

UNITED STATES DEPARTMENT OF LABOR

JAMES J. DAVIS, Secretary

BUREAU OF LABOR STATISTICS

ETHELBERT STEWART, Commissioner

**BULLETIN OF THE UNITED STATES
BUREAU OF LABOR STATISTICS} No. 522**

WAGES AND HOURS OF LABOR SERIES

**WAGES AND HOURS OF LABOR IN
DUNDRIES AND MACHINE SHOPS
1929**



OCTOBER, 1930

**UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1930**

X9(F191):951-952.73
GO

38589

BULLETIN OF THE U. S. BUREAU OF LABOR STATISTICS

NO. 522

WASHINGTON

OCTOBER, 1930

WAGES AND HOURS OF LABOR IN FOUNDRIES AND MACHINE SHOPS IN 1929

INTRODUCTION AND SUMMARY

This bulletin presents the results of a study of wages and hours of labor of wage earners in foundries and in machine shops in the United States in the summer of 1929, by occupations.

Table 1 shows summary figures for wage earners in all occupations and in each occupation in foundries and in machine shops in 1929 in comparison with summaries for other years in which studies were made. Average full-time hours per week for all employees in foundries were 51.0 or 0.1 hour less than in 1927. Average earnings per hour were 62.4 cents or the same as in 1927, and average full-time earnings per week were \$31.82 or 7 cents per week less than in 1927. Average full-time hours per week for all employees in machine shops in 1929 (p. 3) were 50.3 or 0.2 hour more than in 1927; earnings per hour were 63.8 cents in 1929 or 1.3 cents more than in 1927; and full-time earnings per week were \$32.09 or 78 cents more than in 1927.

TABLE 1.—Average hours and earnings with index numbers, 1925 to 1929, by occupation and sex

FOUNDRIES									
[1923=100.0]									
Occupation and sex	Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers of—		
							Full-time hours per week	Earnings per hour	Full-time earnings per week
The Industry									
All occupations:									
Males									
	1923	351	31,856	52.4	\$.560	\$29.34	100.0	100.0	100.0
	1925	413	39,915	51.5	.612	31.82	98.3	109.3	107.4
	1927	417	38,504	51.1	.626	31.99	97.5	111.8	109.0
	1929	399	40,032	51.0	.625	31.88	97.3	111.6	108.7
Females									
	1923	22	310	49.3	.404	19.92	100.0	100.0	100.0
	1925	43	478	49.0	.437	20.92	99.4	106.7	105.0
	1927	42	439	48.0	.459	22.49	99.4	113.6	112.9
	1929	41	359	48.7	.451	22.41	100.8	111.6	112.5
Males and females									
	1923	351	32,166	52.4	.558	29.24	100.0	100.0	100.0
	1925	413	40,393	51.8	.610	31.48	98.3	109.3	107.5
	1927	417	38,943	51.1	.624	31.89	97.5	111.8	109.1
	1929	399	40,391	51.0	.624	31.82	97.3	111.8	108.8

2 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

TABLE 1.—Average hours and earnings, with index numbers, 1923 to 1929, by occupation and sex—Continued

