time for a week and earnings at his regular rate \$40, his bonus at 10 per cent would be \$4, and in the week his earnings, including bonus, would be \$44.

TABLE 8.—*Bonus systems of 42 motor-vehicle establishments in 1928*

Establishment No.	Bonus based on—	Employees entitled to bonus	Necessary to get bonus	Amount of or per cent of earnings paid as bonus
1-10	Production.	Groups of productive employees only.	Production of 75 per cent or more of the set standard of quantity or number of units.	1 per cent of earnings at guaranteed hourly rates for production of 75 per cent of the set standard; also 0.6 per cent for each per cent over 75 to and including 90 per cent; 1 per cent for each per cent over 90 to and including 100 per cent; and also 1.2 per cent for each per cent over 100 up to and including 200 per cent of the set standard of production. For a production of 100 per cent a bonus of 20 per cent and for 200 per cent a bonus of 140 per cent of earnings would be paid.
11, 12	do.	Apprentices, assemblers, bench hands, forge helpers, heat treaters, inspectors, machinists, machine hands, paint sprayers, sand blasters, straighteners, testers, tool and die makers and welders.	Production in excess of the set standard.	A percentage increase of earnings at time or piece rates equal to the percentage increase over the set standard of production. Example: The standard was 40 pieces in a day of 9 hours. An employee at an hourly rate of 60 cents produced 50 pieces in 9 hours. He earned \$5.40 and a bonus of \$1.35 or \$6.75 in the day.
13, 14	do.	Groups of productive employees in connecting rod, glass fitting, transmission, body fitting, truck equipment, chassis assembly, engine assembly, and final assembly departments.	do.	In the pay period taken, the bonus ranged by groups from 10 to 15 per cent of earnings at time or piece rates.
15	do.	Axle, body-frame, chassis, final frame, and motor assemblers of special model truck.	To assemble 1 or more of the specified parts of truck.	Ranged according to work performed from 3 to 10 cents per truck.
16	do.	Machine-shop workers, frame riveters, final testers, wirens on trucks.	Production in excess of a set number of pieces per hour or day of 9 hours.	Rate and one-half for production in excess of the set number of pieces per hour or day of 9 hours.
17	do.	Productive.	Production in excess of set standard.	Per cent of earnings at time or piece rates that production is in excess of the set standard.
18	do.	Freight-car unloaders.	Unload enough cars at rate per car allowed for such work to exceed earnings in period at time rates.	Division among unloaders according to individual earnings of difference between amount allowed by company at rates per car and amount of earnings at time rates.

TABLE 8.—*Bonus systems of 42 motor-vehicle establishments in 1928—Continued*

Establishment No.	Bonus based on—	Employees entitled to bonus	Necessary to get bonus	Amount of or per cent of earnings paid as bonus
10	Production.	Groups: The groups include all occupations except bumpers, blacksmiths, boring-mill operators, forge-shop workers, hardeners, helpers, metal finishers, sheet-metal workers, and tool and die makers.	Production in excess of the set standard.	Per cent of earnings at time or piece rates that production exceeds the set standard.
20	do.	All except apprentices and final testers.	Production of 60 per cent or more of the set standard in a day of 8 hours.	A percentage of earnings at time or piece rates, beginning with a production of 60 per cent of the set standard. Ten classes of employees are entitled to participate. The amount of the bonus by classes range from 25 cents to \$2.50 per day of 8 hours for a production of 100 per cent of the standard.
21	do.	Die sinkers.	Production of number of pieces in less than the set standard of time for the work.	All of the time saved at time rates for completion of number of pieces in less than the set standard.
22	do.	All, divided into groups.	Production in quantity or number of units sufficient at piece rates to exceed earnings of employees of group at time rates.	The number of pieces times the (piece) rate less the earnings at time rates divided among the employees in the group, according to earnings of each person in the group, at time rates.
23	do.	Press or metal stamping departments and lumber handlers.	Production or completion of task in less than the set time for the task.	Per cent of earnings at time rates that the time saved is of the set standard of time for the task.
24	do.	All productive workers, including their helpers and laborers, maintenance workers, and employees in receiving and shipping departments.	Production in excess of the set standard.	Per cent of earnings at time or piece rates that production exceeds the set standard.
25	do.	Die-sinking department.	do.	Do.
26	do.	Groups of all productive except those in cab departments.	Production of 81 per cent or more of the set standard.	1 per cent of earnings at time rates for each per cent of production over 80 of the set standard.
27	do.	Groups in all departments except power house, stores, receiving and handling, inspection, cafeteria, tool room, steel-body mounting, and chassis test.	Production or efficiency of more than 100 per cent of the set standard.	1 per cent of earnings at time or piece rates for each per cent of production or efficiency over 100 per cent of set standard.
28	do.	Die sinkers.	Completion of job or work within set time limit.	The time consumed in the completion of work within the set time limit is paid for at rate of \$1.50 per hour. If not completed within the limit, the time is paid for at regular time rate of approximately \$1 per hour.
29	do.	Chassis assemblers, final assemblers, frame assemblers, boring-mill operators, drill-press operators, forge-shop helpers, grinding-machine operators, milling-machine operators, final and road testers, tool-makers and foremen of these employees.	Production of unit or quantity of work in less than the set standard of time.	Paid for all of the time saved at time rate or average earnings per hour.

TABLE 8.—*Bonus systems of motor-vehicle establishments in 1928—Continued*

Establishment No.	Bonus based on—	Employees entitled to bonus	Necessary to get bonus	Amount of or per cent of earnings paid as bonus
30	Production.	Pieceworkers.....	Production of more than the set standard of units within a set standard of time.	The excess over the set standard of units times the piece rates is divided or prorated among the pieceworkers according to individual earnings.
31	...do....	Groups of: Apprentices, motor assemblers, boring-mill operators, drill-press operators, gear-cutter operators, grinding machine operators, helpers, lathe operators, a few machinists, milling-machine operators, paint sprayers, and straighteners.	Production in number of perfect pieces or units in a set standard of time.	A set rate is paid to each group of employees for each piece or unit completed in the time limit. From the total amount for such units a deduction is made for the number of imperfect units at the same rate. From the remainder the earnings of the employees in the group at their basic time rates are deducted when less than the remainder; thus showing the amount of the bonus earned by the group. The total earnings of the group at time rates, less the earnings of nonsharing members in the group, equal the base. This base into the bonus earned gives the percentage increase of earnings at time rates of sharing members.
32	...do....	All except wood mill, ding men, service-repair department, nonproductive, and in service only a part of the pay period. The bonus applied in the week taken to 75 per cent of the force.	Production in excess of the set standard in a specified time limit.	Per cent of earnings at time or piece rates that production exceeds the set standard.
33	...do....	Packers, box makers, tractor drivers, shipping and cutters of stock in small part shipping departments, stock men, stock laborers, stock chasers, truckers, and truck drivers in stock repair department.	Production in handling more than the set standard in specified period of time.	Per cent of earnings at time rates that production or number of units handled is in excess of the set standard.
34	...do....	Body loaders in shipping department.	Production in the loading of 75 per cent or more of the set standard.	1 per cent of earnings at time rates for production of 75 per cent of the set standard and 1 per cent for each per cent over 75.
35	...do....	Groups of productive employees only.	Production in excess of the set standard.	Per cent of earnings at time or piece rates that production is in excess of the set standard.
		Maintenance.....	Production or completion of work in less than the set standard of time for the work.	All time saved at time rates.
36	...do....	Groups in machine shop, motor assembly, receiving, traffic, car assembly, final test, enameling, stores, and paint departments.	Production in excess of the set standard.	Per cent of earnings at time or piece rates that production is in excess of set standard.
		Tool room.....	Production or completion of work in less than the set standard of time for the work.	All time saved at time or piece rates.
	...do....	Productive hand workers.	Production of 75 per cent or more of the set standard.	Per cent of earnings at hourly rates that the average daily production in pay period is in excess of 75 per cent of the set standard.
37		Productive machine workers.	Production of 80 per cent or more of the set standard.	Per cent of earnings at hourly rates that the average daily production is in excess of 80 per cent of the set standard.
	Years of service.	All.....	Service of 1 to 10 years. Service of 11 to 24 years Service of 25 years and over.	\$10 for each year of service. \$100 annually. \$250 annually.

TABLE 8.—*Bonus systems of motor-vehicle establishments in 1928—Continued*

Establishment No.	Bonus based on—	Employees entitled to bonus	Necessary to get bonus	Amount of or per cent of earnings paid as bonus
38	Years of service.	Groups, exclusive of blacksmiths' helpers, inspectors, laborers, machinists, polishers, tool and die makers, carpenters, millwrights, receiving and shipping clerks, tool and material chasers, utility and clerical.	Production of units sufficient in number at piece rates to amount to more than earnings of employees in group at basic time rates.	The amount or number of units produced by each group at rate per unit less the earnings of the group at basic time rates in given period is divided among the members of the group according to individual earnings.
	Attendance.	Night workers	Full-time attendance	10 per cent of earnings at time and piece rates.
39-42	Years of service.	All in service 1 year or more.	Service of 1 to 4 years... Service of 5 years or more.	5 per cent of earnings at time rates. 10 per cent of earnings at time rates.

NUMBER OF DAYS WORKED IN ONE WEEK

Table 9 shows for the employees in each of 18 representative occupations the average number of calendar days on which employees worked in one week in 1928 and the per cent who worked on each specified number of days in the week. "Days" as used in this table mean the number of calendar days on which the employees did any work in the week. Any part of a day was counted as a day.

TABLE 9.—*Average number of days in one week on which employees worked in 18 specified occupations and per cent of employees who worked on each specified number of days in one week, 1928, by sex*

Occupation	Sex	Number of establishments	Number of wage earners	Average number of days worked in 1 week	Per cent of employees who worked on each specified number of days in 1 week.						
					1	2	3	4	5	6	7
Assemblers, axle	M.	48	2,703	5.2	1	1	4	10	39	45	1
	F.	3	13	5.3				8	54	38	
Assemblers, body frame	M.	47	3,256	5.0	2	2	5	11	46	34	(1)
	F.	5	12	4.8			8	33	25	33	
Assemblers, chassis	M.	53	4,593	5.2	1	2	4	8	41	45	(1)
	F.	7	109	4.7	3	3	28	6	15	47	
Assemblers, frame	M.	45	1,125	5.2	1	1	3	10	39	46	
Assemblers, motor	M.	59	4,859	5.3	1	1	3	8	36	50	1
	F.	9	81	5.0		4	2	22	36	36	
Automotive operators, lathe and screw machine	M.	54	1,842	5.3	1	1	3	7	40	45	2
Drill-press operators	M.	78	8,488	5.3	1	2	3	8	38	46	3
	F.	15	164	5.4	1	2	5	6	27	60	
Grinding-machine operators	M.	70	5,419	5.3	1	1	3	7	42	43	3
	F.	4	8	5.1			13		50	38	
Inspectors	M.	90	7,579	5.4		1	2	7	36	49	3
	F.	29	503	5.4	2	1	1	6	34	56	
Laborers	M.	92	15,635	5.3	1	2	3	9	36	45	4
	F.	21	119	5.2	1	5	3	7	35	50	
Lathe operators	M.	69	5,553	5.3	1	1	2	7	38	49	2
Letterers, strippers, and varnishers	M.	59	650	5.3	1	2	3	8	31	54	1
	F.	6	26	4.8			4	15	4	23	
Machinists	M.	81	3,465	5.5	(1)	1	2	5	41	44	8
Milling-machine operators	M.	70	3,231	5.3	1	2	3	7	39	46	3
Sewing-machine operators	M.	13	228	4.8	1	(1)	4	10	82	3	
	F.	43	861	4.5	3	6	7	31	28	25	(1)
Tool and die makers	M.	77	3,523	5.5	1	1	2	5	34	47	11
Top builders	M.	56	4,090	5.0	1	2	4	19	39	34	(1)
	F.	11	287	5.0	(1)	2	2	10	65	20	(1)
Trim bench hands	M.	25	385	4.4	4	5	14	17	43	18	
	F.	29	669	4.7	4	5	5	24	34	29	

¹ Less than 1 per cent.

Inspecting the figures for axle assemblers, male, the first occupation in the table, it is seen that the 2,703 employees worked an average of 5.2 days in the week; that 1 per cent of them worked on only 1 day in the week, 1 per cent worked on 2 days, 4 per cent worked on 3 days, 10 per cent worked on 4 days, 39 per cent worked 5 days, 45 per cent worked 6 days, and that 1 per cent worked on 7 days in the week.

INDEX NUMBERS OF EMPLOYMENT, PAY ROLLS, AND PRODUCTION, 1923 TO 1928

Index numbers of employment and of pay rolls of employees in the motor-vehicle industry in the United States in Table 10 are as published monthly by the Bureau of Labor Statistics in "Trend of employment" in the United States. The index numbers of production are, like those for employment and pay rolls, for each of the months and years from January, 1923, to December, 1928, and as computed by the bureau from data in the United States Census reports, with the 1926 production the base, or 100 per cent.

During the years 1923 to 1928 monthly employment was lowest in July, 1924, with an index of 76.6, and highest in September, 1928, with an index of 124.3. Pay rolls were lowest in January, 1927, with an index of 63.5, and highest in October, 1928, with an index of 130.5. Production was lowest in December, 1927, with an index of 37.3, and highest in August, 1928, with an index of 128.7.

Indexes of employment by years were 93 in 1923, 87 in 1924, 99 in 1925, 100 in 1926, 91.2 in 1927, and 111.3 in 1928; of pay rolls by years were 92 in 1923, 83.8 in 1924, 102.4 in 1925, 100 in 1926, 90.3 in 1927, and 114.4 in 1928; and of production by years were 93.8 in 1923, 83.3 in 1924, 99.1 in 1925, 100 in 1926, 79.1 in 1927, and 101.3 in 1928.

TABLE 10.—Index numbers of employment, of pay rolls, and of production, January, 1923, to December, 1928

[1926 average=100.0]

Year and month	Employment	Pay rolls	Production	Year and month	Employment	Pay rolls	Production
1923				1926			
January.....	80.5	69.5	68.8	January.....	104.8	91.9	86.4
February.....	87.8	84.0	77.5	February.....	107.2	112.3	101.7
March.....	91.7	91.7	100.3	March.....	109.9	115.4	121.3
April.....	95.7	96.5	106.0	April.....	106.4	111.8	123.2
May.....	97.0	98.3	110.0	May.....	102.4	106.3	117.6
June.....	96.6	93.2	105.9	June.....	100.8	99.8	108.3
July.....	93.5	90.8	92.3	July.....	98.2	92.4	100.3
August.....	92.7	93.3	97.1	August.....	100.7	103.1	119.1
September.....	93.8	90.6	91.9	September.....	100.4	100.6	110.5
October.....	95.3	100.9	102.4	October.....	96.6	102.1	93.4
November.....	95.7	100.8	88.1	November.....	88.8	88.7	71.5
December.....	95.2	94.4	85.8	December.....	83.7	75.3	46.9
Average.....	93.0	92.0	93.8	Average.....	100.0	100.0	100.0
1924				1927			
January.....	99.6	84.6	89.2	January.....	83.9	63.5	66.7
February.....	101.8	105.8	103.4	February.....	94.5	94.7	85.0
March.....	103.7	104.2	107.2	March.....	98.6	103.6	110.1
April.....	99.3	100.8	104.9	April.....	99.3	106.5	113.4
May.....	90.0	89.5	86.8	May.....	99.6	107.2	113.2
June.....	80.4	73.9	69.1	June.....	94.4	88.7	90.3
July.....	76.6	67.5	74.5	July.....	88.6	84.5	75.2
August.....	77.7	72.7	79.1	August.....	92.1	92.1	86.5
September.....	78.3	75.5	82.0	September.....	89.4	86.9	72.6
October.....	79.4	78.9	81.4	October.....	88.5	90.2	61.3
November.....	77.6	75.3	64.2	November.....	81.0	79.4	37.5
December.....	79.9	77.4	57.2	December.....	84.6	86.3	37.3
Average.....	87.0	83.8	83.3	Average.....	91.2	90.3	79.1
1925				1928			
January.....	88.6	67.5	66.1	January.....	91.8	85.8	64.7
February.....	84.7	89.2	78.6	February.....	100.6	108.0	90.3
March.....	90.7	96.6	103.7	March.....	104.9	114.1	115.3
April.....	98.0	105.5	120.8	April.....	107.6	116.0	114.4
May.....	103.5	110.7	116.8	May.....	113.8	120.8	118.8
June.....	99.0	102.2	110.7	June.....	113.8	114.4	110.7
July.....	98.4	101.4	110.8	July.....	113.7	112.1	109.4
August.....	100.0	98.7	71.9	August.....	120.8	124.8	128.7
September.....	104.3	105.0	91.7	September.....	124.3	125.5	115.9
October.....	110.9	120.2	124.9	October.....	122.6	130.5	110.8
November.....	109.8	120.9	104.4	November.....	111.5	111.4	71.7
December.....	104.5	110.5	88.7	December.....	110.0	109.3	65.0
Average.....	99.0	102.4	99.1	Average.....	111.3	114.4	101.3

GROWTH OF THE MOTOR-VEHICLE INDUSTRY, 1904 to 1927

The basic figures in Table 11 are as reported by the United States Census of Manufactures and show the amazing growth, from one census year to another and over the entire period from 1904 to 1927, of the motor-vehicle industry in the United States, in number of manufacturing establishments and average number of wage earners, in amount paid in wages to wage earners, in cost of materials used in the manufacture of motor vehicles, in value of products, and in value added by manufacture. Averages per wage earner of yearly earnings of wage earners, cost of materials, value of products, and of value added by manufacture, and the per cent that wages are of the value added by manufacture as computed by the bureau from the basic figures are also presented in the table.

The reason that no data are shown for the motor-vehicle industry for any year prior to 1904 is that it was of so little importance that all data for it for the years before 1904 were included with the data

used by the Census in compiling reports for the "carriage and wagon industry." In 1925 the motor-vehicle industry in value of products was \$3,198,123,000, and exceeded that of any other industry.

Average yearly earnings of wage earners increased steadily from \$594 in 1904 to \$1,675 in 1925 and then decreased to \$1,660 in 1927. The per cent that wages were of the value added by manufacture ranged by years from 37 in 1914 to 45 per cent in 1923.

TABLE 11.—*Number of establishments, wage earners, wages, cost of materials, value of products, and value added by manufacture in the motor-vehicle industry, 1904 to 1927*

Year	Number of establishments	Average number of wage earners	Amount paid in wages (in thousands)	Cost of materials (in thousands)	Value of products (in thousands)	Value added by manufacture (in thousands)	Average yearly earnings of wage earners	Cost of materials per wage earner	Value of products per wage earner	Value added by manufacture per wage earner	Per cent wages are of value added
1904..	178	12,049	\$7,159	\$11,658	\$26,645	\$16,882	\$594	\$968	\$2,211	\$1,401	42
1909..	743	75,721	48,694	107,731	193,823	117,556	643	1,423	2,560	1,552	41
1914..	1,271	127,092	101,927	292,597	503,230	276,624	802	2,302	3,960	2,177	37
1919..	2,830	343,115	491,121	1,578,651	2,387,903	1,139,395	1,431	4,601	6,959	3,321	43
1921..	2,359	212,777	318,753	1,107,062	1,671,386	758,377	1,498	5,203	7,855	3,564	42
1923..	2,471	404,886	659,887	2,147,463	3,163,327	1,464,870	1,630	5,304	7,813	3,618	45
1925..	1,655	426,110	713,931	2,109,325	3,198,123	1,750,489	1,675	4,950	7,505	4,108	41
1927..	1,475	369,324	612,916	1,888,039	2,846,213	1,468,294	1,660	5,112	7,707	3,976	42

Table 12 shows the production in number of passenger cars, business cars, and the total number of cars of all models in the United States in each of the census years 1904 and 1909, and in each year from 1913 to 1928. The figures as to production are as reported by the United States Census of Manufactures.

The production of passenger cars increased from 20,261 in 1904 to 121,868 in 1909 and from year to year to 1,745,792 in 1917. In 1918, the last year of the World War, production decreased to 943,436, or 46 per cent, as compared with 1917. Production increased in 1919 and 1920, decreased in 1921, increased in 1922 and 1923, decreased in 1924, increased in 1925 and 1926, decreased to 2,946,601 in 1927, and increased to the enormous number of 3,826,613 in 1928. The decrease between 1926 and 1927 was 23 per cent, and the increase in 1928 over 1927 was 30 per cent. Production of business cars decreased 6 per cent between 1926 and 1927, and cars of all models decreased 21 per cent. The production of business cars increased 17 per cent between 1927 and 1928 and of cars of all models combined increased 28 per cent.