FOUNDRIES—Continued

Occupation and sex	Year	Number of establishments	Number of employ-ees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers of—			
							Full-time hours per week	Earn-ings per hour	Full-time earnings per week	
By Occupation										
Chippers and rough grinders:										
Male.....	1923	319	2,923	52.5	\$0.465	\$24.41	100.0	100.0	100.0	
	1925	383	4,110	51.5	.521	26.83	98.1	112.0	109.9	
	1927	379	3,857	51.1	.537	27.44	97.3	115.5	112.4	
	1929	367	4,233	51.4	.538	27.65	97.9	115.7	113.3	
Female.....	1927	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	
Core makers:										
Male.....	1923	345	2,526	51.4	.690	35.47	100.0	100.0	100.0	
	1925	393	3,067	50.3	.734	36.92	97.9	106.4	104.1	
	1927	401	3,040	50.4	.755	38.05	98.1	109.4	107.3	
	1929	387	3,370	49.9	.744	37.13	97.1	107.8	104.7	
Female.....	1923	22	240	49.2	.431	21.21	100.0	100.0	100.0	
	1925	43	353	48.0	.444	21.58	98.8	103.0	101.7	
	1927	41	324	48.4	.491	23.76	98.4	113.9	112.0	
	1929	38	280	49.1	.469	23.03	99.8	108.8	108.6	
Crane operators:										
Male.....	1923	197	593	53.5	.522	27.93	100.0	100.0	100.0	
	1925	236	772	52.7	.562	29.62	98.5	107.7	106.1	
	1927	242	875	52.6	.575	30.25	98.3	110.2	108.3	
	1929	237	927	52.2	.582	30.38	97.6	111.5	108.8	
Cupola tenders:										
Male.....	1923	342	556	52.4	.546	28.61	100.0	100.0	100.0	
	1925	380	567	51.9	.635	32.96	99.0	116.3	115.2	
	1927	393	602	51.8	.620	32.12	98.9	113.6	112.3	
	1929	364	500	51.0	.634	32.33	97.3	116.1	113.0	
Laborers:										
Male.....	1923	343	9,265	53.5	.428	22.90	100.0	100.0	100.0	
	1925	389	10,931	52.5	.481	25.25	98.1	112.4	110.3	
	1927	401	11,017	52.1	.491	25.58	97.4	114.7	111.7	
	1929	384	10,980	52.1	.490	25.53	97.4	114.5	111.5	
Female.....	1923	8	68	49.4	.316	15.61	100.0	100.0	100.0	
	1925	17	125	50.2	.382	19.18	101.6	120.9	122.9	
	1929	7	74	51.6	.386	19.92	104.5	122.2	127.6	
Molders, hand, bench:										
Male.....	1923	262	2,379	51.3	.687	35.24	100.0	100.0	100.0	
	1925	325	2,363	50.2	.768	38.55	97.9	111.8	109.4	
	1927	324	2,063	50.5	.789	39.84	98.4	114.8	113.1	
	1929	321	2,098	49.6	.783	38.84	96.7	114.0	110.2	
Molders, hand, floor:										
Male.....	1923	346	4,904	51.2	.729	37.32	100.0	100.0	100.0	
	1925	401	5,612	50.4	.802	40.42	98.4	110.0	108.3	
	1927	402	5,375	49.9	.820	40.92	97.5	112.5	109.6	
	1929	385	5,453	50.0	.828	41.40	97.7	113.6	110.9	
Molders, machine:										
Male.....	1923	161	1,993	51.9	.678	35.19	100.0	100.0	100.0	
	1925	229	3,140	50.1	.733	36.72	96.5	108.1	104.3	
	1927	220	3,102	50.4	.763	37.95	97.1	111.1	107.8	
	1929	249	3,854	50.4	.734	36.99	97.1	108.3	105.1	
Molders' helpers, floor:										
Male.....	1923	234	1,986	52.2	.433	22.60	100.0	100.0	100.0	
	1925	285	2,642	51.8	.460	23.83	99.2	106.2	105.4	
	1927	247	1,820	51.2	.484	24.78	98.1	111.8	109.6	
	1929	251	1,919	51.1	.502	25.65	97.9	115.9	113.5	
Pattern makers:										
Male.....	1923	283	1,314	51.1	.750	38.38	100.0	100.0	100.0	
	1925	346	1,827	50.4	.804	40.52	98.6	107.2	105.6	
	1927	259	1,512	50.3	.830	41.75	98.4	110.7	108.8	
	1929	191	1,127	50.1	.833	41.73	98.0	111.1	108.7	
Rough carpenters:										
Male.....	1923	261	680	52.0	.534	27.77	100.0	100.0	100.0	
	1925	293	634	51.1	.591	30.20	98.3	110.7	108.8	
	1927	292	625	50.8	.609	30.94	97.7	114.0	111.4	
	1929	270	609	50.7	.622	31.54	97.5	116.5	113.6	

..... included in total for all occupations.