TABLE 12.—Number of cars built in each specified year, 1904 to 1928

Year	Passenger cars	Business cars	Total, all models
1904.....	20, 261	1, 431	21, 692
1909.....	121, 868	4, 725	126, 593
1913.....	461, 500	23, 500	485, 000
1914.....	543, 679	25, 375	569, 054
1915.....	895, 930	74, 000	969, 930
1916.....	1, 525, 578	192, 130	1, 617, 708
1917.....	1, 745, 792	128, 157	1, 873, 949
1918.....	943, 436	227, 250	1, 170, 686
1919.....	1, 657, 652	275, 943	1, 933, 595
1920.....	1, 905, 560	321, 789	2, 227, 349
1921.....	1, 452, 902	140, 934	1, 593, 836
1922.....	2, 302, 923	241, 253	2, 544, 176
1923.....	3, 651, 132	382, 884	4, 034, 016
1924.....	3, 210, 006	392, 538	3, 602, 544
1925.....	3, 768, 996	496, 836	4, 265, 832
1926.....	3, 819, 162	481, 770	4, 300, 932
1927.....	2, 946, 601	454, 725	3, 401, 326
1928.....	3, 826, 613	530, 771	4, 357, 384

SCOPE AND METHOD

This bulletin was compiled from data obtained from the pay rolls and other records of plants engaged in manufacturing or assembling motor vehicles, building bodies, motors, radiators, in making forgings, transmission gears and axles, or sheet-metal stampings for motor vehicles.

The study includes employees in all of the occupations in the industry, beginning with those who unload the raw materials on arrival by railway freight cars, auto trucks, and other vehicles used in the transportation of supplies to establishments, including all of those who perform all of the operations through the various processes of manufacture, and ending with those who load the finished product for shipment. Data were not collected for executives, office clerks, employees working on electric starters, generators, and magnetos, employees engaged in the maintenance or construction of buildings, or for those in the power house, in the engineering, drafting, or experimental departments.

Data are shown in Tables 1 and A for employees in 53 of the most important occupations in the industry, for a group of "other skilled occupations," and also for a group designated as "other employees." Those designated in "other skilled occupations" and "other employees" include wage earners in all other occupations, each too few in number of employees to warrant separate classification.

Data were collected from the records of practically all of the establishments for a representative pay period in September, October, or November, 1928. The figures in the report are, therefore, representative of conditions in those months. Individual data as taken from the pay rolls included the occupation, sex, the number of days and hours worked, and the amount earned in the pay period.

The length of the pay period in the 94 establishments included in the 1928 study was one week in 47, two weeks in 9, half month in 36, and third of month in 2. In collecting data from establishments with pay period of more than one week, hours actually worked and earnings by individual employees were taken as shown on the records for the pay period, and in addition hours actually worked and the actual number of days on which each individual did any work in one week

of the pay period were also obtained. With the data so taken the bureau was able to present data for all establishments and employees for one week.

Table 13 shows by States the number of wage earners in the industry in 1925 as reported by the United States Census of Manufactures and number of establishments and wage earners for which 1928 data are presented in this bulletin.

TABLE 13.—*Number of wage earners in the industry and number of establishments and wage earners for which 1928 data are shown*

State	Number of wage earners reported by the United States Census in 1925	Establishments and wage earners for which data are shown for 1928 in this study	
		Number of establishments	Number of wage earners
Illinois.....	10,563	8	3,421
Indiana.....	28,026	9	10,600
Michigan.....	234,492	33	95,624
New Jersey.....	10,222	6	5,680
New York.....	26,012	13	10,368
Ohio.....	43,791	12	15,036
Pennsylvania.....	18,929	6	8,222
Wisconsin.....	16,339	7	5,011
Other States.....	37,736		
Total.....	426,110	94	153,962

A few large establishments are represented in the study by only a part of the employees because the inclusion of all employees would have tended to give them undue weight in the published averages, especially for the States in which such large plants are located.

In selecting establishments from which to obtain data the bureau undertook to obtain representation from all States in which the industry is of material importance, measured by the number of wage earners employed in the States as reported by the United States Census of Manufactures.

Average earnings per hour for wage earners in each occupation were computed by dividing the total earnings in one week of all employees in the occupation by the total hours worked in one week by such wage earners.

Average full-time hours per week were computed by dividing the total full-time hours per week of all employees in the occupation by the number of employees in the occupation.

Average full-time earnings per week for employees in each occupation were computed by multiplying the average earnings per hour of all employees in the occupation by the average full-time hours per week. This assumes that the earnings for full time would have been at the same average rate per hour as was made in one week.

OCCUPATIONS IN THE INDUSTRY

The occupations for which data are shown in this bulletin are arranged alphabetically in Table A (p. 28) and defined in bulletin No. 438.

GENERAL TABLES

In addition to the preceding text tables, data as to days, hours, and earnings of wage earners by occupations and States are presented in five general tables, as follows:

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State (p. 28).

The purpose of this table is to show all of the 1928 averages that have been computed for the employees in each occupation in the industry in each State and for the employees in all occupations combined, of the industry, in each State; to present in parallel columns "average full-time hours per week," "average hours actually worked in one week," and the "per cent that the hours actually worked in one week is of the average full-time hours per week"; and to make easy the comparison of the figures, one State with another. "Average full-time earnings in one week" and "average actual earnings in one week" are presented in the last two columns of the table. One column shows the average amount that each employee would have earned in one week had all employees in an occupation, a State, or the industry worked full time at the same average earnings per hour as was earned in the hours actually worked in the one week covered by the study. The other column shows the amount actually earned in one week.

Axle assemblers, male, the second occupation in the table: The 10 employees of the 2 establishments in Illinois worked an average of 5.3 days in one week, their full-time hours averaged 49.9 per week, and they actually worked 42.8 hours in one week, or 86 per cent of full time. They earned an average of 60 cents per hour and \$25.66 in one week. Had they worked the full time of 49.9 hours in the week at 60 cents per hour, the same as was earned in the 42.8 hours actually worked in the week, they would have earned an average of \$29.94 in the week. The 2,703 employees in this occupation in the 48 establishments in all 8 States worked an average of 5.2 days in one week, their full-time hours were 50.2 per week, they actually worked 46.9 hours in one week, or 93 per cent of full time, earned an average of 75.5 cents per hour, and \$35.42 in one week, and had they worked full time at the same average per hour would have earned an average of \$37.90 in one week. The figures for Illinois and for all States in this occupation may be compared with those for any other State, as may those at the end of this table, where data are shown for 3,421 males and females in all occupations in 8 establishments in Illinois, and for 153,962 males and females in all occupations in the industry in 94 establishments in 8 States.

TABLE B.—Average and classified earnings per hour in 18 specified occupations, 1928, by sex and State (p. 42).

TABLE C.—Average and classified full-time hours per week in 18 specified occupations, 1928, by sex and State (p. 50).

TABLE D.—Average and classified hours actually worked in one week in 18 specified occupations, 1928, by sex and State (p. 58).

TABLE E.—Average and classified actual earnings in one week in 18 specified occupations, 1928, by sex and State (p. 66).

Tables B, C, D, and E were limited to 18 representative occupations, for reasons already assigned in text in explanation of Table 3.

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
Apprentices, male:									
Illinois.....	4	26	5.7	51.3	49.3	96	\$0.391	\$20.06	\$19.26
Indiana.....	3	47	5.4	50.0	47.1	94	.404	20.20	19.03
Michigan.....	20	855	5.3	47.9	44.9	94	.631	30.22	28.36
New Jersey.....	3	26	5.7	50.0	49.1	98	.387	19.35	19.00
New York.....	7	29	5.9	49.9	52.2	105	.441	22.01	23.01
Ohio.....	6	47	5.8	46.7	47.3	101	.387	18.07	18.31
Pennsylvania.....	6	137	4.8	52.7	44.1	84	.439	23.14	19.38
Total.....	49	1,167	5.3	48.6	45.4	93	.572	27.80	25.98
Assemblers, axle, male:									
Illinois.....	2	10	5.3	49.9	42.8	86	.600	29.94	25.66
Indiana.....	6	138	5.2	50.8	47.5	94	.652	33.12	30.95
Michigan.....	17	1,883	5.3	50.3	48.2	96	.768	38.63	37.01
New Jersey.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
New York.....	8	279	5.1	49.7	44.0	89	.728	36.18	32.04
Ohio.....	8	290	5.0	49.7	43.3	87	.745	37.03	32.26
Pennsylvania.....	3	48	5.8	49.9	47.6	95	.746	37.23	35.51
Wisconsin.....	3	50	4.3	52.4	36.3	69	.753	39.46	27.32
Total.....	48	2,703	5.2	50.2	46.9	93	.755	37.90	35.42
Assemblers, axle, female:									
Indiana.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Michigan.....	2	9	5.2	50.4	45.2	90	.626	26.51	23.76
Total.....	3	13	5.3	50.3	45.9	91	.451	22.69	20.70
Assemblers, body-frame, male:									
Illinois.....	4	124	4.5	42.3	34.0	80	.835	35.32	28.44
Indiana.....	5	572	5.0	50.4	43.3	86	.682	34.37	29.51
Michigan.....	16	1,428	5.1	50.7	42.0	83	.857	43.45	36.03
New Jersey.....	2	64	4.7	50.0	37.2	74	.734	36.70	27.31
New York.....	8	279	5.0	50.3	41.4	82	.824	41.45	34.10
Ohio.....	7	422	4.7	50.0	42.1	84	.757	37.85	31.84
Pennsylvania.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Wisconsin.....	4	356	5.0	52.2	41.0	79	.795	41.50	32.59
Total.....	47	3,266	5.0	50.4	41.7	83	.799	40.27	33.35
Assemblers, body-frame, female:									
Indiana.....	2	6	5.0	50.0	44.1	88	.321	16.05	14.15
Michigan.....	2	2	4.0	49.0	30.9	63	.564	27.64	17.44
New York.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Total.....	5	12	4.8	49.8	42.2	85	.419	20.87	17.66
Assemblers, chassis, male:									
Illinois.....	4	251	4.9	41.0	39.6	97	.834	34.19	33.04
Indiana.....	5	214	5.0	51.9	44.5	86	.612	31.76	27.23
Michigan.....	17	2,534	5.4	50.0	45.8	92	.782	39.10	35.81
New Jersey.....	4	403	5.1	42.3	41.3	98	.740	31.30	30.56
New York.....	6	249	5.0	50.5	43.2	86	.773	39.04	33.38
Ohio.....	10	578	4.9	49.4	42.1	85	.788	36.46	31.06
Pennsylvania.....	3	163	5.6	49.8	50.7	102	.673	33.52	34.12
Wisconsin.....	4	201	4.9	52.0	43.5	84	.671	34.89	29.17
Total.....	53	4,593	5.2	49.0	44.5	91	.758	37.14	33.72
Assemblers, chassis, female:									
Indiana.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Michigan.....	6	108	4.7	49.8	39.7	80	.529	26.34	21.00
Total.....	7	109	4.7	49.8	39.7	80	.529	26.34	20.97

¹ Data included in total.

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
Assemblers, final, male:									
Illinois.....	5	169	5.1	45.5	41.5	91	\$0.730	\$33.22	\$30.28
Indiana.....	6	557	5.1	51.1	44.4	87	.689	35.21	30.58
Michigan.....	23	4,520	5.1	50.5	44.0	87	.799	40.35	35.12
New Jersey.....	3	236	4.9	45.1	39.3	87	.718	32.38	28.24
New York.....	9	915	5.1	50.1	41.9	84	.787	39.43	32.98
Ohio.....	11	1,208	4.8	49.7	41.8	84	.760	37.77	31.77
Pennsylvania.....	3	291	5.6	50.1	46.2	92	.689	34.52	31.80
Wisconsin.....	6	302	4.9	52.6	40.6	77	.725	38.14	29.46
Total.....	66	8,198	5.1	50.1	43.2	86	.774	38.78	33.46
Assemblers, final, female:									
Indiana.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Michigan.....	14	368	5.2	49.8	42.9	86	.508	25.30	21.81
New Jersey.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
New York.....	3	31	5.4	49.8	45.5	91	.465	23.16	21.18
Ohio.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Wisconsin.....	2	10	4.2	50.0	33.6	67	.534	26.70	17.91
Total.....	22	575	5.0	49.3	41.9	85	.507	25.00	21.21
Assemblers, frame, male:									
Illinois.....	3	35	5.8	49.9	49.0	98	.597	29.79	29.28
Indiana.....	5	117	5.0	50.8	42.5	84	.733	37.24	31.17
Michigan.....	13	599	5.3	48.8	44.6	91	.784	38.26	35.02
New Jersey.....	2	28	5.1	46.8	44.1	94	.751	35.15	33.13
New York.....	7	86	5.4	50.4	46.3	92	.760	38.15	35.20
Ohio.....	8	154	5.1	49.2	44.7	91	.822	40.44	36.79
Pennsylvania.....	4	77	5.4	52.1	49.9	96	.738	38.45	36.82
Wisconsin.....	3	29	4.9	53.4	45.1	84	.730	38.98	32.92
Total.....	45	1,125	5.2	49.5	45.1	91	.770	38.12	34.72
Assemblers, motor, male:									
Illinois.....	7	275	5.7	53.2	55.1	104	.699	37.19	38.54
Indiana.....	6	283	5.5	50.7	50.9	100	.652	33.06	33.23
Michigan.....	19	3,050	5.4	49.4	47.2	96	.792	39.12	37.89
New Jersey.....	2	84	5.5	50.0	47.2	94	.782	39.10	36.87
New York.....	6	201	4.5	50.5	38.6	76	.732	36.97	28.25
Ohio.....	11	661	5.1	50.1	45.3	90	.714	35.77	32.36
Pennsylvania.....	3	169	5.1	54.7	47.1	86	.754	41.24	35.55
Wisconsin.....	5	136	4.6	52.4	42.1	80	.740	38.78	31.19
Total.....	59	4,859	5.3	50.1	47.1	94	.762	38.18	35.90
Assemblers, motor, female:									
Illinois.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Indiana.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Michigan.....	7	63	5.1	50.4	42.7	85	.498	25.10	21.24
Total.....	9	81	5.0	50.4	41.3	82	.460	23.18	18.99
Automatic operators, lathe and screw machine, male:									
Illinois.....	4	29	5.9	55.0	57.5	105	.695	38.23	39.91
Indiana.....	4	195	5.5	50.3	50.6	101	.676	34.00	34.25
Michigan.....	21	1,088	5.3	48.1	47.7	99	.850	40.89	40.51
New Jersey.....	2	24	5.9	50.0	55.5	111	.945	47.25	52.39
New York.....	8	295	5.2	50.6	47.7	94	.744	37.65	35.50
Ohio.....	8	152	4.9	48.1	41.6	86	.811	39.01	33.73
Pennsylvania.....	4	36	5.7	51.8	54.5	105	.735	38.07	40.04
Wisconsin.....	3	23	5.5	55.4	52.8	95	.756	41.88	39.91
Total.....	54	1,842	5.3	49.0	47.9	98	.806	39.49	38.61

¹ Data included in total.

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TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
Bench hands, machine shop, male:									
Illinois.....	5	58	5.6	54.4	53.4	98	\$0.650	\$35.36	\$34.70
Indiana.....	8	132	5.2	50.4	46.0	91	.621	31.30	28.56
Michigan.....	26	1,156	5.4	48.6	48.2	99	.764	37.13	36.80
New Jersey.....	3	52	5.7	50.0	51.7	103	.699	31.95	33.03
New York.....	10	132	5.4	51.5	48.9	95	.706	36.36	34.53
Ohio.....	7	32	5.4	47.5	43.9	92	.719	34.15	31.62
Pennsylvania.....	6	536	6.0	53.6	58.5	109	.690	36.98	40.40
Wisconsin.....	2	30	5.4	53.9	50.4	94	.729	39.29	36.70
Total.....	67	2,178	5.6	50.3	50.7	101	.724	36.42	36.71
Bench hands, machine shop, female:									
Michigan.....	4	25	4.8	49.2	40.5	82	.540	26.57	21.87
New York.....	2	16	5.8	49.4	48.6	98	.546	26.97	26.54
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	7	42	5.2	49.3	43.8	89	.538	26.52	23.56
Blacksmiths, male:									
Illinois.....	7	17	5.7	52.1	51.2	98	.819	42.67	41.91
Indiana.....	9	71	5.6	50.8	51.9	102	.728	36.98	37.80
Michigan.....	28	601	5.3	48.0	47.2	98	1.033	49.58	48.79
New Jersey.....	5	16	5.9	49.4	51.4	104	.752	37.15	38.63
New York.....	9	44	5.5	51.2	49.6	97	.894	45.77	44.39
Ohio.....	9	61	4.6	51.3	42.1	82	1.052	53.97	44.27
Pennsylvania.....	6	28	5.5	51.1	50.5	99	.732	37.41	36.99
Wisconsin.....	6	12	5.2	56.4	46.3	89	.653	36.83	30.23
Total.....	79	850	5.3	48.9	47.6	97	.973	47.58	46.34
Boring-mill operators, male:									
Illinois.....	5	33	5.6	52.7	51.5	98	.719	37.89	37.07
Indiana.....	6	48	5.8	50.7	53.4	105	.559	28.34	29.85
Michigan.....	20	729	5.1	45.0	43.7	97	.857	38.57	37.45
New Jersey.....	3	40	5.7	51.3	52.9	103	.747	38.32	39.55
New York.....	5	48	5.3	50.7	50.2	99	.750	38.03	37.66
Ohio.....	9	126	5.1	49.8	45.6	92	.801	39.89	36.53
Pennsylvania.....	4	69	5.5	54.0	54.2	100	.740	39.96	40.14
Wisconsin.....	4	36	5.3	55.1	50.7	92	.684	37.69	34.67
Total.....	56	1,129	5.2	47.3	46.0	97	.808	38.22	37.17
Bumpers, male:									
Illinois.....	2	6	4.5	44.8	39.0	87	1.439	64.47	56.10
Indiana.....	3	13	5.2	50.0	43.3	87	.848	42.40	36.71
Michigan.....	19	198	5.2	48.9	44.5	91	1.123	54.91	49.92
New Jersey.....	2	7	4.4	50.0	38.3	77	1.126	56.30	43.09
New York.....	5	41	4.5	51.2	38.7	76	.866	44.34	33.55
Ohio.....	6	58	4.8	49.6	41.9	84	.898	44.54	37.65
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	5	34	3.9	53.1	33.1	62	.978	51.93	32.38
Total.....	43	358	4.9	49.6	42.0	85	1.042	51.68	43.81
Crane operators, male:									
Illinois.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Indiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Michigan.....	23	140	5.5	48.0	49.7	104	.765	36.72	38.04
New Jersey.....	2	9	5.4	41.1	47.0	114	.864	35.51	40.58
New York.....	3	8	5.6	52.8	55.6	105	.604	31.89	33.58
Ohio.....	2	7	5.4	48.7	45.2	93	.670	32.63	30.26
Pennsylvania.....	3	40	6.1	54.5	63.4	116	.536	29.21	33.99
Wisconsin.....	2	2	6.5	52.5	56.3	107	.769	40.37	43.25
Total.....	37	217	5.6	49.3	52.2	106	.707	34.86	36.90

¹ Data included in total.

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
Cutters, cloth and leather, male:									
Illinois.....	2	4	4.3	44.8	34.4	77	\$0.815	\$36.51	\$28.03
Indiana.....	4	16	4.8	51.2	41.0	80	.682	34.92	27.98
Michigan.....	15	120	4.6	49.6	39.3	79	.883	43.80	34.74
New Jersey.....	2	24	4.6	42.5	37.1	87	.754	32.05	27.95
New York.....	5	17	5.5	51.2	48.8	95	.719	36.81	35.10
Ohio.....	6	14	5.6	49.6	47.4	96	.895	44.39	42.43
Pennsylvania.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Wisconsin.....	4	9	4.0	53.3	31.7	59	.698	37.20	22.13
Total.....	39	205	4.7	49.1	40.2	82	.831	40.80	33.35
Cutters, cloth and leather, female:									
Indiana.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Michigan.....	2	7	5.4	54.0	51.8	96	.561	30.29	29.04
Wisconsin.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Total.....	4	12	5.7	52.8	50.4	95	.461	24.34	23.26
Die setters, sheet-metal, male:									
Indiana.....	2	6	5.8	50.0	55.8	112	.577	28.85	32.17
Michigan.....	15	158	5.3	45.3	46.5	103	.916	41.49	42.57
New Jersey.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
New York.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Ohio.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Pennsylvania.....	2	34	6.0	52.8	58.8	111	.690	36.43	40.55
Total.....	22	224	5.4	47.4	49.1	104	.849	40.24	41.66
Ding men, male:									
Illinois.....	2	2	5.5	44.8	46.0	103	.818	36.65	37.63
Indiana.....	3	6	5.7	50.0	51.7	103	.783	39.15	40.49
Michigan.....	17	182	5.2	51.3	46.9	91	1.166	59.82	54.64
New Jersey.....	3	6	5.2	43.3	41.1	95	.876	37.93	36.02
New York.....	3	15	5.6	51.4	47.9	93	1.130	58.08	54.13
Ohio.....	5	13	5.3	50.0	50.5	101	1.134	56.70	57.32
Wisconsin.....	3	11	5.3	53.0	44.8	85	.855	45.32	38.28
Total.....	36	235	5.3	51.0	47.0	92	1.128	57.53	53.01
Door hangers, male:									
Illinois.....	2	8	4.9	47.1	27.0	57	.847	39.89	22.90
Indiana.....	4	53	4.8	50.2	40.8	81	.768	38.55	31.38
Michigan.....	14	355	5.1	51.0	43.2	85	.921	46.97	39.80
New Jersey.....	3	16	4.7	47.5	38.2	80	.833	39.57	31.79
New York.....	5	52	5.1	50.4	42.2	84	.915	46.12	38.58
Ohio.....	7	89	4.8	49.6	42.4	85	.815	40.42	34.53
Pennsylvania.....	2	16	5.8	52.1	56.5	108	.698	36.37	39.43
Wisconsin.....	4	83	5.3	53.3	41.4	78	.721	38.43	29.84
Total.....	41	672	5.1	50.9	42.6	84	.861	43.82	36.71
Drill-press operators, male:									
Illinois.....	6	274	5.7	54.1	54.2	100	.645	34.89	35.00
Indiana.....	9	564	5.4	50.7	50.5	100	.593	30.07	29.98
Michigan.....	28	5,698	5.3	48.6	47.4	98	.771	37.47	36.52
New Jersey.....	3	111	5.7	50.3	52.2	104	.677	34.05	35.38
New York.....	10	390	5.0	50.4	44.4	88	.686	34.57	30.48
Ohio.....	10	699	5.1	49.7	44.3	89	.700	34.79	30.97
Pennsylvania.....	6	486	5.6	53.1	52.7	99	.661	35.10	34.81
Wisconsin.....	6	266	5.1	55.1	49.2	89	.688	37.91	33.83
Total.....	78	8,488	5.3	49.6	47.8	96	.734	36.41	35.10

¹ Data included in total.

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
Drill-press operators, female:									
Illinois.....	2	32	5.5	54.8	49.9	91	\$0.464	\$25.43	\$23.15
Indiana.....	2	26	4.9	50.0	41.9	84	.359	17.95	14.76
Michigan.....	5	68	5.5	49.8	46.7	94	.486	24.20	22.66
New Jersey.....	2	4	3.8	50.0	34.3	69	.612	30.60	20.97
New York.....	2	36	5.3	48.2	42.3	88	.478	23.04	20.21
Pennsylvania.....	2	4	6.0	50.3	54.8	109	.418	21.03	22.92
Total.....	15	164	5.4	50.5	45.6	90	.468	23.53	21.22
Forge-shop helpers, male:									
Illinois.....	5	15	5.4	51.7	48.3	93	.633	32.73	30.55
Indiana.....	6	135	5.8	63.9	59.9	94	.573	36.61	34.33
Michigan.....	19	1,322	5.3	49.0	48.7	99	.768	37.63	37.33
New Jersey.....	4	42	6.1	51.2	61.4	120	.636	32.56	39.04
New York.....	8	70	5.6	52.2	51.9	99	.645	33.83	33.63
Ohio.....	9	191	4.5	52.1	43.5	83	.761	39.65	33.07
Pennsylvania.....	5	51	5.4	52.7	50.4	96	.632	33.31	31.87
Wisconsin.....	2	7	4.3	54.6	45.2	83	.572	31.23	25.84
Total.....	58	1,833	5.3	50.7	49.4	97	.735	37.26	36.35
Gear-cutter operators, male:									
Illinois.....	5	35	5.7	55.0	54.0	98	.655	36.03	35.38
Indiana.....	4	221	5.5	50.5	51.5	102	.608	30.70	31.30
Michigan.....	19	543	5.2	49.6	48.7	100	.834	40.53	40.62
New Jersey.....	3	14	5.7	50.0	47.9	96	.813	40.90	39.18
New York.....	5	219	5.2	49.9	51.3	103	.750	37.43	38.49
Ohio.....	9	50	5.5	46.7	46.4	99	.793	37.03	36.81
Pennsylvania.....	3	19	5.9	51.4	61.5	120	.684	35.16	42.06
Wisconsin.....	2	20	5.7	54.1	53.8	99	.799	43.23	42.96
Total.....	50	1,121	5.3	49.5	50.1	101	.760	37.62	38.08
Grinding-machine operators, male:									
Illinois.....	6	139	5.7	53.1	53.1	100	.690	36.66	36.66
Indiana.....	6	316	5.6	50.7	50.7	100	.638	32.37	32.37
Michigan.....	27	3,657	5.3	47.9	47.5	99	.828	39.66	39.31
New Jersey.....	3	109	5.7	50.2	51.8	103	.791	39.71	40.98
New York.....	8	466	5.3	49.9	48.5	97	.716	35.73	34.72
Ohio.....	10	448	5.2	48.9	45.0	92	.794	38.83	35.76
Pennsylvania.....	5	166	5.5	53.7	54.1	101	.679	36.46	36.73
Wisconsin.....	5	118	5.0	54.8	49.1	90	.762	41.76	37.42
Total.....	70	5,419	5.3	48.8	48.0	98	.792	38.65	38.06
Grinding-machine operators, female:									
Indiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Michigan.....	2	3	5.3	51.3	48.7	95	.440	22.57	21.40
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	4	8	5.1	50.3	46.1	92	.457	22.99	21.06
Hardeners, male:									
Illinois.....	4	49	5.9	55.8	60.0	108	.604	33.70	36.22
Indiana.....	4	39	6.1	53.8	61.6	114	.676	36.37	41.67
Michigan.....	23	447	5.5	53.8	54.8	102	.782	42.07	42.86
New Jersey.....	2	7	6.0	50.0	60.0	120	.759	37.95	45.55
New York.....	8	111	5.7	56.9	60.4	106	.733	41.71	44.29
Ohio.....	6	15	5.7	47.1	48.7	103	.739	34.81	36.01
Pennsylvania.....	5	25	5.5	57.5	59.0	103	.788	45.31	46.44
Wisconsin.....	4	27	4.9	57.9	51.1	88	.650	37.64	33.22
Total.....	56	720	5.6	54.5	56.3	103	.749	40.82	42.21

¹ Data included in total.

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
Helpers, male:									
Illinois.....	3	18	5.2	53.1	47.7	90	\$0.571	\$30.32	\$27.23
Indiana.....	8	188	5.3	50.7	47.3	93	.508	25.76	24.01
Michigan.....	29	2,435	5.1	45.2	43.4	96	.659	29.79	28.60
New Jersey.....	5	54	5.2	50.0	46.1	92	.571	28.55	26.31
New York.....	10	151	5.5	51.4	49.4	96	.548	28.22	27.10
Ohio.....	8	278	4.4	49.3	37.7	76	.630	31.06	23.74
Pennsylvania.....	6	915	5.1	54.1	49.6	92	.565	30.57	28.00
Wisconsin.....	5	46	4.1	52.6	34.8	66	.715	37.61	24.89
Total.....	74	4,085	5.1	48.1	44.8	93	.621	29.87	27.79
Helpers, female:									
Michigan.....	2	4	5.0	53.0	42.6	80	.488	25.86	20.78
New York.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	4	17	5.3	52.0	44.5	86	.463	24.08	20.63
Inspectors, male:									
Illinois.....	5	148	5.8	52.1	54.6	105	.658	34.28	35.74
Indiana.....	8	438	5.5	50.6	49.8	98	.600	30.36	29.14
Michigan.....	33	4,966	5.3	48.7	47.9	98	.755	36.77	36.97
New Jersey.....	6	169	5.5	48.3	48.0	99	.737	35.60	35.88
New York.....	13	498	5.5	50.5	50.3	100	.672	33.94	33.11
Ohio.....	12	772	5.1	49.5	46.1	93	.711	35.19	32.71
Pennsylvania.....	6	431	5.8	53.0	57.0	108	.643	34.08	36.64
Wisconsin.....	7	157	5.5	53.0	50.9	96	.623	33.02	31.78
Total.....	90	7,579	5.4	49.4	48.7	99	.723	35.72	35.22
Inspectors, female:									
Illinois.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Indiana.....	2	23	5.2	50.0	44.9	90	.333	16.65	14.94
Michigan.....	19	419	5.4	50.6	46.3	92	.396	20.04	18.36
New Jersey.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Ohio.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania.....	3	27	5.3	52.5	43.9	84	.388	20.37	17.05
Wisconsin.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	29	503	5.4	50.7	46.2	91	.390	19.77	18.04
Laborers, male:									
Illinois.....	6	435	5.3	46.6	47.1	101	.661	30.80	31.11
Indiana.....	9	1,056	5.4	50.8	48.3	95	.501	25.45	24.22
Michigan.....	33	9,489	5.3	49.4	48.0	97	.605	29.59	29.03
New Jersey.....	6	1,131	5.2	43.9	43.7	100	.661	29.02	28.87
New York.....	13	1,021	5.3	51.1	49.6	97	.564	28.52	27.95
Ohio.....	12	1,488	5.0	49.8	45.2	91	.546	27.19	24.69
Pennsylvania.....	6	571	5.6	53.0	55.5	105	.486	25.76	26.95
Wisconsin.....	7	344	5.2	53.3	48.2	90	.548	29.21	26.39
Total.....	92	15,535	5.3	49.4	47.8	97	.589	29.10	28.13
Laborers, female:									
Illinois.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Michigan.....	11	97	5.2	50.1	44.4	89	.466	23.35	20.71
New Jersey.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	2	4	5.3	49.9	42.3	85	.395	19.71	16.72
Ohio.....	3	13	5.5	44.5	40.6	91	.509	22.65	20.66
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	2	2	5.5	47.5	41.5	87	.350	16.63	14.53
Total.....	21	119	5.2	49.5	43.7	88	.465	23.02	20.32

¹ Data included in total.

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
Lacquer rubbers, male:									
Illinois.....	2	11	3.6	46.9	27.4	58	\$0.802	\$37.61	\$21.97
Indiana.....	4	98	5.1	51.6	43.9	85	.698	36.02	30.65
Michigan.....	18	815	5.1	50.8	43.4	85	.887	45.06	38.49
New Jersey.....	4	137	5.0	44.5	41.8	94	.714	31.77	29.83
New York.....	4	77	5.2	51.4	42.9	83	.887	45.59	38.02
Ohio.....	6	187	4.7	49.8	42.1	85	.820	40.84	34.54
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	4	133	4.6	52.8	39.5	75	.801	42.29	31.62
Total.....	43	1,465	5.0	50.3	42.5	84	.841	42.30	35.77
Lacquer rubbers, female:									
Indiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Michigan.....	2	29	4.0	53.0	33.4	63	.648	34.34	21.62
Total.....	3	36	4.1	52.4	34.8	66	.636	33.33	22.12
Lathe operators, male:									
Illinois.....	6	227	5.6	52.9	51.4	97	.689	36.45	35.42
Indiana.....	8	311	5.5	50.8	50.4	99	.629	31.95	31.69
Michigan.....	24	3,495	5.3	47.9	47.3	99	.832	39.85	39.34
New Jersey.....	3	219	5.7	50.1	53.0	106	.755	37.83	40.00
New York.....	9	303	5.0	50.7	43.9	87	.728	36.91	31.97
Ohio.....	10	531	5.3	48.1	44.8	93	.780	37.52	34.94
Pennsylvania.....	5	282	5.6	52.4	53.5	102	.708	37.10	37.87
Wisconsin.....	4	185	5.2	55.0	50.0	91	.706	38.83	35.26
Total.....	69	5,553	5.3	49.0	47.8	98	.789	38.66	37.74
Letterers, strippers, and varnishers, male:									
Illinois.....	2	8	4.6	44.8	35.6	79	.871	39.02	30.98
Indiana.....	6	72	5.2	50.9	44.9	88	.736	40.01	35.28
Michigan.....	23	369	5.4	50.0	48.2	96	1.247	62.35	60.19
New Jersey.....	4	22	5.3	45.5	43.4	95	.968	44.04	42.04
New York.....	4	50	5.4	50.6	47.4	94	.933	47.21	44.27
Ohio.....	10	82	5.3	49.9	47.8	96	1.008	53.29	51.00
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	5	35	4.8	52.4	41.2	79	.928	48.63	33.23
Total.....	59	650	5.3	50.0	47.0	94	1.115	55.75	52.45
Letterers, strippers, and varnishers, female:									
Indiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Michigan.....	3	14	4.6	50.0	38.2	76	.560	28.00	21.40
New York.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Ohio.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	6	26	4.8	49.8	39.6	80	.588	29.28	23.30
Machinists, male:									
Illinois.....	7	80	5.7	52.1	55.6	107	.725	37.77	40.28
Indiana.....	7	148	5.6	50.8	52.8	104	.699	35.61	36.93
Michigan.....	31	2,350	5.4	46.6	48.0	103	.893	41.61	42.84
New Jersey.....	5	116	5.7	49.7	51.9	104	.811	40.81	42.13
New York.....	12	250	5.6	49.6	50.8	102	.758	37.60	38.52
Ohio.....	10	202	5.5	48.2	48.2	98	.801	39.41	38.60
Pennsylvania.....	5	226	5.9	53.2	59.7	112	.729	38.78	43.61
Wisconsin.....	4	63	5.3	52.2	48.4	93	.602	31.42	29.11
Total.....	81	3,465	5.5	47.9	49.5	103	.844	40.43	41.74

¹ Data included in total.

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per week	Average full-time earnings per week	Average actual earnings in 1 week
Metal finishers, male:									
Illinois.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Indiana.....	3	346	4.7	50.0	38.9	78	\$0.955	\$47.75	\$37.16
Michigan.....	23	2,820	5.3	49.9	45.9	92	.953	47.55	43.76
New Jersey.....	4	91	4.4	48.5	37.5	77	.858	41.61	32.16
New York.....	7	181	5.3	52.7	48.4	92	.935	49.27	45.27
Ohio.....	9	433	4.7	49.8	41.5	83	.812	40.44	33.70
Pennsylvania.....	3	530	5.6	53.1	56.9	107	.677	35.95	38.55
Wisconsin.....	5	172	5.0	53.1	41.0	77	.785	41.68	32.17
Total.....	55	4,606	5.2	50.5	45.9	91	.893	45.10	41.00
Metal panelers, male:									
Illinois.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Indiana.....	3	214	4.8	50.0	40.9	82	.789	39.45	32.32
Michigan.....	12	969	5.1	51.5	42.7	83	.864	44.50	36.91
New Jersey.....	3	282	5.0	41.1	39.2	95	.754	30.99	29.54
New York.....	4	77	5.1	51.2	42.7	83	.917	46.95	39.15
Ohio.....	5	196	4.7	49.8	42.0	84	.825	41.09	34.67
Pennsylvania.....	2	19	5.8	50.0	49.2	98	.710	35.50	34.87
Wisconsin.....	4	162	5.3	53.3	45.1	85	.779	41.52	35.11
Total.....	34	1,947	5.0	49.8	42.1	85	.830	41.33	34.98
Milling-machine operators, male:									
Illinois.....	6	82	5.7	52.9	54.6	103	.656	34.70	35.84
Indiana.....	8	146	5.5	50.8	51.4	101	.621	31.55	31.91
Michigan.....	25	2,136	5.3	48.5	47.2	97	.798	38.70	37.71
New Jersey.....	3	70	5.8	50.0	53.4	107	.716	35.80	38.18
New York.....	9	194	5.1	51.3	46.8	91	.716	36.73	33.52
Ohio.....	9	296	5.2	49.2	45.5	92	.735	36.16	33.42
Pennsylvania.....	6	213	5.7	52.9	54.6	103	.700	37.03	38.21
Wisconsin.....	4	94	5.0	55.3	48.5	88	.718	39.71	34.87
Total.....	70	3,231	5.3	49.5	48.1	97	.764	37.82	36.72
Molders, belt and drip, male:									
Illinois.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Indiana.....	2	72	5.0	50.0	42.5	85	.867	42.85	36.44
Michigan.....	10	315	5.0	49.8	43.9	88	.986	49.10	43.26
New Jersey.....	2	7	5.3	50.0	44.8	90	.710	35.50	31.84
New York.....	4	83	5.1	51.0	41.8	82	.921	46.97	38.53
Ohio.....	6	57	4.6	50.2	37.8	75	.811	40.71	30.63
Pennsylvania.....	2	12	5.3	50.3	46.7	93	.675	33.95	31.48
Wisconsin.....	3	125	5.1	52.9	40.9	77	.831	43.96	33.97
Total.....	30	672	5.0	50.6	42.4	84	.914	46.25	38.80
Painters, general, male:									
Illinois.....	5	63	5.0	45.3	39.7	88	.794	35.97	31.54
Indiana.....	6	337	5.0	51.0	43.0	84	.727	37.08	31.23
Michigan.....	30	1,070	5.1	50.8	46.6	92	.807	41.06	37.63
New Jersey.....	4	41	5.1	47.3	43.4	92	.762	36.04	33.05
New York.....	12	174	5.6	51.7	50.9	98	.707	36.55	36.98
Ohio.....	12	268	5.1	49.8	45.1	91	.753	37.50	33.95
Pennsylvania.....	2	27	4.9	50.6	38.9	77	.653	33.04	25.39
Wisconsin.....	6	175	5.2	52.8	43.6	83	.720	38.02	31.38
Total.....	77	2,155	5.1	50.7	45.6	90	.770	39.04	35.12
Painters, general, female:									
Indiana.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Michigan.....	2	5	4.2	50.4	36.7	73	.503	25.35	18.47
Total.....	3	8	4.8	50.3	40.7	81	.415	20.87	16.87

¹ Data included in total.

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per week	Average full-time earnings per week	Average actual earnings in 1 week
Paint sprayers, male:									
Illinois.....	4	31	4.6	43.8	37.1	85	\$0.804	\$35.22	\$29.82
Indiana.....	6	183	5.4	51.3	48.3	94	.671	34.42	32.39
Michigan.....	26	841	5.2	50.4	44.5	88	.859	43.29	38.24
New Jersey.....	5	66	5.2	46.7	42.0	90	.729	34.04	30.66
New York.....	9	158	5.1	50.4	44.1	88	.901	45.41	39.73
Ohio.....	11	143	4.9	49.6	43.8	88	.835	41.42	36.59
Pennsylvania.....	4	24	5.5	51.0	46.7	92	.788	40.19	36.76
Wisconsin.....	6	130	5.2	52.8	44.3	84	.781	41.24	34.62
Total.....	71	1,581	5.2	50.4	44.6	88	.824	41.53	36.76
Paint sprayers, female:									
Indiana.....	2	7	5.0	50.0	43.8	88	.570	28.50	24.94
Michigan.....	3	12	3.3	48.3	28.3	59	.500	27.05	15.86
Total.....	5	19	3.9	48.9	34.0	70	.565	27.63	19.21
Planer and shaper operators, male:									
Illinois.....	3	4	6.0	51.8	51.8	100	.738	38.17	38.17
Indiana.....	4	27	5.3	50.2	45.9	91	.666	33.43	30.54
Michigan.....	15	222	5.3	45.9	47.7	104	.875	40.16	41.76
New Jersey.....	3	8	5.6	50.0	54.5	109	.790	39.50	43.06
New York.....	5	14	5.9	51.3	53.7	105	.706	36.22	37.90
Ohio.....	4	50	5.4	51.2	50.9	99	.706	36.15	35.96
Pennsylvania.....	2	73	5.6	56.2	59.3	106	.686	38.55	40.70
Wisconsin.....	2	3	6.0	53.3	53.3	100	.773	41.22	41.22
Total.....	38	401	5.4	49.1	50.5	103	.791	38.84	39.94
Platers, male:									
Indiana.....	4	13	6.0	51.2	57.4	112	.643	32.92	36.91
Michigan.....	17	296	5.2	49.1	51.1	104	.746	36.63	38.15
New Jersey.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
New York.....	5	25	4.9	51.6	44.9	87	.848	43.76	38.06
Ohio.....	3	12	4.9	49.8	43.9	88	.804	40.04	35.31
Pennsylvania.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Wisconsin.....	2	7	6.0	52.9	54.0	102	.835	44.17	45.09
Total.....	33	358	5.2	49.5	50.8	103	.756	37.42	38.41
Polishers and buffers, male:									
Illinois.....	2	2	6.0	52.5	64.8	123	.547	28.72	35.45
Indiana.....	5	95	5.6	51.3	50.2	98	.715	36.68	35.92
Michigan.....	23	1,458	5.3	48.6	49.2	101	.972	47.24	47.56
New Jersey.....	2	6	5.8	50.0	56.2	112	.865	43.25	48.85
New York.....	8	257	5.3	51.1	48.7	95	.884	46.17	43.02
Ohio.....	8	117	4.8	49.1	40.0	81	.960	47.14	38.42
Pennsylvania.....	2	24	5.7	50.0	49.1	98	.754	37.70	37.05
Wisconsin.....	6	71	6.0	52.7	40.4	77	.704	37.10	28.41
Total.....	56	2,030	5.3	49.2	48.4	98	.938	46.05	45.32
Punch-press operators, male:									
Illinois.....	3	10	4.9	51.0	42.2	83	.734	37.43	30.92
Indiana.....	8	309	5.3	50.2	46.9	93	.640	32.13	29.98
Michigan.....	28	3,316	5.1	46.9	44.7	95	.777	36.44	34.74
New Jersey.....	3	49	4.2	50.0	38.2	76	.752	37.60	28.73
New York.....	7	92	5.4	52.4	51.7	99	.690	36.16	35.67
Ohio.....	4	155	4.6	50.8	42.3	83	.732	37.19	30.94
Pennsylvania.....	5	299	5.4	53.5	52.8	99	.577	30.87	30.45
Wisconsin.....	3	38	3.3	53.6	26.8	50	.700	37.52	18.75
Total.....	61	4,268	5.1	47.9	45.2	94	.746	35.73	33.75

¹Data included in total.