TABLE 1.—Average hours and earnings, with index numbers, 1923 to 1929, by occupation and sex—Continued

Occupation and sex	Year	Number of establishments	Number of employes	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers of—		
							Full-time hours per week	Earnings per hour	Full-time earnings per week
FOUNDRIES—Continued									
By Occupation—Continued									
Sand blasters: ¹									
Male.....	1927	175	362	51.7	\$0.591	\$30.55			
	1929	183	337	51.9	.592	30.72			
Other employees:									
Male.....	1923	304	2,737	53.6	.503	26.96	100.0	100.0	100.0
	1925	378	4,250	52.7	.576	30.36	98.3	114.5	112.6
	1927	365	4,254	51.0	.587	29.94	95.1	116.7	111.1
	1929	360	4,725	51.2	.592	30.31	95.5	117.7	112.4
Female ²	1923	2	2	51.0	.205	10.46	100.0	100.0	100.0
	1927	15	107	50.6	.380	19.23	99.2	185.4	183.8
	1929	5	5	50.5	.492	24.85	99.0	240.0	237.6

MACHINE SHOPS									
The Industry									
All occupations:									
Males.....	1923	429	58,506	50.8	\$0.590	\$28.45	100.0	100.0	100.0
	1925	511	85,199	50.4	.604	30.44	99.2	107.9	107.0
	1927	526	85,309	50.1	.629	31.51	98.6	112.3	110.8
	1929	508	89,935	50.3	.641	32.24	99.0	114.5	113.3
Females.....	1923	19	408	49.1	.366	17.97	100.0	100.0	100.0
	1925	36	1,075	49.3	.420	20.71	100.4	114.8	115.2
	1927	50	1,470	48.9	.403	19.71	99.6	110.1	109.7
	1929	56	1,556	49.3	.399	19.67	100.4	109.0	109.5
Males and females.....	1923	429	58,914	50.8	.559	28.40	100.0	100.0	100.0
	1925	511	86,274	50.4	.602	30.34	99.2	107.7	106.8
	1927	526	86,779	50.1	.625	31.31	98.6	111.8	110.2
	1929	508	91,491	50.3	.638	32.09	99.0	114.1	113.0

By Occupation									
Assemblers:									
Male.....	1923	310	5,681	50.6	\$0.575	\$29.10	100.0	100.0	100.0
	1925	306	7,151	49.6	.694	31.45	98.0	110.3	108.1
	1927	368	8,019	50.1	.653	32.72	99.0	113.6	112.4
	1929	335	7,670	50.1	.657	32.92	99.0	114.3	113.1
Female.....	1923	6	54	50.2	.350	17.57	100.0	100.0	100.0
	1925	9	150	50.7	.444	22.51	101.0	126.9	128.1
	1927	14	120	49.6	.423	20.94	98.6	120.9	119.2
	1929	20	190	49.8	.441	21.96	99.2	126.0	125.0
Blacksmiths:									
Male.....	1923	345	797	50.8	.678	34.44	100.0	100.0	100.0
	1925	395	885	50.2	.717	35.99	98.8	105.8	104.5
	1927	406	845	50.2	.726	36.45	98.8	107.1	105.8
	1929	397	857	50.1	.742	37.17	98.6	109.4	107.9
Blacksmiths' helpers:									
Male.....	1923	282	945	50.8	.489	24.84	100.0	100.0	100.0
	1925	298	857	50.5	.504	25.45	99.4	103.1	102.5
	1927	291	722	50.2	.525	26.36	98.8	107.4	106.1
	1929	285	800	49.9	.534	26.65	98.2	109.2	107.3
Boring-mill operators:									
Male.....	1923	271	1,455	50.8	.660	33.53	100.0	100.0	100.0
	1925	341	2,135	50.4	.688	34.68	99.2	104.2	103.4
	1927	354	2,208	50.7	.727	36.86	99.8	110.2	109.9
	1929	372	2,333	51.1	.750	38.33	100.6	113.6	114.3
Crane operators:									
Male.....	1923	167	525	51.1	.501	25.60	100.0	100.0	100.0
	1925	214	764	50.7	.524	26.57	99.2	104.6	103.8
	1927	218	865	51.2	.540	27.65	100.2	107.8	108.0
	1929	233	960	50.7	.555	28.14	99.2	110.8	109.9
Female.....	1927	2	4	51.3	.431	22.11			
	1929	2	7	50.7	.425	21.55			

¹ Excluded with "Other employees" in 1923 and 1925.