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per week	Average full-time earnings per week	Average actual earnings in 1 week
Punch-press operators, female:									
Michigan.....	3	72	5.2	51.1	45.5	89	\$0.498	\$25.45	\$22.63
New York.....	2	3	5.7	49.0	47.3	97	.543	26.61	25.65
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	6	100	5.0	51.3	43.4	85	.491	25.19	21.31
Sand blasters, etc., male:									
Illinois.....	2	19	5.9	55.5	58.1	105	.564	31.30	32.73
Indiana.....	2	39	5.8	50.0	50.9	102	.641	32.05	32.60
Michigan.....	22	766	5.3	47.6	47.7	100	.753	35.84	35.91
New Jersey.....	3	67	5.5	50.0	47.4	95	.637	31.85	30.20
New York.....	5	17	5.9	54.5	59.7	110	.794	43.27	47.40
Ohio.....	5	69	4.8	52.7	45.4	86	.707	37.26	32.08
Pennsylvania.....	4	47	5.7	51.7	53.2	103	.593	30.66	31.54
Wisconsin.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	44	1,026	5.3	48.7	48.3	99	.727	35.40	35.09
Sanders and rough-stuff rubbers, male:									
Illinois.....	2	31	4.4	41.2	34.1	83	.823	33.91	28.06
Indiana.....	6	203	4.7	51.3	40.5	79	.685	35.14	27.71
Michigan.....	22	1,440	5.1	50.5	42.6	84	.831	41.97	35.38
New Jersey.....	4	293	5.1	41.9	40.4	96	.715	29.96	28.89
New York.....	7	241	5.1	50.7	42.0	83	.894	45.33	37.55
Ohio.....	7	295	4.6	50.2	41.0	82	.832	41.77	34.07
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	5	212	4.9	52.9	40.4	76	.752	39.78	30.36
Total.....	54	2,716	5.0	49.7	41.7	84	.807	40.11	33.68
Sanders and rough-stuff rubbers, female:									
Indiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Michigan.....	3	17	3.8	51.5	32.2	63	.537	27.66	17.29
Total.....	4	18	3.9	51.4	32.8	64	.540	27.76	17.72
Sewing-machine operators, male:									
Illinois.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Indiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Michigan.....	7	132	4.9	41.4	39.2	95	.839	34.73	32.92
New Jersey.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	2	22	5.0	49.0	43.1	88	.833	40.82	35.88
Wisconsin.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	13	228	4.8	42.4	38.7	91	.833	35.32	32.21
Sewing-machine operators, female:									
Illinois.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Indiana.....	5	133	4.9	50.6	41.4	82	.493	24.95	20.43
Michigan.....	16	568	4.4	51.5	35.4	71	.508	26.16	18.51
New Jersey.....	2	22	3.5	50.0	30.7	61	.513	25.65	15.74
New York.....	6	45	5.4	51.1	43.1	84	.561	28.67	24.21
Ohio.....	9	57	5.1	49.3	42.6	86	.570	28.10	24.26
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	3	28	3.4	46.8	26.4	56	.483	22.60	12.78
Total.....	43	861	4.5	51.0	37.5	74	.513	26.16	19.25
Sheet-metal workers, male:									
Illinois.....	2	15	4.9	49.5	38.1	77	.714	35.34	27.19
Indiana.....	6	176	5.4	50.6	46.8	92	.713	36.08	33.38
Michigan.....	22	1,333	5.3	49.6	46.9	95	.866	42.95	40.63
New Jersey.....	3	37	4.9	45.9	41.8	91	.816	37.45	34.13
New York.....	6	339	5.5	54.1	55.1	102	.746	40.36	41.09
Ohio.....	6	252	4.9	48.8	43.0	88	.792	38.65	34.06
Pennsylvania.....	4	214	5.7	51.6	52.8	102	.679	35.64	35.87
Wisconsin.....	5	70	3.6	53.7	28.6	53	.712	38.23	20.37
Total.....	54	2,441	5.3	50.5	47.5	94	.807	40.75	38.31

1 Data included in total.

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per week	Average full-time earnings per week	Average actual earnings in 1 week
Sheet-metal workers, female:									
Michigan.....	3	8	5.9	50.3	50.2	100	\$0.512	\$25.75	\$25.69
New Jersey.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
New York.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Ohio.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Pennsylvania.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Total.....	7	56	5.2	49.6	43.9	89	.489	24.25	21.46
Straighteners, male:									
Illinois.....	2	24	6.1	55.8	64.1	115	.641	35.77	41.11
Indiana.....	3	8	5.8	50.6	54.0	107	.676	34.21	36.48
Michigan.....	19	369	5.3	49.1	48.3	98	.820	40.26	39.62
New Jersey.....	2	14	5.6	52.1	52.8	101	.723	37.67	38.19
New York.....	5	33	5.2	49.3	47.6	97	.683	33.67	32.46
Ohio.....	6	41	5.2	48.9	44.6	91	.773	37.80	34.44
Pennsylvania.....	5	25	5.7	53.6	54.1	101	.663	35.54	35.87
Wisconsin.....	3	17	5.6	53.4	52.1	98	.684	36.53	35.60
Total.....	45	531	5.4	49.8	49.3	99	.780	38.84	38.45
Testers, final and road, male:									
Illinois.....	4	11	6.2	52.4	56.8	108	.635	33.27	36.09
Indiana.....	4	23	5.4	51.0	49.4	97	.641	32.69	31.69
Michigan.....	13	159	5.2	50.6	48.0	95	.725	36.69	34.82
New Jersey.....	2	43	5.5	41.2	44.8	109	.789	32.51	35.32
New York.....	8	125	5.5	50.5	51.5	102	.696	35.15	35.81
Ohio.....	10	127	5.3	50.2	50.1	100	.696	34.94	34.82
Pennsylvania.....	3	11	5.7	49.2	49.0	100	.717	35.28	35.16
Wisconsin.....	4	39	4.7	52.9	42.4	80	.559	29.57	23.73
Total.....	48	538	5.3	49.9	48.9	98	.699	34.88	34.19
Testers, motor, male:									
Illinois.....	4	48	6.1	52.8	60.5	115	.722	38.12	43.71
Indiana.....	2	37	5.5	50.0	52.2	104	.666	33.50	34.77
Michigan.....	13	442	5.4	50.6	47.1	93	.772	39.06	36.37
New Jersey.....	2	21	5.6	50.0	47.6	95	.596	29.80	28.39
New York.....	5	27	5.3	50.4	45.6	90	.680	34.27	31.04
Ohio.....	9	85	5.4	52.6	52.8	100	.621	32.66	32.81
Pennsylvania.....	2	36	5.0	55.2	41.7	76	.713	39.36	29.73
Wisconsin.....	4	53	5.0	54.4	47.0	86	.665	36.18	31.25
Total.....	41	749	5.4	51.4	48.6	95	.726	37.32	35.26
Tool and die makers, male:									
Illinois.....	6	40	5.9	50.7	52.8	104	.750	38.03	39.64
Indiana.....	8	274	5.4	51.1	49.4	97	.795	40.62	39.27
Michigan.....	29	2,391	5.5	47.5	50.1	105	.973	46.22	48.78
New Jersey.....	4	77	5.6	50.0	55.8	112	.853	42.65	47.64
New York.....	10	208	5.9	51.0	55.6	109	.827	42.18	45.98
Ohio.....	10	336	5.6	51.3	53.9	105	.855	43.86	46.06
Pennsylvania.....	5	126	5.8	53.6	57.3	107	.728	39.02	41.71
Wisconsin.....	5	71	4.8	53.8	41.8	78	.730	39.27	30.48
Total.....	77	3,523	5.5	48.8	51.0	105	.919	44.85	46.86
Top builders, male:									
Illinois.....	3	68	4.6	43.6	33.1	76	.858	37.41	28.42
Indiana.....	6	291	4.9	50.8	41.5	82	.750	38.10	31.13
Michigan.....	20	2,204	4.9	50.8	40.9	81	.867	44.04	35.50
New Jersey.....	4	500	4.9	41.9	38.6	92	.740	31.01	28.53
New York.....	7	293	5.1	50.5	42.9	85	.900	45.45	38.59
Ohio.....	10	354	5.1	49.5	43.1	87	.875	43.81	37.73
Pennsylvania.....	2	15	5.1	50.0	45.7	91	.877	43.85	40.07
Wisconsin.....	4	365	5.2	53.0	42.0	79	.788	41.76	33.14
Total.....	56	4,090	5.0	49.6	41.0	83	.840	41.66	34.44

¹ Data included in total.

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per week	Average full-time earnings per week	Average actual earnings in 1 week
Top builders, female:									
Indiana.....	2	15	4.9	50.0	42.1	84	\$0.567	\$28.35	\$23.86
Michigan.....	3	149	5.1	50.0	44.5	89	.536	26.80	23.87
New York.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Ohio.....	2	78	4.8	48.0	38.7	81	.515	24.72	19.93
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	2	23	5.0	50.2	38.2	76	.576	28.92	21.97
Total.....	11	287	5.0	49.5	41.6	84	.536	26.53	22.34
Trim-bench hands, male:									
Illinois.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Indiana.....	5	37	4.9	51.5	41.9	81	.595	30.64	24.92
Michigan.....	10	258	4.2	50.1	34.3	68	.825	41.33	28.29
New Jersey.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	2	9	3.6	48.2	27.3	57	.752	36.25	20.54
Ohio.....	5	49	5.2	49.9	45.8	92	.725	36.18	33.21
Wisconsin.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	25	385	4.4	49.4	36.5	74	.770	38.04	28.12
Trim-bench hands, female:									
Indiana.....	4	50	4.9	51.2	40.2	79	.445	22.78	17.91
Michigan.....	12	501	4.6	50.9	38.0	75	.477	24.28	18.12
New Jersey.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	3	23	5.4	51.9	43.0	83	.518	26.88	22.23
Ohio.....	6	55	4.9	49.9	40.6	81	.536	26.75	21.74
Wisconsin.....	3	36	4.8	50.0	36.6	73	.506	25.30	18.53
Total.....	29	669	4.7	50.8	38.5	76	.483	24.54	18.58
Varnish rubbers, male:									
Illinois.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Indiana.....	3	38	5.3	50.5	44.4	88	.850	42.93	37.74
Michigan.....	13	222	5.5	50.8	43.4	95	.831	42.21	40.17
New Jersey.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	2	13	5.9	48.0	50.0	104	.888	42.62	44.40
Ohio.....	5	37	5.7	50.7	53.5	106	.872	44.21	46.68
Wisconsin.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	26	357	5.5	49.4	47.3	96	.836	41.30	39.56
Welders and braziers, male:									
Illinois.....	6	26	4.7	51.7	42.5	82	.738	38.15	31.36
Indiana.....	2	59	5.1	50.2	43.3	86	.889	44.63	38.48
Michigan.....	28	835	5.2	45.8	44.7	98	.892	40.85	39.88
New Jersey.....	5	21	5.5	50.0	49.7	99	.724	36.20	35.96
New York.....	8	32	5.3	52.0	49.3	95	.816	42.43	40.20
Ohio.....	8	47	4.9	49.9	43.2	87	.799	39.87	34.56
Pennsylvania.....	4	129	5.7	52.3	55.6	106	.706	36.92	39.51
Wisconsin.....	5	48	3.8	54.3	33.9	62	.789	42.84	26.72
Total.....	66	1,197	5.2	47.6	45.5	96	.852	40.56	38.77
Welders, spot and butt, males:									
Illinois.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Indiana.....	3	39	4.9	50.6	43.0	85	.779	39.42	33.51
Michigan.....	20	468	5.0	47.8	42.6	89	.862	41.20	36.69
New Jersey.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	6	19	5.4	53.3	51.8	97	.790	42.11	40.93
Ohio.....	3	42	4.6	49.4	41.7	84	.789	38.53	32.55
Pennsylvania.....	2	231	5.5	52.4	51.8	99	.668	35.00	34.65
Wisconsin.....	5	14	5.0	52.8	40.3	76	.835	44.09	33.62
Total.....	41	825	5.1	49.5	45.3	92	.789	39.06	35.74

¹ Data included in total.

MOTOR-VEHICLE INDUSTRY

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per week	Average full-time earnings per week	Average actual earnings in 1 week
Woodworking-machine operators, male:									
Illinois.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Indiana.....	5	372	5.2	50.3	44.8	89	\$0.643	\$32.34	\$28.82
Michigan.....	19	1,091	5.3	50.4	46.6	92	.758	38.20	35.32
New Jersey.....	2	10	5.5	50.0	46.7	93	.643	32.15	30.00
New York.....	6	72	5.3	51.1	46.0	90	.737	37.66	33.87
Ohio.....	7	132	4.4	50.3	39.7	79	.763	38.38	30.34
Pennsylvania.....	3	26	5.9	50.1	47.2	94	.627	31.41	29.62
Wisconsin.....	4	97	4.5	53.5	33.7	63	.708	37.88	23.84
Total.....	47	1,815	5.2	50.5	44.9	89	.729	36.81	32.73
Other skilled occupations, male:									
Illinois.....	7	74	5.7	48.2	49.4	102	.795	38.32	39.28
Indiana.....	9	300	5.4	50.4	49.8	99	.667	33.62	33.18
Michigan.....	33	3,863	5.6	48.2	53.2	110	.800	38.56	42.53
New Jersey.....	6	194	5.7	48.8	51.2	105	.795	38.80	40.73
New York.....	13	304	5.6	51.1	50.9	100	.721	36.94	36.70
Ohio.....	12	432	5.8	49.1	51.5	105	.716	35.16	36.85
Pennsylvania.....	6	364	6.0	52.0	58.5	113	.688	35.78	40.23
Wisconsin.....	7	84	5.2	53.3	47.7	89	.667	35.55	31.77
Total.....	93	5,615	5.6	48.9	52.9	108	.773	37.80	40.86
Other skilled occupations, female:									
Michigan.....	3	5	4.4	51.6	34.5	67	.540	27.86	18.59
Wisconsin.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	4	8	4.6	51.0	36.1	71	.609	25.96	18.37
Other employees, male:									
Illinois.....	8	205	5.4	47.5	47.2	99	.706	33.54	33.33
Indiana.....	9	549	5.5	50.9	50.3	99	.604	30.74	30.38
Michigan.....	33	8,131	5.4	48.2	49.2	102	.727	35.04	35.79
New Jersey.....	6	473	5.5	43.7	48.1	110	.706	30.85	33.93
New York.....	13	829	5.6	51.0	52.1	102	.666	33.97	34.68
Ohio.....	12	1,676	5.5	49.2	49.1	100	.690	33.95	33.90
Pennsylvania.....	6	829	5.7	52.3	56.6	108	.609	31.85	34.46
Wisconsin.....	6	127	5.0	52.6	47.4	90	.596	31.35	28.24
Total.....	93	12,819	5.5	48.8	49.8	102	.702	34.26	34.97
Other employees, female:									
Illinois.....	2	9	5.2	54.0	46.9	87	.563	30.40	26.41
Indiana.....	4	37	4.7	50.1	39.5	79	.484	24.25	19.09
Michigan.....	15	287	5.2	48.8	43.5	89	.511	24.94	22.20
New Jersey.....	2	9	4.8	50.0	44.0	88	.469	23.45	20.61
New York.....	3	10	4.8	48.5	39.6	82	.445	21.58	17.62
Ohio.....	2	25	5.5	48.4	45.8	95	.452	21.88	20.69
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	30	391	5.1	49.2	42.9	87	.506	24.90	21.71
1 Data included in total.									
All occupations, male:									
Illinois.....	8	3,361	5.4	49.2	48.0	98	.704	34.64	33.81
Indiana.....	9	10,258	5.3	50.9	47.3	93	.652	33.19	30.82
Michigan.....	33	92,784	5.3	48.8	47.0	96	.790	38.55	37.12
New Jersey.....	6	5,629	5.2	45.3	44.6	98	.725	32.84	32.32
New York.....	13	10,142	5.3	50.9	47.6	94	.734	37.36	34.95
Ohio.....	12	14,624	5.1	49.6	44.9	91	.734	36.41	32.95
Pennsylvania.....	6	8,127	5.6	52.8	53.9	102	.644	34.00	34.71
Wisconsin.....	7	4,903	5.0	53.3	43.5	82	.717	38.22	31.22
Total.....	94	149,828	5.3	49.4	47.0	95	.756	37.35	35.56
1 Data included in total.									

TABLE A.—Average number of days on which employees worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1928, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average number of days on which employees worked in 1 week	Average full-time hours per week	Average hours actually worked in 1 week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
All occupations, female:									
Illinois.....	3	60	5.5	54.4	48.8	90	\$0.441	\$23.99	\$21.55
Indiana.....	6	342	4.9	50.4	41.2	82	.457	23.03	18.82
Michigan.....	25	2,840	4.9	50.5	41.2	82	.487	24.59	20.06
New Jersey.....	3	51	4.0	50.0	35.4	71	.505	25.25	17.86
New York.....	8	226	5.3	49.8	43.0	86	.507	25.25	21.81
Ohio.....	10	412	4.9	48.4	40.4	83	.516	24.97	20.81
Pennsylvania.....	4	95	5.1	51.8	42.3	82	.460	23.83	19.48
Wisconsin.....	5	108	4.4	49.2	34.5	70	.511	25.14	17.61
Total.....	64	4,134	4.9	50.3	41.1	82	.487	24.50	20.04
All occupations, male and female:									
Illinois.....	8	3,421	5.4	49.3	48.1	98	.699	34.46	33.59
Indiana.....	9	10,600	5.3	50.9	47.1	93	.647	32.93	30.43
Michigan.....	33	95,624	5.3	48.9	46.8	96	.782	38.24	36.82
New Jersey.....	6	5,680	5.2	45.3	44.5	98	.723	32.75	32.19
New York.....	13	10,368	5.3	50.9	47.5	93	.729	37.11	34.67
Ohio.....	12	15,036	5.1	49.6	44.8	90	.728	36.11	32.62
Pennsylvania.....	6	8,222	5.6	52.8	53.7	102	.643	33.95	34.54
Wisconsin.....	7	5,011	5.0	53.2	43.3	81	.714	37.98	30.93
Total.....	94	153,962	5.3	49.4	46.9	95	.750	37.05	35.14

TABLE B.—Average and classified earnings per hour in 18 specified occupations, 1928, by sex and State

Occupation, sex, and State	Number of establishments	Number of wage earners	Average earnings per hour	Number of wage earners whose average earnings per hour were—																
				Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 40 cents	40 and under 50 cents	50 and under 60 cents	60 and under 70 cents	70 and under 80 cents	80 and under 90 cents	90 cents and under \$1	\$1 and under \$1.10	\$1.10 and under \$1.20	\$1.20 and under \$1.30	\$1.30 and under \$1.40	\$1.40 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2
Assemblers, axle, male:																				
Illinois.....	2	10	\$.600						4	5	1									
Indiana.....	6	138	.652					15	31	40	35	15	2							
Michigan.....	17	1,883	.768				1	7	58	466	578	505	221	44	3					
New Jersey.....	1	(1)	(1)							(1)	(1)	(1)								
New York.....	8	279	.728		1	2		7	41	79	84	37	21	7						
Ohio.....	8	290	.745					11	32	37	88	105	14	3						
Pennsylvania.....	3	48	.746					1	6	6	6	29								
Wisconsin.....	3	50	.753							7	24	15	1							
Total.....	48	2,703	.755		1	3	44	172	641	817	709	259	54	3						
Assemblers, axle, female																				
Indiana.....	1	(1)	(1)		(1)	(1)														
Michigan.....	2	9	.526					1	8											
Total.....	3	13	.451		3	1	1	8												
Assemblers, body-frame, male:																				
Illinois.....	4	124	.835				2	2	7	8	28	13	48	14		1	1			
Indiana.....	5	572	.682	2			10	99	82	131	67	83	76	17	4					
Michigan.....	16	1,428	.857				2	17	34	281	190	341	284	223	45	5	5	1	1	
New Jersey.....	2	64	.734					1	5	15	19	21	2							
New York.....	8	279	.824					2	25	35	72	55	36	29	16	6		3		
Ohio.....	7	422	.757				2	20	43	75	78	166	37	1						
Pennsylvania.....	1	(1)	(1)						(1)	(1)	(1)									
Wisconsin.....	4	356	.795		1	2		3	13	49	109	75	91	13						
Total.....	47	3,256	.799	2	1	18	144	210	598	567	754	576	297	66	12	6	4	1		
Assemblers, body-frame, female:																				
Indiana.....	2	6	.321	1	1		2	2												
Michigan.....	2	2	.564							2										
New York.....	1	(1)	(1)						(1)											
Total.....	5	12	.419	1	1	2	2	6												

Assemblers, chassis, male:																			
Illinois.....	4	251	.834			1	4	15	11	75	28	86	31						
Indiana.....	6	214	.612			6	39	78	31	21	33	4	1			1			
Michigan.....	17	2,534	.782			1	4	186	575	772	386	576	23	10		1			
New Jersey.....	4	403	.740				3	17	97	195	70	20	1						
New York.....	6	249	.773			3	9	13	24	77	106	11	4			2			
Ohio.....	10	578	.738					23	84	72	161	214	21	2	1				
Pennsylvania.....	3	163	.673			1	4	23	22	34	54	23	2						
Wisconsin.....	4	201	.671				1	30	32	39	68	18	6			7			
Total.....	53	4,593	.758			1	16	135	447	883	1,423	878	726	62	11	10	1		
Assemblers, chassis, female:																			
Indiana.....	1	(1)	(1)						(1)										
Michigan.....	6	108	.529				4	37	64	1	1	1							
Total.....	7	109	.529			4	37	65	1	1	1								
Assemblers, frame, male:																			
Illinois.....	3	35	.597					21	7	6	1								
Indiana.....	5	117	.733				5	18	25	24	39	6							
Michigan.....	13	599	.784				2	77	34	273	118	50	7	31	7				
New Jersey.....	2	28	.751					5	13	10									
New York.....	7	86	.760				7	4	23	30	7	6			9				
Ohio.....	8	154	.822				4	4	12	43	54	21	12	1	2	1			
Pennsylvania.....	4	77	.738				6	14	19	10	8	17	3						
Wisconsin.....	3	29	.730			1	1	9	1	6	6	3	1		1				
Total.....	45	1,125	.770			1	25	147	126	405	243	103	23	32	19	1			
Assemblers, motor, male:																			
Illinois.....	7	275	.699			1	11	57	78	68	41	16	2		1				
Indiana.....	6	283	.652				32	83	54	37	61	7	2	1					
Michigan.....	19	3,050	.792	1	1	4	15	139	235	966	1,378	297	15	5					
New Jersey.....	2	84	.782				2	20	16	17	6	5	9	5	3	1			
New York.....	6	201	.732				4	10	57	96	32	2							
Ohio.....	11	661	.714			20	42	84	62	234	166	34	16	2	1				
Pennsylvania.....	3	169	.754					4	35	59	69	2							
Wisconsin.....	5	136	.740				7	10	14	69	28	4		1	2			1	
Total.....	59	4,859	.762			1	1	25	113	407	551	1,546	1,781	367	44	14	7	1	1
Assemblers, motor, female:																			
Illinois.....	1	(1)	(1)			(1)													
Indiana.....	1	(1)	(1)			(1)													
Michigan.....	7	63	.498				1	33	28	1									
Total.....	9	81	.460			10	9	33	28	1									

¹ Data included in total.

TABLE B.—Average and classified earnings per hour in 18 specified occupations, 1928, by sex and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average earnings per hour	Number of wage earners whose average earnings per hour were—																	
				Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 40 cents	40 and under 50 cents	50 and under 60 cents	60 and under 70 cents	70 and under 80 cents	80 and under 90 cents	90 cents and under \$1	\$1 and under \$1.10	\$1.10 and under \$1.20	\$1.20 and under \$1.30	\$1.30 and under \$1.40	\$1.40 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2	\$2 and over
Automatic operators, lathe and screw machine, male:																					
Illinois.....	4	29	\$.695					3	5	10	4	2	4	1							
Indiana.....	4	195	.676					2	57	47	59	24	6								
Michigan.....	21	1,088	.850					3	20	76	214	410	224	106	20	7					
New Jersey.....	2	24	.945						1	1	4	5	3	4	4			6	2		
New York.....	8	295	.744						3	28	48	137	68	8	3			2			
Ohio.....	8	152	.811					1	18	21	26	47	26	10	3						
Pennsylvania.....	4	36	.735						7	9	11	3	4	2							
Wisconsin.....	3	23	.756					3	3	1	5	7	1	3							
Total.....	54	1,842	.806					15	139	213	460	566	276	129	27	7	8	2			
Drill-press operators, male:																					
Illinois.....	6	274	.645				2	32	51	117	52	16	3	1							
Indiana.....	9	564	.593				5	99	235	130	56	29	6	3			1				
Michigan.....	28	5,698	.771				1	87	304	881	1,726	2,132	463	87	13	3		1			
New Jersey.....	3	111	.677				1	4	28	34	25	17	1	1							
New York.....	10	390	.686				7	24	66	111	109	52	19	2							
Ohio.....	10	699	.700				3	39	135	158	136	134	38	6							
Pennsylvania.....	6	486	.661		1	1		61	100	143	106	62	12								
Wisconsin.....	6	266	.688				3	24	47	56	68	47	19	2							
Total.....	78	8,488	.734		1	1	22	370	966	1,630	2,323	2,489	561	102	13	4	1				
Drill-press operators, female:																					
Illinois.....	2	32	.464				7	19	2	3	1										
Indiana.....	2	20	.359			6	7	5	2												
Michigan.....	5	66	.486					48	13	4	3										
New Jersey.....	2	4	.612							4											
New York.....	2	36	.478				9	12	11	3	1										
Pennsylvania.....	2	4	.418				1	3													
Total.....	15	164	.466			6	24	87	28	14	5										
Grinding-machine operators, male:																					
Illinois.....	6	139	.690					9	22	46	31	22	9								
Indiana.....	6	316	.638				1	1	15	83	142	52	16	5	1						

Michigan	27	3,657	.828			1	13	83	378	874	1,221	739	281	47	19			1	
New Jersey	3	109	.791				3	9	14	30	27	13	9	4					
New York	8	466	.716			1	8	56	97	116	125	51	10	1	1				
Ohio	10	448	.794				10	42	57	111	114	79	30	4	1				
Pennsylvania	5	166	.679			1	19	30	38	35	41	2							
Wisconsin	5	118	.762			1	5	19	19	20	20	21	5	7	1				
Total	70	5,419	.792			1	5	82	344	791	1,269	1,586	919	336	63	22			1
Grinding-machine operators, female:																			
Indiana	1	(1)	(1)				(1)	(1)											
Michigan	2	3	.440					3											
Pennsylvania	1	(1)	(1)				(1)												
Total	4	8	.457				6	2											
Inspectors, male:																			
Illinois	5	148	.658			2	20	38	26	28	8	15	11						
Indiana	8	438	.600			1	42	181	127	50	21	10	6						
Michigan	33	4,966	.755			6	106	305	1,426	1,331	760	637	259	89	34	12	1		
New Jersey	6	169	.737				6	15	37	54	36	18	2	1					
New York	13	498	.672				12	107	175	129	53	13	7	2					
Ohio	12	772	.711				9	42	354	203	137	21	5		1				
Pennsylvania	6	431	.643			1	20	135	169	73	27	2	3	1					
Wisconsin	7	157	.623			4	14	50	45	27	14	1	1				1		
Total	90	7,579	.723			14	229	873	2,359	1,895	1,056	717	294	93	35	13	1		
Inspectors, female:																			
Illinois	1	(1)	(1)			(1)													
Indiana	2	23	.333			7	13			3									
Michigan	19	419	.396				244	159	6	2	5								
New Jersey	1	(1)	(1)				(1)	(1)											
New York	1	(1)	(1)				(1)	(1)											
Ohio	1	(1)	(1)				(1)	(1)											
Pennsylvania	3	27	.388				17	8	2										
Wisconsin	1	(1)	(1)				(1)												
Total	29	503	.390			7	295	180	8	6	2	5							
Laborers, male:																			
Illinois	6	435	.661				1	138	45	18	50	44	122	17					
Indiana	9	1,056	.501			1	175	383	219	164	83	26	2	1					
Michigan	33	9,489	.605			1	85	1,879	3,547	1,347	931	1,025	584	79	10	1			
New Jersey	6	1,131	.661				6	88	262	261	366	102	50	1					
New York	13	1,021	.564				3	24	229	373	241	104	34	9	2	2			
Ohio	12	1,488	.546				3	61	634	334	231	122	67	11	9	12	4		
Pennsylvania	6	571	.496				3	368	127	59	11	2	1						
Wisconsin	7	344	.548				12	137	83	55	40	13	2	2					
Total	92	15,535	.589			2	8	382	3,856	4,990	2,376	1,707	1,313	781	111	24	5		

¹Data included in total.

TABLE B.—Average and classified earnings per hour in 18 specified occupations, 1928, by sex and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average earnings per hour	Number of wage earners whose average earnings per hour were—																	
				Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 40 cents	40 and under 50 cents	50 and under 60 cents	60 and under 70 cents	70 and under 80 cents	80 and under 90 cents	90 cents and under \$1	\$1 and under \$1.10	\$1.10 and under \$1.20	\$1.20 and under \$1.30	\$1.30 and under \$1.40	\$1.40 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2	\$2 and over
Laborers, female:																					
Illinois	1	(1)	(1)					(1)													
Michigan	11	97	\$0.466			1	13	42	38	3											
New Jersey	1	(1)	(1)					(1)													
New York	2	4	.395				1	3													
Ohio	3	13	.509					9	1	3											
Pennsylvania	1	(1)	(1)				(1)														
Wisconsin	2	2	.350				2														
Total	21	119	.465			1	17	56	39	6											
Lathe operators, male:																					
Illinois	6	227	.689				3	9	36	71	64	37	5	2							
Indiana	8	311	.629					24	99	122	46	13	4	2	1						
Michigan	24	3,495	.832		1			8	54	272	825	1,396	600	181	72	21	4		1		
New Jersey	3	219	.755					4	22	60	57	40	27	8	3						
New York	9	363	.723					10	33	71	112	57	17	3							
Ohio	10	531	.780			1	6	37	82	156	160	100	75	13	1						
Pennsylvania	5	282	.703				11	31	97	78	56	7	7	1							
Wisconsin	4	185	.706			2	13	23	42	53	32	9	5	1							
Total	69	5,553	.789			1	7	85	335	817	1,396	1,791	804	214	77	21	4		1		
Letterers, strippers, and varnishers, male:																					
Illinois	2	8	.871						1		1	1	4	1							
Indiana	6	72	.786				1	6	17	1	10	14	3	1	1		6				
Michigan	23	369	1.247					2	2	7	30	32	59	34	50	28	25	5	16	24	
New Jersey	4	22	.968						2		5	5	3	2	1	1			1	2	
New York	8	50	.933						3		11	10	10	4	3	6	2				
Ohio	10	82	1.068					1		1	8	9	16	9	6	21	4	1	6		
Pennsylvania	1	(1)	(1)							(1)	(1)	(1)	(1)								
Wisconsin	5	35	.923						1		7	8	7	10		1	1				
Total	50	650	1.115				1	9	26	15	75	81	113	63	61	58	38	6	23	26	

TABLE B.—Average and classified earnings per hour in 18 specified occupations, 1928, by sex and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average earnings per hour	Number of wage earners whose average earnings per hour were—																	
				Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 40 cents	40 and under 50 cents	50 and under 60 cents	60 and under 70 cents	70 and under 80 cents	80 and under 90 cents	90 cents and under \$1	\$1 and under \$1.10	\$1.10 and under \$1.20	\$1.20 and under \$1.30	\$1.30 and under \$1.40	\$1.40 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2	\$2 and over
Sewing-machine operators, female:																					
Illinois.....	1	(1)	(1)				(1)	(1)													
Indiana.....	5	133	\$0.493		10	5	16	11	66	21	4										
Michigan.....	16	568	.508	1		3	96	183	188	91	6										
New Jersey.....	2	22	.513			2	2	2	16												
New York.....	6	43	.561				3	11	18	6	2	1	1		1						
Ohio.....	9	57	.570			1	3	13	20	16	2	2									
Pennsylvania.....	1	(1)	(1)				(1)			(1)											
Wisconsin.....	3	28	.483		1		8	12	2	5											
Total.....	43	861	.513	1	11	11	130	235	310	144	14	3	1		1						
Tool and die makers, male:																					
Illinois.....	6	40	.750					1	1	5	25	5	2			1					
Indiana.....	8	274	.795					3	6	28	118	70	32	10	4	1			2		
Michigan.....	29	2,391	.973					3	9	37	175	495	658	515	240	152	57	23	10	13	4
New Jersey.....	4	77	.853						1	5	12	35	18	5	1						
New York.....	10	208	.827							12	67	79	41	8	1						
Ohio.....	10	336	.855						2	14	84	130	74	29	1	2					
Pennsylvania.....	5	126	.728						3	47	52	20	4								
Wisconsin.....	5	71	.730						2	21	34	13	1								
Total.....	77	3,523	.919					7	24	169	567	847	830	567	247	156	57	25	10	13	4
Top builders, male:																					
Illinois.....	3	68	.858					1	1	6	17	10	25	5	1	1					1
Indiana.....	6	291	.750				12	23	38	22	42	65	84	4						1	
Michigan.....	20	2,204	.867			1	9	33	125	317	304	424	453	447	68	18	4			1	
New Jersey.....	4	500	.740						2	152	243	81	16	1							
New York.....	7	293	.900						5	22	31	72	99	49	6	7	1			1	
Ohio.....	10	354	.875					5	8	30	68	89	87	24	42	1					
Pennsylvania.....	2	15	.877								5	7	2								
Wisconsin.....	4	365	.788					16	19	48	83	126	68	5							
Total.....	56	4,090	.840			1	21	78	198	597	798	874	834	535	118	26	6		3	1	

Top builders, female:															
Indiana.....	2	15	.567					1	10	4					
Michigan.....	3	149	.536				6	75	24	29	13				
New York.....	1	(1)	(1)	(1)				(1)	(1)	(1)	(1)			1	
Ohio.....	2	78	.515				10	18	46	4					
Pennsylvania.....	1	(1)	(1)					(1)	3						
Wisconsin.....	1	23	.576						18	1				1	
Total.....	11	287	.536		1		16	102	108	42	13	3		1	1
Trim-bench hands, male:															
Illinois.....	1	(1)	(1)							(1)					
Indiana.....	5	37	.595				9	8	2		6	11	1		
Michigan.....	10	258	.825				1	7	24	57	30	35	62	39	2
New Jersey.....	1	(1)	(1)						(1)	(1)					
New York.....	2	9	.752					1	1		5	1		1	
Ohio.....	5	49	.725					4	4	11	17	11	2		
Wisconsin.....	1	(1)	(1)						(1)	(1)					
Total.....	25	385	.770				10	20	34	85	70	58	65	40	2
Trim-bench hands, female:															
Indiana.....	4	50	.445			3	5	4	18	11					
Michigan.....	12	501	.477		5	3	151	152	121	59	8		2		
New Jersey.....	1	(1)	(1)						(1)	(1)					
New York.....	3	23	.518			1	1	6	10	5					
Ohio.....	6	55	.536		1		10	9	21	12	2				
Wisconsin.....	3	36	.506		1	1	1	7	25	1					
Total.....	29	669	.483	1	15	8	168	178	198	89	10		2		

1 Data included in total.

TABLE C.—Average and classified full-time hours per week in 18 specified occupations, 1923, by sex and State

Occupation, sex, and State	Number of establishments	Number of wage earners	Average full-time hours per week	Number of wage earners whose full-time hours per week were—														
				40	44½	45	47	48	Over 48 and under 49½	49½	50	Over 50 and under 54	54	55	55½	57½	Over 57½ and under 60	60
Assemblers, axle, male:																		
Illinois.....	2	10	49.9							3	7							
Indiana.....	6	138	50.8							2	115			21				
Michigan.....	17	1,883	50.3	229				58		52	1,080	76		56		331	1	
New Jersey.....	1	(1)	(1)							(1)								
New York.....	8	279	49.7					51	50	7	173		18					
Ohio.....	8	250	49.7		35	2		97		3	113	10					30	
Pennsylvania.....	3	48	49.9				2				46							
Wisconsin.....	3	50	52.4								9	35		6				
Total.....	48	2,703	50.2	229	35	2	2	206	30	67	1,548	121	18	83		331	30	1
Assemblers, axle, female:																		
Indiana.....	1	(1)	(1)							(1)								
Michigan.....	2	9	50.4							8			1					
Total.....	3	13	50.3							12			1					
Assemblers, body-frame, male:																		
Illinois.....	4	124	42.3	94						27	3							
Indiana.....	5	572	50.4							12	518			42				
Michigan.....	16	1,428	50.7	63				333			576	5		433		2	16	
New Jersey.....	2	64	50.0								64							
New York.....	8	279	50.3					23	17	17	180		42					
Ohio.....	7	422	50.0					194		16	105	82					25	
Pennsylvania.....	1	(1)	(1)								(1)							
Wisconsin.....	4	356	52.2								94	252		10				
Total.....	47	3,256	50.4	157				550	17	72	1,551	339	42	485		2	41	
Assemblers, body-frame, female:																		
Indiana.....	2	6	50.0								6							
Michigan.....	2	2	49.0					1			1							
New York.....	1	(1)	(1)								(1)							
Total.....	5	12	49.8					1			11							

Assemblers, chassis, male:																
Illinois.....	4	251	41.0	226						19	6					
Indiana.....	5	214	51.9							10	122			82		
Michigan.....	17	2,534	50.0	38			205			234	1,782	171		123		
New Jersey.....	4	403	42.3	311							92					
New York.....	6	249	50.5					8	16	50	127		48			
Ohio.....	10	578	49.4		39	1	249			50	198	5				36
Pennsylvania.....	3	183	49.8					13			150					
Wisconsin.....	4	201	52.0								96	46		59		
Total.....	53	4,593	49.0	575	39	1	13	463	16	363	2,553	222	48	264		36
Assemblers, chassis, female:																
Indiana.....	1	(1)	(1)								(1)					
Michigan.....	6	108	49.8				4	34		17	35		18			
Total.....	7	109	49.8				4	34		17	36		18			
Assemblers, frame, male:																
Illinois.....	3	35	49.9							10	25					
Indiana.....	5	117	50.8							2	96			19		
Michigan.....	13	599	48.8	98			70			12	324	10	24	61		
New Jersey.....	2	28	46.8	9							19					
New York.....	7	86	50.2					3	12	14	44		13			
Ohio.....	8	154	49.2		38			50		1	44	4				17
Pennsylvania.....	4	77	52.1				4				43			26		4
Wisconsin.....	3	29	53.4								1	20		7		1
Total.....	45	1,125	49.5	107	38		4	123	12	39	596	34	37	113		21
Assemblers, motor, male:																
Illinois.....	7	275	53.2	2						27	28	151		65		1
Indiana.....	6	283	50.7							1	249			27		6
Michigan.....	19	3,050	49.4	233				168		166	2,181	182		110	8	2
New Jersey.....	2	84	50.0								84					
New York.....	6	201	50.5					12	74	25	21		69			
Ohio.....	11	661	50.1		105	4		223		25	172	9			73	49
Pennsylvania.....	3	169	54.7				1				23			145		
Wisconsin.....	5	136	52.4								41	57		38		
Total.....	59	4,859	50.1	235	105	4	1	403	74	244	2,799	399	69	240	145	8
Assemblers, motor, female:																
Illinois.....	1	(1)	(1)											(1)		
Indiana.....	1	(1)	(1)								(1)					
Michigan.....	7	63	50.4					2			45	16				
Total.....	9	81	50.4					2			62	16		1		

¹Data included in total.

TABLE C.—Average and classified full-time hours per week in 18 specified occupations, 1928, by sex and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average full-time hours per week	Number of wage earners whose full-time hours per week were—															
				40	44½	45	47	48	Over 48 and under 49½	49½	50	Over 50 and under 54	54	55	55½	57½	Over 57½ and under 60	60	Over 60
Automatic operators, lathe and screw-machine, male:																			
Illinois.....	4	29	55.0							2		10			13		3	1	
Indiana.....	4	195	50.3								190						5		
Michigan.....	21	1,088	48.1	308				48			558	16			70		86	2	
New Jersey.....	2	24	50.0								24								
New York.....	8	295	50.6					54	37		160		17					27	
Ohio.....	8	152	48.1		50	11		42		9	26						4	10	
Pennsylvania.....	4	36	51.8								26								
Wisconsin.....	3	23	55.4									12			7			2	
Total.....	54	1,842	49.0	308	50	11	1	144	37	11	984	38	17	90	7	86	4	45	9
Drill-press operators, male:																			
Illinois.....	6	274	54.1							22	35	75			121			5	16
Indiana.....	9	564	50.7							2	506				34			22	
Michigan.....	28	5,698	48.6	1,151				356		78	3,198	284	10	358		220		16	27
New Jersey.....	3	111	50.3								108							3	
New York.....	10	390	50.4					98	35		175		56	10				16	
Ohio.....	10	699	49.7		200	12		210		36	86	3				74		78	
Pennsylvania.....	6	486	53.1			7	6				205	48		49	119			41	11
Wisconsin.....	6	266	55.1									142		87				41	37
Total.....	78	8,488	49.6	1,151	200	19	6	664	35	138	4,313	552	66	659	119	220	74	181	91
Drill-press operators, female:																			
Illinois.....	2	32	54.8									4			28				
Indiana.....	2	20	50.0								20								
Michigan.....	5	68	49.8					30			26			12					
New Jersey.....	2	4	50.0								4								
New York.....	2	36	48.2					32		4									
Pennsylvania.....	2	4	50.3						2			2							
Total.....	15	164	50.5					62	2	4	50	6	12	28					
Grinding-machine operators, male:																			
Illinois.....	6	139	53.1							15	29	50			41				4
Indiana.....	6	316	50.7								280				29			7	
Michigan.....	27	3,657	47.9	1,036				168		21	1,873	154		245		117		27	16

TABLE C.—Average and classified full-time hours per week in 18 specified occupations, 1928, by sex and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average full-time hours per week	Number of wage earners whose full-time hours per week were—															
				40	44½	45	47	48	Over 48 and under 49½	49½	50	Over 50 and under 54	54	55	55½	57½	Over 57½ and under 60	60	Over 60
Laborers, female:																			
Illinois.....	1	(1)	(1)																
Michigan.....	11	97	50.1				8			82		5	(1)	2					
New Jersey.....	1	(1)	(1)							(1)									
New York.....	2	4	49.9						1	3									
Ohio.....	3	13	44.5		6	8		4		1									
Pennsylvania.....	1	(1)	(1)							(1)									
Wisconsin.....	2	2	47.5			1				1									
Total.....	21	119	49.5		6	8	1	12	1	1	88	5	3						
Lathe operators, male:																			
Illinois.....	6	227	52.9							63	32	62		55			2	13	
Indiana.....	8	311	50.8								261			50					
Michigan.....	24	3,495	47.9	973				195	19	1,777	117			308		79	10	17	
New Jersey.....	3	219	50.1							216							3		
New York.....	9	303	50.7					63	76	61		85	7				11		
Ohio.....	10	531	48.1		231	23		113		33	61	3					25	40	2
Pennsylvania.....	5	282	52.4			7				164	20			2	59		24	6	
Wisconsin.....	4	185	55.0								90			72				23	
Total.....	69	5,553	49.0	973	231	30		371	76	115	2,572	292	85	494	59	79	25	90	61
Letterers, strippers, and varnishers, male:																			
Illinois.....	2	8	44.8	4						4									
Indiana.....	6	72	50.9							1	58			13					
Michigan.....	23	369	50.0	6				67	28	224	6			37		1			
New Jersey.....	4	22	45.5	10						12									
New York.....	8	50	50.6					9	8	5	12	16							
Ohio.....	10	82	49.9		3			18		17	33	7						4	
Pennsylvania.....	1	(1)	(1)							(1)									
Wisconsin.....	5	35	52.4							7	24			4					
Total.....	59	650	50.0	20	3			94	8	55	358	37	16	54		1		4	
Letterers, strippers, and varnishers, female:																			
Indiana.....	1	(1)	(1)							(1)									

Michigan.....	3	14	50.0					4			6	4							
New York.....	1	(1)	(1)								(1)								
Ohio.....	1	(1)	(1)					(1)											
Total.....	6	26	49.8					6			16	4							
Machinists, male:																			
Illinois.....	7	80	52.1	7						8	13	23		28					1
Indiana.....	7	148	50.8								126			19					3
Michigan.....	31	2,380	46.6	929				156		23	1,019	58		122		46			14
New Jersey.....	5	116	49.7	5							110								1
New York.....	12	250	49.6					43	85		90		23	8					1
Ohio.....	10	202	49.2		48	2		92		7	22							2	29
Pennsylvania.....	5	226	53.2								49	105		12	35				25
Wisconsin.....	4	63	52.2								30	11		22					
Total.....	81	3,465	47.9	941	48	2		291	85	38	1,459	197	23	211	35	46		2	73
Milling-machine operators, male:																			
Illinois.....	6	82	52.9							11	21	20		28					2
Indiana.....	8	146	50.8								123			23					
Michigan.....	25	2,136	48.5	458				122		38	1,203	71		163		60			1
New Jersey.....	3	70	50.0								70								
New York.....	9	194	51.3					35	22		51		82						4
Ohio.....	9	296	49.2		92	10		90		16	35	1						11	36
Pennsylvania.....	6	213	52.9			7	1				104	21		6	44				22
Wisconsin.....	4	94	55.3									42		39					8
Total.....	70	3,231	49.5	458	92	17	1	247	22	65	1,607	155	82	259	44	60		11	63
Sewing-machine operators, male:																			
Illinois.....	1	(1)	(1)	(1)															
Indiana.....	1	(1)	(1)								(1)								
Michigan.....	7	132	41.4	116				3			7			6					
New Jersey.....	1	(1)	(1)	(1)															
New York.....	2	22	49.0							19				3					
Wisconsin.....	1	(1)	(1)										(1)						
Total.....	13	228	42.4	175				3	19		16	6	3	6					
Sewing-machine operators, female:																			
Illinois.....	1	(1)	(1)							(1)									
Indiana.....	5	133	50.6							2	115			16					
Michigan.....	16	568	51.5				2	56		15	278	10	81	126					
New Jersey.....	2	22	50.0								22								
New York.....	6	43	51.1					8		4	15		16						
Ohio.....	9	57	49.3		2			20		6	21	8							
Pennsylvania.....	1	(1)	(1)								(1)								
Wisconsin.....	3	28	46.8			20					6			2					
Total.....	43	861	51.0		2	20	2	84		31	463	18	97	144					

¹ Data included in total.

* Full time is 42 hours.

TABLE C.—Average and classified full-time hours per week in 18 specified occupations, 1928, by sex and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average full-time hours per week	Number of wage earners whose full-time hours per week were—															
				40	44½	45	47	48	Over 48 and under 49½	49½	50	Over 50 and under 54	54	55	55½	57½	Over 57½ and under 60	60	Over 60
Tool and die makers, male:																			
Illinois.....	6	40	50.7							16	16	4			4				
Indiana.....	8	274	51.1								222				42			10	
Michigan.....	29	2,391	47.5	753						69	1,062	159	10	168		40		8	
New Jersey.....	4	77	50.0								77								
New York.....	10	208	51.0					35	49		50		35	33				6	
Ohio.....	10	336	51.3		19	4		162		11	48	1				10		81	
Pennsylvania.....	5	126	53.6								47	19		15	25			19	
Wisconsin.....	5	71	53.8								49	49		22				1	
Total.....	77	3,523	48.8	753	19	4		305	49	96	1,522	232	45	284	25	40	10	124	15
Top builders, male:																			
Illinois.....	3	68	43.6	42						26	7								
Indiana.....	6	291	50.8								237				47				
Michigan.....	20	2,204	50.8	83				304		30	1,112	18		645				2	
New Jersey.....	4	500	41.9	404							96								
New York.....	7	293	50.5					46	69	13	72		93						
Ohio.....	10	354	49.5		5			161		37	100	38						13	
Pennsylvania.....	2	15	50.0								15								
Wisconsin.....	4	365	53.0								24	328			13				
Total.....	56	4,090	49.6	539	5			511	69	113	1,656	384	93	705					15
Top builders, female:																			
Indiana.....	2	15	50.0								15								
Michigan.....	3	149	50.0								149								
New York.....	1	(1)	(1)								(1)								
Ohio.....	2	78	48.0					77			1								
Pennsylvania.....	1	(1)	(1)						(1)										
Wisconsin.....	2	23	50.2								22			1					
Total.....	11	287	49.5					77	1		208			1					

Trim-bench hands, male:													
Illinois.....	1	(¹)	(¹)	(¹)									
Indiana.....	5	37	51.5					2	24			11	
Michigan.....	10	258	50.1	6			41		182			27	2
New Jersey.....	1	(¹)	(¹)	(¹)									
New York.....	2	9	48.2				1	8					
Ohio.....	5	49	49.9				19	2	11		17		
Wisconsin.....	1	(¹)	(¹)							(¹)			
Total.....	25	385	49.4	34			61	8	4	217	21	38	2
Trim-bench hands, female:													
Indiana.....	4	50	51.2						38			12	
Michigan.....	12	501	50.9				79	3	285		57	77	
New Jersey.....	1	(¹)	(¹)						(¹)				
New York.....	3	23	51.9						12		11		
Ohio.....	6	55	49.9				8	8	31	8			
Wisconsin.....	3	36	50.0			2			32			2	
Total.....	29	669	50.8			2	87	11	402	8	68	91	

¹ Data included in total.

Assemblers, chassis, male:																	
Illinois.....	4	251	39.6			1		1	3	25	210	11					
Indiana.....	5	214	44.5			3	2	2	5	53	75	47	25	1		1	
Michigan.....	17	2,534	45.8	2	4	19	14	46	122	207	571	1,431	101	14	3		
New Jersey.....	4	403	41.3		3	8	8	2	10	135	127	90	9	2			
New York.....	6	249	43.2	1	1	1		8	11	44	138	42	3				
Ohio.....	10	578	42.1		4	3	10	9	16	195	207	70	52	3			
Pennsylvania.....	3	163	50.7		1	1	1	2	3	10	34	75	22	14			
Wisconsin.....	4	201	43.5			1			7	44	96	53					
Total.....	53	4,593	44.5	3	13	37	35	70	177	713	1,458	1,837	212	34	3	1	
Assemblers, chassis, female:																	
Indiana.....	1	(1)	(1)							(1)							
Michigan.....	6	108	39.7			3	1	2	32	3	11	56					
Total.....	7	109	39.7			3	1	2	32	4	11	56					
Assemblers, frame, male:																	
Illinois.....	3	35	49.0						1	2	3	29					
Indiana.....	5	117	42.5	1		2	2	3	1	22	50	29	7				
Michigan.....	13	599	44.6		2	1	2	19	21	55	224	264	10	1			
New Jersey.....	2	28	44.1							8	15	3	1	1			
New York.....	7	86	46.3						4	7	34	40		1			
Ohio.....	8	154	44.7			1	1		4	10	85	41	12				
Pennsylvania.....	4	77	49.9		2	1			4	6	7	32	22	3			
Wisconsin.....	3	29	45.1			1			1	6	13	5	3	1			
Total.....	45	1,125	45.1	1	4	5	5	22	36	116	431	443	55	7			
Assemblers, motor, male:																	
Illinois.....	7	275	55.1			1	1	2	1	4	12	29	80	92	46	5	2
Indiana.....	6	283	50.9			1	3		2	8	11	115	46	52	38	7	
Michigan.....	19	3,050	47.2	1	5	23	10	33	110	90	917	1,649	181	25	6		
New Jersey.....	2	84	47.2					1	2	10	11	52	6				
New York.....	6	201	38.6			1		38	10	58	53	38	2				
Ohio.....	11	661	45.3		3	5	4	8	17	74	342	124	50	24	8	2	
Pennsylvania.....	3	169	47.1			1		2	4	21	69	37	28	5	2		
Wisconsin.....	5	136	42.1	1	1	1	2	2	4	33	69	9	9	5			
Total.....	59	4,859	47.1	2	12	33	21	88	159	309	1,605	2,035	420	143	28	4	
Assemblers, motor, female:																	
Illinois.....	1	(1)	(1)								(1)						
Indiana.....	1	(1)	(1)					(1)		(1)	(1)						
Michigan.....	7	63	42.7					2	15	3	18	25					
Total.....	9	81	41.3					4	15	11	26	25					

¹Data included in total.

TABLE D.—Average and classified hours actually worked in one week in 18 specified occupations, 1928, by sex and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average hours actually worked in 1 week	Number of wage earners who during one week worked—													
				Under 4 hours	4 and under 8 hours	8 and under 12 hours	12 and under 16 hours	16 and under 24 hours	24 and under 32 hours	32 and under 40 hours	40 and under 48 hours	48 and under 56 hours	56 and under 64 hours	64 and under 72 hours	72 and under 80 hours	80 and under 88 hours	88 and under 96 hours
Automatic operators, lathe and screw machine, male:																	
Illinois.....	4	29	57.5											17	8		
Indiana.....	4	195	50.6	2		3	1	4	11	12	35	62	39	16	6	4	
Michigan.....	21	1,088	47.7		2	1	10	29	88	352	391	167	40	4	4		
New Jersey.....	2	24	55.5					1		1	8	9	5				
New York.....	8	295	47.7		1	1	1	7	13	32	62	123	47	5	2	1	
Ohio.....	8	152	41.6		1	7		6	5	15	84	20	14				
Pennsylvania.....	4	36	54.5					1	1		4	21	3	6			
Wisconsin.....	3	23	52.8					1	1	1	4	7	5	1	3		
Total.....	54	1,842	47.9	2	2	13	3	29	61	148	542	649	292	77	15	9	
Drill-press operators, male:																	
Illinois.....	6	274	54.2		2			3	7	8	22	119	81	30	2		
Indiana.....	9	564	50.5		3	9	4	17	27	32	95	177	117	52	22	9	
Michigan.....	28	5,698	47.4	1	7	34	20	110	167	352	1,645	2,375	823	139	25		
New Jersey.....	3	111	52.2		1	1			2	7	57	27	10				
New York.....	10	390	44.4			3	7	7	18	86	115	116	31	5	2		
Ohio.....	10	699	44.3	1	2	7	9	13	21	83	323	150	77	8	5		
Pennsylvania.....	6	486	52.7	3		1	3	8	10	23	53	233	107	35	9	1	
Wisconsin.....	6	266	49.2			2	2	8	17	28	37	114	27	20	10	1	
Total.....	78	8,488	47.8	5	14	57	45	166	269	619	2,297	3,341	1,290	299	75	11	
Drill-press operators, female:																	
Illinois.....	2	32	49.9			1		1		2	3	25					
Indiana.....	2	20	41.9						3	4	9	4					
Michigan.....	5	68	46.7					3	1	3	11	50					
New Jersey.....	2	4	34.3					2			1	1					
New York.....	2	36	42.3					1	2	4	25	4					
Pennsylvania.....	2	4	54.8									3		1			
Total.....	15	164	45.6			1		7	6	13	49	87		1			
Grinding-machine operators, male:																	
Illinois.....	6	139	53.1			1		3		6	12	72	39	5	1		
Indiana.....	6	816	50.7			2	2	9	12	11	59	131	55	25	8	2	
Michigan.....	27	3,657	47.5		3	20	7	57	97	262	1,271	1,216	523	150	44	7	

New Jersey	3	109	51.8					3	3	2	12	54	24	11				
New York	8	466	48.5	2				12	15	62	109	149	69	36	2	4	1	
Ohio	10	448	45.0		3	5	4	3	5	32	245	104	41	4				
Pennsylvania	5	166	54.1					5	3	10	22	56	40	23	6		1	
Wisconsin	5	118	49.1			1		4	7	20	18	29	20	12	3		1	
Total	70	5,419	48.0	2	6	34	13	96	142	405	1,748	1,811	814	266	66	13	3	
Grinding-machine operators, female:																		
Indiana	1	(1)	(1)					(1)			(1)	(1)						
Michigan	2	3	48.7								1	2						
Pennsylvania	1	(1)	(1)											(1)				
Total	4	8	46.1					1			3	3		1				
Inspectors, male:																		
Illinois	5	148	54.6				1		1	4	28	56	27	26	3	1	1	
Indiana	8	438	49.8		1	1		4	7	50	124	145	60	32	7	3	4	
Michigan	33	4,966	47.9	3	2	35	17	66	161	340	1,414	1,973	678	212	51	11	2	1
New Jersey	6	169	48.0	1		1	1	3	5	13	45	71	19	10				
New York	13	498	50.3		1	1	2	3	17	57	107	179	78	35	15	3		
Ohio	12	772	46.1		1	5	7	9	18	76	368	194	58	15	16	3		2
Pennsylvania	6	431	57.0		3	1	2	3	5	15	36	161	82	77	39	7		
Wisconsin	7	157	50.9					1	1	14	32	72	31	5		1		
Total	90	7,579	48.7	4	8	44	30	89	215	569	2,154	2,851	1,033	412	131	29	7	3
Inspectors, female:																		
Illinois	1	(1)	(1)								(1)	(1)						
Indiana	2	23	44.9						1	3	11	6	2					
Michigan	19	419	46.3			6	2	2	14	21	130	244						
New Jersey	1	(1)	(1)								(1)	(1)						
New York	1	(1)	(1)						(1)		(1)							
Ohio	1	(1)	(1)						(1)		(1)							
Pennsylvania	3	27	43.9		3				1	(1)	(1)	4	19					
Wisconsin	1	(1)	(1)								(1)							
Total	29	503	46.2		3	6	2	2	18	25	161	284	2					
Laborers, male:																		
Illinois	6	435	47.1			2	2	5	8	19	224	89	46	30	6	6		
Indiana	9	1,056	48.3		2	6	5	19	27	104	322	343	136	78	13	1		
Michigan	33	9,489	48.0	8	35	63	69	208	308	550	2,771	2,953	1,304	568	221	64	6	1
New Jersey	6	1,131	43.7	4	12	13	17	18	41	109	456	370	45	34	6	3		
New York	13	1,021	49.6	2	4	14	10	11	39	101	171	438	112	74	38	6	1	
Ohio	12	1,488	45.2	4	14	35	16	50	53	134	551	355	201	54	18	2	1	
Pennsylvania	6	571	55.5		4	6	20	11	8	25	50	143	130	98	64	12		
Wisconsin	7	344	48.2		1		3	3	26	24	103	113	46	16	7		2	
Total	92	15,535	47.8	13	72	139	140	325	510	1,366	4,648	4,804	2,083	952	373	94	10	1

† Data included in total.

TABLE D.—Average and classified hours actually worked in one week in 18 specified occupations, 1928, by sex and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average hours actually worked in 1 week	Number of wage earners who during one week worked—													
				Under 4 hours	4 and under 8 hours	8 and under 12 hours	12 and under 16 hours	16 and under 24 hours	24 and under 32 hours	32 and under 40 hours	40 and under 48 hours	48 and under 56 hours	56 and under 64 hours	64 and under 72 hours	72 and under 80 hours	80 and under 88 hours	88 and under 96 hours
Laborers, female:																	
Illinois.....	1	(1)	(1)											(1)			
Michigan.....	11	97	44.4	1		2		3		6	7	20		58			
New Jersey.....	1	(1)	(1)				(1)										
New York.....	2	4	42.3											1			
Ohio.....	3	13	40.6							1	1	11					
Pennsylvania.....	1	(1)	(1)											(1)			
Wisconsin.....	2	2	41.5								1	1					
Total.....	21	119	43.7	1		2	1	3		7	11	33		61			
Lathe operators, male:																	
Illinois.....	6	227	51.4	1	1			4		6	17	21	112	44	17	3	
Indiana.....	8	311	50.4			4	1	9		3	14	69	132	54	16	6	3
Michigan.....	24	3,495	47.3	1	3	13	10	37		108	242	1,153	1,342	435	121	23	7
New Jersey.....	3	219	53.0				1	6		2	6	19	105	45	34	1	
New York.....	9	303	43.9		2	3	3	5		17	73	81	98	15	6		
Ohio.....	10	531	44.8		2	3	4	9		12	42	280	114	57	6	2	
Pennsylvania.....	5	282	53.5		1	3		2		5	12	29	141	58	23	6	2
Wisconsin.....	4	185	50.0			1	2	6		10	17	27	68	27	23	4	
Total.....	69	5,553	47.8	2	9	28	21	78		163	423	1,679	2,112	735	246	45	12
Letterers, strippers, and varnishers, male:																	
Illinois.....	2	8	35.6							2	2	4					
Indiana.....	6	72	44.9		2	1				3	4	29	27	6			
Michigan.....	23	369	48.2	1	2	3	2	9		10	22	80	171	60	7	2	
New Jersey.....	4	22	43.4							1	4	9	7	1			
New York.....	8	50	47.4					1		1	11	8	24	2	2	1	
Ohio.....	10	82	47.8				1	2		2	10	20	34	9	2	1	1
Pennsylvania.....	1	(1)	(1)							(1)	(1)	(1)	(1)				
Wisconsin.....	5	35	41.2					1		1	8	23	2				
Total.....	59	650	47.0	1	4	4	3	13		21	62	177	271	78	11	4	1

Letterers, strippers, and varnishers, female:																	
Indiana.....	1	(1)	(1)						(1)	(1)							
Michigan.....	3	14	38.2		1			4		5	4						
New York.....	1	(1)	(1)						(1)	(1)							
Ohio.....	1	(1)	(1)						(1)	(1)							
Total.....	6	26	39.6		1			4	2	15	4						
Machinists, male:																	
Illinois.....	7	80	55.6				1	3	2	9	21	26	13	5			
Indiana.....	7	148	52.8			1	3	2	8	40	37	27	19	8	3		
Michigan.....	31	2,380	48.0		8	3	25	43	183	934	656	311	143	55	16	2	
New Jersey.....	5	116	51.9					2	6	17	60	20	11				
New York.....	12	250	50.8		1		2	5	10	34	109	45	19	7	2		
Ohio.....	10	202	48.2		1		1	1	6	9	75	67	33	8	1		
Pennsylvania.....	5	226	59.7				2	7	6	10	53	66	50	26	5		
Wisconsin.....	4	63	48.4		1	1			2	39	7	11	1	1			
Total.....	81	3,465	49.5		3	9	7	37	73	232	1,158	1,010	539	264	103	26	2
Milling-machine operators, male:																	
Illinois.....	6	82	54.6					1	2	3	5	38	21	8	4		
Indiana.....	8	146	51.4		1	1		5	1	6	27	58	36	5	5	1	
Michigan.....	25	2,136	47.2		2	13	8	38	67	146	631	885	291	48	7		
New Jersey.....	3	70	53.4							3	7	38	15	7			
New York.....	9	194	46.8			2	3	4	15	35	40	56	17	22			
Ohio.....	9	296	45.5		1	3	1	5	8	30	132	71	40	5			
Pennsylvania.....	6	213	54.6				1	1	4	10	28	98	38	25	7	1	
Wisconsin.....	4	94	48.5		1	1		4	2	12	15	36	14	9			
Total.....	70	3,231	48.1		2	3	20	13	58	99	245	885	1,280	472	129	23	1
Sewing-machine operators, male:																	
Illinois.....	1	(1)	(1)		(1)			(1)	(1)		(1)						
Indiana.....	1	(1)	(1)					(1)	(1)		(1)						
Michigan.....	7	132	39.2						2	31	98	1					
New Jersey.....	1	(1)	(1)							(1)	(1)						
New York.....	2	22	43.1						1	4	13	3	1				
Wisconsin.....	1	(1)	(1)					(1)									
Total.....	13	228	38.7		3			9	4	42	165	4	1				

1 Data included in total.

TABLE D.—Average and classified hours actually worked in one week in 18 specified occupations, 1928, by sex and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average hours actually worked in 1 week	Number of wage earners who during one week worked—													
				Under 4 hours	4 and under 8 hours	8 and under 12 hours	12 and under 16 hours	16 and under 24 hours	24 and under 32 hours	32 and under 40 hours	40 and under 48 hours	48 and under 56 hours	56 and under 64 hours	64 and under 72 hours	72 and under 80 hours	80 and under 88 hours	88 and under 96 hours
Sewing-machine operators, female:																	
Illinois.....	1	(1)	(1)			(1)				(1)		(1)					
Indiana.....	5	133	41.4			1		4		10	34	51	29	2	2		
Michigan.....	16	568	36.4	3	13	24	10	22	90	171	106	125	2	2			
New Jersey.....	2	22	30.7			6		3	1	1	11						
New York.....	6	43	43.1			1		1	1	7	15	18					
Ohio.....	9	57	42.6					2	3	11	25	15	1				
Pennsylvania.....	1	(1)	(1)								(1)	(1)					
Wisconsin.....	3	28	26.4		2			16	3		7						
Total.....	43	861	37.5	3	15	33	10	48	110	224	217	192	5	4			
Tool and die makers, male:																	
Illinois.....	6	40	52.8						1	1	6	22	6	4			
Indiana.....	8	274	49.4			1	2	4	10	20	94	60	56	18	6	3	
Michigan.....	29	2,391	50.1		2	8	9	25	49	170	756	616	397	218	122	16	3
New Jersey.....	4	77	55.8		1	1		2		1	4	20	32	16			
New York.....	10	208	55.6						2	6	21	99	46	26	4	3	1
Ohio.....	10	336	53.9			1	6	5	10	19	27	121	78	53	4	1	11
Pennsylvania.....	5	126	57.3					1		3	3	36	61	20	2		
Wisconsin.....	5	71	41.8					6	15	7	17	19	5	2			
Total.....	77	3,523	51.0	3	11	17	43	87	227	928	993	681	357	138	23	15	
Top builders, male:																	
Illinois.....	3	68	33.1		1	2	4	9	4	6	40	2					
Indiana.....	6	291	41.5			1		5	23	67	132	44	12	7			
Michigan.....	20	2,204	40.9		16	28	46	94	327	401	571	564	116	37	3	1	
New Jersey.....	4	500	38.6	1	11	11	6	10	26	103	265	67					
New York.....	7	293	42.9		1	1	1	9	34	89	84	95	27	2			
Ohio.....	10	354	43.1			2		12	31	48	147	91	18	2	2		
Pennsylvania.....	2	15	45.7		2						1	11	1				
Wisconsin.....	4	365	42.0				1	4	13	85	224	38					
Total.....	56	4,060	41.0	1	32	45	58	143	458	799	1,414	912	174	48	5	1	

Top builders, female:																			
Indiana.....	2	15	42.1						1	6	3	5							
Michigan.....	3	149	44.5		1		5	2	5	13	38	84	1						
New York.....	1	(¹)	(¹)						(¹)	(¹)	(¹)								
Ohio.....	2	78	38.7					1	8	34	34		1						
Pennsylvania.....	1	(¹)	(¹)										(¹)						
Wisconsin.....	2	23	38.2					1		21	1								
Total.....	11	287	41.6		1		5	4	16	92	77	91	1						
Trim-bench hands, male:																			
Illinois.....	1	(¹)	(¹)		(¹)														
Indiana.....	5	37	41.9			1			2	9	16	6	3						
Michigan.....	10	258	34.3	1	3	7	9	19	68	57	66	20	8						
New Jersey.....	1	(¹)	(¹)							(¹)	(¹)	(¹)							
New York.....	2	9	27.3		1		1	1	3	2	1								
Ohio.....	5	49	45.8		1	1			1	3	22	12	9						
Wisconsin.....	1	(¹)	(¹)					(¹)											
Total.....	25	385	36.5	1	6	9	10	24	74	77	125	39	20						
Trim-bench hands, female:																			
Indiana.....	4	50	40.2					1	6	17	13	13							
Michigan.....	12	501	38.0	1	12		15	15	74	91	157	116	3	1					
New Jersey.....	1	(¹)	(¹)			(¹)					(¹)								
New York.....	3	23	43.0								11	1	11						
Ohio.....	6	55	40.6		1	2		6	2	4	14	4	26						
Wisconsin.....	3	36	36.6					2	3	26	4								
Total.....	29	669	38.5	1	14	19	15	24	85	149	192	166	3	1					

¹ Data included in total.

TABLE E.—Average and classified actual earnings in one week in 18 specified occupations, 1928, by sex and State

Occupation, sex, and State	Number of establishments	Number of wage earners	Average actual earnings in 1 week	Number of wage earners who during 1 week earned—																						
				Under \$4	\$4 and under \$8	\$8 and under \$12	\$12 and under \$16	\$16 and under \$20	\$20 and under \$25	\$25 and under \$30	\$30 and under \$35	\$35 and under \$40	\$40 and under \$45	\$45 and under \$50	\$50 and under \$55	\$55 and under \$60	\$60 and under \$65	\$65 and under \$70	\$70 and under \$75	\$75 and under \$80	\$80 and under \$90	\$90 and under \$100	\$100 and under \$110	\$110 and over		
Assemblers, axle, male:																										
Illinois.....	2	10	\$25.66					2	2	3	3															
Indiana.....	6	138	30.95		2	2	4	5	21	26	29		31	14	3	1										
Michigan.....	17	1,883	37.01	1	20	11	16	34	88	143	347	470	485	189	51	16	4	8								
New Jersey.....	1	(1)	(1)						(1)	(1)	(1)															
New York.....	8	279	32.04	2	5	5	7	27	28	52	46	45	34	12	3	4	2	3	3		1					
Ohio.....	8	290	32.26		1	2	6	6	22	61	105	51	23	10	3											
Pennsylvania.....	3	48	35.51				1		2	4	13	24	1	1	2											
Wisconsin.....	3	50	27.32		1			2	12	18	13	4														
Total.....	48	2,703	35.42	3	29	20	34	76	176	308	559	625	557	215	60	20	6	11	3		1					
Assemblers, axle, female:																										
Indiana.....	1	(1)	(1)			(1)	(1)	(1)																		
Michigan.....	2	9	23.76					1	5	3																
Total.....	3	13	20.70			1	2	2	5	3																
Assemblers, body-frame, male:																										
Illinois.....	4	124	28.44		1	5	4	3	30	22	31	21	7													
Indiana.....	5	572	29.51	5	21	5	17	31	96	114	112	32	17	3	4	1	2									
Michigan.....	16	1,428	36.03	11	23	28	26	36	166	219	146	211	194	134	146	57	19	9	2	1						
New Jersey.....	2	64	27.31	2	2	1	2	6	10	14	12	9	5	1												
New York.....	8	279	34.10		3	2	1	14	16	48	54	78	40	13	6	4										
Ohio.....	7	422	31.84	6	21	11	18	18	40	37	69	100	64	16	10	8	2	1			1					
Pennsylvania.....	1	(1)	(1)							(1)	(1)	(1)	(1)	(1)	(1)											
Wisconsin.....	4	356	32.59	2	3	4	6	14	12	56	121	81	52	5												
Total.....	47	3,256	33.35	26	74	56	74	122	370	511	546	615	398	187	166	73	22	12	2	1	1					
Assemblers, body-frame, female:																										
Indiana.....	2	6	14.15		1	1	2	1	1																	
Michigan.....	2	2	17.44				1																			
New York.....	1	(1)	(1)						(1)																	
Total.....	5	12	17.66		1	1	3	1	6																	

Assemblers, chassis, male:																
Illinois	4	251	33.04		1	4	7	12	15	98	84	30				
Indiana	5	214	27.23	2	2	1	6	15	77	36	20	9	3		1	1
Michigan	17	2,534	35.81	5	24	20	38	43	142	368	549	483	267	528	45	13
New Jersey	4	403	30.56	2	12	4	3	9	45	118	108	52	33	8	6	1
New York	6	249	33.38	2	1	1	3	11	20	39	51	81	33	3	1	3
Ohio	10	578	31.06	2	10	5	11	18	36	113	248	89	36	8	1	1
Pennsylvania	3	163	34.12	2	1	2	6	6	20	18	18	39	24	25	2	
Wisconsin	4	201	29.17		1		4	13	31	77	54	9	2	3		7
Total	53	4,593	33.72	15	52	33	75	122	383	784	1,155	869	434	578	55	19
Assemblers, chassis, female:																
Indiana	1	(1)	(1)					(1)								
Michigan	6	108	21.00		4	1	32	6	39	24	1	1				
Total	7	109	20.97		4	1	32	7	39	24	1	1				
Assemblers, frame, male:																
Illinois	3	35	29.28				1	2	7	12	7	4	2			
Indiana	5	117	31.17	2	1	3		5	20	15	24	26	19	1	1	
Michigan	13	599	35.02	2		6	6	16	38	79	155	143	91	20	9	31
New Jersey	2	28	33.13						1	5	16	3		2	1	
New York	7	86	35.20					3	9	13	13	34	2	1	4	7
Ohio	8	154	36.79			1		3	7	10	46	32	39	7	3	1
Pennsylvania	4	77	36.82	1	2		2	1	5	10	11	12	15	7	8	3
Wisconsin	3	29	32.92			1		1	7	6	4	4		3	2	
Total	45	1,125	34.72	5	4	10	10	31	94	150	276	258	168	41	28	42
Assemblers, motor, male:																
Illinois	7	275	38.54	1	2	2	1	6	12	24	42	79	42	28	19	12
Indiana	6	283	35.23	1	1	3	7	9	45	43	33	47	64	11	10	4
Michigan	19	3,050	37.39	4	22	9	17	34	78	208	435	980	1,023	162	44	26
New Jersey	2	84	36.87		1	2	1	5	19	16	5	13	3	5	1	8
New York	6	201	28.25	1		3	27	18	23	39	37	41	10	1	1	4
Ohio	11	661	32.36	2	9	8	9	8	38	129	254	111	63	26	1	4
Pennsylvania	3	169	35.55			1	2	1	6	20	55	43	24	11	5	
Wisconsin	5	136	31.19	1	3		2	6	6	22	68	14	6	5		
Total	59	4,869	35.90	10	38	28	66	83	213	509	940	1,328	1,235	249	91	50
Assemblers, motor, female:																
Illinois	1	(1)	(1)				(1)									
Indiana	1	(1)	(1)		(1)	(1)										
Michigan	7	63	21.24			3	11	9	27	10	3					
Total	9	81	18.99		2	11	19	9	27	10	3					

¹ Data included in total

TABLE E.—Average and classified actual earnings in one week in 18 specified occupations, 1928, by sex and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average actual earnings in 1 week	Number of wage earners who during 1 week earned—																						
				Under \$4	\$4 and under \$8	\$8 and under \$12	\$12 and under \$16	\$16 and under \$20	\$20 and under \$25	\$25 and under \$30	\$30 and under \$35	\$35 and under \$40	\$40 and under \$45	\$45 and under \$50	\$50 and under \$55	\$55 and under \$60	\$60 and under \$65	\$65 and under \$70	\$70 and under \$75	\$75 and under \$80	\$80 and under \$90	\$90 and under \$100	\$100 and under \$110	\$110 and over		
Automatic operators, lathe and screw machine, male:																										
Illinois.....	4	29	\$39.91						2	3	5	9	2	2	2											
Indiana.....	4	195	34.25	2	2	2	9	8	10	20	39	35	45	11	11	1										
Michigan.....	21	1,088	40.51	1	1	6	12	28	58	195	243	233	156	67	45	30	8	5	5	2						
New Jersey.....	2	24	52.39							1		4	2	4	3											
New York.....	8	295	35.50		2	3	7	6	15	34	77	70	46	19	12	1										
Ohio.....	8	152	33.73	1	7	4	1	6	6	18	29	32	27	20	1											
Pennsylvania.....	4	36	40.04						1	3	9	4	8	4	4											
Wisconsin.....	3	23	39.91		1			2	1	1	2	4	4		6	2										
Total.....	54	1,842	38.61	3	13	10	24	34	63	138	356	401	367	215	106	53	29	13	9	5	3					
Drill-press operators, male:																										
Illinois.....	6	274	35.00	1		3	4	5	24	42	56	50	46	23	9											
Indiana.....	9	564	29.98	2	14	17	25	17	69	112	129	105	46	21	2	4										
Michigan.....	28	5,698	36.52	8	32	53	75	104	178	456	1,391	1,352	1,262	497	194	47	39	8	2							
New Jersey.....	3	111	35.38					2	10	13	28	21	15	14	6											
New York.....	10	390	30.48	1	5	6	9	25	57	87	85	62	31	13	7	1										
Ohio.....	10	699	30.97	2	15	11	14	17	57	174	166	49	17	3												
Pennsylvania.....	6	486	34.81	3	5	8	9	16	26	61	127	94	61	42	24	6	2	1	1							
Wisconsin.....	6	266	33.83		4	1	9	14	17	43	53	50	41	25	6	3										
Total.....	78	8,488	35.10	17	76	100	145	200	438	988	2,043	1,909	1,551	652	251	61	43	11	3							
Drill-press hands, female:																										
Illinois.....	2	32	23.15		2		1	5	9	12	2	1														
Indiana.....	2	20	14.76			5	10	3	2																	
Michigan.....	5	68	22.66			3	1	9	39	10	4	1	1													
New Jersey.....	2	4	20.97			1	1			1	1															
New York.....	2	36	20.21			2	5	11	12	4	2															
Pennsylvania.....	2	4	22.92			1			2	1																
Total.....	15	164	21.22		2	11	19	28	64	28	9	2	1													

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Grinding-machine operators, male:																			
Illinois.....	6	139	36.66		1	1	1	5	3	14	26	46	20	11	8	3			
Indiana.....	6	816	32.37		4	7	8	10	18	71	87	56	24	10	10				
Michigan.....	27	3,657	30.31	2	17	17	28	35	93	207	793	868	740	384	230	122	70	39	12
New Jersey.....	3	109	40.98					4	4	8	9	23	21	15	5	1			
New York.....	8	466	34.72	2	5	3	12	12	23	58	83	112	64	28	27	20	11	1	2
Ohio.....	10	448	35.76	3	7	1	3	9	28	43	81	140	86	29	10	6	1	1	1
Pennsylvania.....	5	166	36.73		2	1	4	3	14	20	30	27	25	21	15	3	1		
Wisconsin.....	5	118	37.42		1	1	3	6	9	12	16	20	22	12	10	1	1	2	1
Total.....	70	5,419	38.06	7	37	31	59	84	192	433	1,125	1,282	1,002	524	325	160	84	43	17
Grinding-machine operators, female:																			
Indiana.....	1	(¹)	(¹)			(¹)		(¹)	(¹)										
Michigan.....	2	3	21.40					1	2										
Pennsylvania.....	1	(¹)	(¹)							(¹)									
Total.....	4	8	21.06			1		2	3	2									
Inspectors, male:																			
Illinois.....	5	148	35.94		1		1	5	9	26	36	23	29	5	4	3		4	1
Indiana.....	8	433	29.87	1	1	2	6	13	85	134	97	67	26	7	8		1		
Michigan.....	33	4,966	36.18	5	36	28	52	89	272	507	1,249	1,299	681	368	174	99	34	33	16
New Jersey.....	6	169	35.41	1		4	1	2	9	28	33	45	19	12	9	5	1		
New York.....	13	498	33.81	1	1	4	4	12	49	117	108	88	63	23	12	6	3	1	5
Ohio.....	12	772	32.77	1	6	9	6	15	57	228	187	135	66	31	11	9	5	1	1
Pennsylvania.....	6	451	36.64	1	5	1	6	6	17	70	106	61	64	46	31	8	4	3	2
Wisconsin.....	7	187	31.73			1	1	5	32	31	38	17	23	6	1	1			
Total.....	90	7,579	35.22	10	50	49	77	147	630	1,141	1,854	1,725	971	498	250	131	48	42	26
Inspectors, female:																			
Illinois.....	1	(¹)	(¹)			(¹)	(¹)												
Indiana.....	2	23	14.94			5		11	5	1									
Michigan.....	19	419	18.36	5	5	13	72	200	103	12	8	1							
New Jersey.....	1	(¹)	(¹)						(¹)	(¹)									
New York.....	1	(¹)	(¹)			(¹)	(¹)	(¹)	(¹)										
Ohio.....	1	(¹)	(¹)			(¹)	(¹)	(¹)	(¹)										
Pennsylvania.....	3	27	17.05	3		1		4	12	5	2								
Wisconsin.....	1	(¹)	(¹)			(¹)	(¹)	(¹)	(¹)										
Total.....	29	503	18.04	8	5	21	95	238	110	17	8	1							
Laborers, male:																			
Illinois.....	6	435	31.11	1	2	5	4	18	71	57	118	128	24	2	5				
Indiana.....	9	1,056	24.22	7	6	19	45	215	344	193	135	72	17	1	1	1			
Michigan.....	33	9,489	29.03	44	125	177	267	678	1,645	2,210	2,165	1,167	559	272	101	33	22	14	8
New Jersey.....	6	1,131	28.87	16	22	19	21	48	232	227	218	192	91	29	12	2	1	1	1
New York.....	13	1,021	27.95	5	25	13	33	66	246	288	136	98	76	17	4	5	5	4	
Ohio.....	12	1,488	24.69	30	48	49	58	203	349	395	187	82	74	10	3				
Pennsylvania.....	6	671	26.95	8	27	7	10	25	120	175	125	37	24	11	2				
Wisconsin.....	7	344	26.39	1	3	7	24	39	77	82	67	30	8	5	1				
Total.....	92	15,535	28.13	112	258	296	462	1,292	3,084	3,627	3,151	1,806	873	347	129	41	28	19	8

¹ Data included in total.

TABLE E.—Average and classified actual earnings in one week in 18 specified occupations, 1928, by sex and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average actual earnings in 1 week	Number of wage earners who during 1 week earned—																				
				Under \$4	\$4 and under \$8	\$8 and under \$12	\$12 and under \$16	\$16 and under \$20	\$20 and under \$25	\$25 and under \$30	\$30 and under \$35	\$35 and under \$40	\$40 and under \$45	\$45 and under \$50	\$50 and under \$55	\$55 and under \$60	\$60 and under \$65	\$65 and under \$70	\$70 and under \$75	\$75 and under \$80	\$80 and under \$90	\$90 and under \$100	\$100 and under \$110	\$110 and over
Laborers, female:																								
Illinois.....	1	(1)	(1)						(1)															
Michigan.....	11	97	\$20.71	2	2	4	9	17	53	7	3													
New Jersey.....	1	(1)	(1)		(1)																			
New York.....	2	4	16.72				2	2																
Ohio.....	3	13	20.66					4	7	2														
Pennsylvania.....	1	(1)	(1)				(1)	2																
Wisconsin.....	2	2	14.53																					
Total.....	21	119	20.32	2	3	4	14	23	61	9	3													
Lathe operators, male:																								
Illinois.....	6	227	35.42	2	1	1	8	5	8	24	53	56	45	16	3	3	1		1					
Indiana.....	8	311	31.69		4	6	4	8	29	72	85	72	18	6	4	2					1			
Michigan.....	24	3,495	39.34	3	12	13	26	38	70	170	650	863	852	433	219	76	48	10	3	1	7	3	1	
New Jersey.....	3	219	40.00			4	1	4	6	16	37	45	44	24	15	9	9							
New York.....	9	303	31.97	2	3	6	2	11	30	72	67	67	25	9	8	4								
Ohio.....	10	531	34.94	1	5	7	8	11	16	42	140	180	84	28	8									
Pennsylvania.....	5	282	37.87	1	1	1	2	6	13	19	37	68	60	30	15	3	2	2	2	2				
Wisconsin.....	4	185	35.28		2	1	5	10	15	18	33	36	37	18	8	1								
Total.....	69	5,553	37.74	9	28	39	56	93	187	433	1,119	1,387	1,165	564	280	99	60	16	6	7	4	1		
Letterers, strippers, and varnishers, male:																								
Illinois.....	2	8	30.98				1				3	2	1											
Indiana.....	6	72	35.28	1	2			1	12	11	8	9	14	6	4	3			1					
Michigan.....	23	369	60.19	1	1	5	2	2	4	7	14	21	33	41	47	44	23	14	14	11	27	39	17	2
New Jersey.....	4	22	42.04					1	1	1	6	4	5	1	1									
New York.....	8	50	44.27				1		1	4	7	8	9	8	1	4	3	1	2			1	1	
Ohio.....	10	82	51.00					2	2		3	11	11	12	14	6	9	6	3			1	1	1
Pennsylvania.....	1	(1)	(1)					(1)		(1)		(1)		(1)										
Wisconsin.....	5	35	33.23					2	1	4	6	5	(1)	11	3	2	1							
Total.....	59	650	52.45	2	3	5	4	8	21	32	47	63	86	71	70	58	37	22	20	12	28	41	18	2

Letterers, strippers, and varnishers, female:																									
Indiana.....	1	(1)	(1)						(1)	(1)															
Michigan.....	3	14	21.40			1	4	2	1	5			1												
New York.....	1	(1)	(1)											(1)											
Ohio.....	1	(1)	(1)				(1)	(1)																	
Total.....	6	26	23.30			1	5	3	7	7			1	2											
Machinists, male:																									
Illinois.....	7	80	40.28					4	2	6	11	16	13	16	4	5	3	1							
Indiana.....	7	148	36.93			3	2	1	7	28	22	37	17	11	7	11	7	4							
Michigan.....	31	2,880	42.84		4	12	11	9	34	67	221	582	646	338	173	107	73	62	22	8	7	4			
New Jersey.....	5	116	42.13						4	7	23	21	17	16	16	8	2	1	1			1			
New York.....	12	250	38.52		1	2	3	6	13	17	43	71	36	23	14	8	8	2				3			
Ohio.....	10	202	38.60		1		1	3	2	11	72	36	31	27	13	2	1	2							
Pennsylvania.....	5	226	43.51			1	3	3	6	15	24	41	37	30	28	19	12	2	2	1	2				
Wisconsin.....	4	63	29.11		1	1		4	20	11	9	10	3	2	2										
Total.....	81	3,465	41.74	2	6	18	20	30	88	162	425	814	800	461	259	156	103	70	25	9	12	5			
Milling-machine operators, male:																									
Illinois.....	6	82	35.84			1	1	3	5	16	16	15	12	5	3	1	1	2	1						
Indiana.....	8	146	31.91		2	2	3	4	21	27	37	25	12	8	4		1								
Michigan.....	25	2,136	37.71		2	13	18	22	74	143	402	502	581	227	78	30	12	2	2	1					
New Jersey.....	3	70	35.18						3	9	15	18	15	3	3	2	1	1							
New York.....	9	194	33.52		2	4	4	10	38	16	48	24	13	8	9	12	5	1							
Ohio.....	9	296	33.42		2	3	3	4	2	17	59	80	76	30	11	5	1		2	1					
Pennsylvania.....	6	213	33.21			1	1	3	9	19	45	50	40	18	15	6		4	1						
Wisconsin.....	4	94	34.87		1	1	2		6	13	14	21	19	5	6		1								
Total.....	70	3,231	36.72	5	22	31	35	54	173	302	657	731	722	285	123	52	25	9	4	1					
Sewing-machine operators, male:																									
Illinois.....	1	(1)	(1)	(1)			(1)	(1)		(1)	(1)	(1)	(1)												
Indiana.....	1	(1)	(1)				(1)	(1)		(1)	(1)	(1)	(1)												
Michigan.....	7	132	32.92				1	2	8	16	45	52	8												
New Jersey.....	1	(1)	(1)									(1)	(1)												
New York.....	2	22	35.88					1		4	4	(1)	(1)	1	1	2									
Wisconsin.....	1	(1)	(1)			(1)	(1)																		
Total.....	13	228	32.21	3	2	8	4	10	20	88	80	10	1	2											

¹Data included in total.

TABLE E.—Average and classified actual earnings in one week in 18 specified occupations, 1928, by sex and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average actual earnings in 1 week	Number of wage earners who during 1 week earned—																				
				Under \$4	\$4 and under \$8	\$8 and under \$12	\$12 and under \$16	\$16 and under \$20	\$20 and under \$25	\$25 and under \$30	\$30 and under \$35	\$35 and under \$40	\$40 and under \$45	\$45 and under \$50	\$50 and under \$55	\$55 and under \$60	\$60 and under \$65	\$65 and under \$70	\$70 and under \$75	\$75 and under \$80	\$80 and under \$90	\$90 and under \$100	\$100 and under \$110	\$110 and over
Sewing-machine operators, female:																								
Illinois.....	1	(1)	(1)	---	(1)	(1)	(1)	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Indiana.....	5	133	\$20.43	---	4	14	16	30	37	28	3	---	1	---	---	---	---	---	---	---	---	---	---	
Michigan.....	16	568	18.51	14	39	71	134	59	95	123	28	3	2	---	---	---	---	---	---	---	---	---	---	
New Jersey.....	2	22	15.74	1	7	1	1	2	7	3	---	---	---	---	---	---	---	---	---	---	---	---	---	
New York.....	6	43	24.21	---	1	1	1	8	12	12	5	2	1	---	---	---	---	---	---	---	---	---	---	
Ohio.....	9	57	24.26	---	2	2	2	9	20	9	10	2	1	---	---	---	---	---	---	---	---	---	---	
Pennsylvania.....	1	(1)	(1)	---	---	---	---	---	---	(1)	(1)	---	---	---	---	---	---	---	---	---	---	---	---	
Wisconsin.....	3	28	12.78	2	3	13	3	2	1	4	---	---	---	---	---	---	---	---	---	---	---	---	---	
Total.....	43	861	19.25	17	57	103	159	111	172	180	50	7	5	---	---	---	---	---	---	---	---	---	---	
Tool and die makers, male.																								
Illinois.....	6	40	39.64	---	---	---	---	---	---	3	4	10	18	4	1	---	---	---	---	---	---	---	---	
Indiana.....	8	274	39.27	---	1	2	1	4	15	28	49	55	45	34	13	13	5	5	2	2	---	---	---	
Michigan.....	29	2,391	48.78	---	3	10	15	13	25	45	118	236	530	471	332	190	120	92	78	57	27	17	7	
New Jersey.....	4	77	47.64	1	---	1	2	---	---	1	7	7	6	18	11	6	14	2	1	---	---	---	---	
New York.....	10	208	45.98	---	---	---	---	---	2	2	14	50	49	27	27	15	13	3	---	3	2	1	---	
Ohio.....	10	336	46.06	---	1	3	7	1	6	14	20	58	64	69	24	15	14	20	6	2	1	11	---	
Pennsylvania.....	5	126	41.71	---	---	1	5	---	---	4	24	22	42	10	11	7	2	1	---	---	---	---	---	
Wisconsin.....	5	71	30.48	---	---	1	5	10	7	9	15	9	10	2	2	1	---	---	---	---	---	---	---	
Total.....	77	3,523	46.86	1	5	17	31	28	56	106	251	447	764	635	421	247	168	123	87	64	31	29	7	5
Top builders, male:																								
Illinois.....	3	68	28.42	---	2	1	12	5	1	1	22	18	5	1	---	---	---	---	---	---	---	---	---	
Indiana.....	6	291	31.13	---	---	4	13	19	35	43	66	91	14	4	1	---	---	---	---	---	1	---	---	
Michigan.....	20	2,204	35.50	8	33	44	104	182	247	135	217	268	325	363	172	64	28	5	6	3	---	---	---	
New Jersey.....	4	500	28.53	5	21	5	9	18	44	131	159	73	31	4	---	---	---	---	---	---	---	---	---	
New York.....	7	293	38.59	---	2	2	3	7	16	36	48	53	39	40	21	16	9	1	---	---	---	---	---	
Ohio.....	10	354	37.73	---	1	4	7	9	24	32	74	49	48	55	40	9	1	---	---	---	1	---	---	
Pennsylvania.....	2	15	40.07	---	2	---	---	---	---	---	---	2	4	6	---	---	1	---	---	---	---	---	---	
Wisconsin.....	4	365	33.14	---	1	1	4	10	27	35	137	117	24	9	---	---	---	---	---	---	---	---	---	
Total.....	56	4,090	34.44	13	62	61	152	250	394	413	723	671	490	482	234	89	39	6	6	4	1	---	---	

Top builders, female:																
Indiana.....	2	15	23.86					6	3	4	2					
Michigan.....	3	149	23.87	1	6	1	4	32	52	22	18	11	2			
New York.....	1	(1)	(1)			(1)		(1)	(1)	(1)						
Ohio.....	2	78	19.93			3	10	26	34	4		1				
Pennsylvania.....	1	(1)	(1)						(1)							
Wisconsin.....	2	23	21.97			1	3		18			1				
Total.....	11	287	22.34	1	6	5	15	76	117	32	20	13	2			
Trim-bench hands, male:																
Illinois.....	1	(1)	(1)	(1)												
Indiana.....	5	37	24.92		1		9	3	6	6	6	3	3			
Michigan.....	10	258	28.29	3	7	10	21	39	31	24	41	37	23	11	7	4
New Jersey.....	1	(1)	(1)						(1)	(1)	(1)					
New York.....	2	9	20.54	1		1	1	1	2	1	1	1				
Ohio.....	5	49	33.21	1	1				6	10	11	7	7	5	1	
Wisconsin.....	1	(1)	(1)			(1)	(1)									
Total.....	25	385	28.12	6	9	12	34	43	49	53	70	48	33	16	8	4
Trim-bench hands, female:																
Indiana.....	4	50	17.91		1	10	9	8	15	7						
Michigan.....	12	501	18.12	17	31	79	75	70	120	89	17	3				
New Jersey.....	1	(1)	(1)		(1)				(1)	(1)						
New York.....	3	23	22.23				2	5	8	8						
Ohio.....	6	36	21.74	4	3	1	6	4	13	13	10	1				
Wisconsin.....	3	36	18.53	1	1	1	5	6	22							
Total.....	29	669	18.58	22	37	91	97	93	180	118	27	4				

1 Data included in total.

LIST OF BULLETINS OF THE BUREAU OF LABOR STATISTICS

The following is a list of bulletins of the Bureau of Labor Statistics published since July, 1912, except that in the case of bulletins giving the results of periodic surveys of the bureau only the latest bulletin on any one subject is here listed.

A complete list of the reports and bulletins issued prior to July, 1912, as well as the bulletins published since that date, will be furnished on application. Bulletins marked thus () are out of print.*

Cconciliation and Arbitration (including strikes and lockouts).

- *No. 124. Conciliation and arbitration in the building trades of Greater New York. [1913.]
- *No. 133. Report of the industrial council of the British Board of Trade on its inquiry into industrial agreements. [1913.]
- No. 139. Michigan copper district strike. [1914.]
- No. 144. Industrial court of the cloak, suit, and skirt industry of New York City. [1914.]
- No. 145. Conciliation, arbitration, and sanitation in the dress and waist industry of New York City. [1914.]
- *No. 191. Collective bargaining in the anthracite coal industry. [1916.]
- *No. 198. Collective agreements in the men's clothing industry. [1916.]
- No. 233. Operation of the industrial disputes investigation act of Canada. [1918.]
- No. 225. Joint industrial councils in Great Britain. [1919.]
- No. 233. History of the Shipbuilding Labor Adjustment Board, 1917 to 1919.
- No. 237. National War Labor Board: History of its formation, activities, etc. [1921.]
- No. 303. Use of Federal power in settlement of railway labor disputes. [1922.]
- No. 341. Trade agreement in the silk-ribbon industry of New York City. [1923.]
- No. 402. Collective bargaining by actors. [1926.]
- No. 468. Trade agreements, 1927.
- No. 481. Joint industrial control in the book and job printing industry. [1928.]

Cooperation.

- No. 313. Consumers' cooperative societies in the United States in 1920.
- No. 314. Cooperative credit societies in America and in foreign countries. [1922.]
- No. 437. Cooperative movement in the United States in 1925 (other than agricultural).

Employment and Unemployment.

- *No. 109. Statistics of unemployment and the work of employment offices in the United States. [1913.]
- No. 172. Unemployment in New York City, N. Y. [1915.]
- *No. 183. Regularity of employment in the women's ready-to-wear garment industries. [1915.]
- *No. 195. Unemployment in the United States. [1916.]
- No. 196. Proceedings of the Employment Managers' Conference held at Minneapolis, Minn., January 19 and 20, 1916.
- *No. 202. Proceedings of the conference of Employment Managers' Association of Boston, Mass., held May 10, 1916.
- No. 206. The British system of labor exchanges. [1916.]
- No. 227. Proceedings of the Employment Managers' Conference, Philadelphia, Pa., April 2 and 3, 1917.
- No. 235. Employment system of the Lake Carriers' Association. [1918.]
- *No. 241. Public employment offices in the United States. [1918.]
- No. 247. Proceedings of Employment Managers' Conference, Rochester, N. Y., May 9-11, 1918.
- No. 310. Industrial unemployment: A statistical study of its extent and causes. [1922.]
- No. 409. Unemployment in Columbus, Ohio, 1921 to 1925.

Foreign Labor Laws.

- *No. 142. Administration of labor laws and factory inspection in certain European countries. [1914.]
- No. 494. Labor legislation of Uruguay.

Housing.

- *No. 158. Government aid to home owning and housing of working people in foreign countries. [1914.]
- No. 263. Housing by employers in the United States. [1920.]
- No. 295. Building operations in representative cities in 1920.
- No. 500. Building permits in the principal cities of the United States in [1921 to] 1928.

Industrial Accidents and Hygiene.

- *No. 104. Lead poisoning in potteries, tile works, and porcelain enameled sanitary ware factories. [1912.]
- No. 120. Hygiene of the painters' trade. [1913.]
- *No. 127. Dangers to workers from dusts and fumes, and methods of protection. [1913.]
- *No. 141. Lead poisoning in the smelting and refining of lead. [1914.]
- *No. 157. Industrial accident statistics. [1915.]
- *No. 165. Lead poisoning in the manufacture of storage batteries. [1914.]
- *No. 179. Industrial poisons used in the rubber industry. [1915.]
- No. 188. Report of British departmental committee on the danger in the use of lead in the painting of buildings. [1916.]

Industrial Accidents and Hygiene—Continued.

- *No. 201. Report of committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions. [1916.]
- *No. 207. Causes of death, by occupation. [1917.]
- *No. 209. Hygiene of the printing trades. [1917.]
- *No. 219. Industrial poisons used or produced in the manufacture of explosives. [1917.]
- No. 221. Hours, fatigue, and health in British munition factories. [1917.]
- No. 230. Industrial efficiency and fatigue in British munition factories. [1917.]
- *No. 231. Mortality from respiratory diseases in dusty trades (inorganic dusts). [1918.]
- *No. 234. Safety movement in the iron and steel industry, 1907 to 1917.
- No. 236. Effects of the air hammer on the hands of stonecutters. [1918.]
- No. 249. Industrial health and efficiency. Final report of British Health of Munition Workers' Committee. [1919.]
- *No. 251. Preventable death in the cotton manufacturing industry. [1919.]
- No. 256. Accidents and accident prevention in machine building. [1919.]
- No. 267. Anthrax as an occupational disease. [1920.]
- No. 276. Standardization of industrial accident statistics. [1920.]
- No. 280. Industrial poisoning in making coal-tar dyes and dye intermediates. [1921.]
- No. 291. Carbon-monoxide poisoning. [1921.]
- No. 293. The problem of dust phthisis in the granite-stone industry. [1922.]
- No. 298. Causes and prevention of accidents in the iron and steel industry, 1910-1919.
- No. 306. Occupation hazards and diagnostic signs: A guide to impairments to be looked for in hazardous occupations. [1922.]
- No. 490. Statistics of industrial accidents in the United States to the end of 1927.
- No. 392. Survey of hygienic conditions in the printing trades. [1925.]
- No. 405. Phosphorus necrosis in the manufacture of fireworks and in the preparation of phosphorus. [1926.]
- No. 425. Record of industrial accidents in the United States to 1925.
- No. 488. Deaths from lead poisoning, 1925 to 1927.
- No. 427. Health survey of the printing trades, 1922 to 1925.
- No. 428. Proceedings of the Industrial Accident Prevention Conference, held at Washington, D. C., July 14-16, 1926.
- No. 460. A new test for industrial lead poisoning. [1928.]
- No. 466. Settlement for accidents to American seamen. [1928.]

Industrial Relations and Labor Conditions.

- No. 237. Industrial unrest in Great Britain. [1917.]
- No. 340. Chinese migrations, with special reference to labor conditions. [1923.]
- No. 349. Industrial relations in the West Coast lumber industry. [1923.]
- No. 361. Labor relations in the Fairmont (W. Va.) bituminous-coal field. [1924.]
- No. 380. Postwar labor conditions in Germany. [1925.]
- No. 383. Works council movements in Germany. [1925.]
- No. 384. Labor conditions in the shoe industry in Massachusetts, 1920-1924.
- No. 399. Labor relations in the lace and lace-curtain industries in the United States. [1925.]
- No. 483. Conditions in the shoe industry in Haverhill, Mass, 1928.

Labor Laws of the United States (including decisions of courts relating to labor).

- No. 211. Labor laws and their administration in the Pacific States. [1917.]
- No. 229. Wage-payment legislation in the United States. [1917.]
- No. 285. Minimum wage laws of the United States Construction and operation. [1921.]
- No. 321. Labor laws that have been declared unconstitutional. [1922.]
- No. 322. Kansas Court of Industrial Relations. [1923.]
- No. 343. Laws providing for bureaus of labor statistics, etc. [1923.]
- No. 370. Labor laws of the United States, with decisions of courts relating thereto. [1925.]
- No. 408. Laws relating to payment of wages. [1926.]
- No. 444. Decisions of courts and opinions affecting labor, 1926.
- No. 467. Minimum-wage legislation in various countries. [1928.]
- No. 486. Labor legislation of 1928.

Proceedings of Annual Conventions of the Association of Governmental Labor Officials of the United States and Canada. (Name changed in 1928 to Association of Governmental Officials in Industry of the United States and Canada.)

- *No. 266. Seventh, Seattle, Wash., July 12-15, 1920.
- No. 307. Eighth, New Orleans, La., May 2-6, 1921.
- No. 323. Ninth, Harrisburg, Pa., May 22-26, 1922.
- No. 352. Tenth, Richmond, Va., May 1-4, 1923.
- *No. 389. Eleventh, Chicago, Ill., May 19-23, 1924.
- *No. 411. Twelfth, Salt Lake City, Utah, August 13-15, 1925.
- No. 429. Thirteenth, Columbus, Ohio, June 7-10, 1926.
- No. 455. Fourteenth, Paterson, N. J., May 31 to June 3, 1927.
- No. 480. Fifteenth, New Orleans, La., May 15-24, 1928.

Proceedings of Annual Meetings of the International Association of Industrial Accident Boards and Commissions.

- No. 210. Third, Columbus, Ohio, April 25-28, 1926.
- No. 248. Fourth, Boston, Mass., August 21-25, 1927.
- No. 264. Fifth, Madison, Wis., September 24-27, 1918.
- *No. 273. Sixth, Toronto, Canada, September 23-26, 1919.
- No. 281. Seventh, San Francisco, Calif., September, 20-24, 1920.
- No. 304. Eighth, Chicago, Ill., September 19-23, 1921.
- No. 333. Ninth, Baltimore, Md., October 9-13, 1922.
- No. 359. Tenth, St. Paul, Minn., September 24-26, 1923.
- No. 385. Eleventh, Halifax, Nova Scotia, August 26-28, 1924.
- No. 395. Index to proceedings, 1914-1924.
- No. 406. Twelfth, Salt Lake City, Utah, August 17-20, 1925.
- No. 432. Thirteenth, Hartford, Conn., September 14-17, 1926.
- No. 456. Fourteenth, Atlanta, Ga., September 27-29, 1927.
- No. 485. Fifteenth, Paterson, N. J., September 11-14, 1928.

Proceedings of Annual Meetings of the International Association of Public Employment Services.

- No. 192. First, Chicago, December 19 and 20, 1913; second, Indianapolis, September 24 and 26, 1914; third, Detroit, July 1 and 2, 1915.
- No. 220. Fourth, Buffalo, N. Y., July 20 and 21, 1916.
- No. 311. Ninth, Buffalo, N. Y., September 7-9, 1921.
- No. 337. Tenth, Washington, D. C., September 11-13, 1922.
- No. 355. Eleventh, Toronto, Canada, September 4-7, 1923.
- No. 400. Twelfth, Chicago, Ill., May 19-23, 1924.
- No. 414. Thirteenth, Rochester, N. Y., September 15-17, 1925.
- No. 478. Fifteenth, Detroit, Mich., October 25-28, 1927.
- No. 501. Sixteenth, Cleveland, Ohio, September 18-21, 1928.

Productivity of Labor.

- No. 356. Productivity costs in the common-brick industry. [1924.]
- No. 360. Time and labor costs in manufacturing 100 pairs of shoes, 1923.
- No. 407. Labor cost of production and wages and hours of labor in the paper box-board industry. [1926.]
- No. 412. Wages, hours, and productivity in the pottery industry, 1925.
- No. 441. Productivity of labor in the glass industry. [1927.]
- No. 474. Productivity of labor in the merchant blast furnaces. [1923.]
- No. 475. Productivity of labor in newspaper printing. [1923.]

Retail Prices and Cost of Living.

- *No. 121. Sugar prices, from refiner to consumer. [1913.]
- *No. 130. Wheat and flour prices, from farmer to consumer. [1913.]
- No. 164. Butter prices, from producer to consumer. [1914.]
- No. 170. Foreign food prices as affected by the war. [1915.]
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Miscellaneous Series.

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