² Included with "L"

4 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

TABLE 1.—Average hours and earnings, with index numbers, 1923 to 1929, by occupation and sex—Continued

MACHINE SHOPS—Continued

Occupation and sex	Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers of—		
							Full-time hours per week	Earnings per hour	Full-time earnings per week
By Occupation—Continued									
Drill-press operators:									
Male.....	1923	350	3,634	50.8	\$0.527	\$26.77	100.0	100.0	100.0
	1925	423	5,012	50.4	.579	29.18	99.2	109.9	109.0
	1927	433	4,759	50.1	.605	30.31	98.6	114.8	113.2
	1929	440	5,291	50.3	.628	31.59	99.0	119.2	118.0
Female.....	1923	5	33	48.5	.410	20.30	100.0	100.0	100.0
	1925	16	93	49.0	.477	23.37	99.0	116.3	115.1
	1927	22	121	48.4	.448	22.13	99.8	109.3	109.0
	1929	17	77	49.2	.410	20.17	99.4	100.0	99.4
Fitters and bench hands:									
Male.....	1923	271	4,721	49.9	.616	30.74	100.0	100.0	100.0
	1925	388	8,157	49.8	.643	32.02	99.8	104.4	104.2
	1927	332	6,661	49.5	.662	32.77	99.2	107.5	106.6
	1929	367	7,715	49.8	.677	33.71	99.8	109.9	109.7
Female.....	1923	4	60	49.0	.420	20.58	100.0	100.0	100.0
	1925	14	146	49.3	.468	23.07	100.6	111.4	112.1
	1927	20	341	49.0	.411	20.14	100.0	97.9	97.9
	1929	14	175	48.6	.450	21.87	99.2	107.1	106.3
Grinding-machine operators:									
Male.....	1923	221	1,255	50.5	.586	29.59	100.0	100.0	100.0
	1925	267	2,016	50.3	.637	32.04	99.6	108.7	108.3
	1927	298	2,285	50.1	.668	33.47	99.2	114.0	113.1
	1929	313	2,888	51.0	.701	35.75	101.0	119.6	120.8
Female.....	1923	2	2	52.0	.310	16.12	100.0	100.0	100.0
	1927	5	15	48.6	.444	21.58	93.5	143.2	133.9
	1929	7	19	50.6	.343	17.36	97.3	110.6	107.7
Hammersmiths: *									
Male.....	1929	52	226	50.3	.888	44.67	-----	-----	-----
Helpers, not otherwise specified: *									
Male.....	1929	322	3,443	50.2	.514	25.80	-----	-----	-----
Laborers:									
Male.....	1923	375	8,355	51.1	.418	21.35	100.0	100.0	100.0
	1925	439	9,833	50.6	.456	23.07	99.0	109.1	108.1
	1927	459	8,342	50.4	.456	22.98	98.6	109.1	107.6
	1929	452	8,506	50.5	.469	23.68	98.8	112.2	110.9
Female.....	1923	5	80	48.2	.323	15.57	100.0	100.0	100.0
	1929	3	11	50.8	.349	17.73	105.4	108.0	113.9
Lathe operators, engine:									
Male.....	1923	347	4,421	50.9	.633	32.22	100.0	100.0	100.0
	1925	401	5,856	50.3	.663	33.35	98.8	104.7	103.5
	1927	414	5,964	50.2	.695	34.89	98.6	109.8	108.3
	1929	421	5,640	50.3	.717	36.07	98.8	113.3	111.9
Female.....	1927	2	7	48.4	.385	18.63	-----	-----	-----
Lathe operators, turret:									
Male.....	1923	251	2,147	50.5	.610	30.81	100.0	100.0	100.0
	1925	328	3,393	50.2	.647	32.48	99.4	106.1	105.4
	1927	343	3,167	50.0	.675	33.76	99.0	110.7	109.5
	1929	359	3,855	50.5	.700	35.35	100.0	114.8	114.7
Female.....	1925	3	27	49.9	.488	24.35	-----	-----	-----
	1927	8	46	50.0	.549	27.45	-----	-----	-----
	1929	3	13	48.9	.432	21.12	-----	-----	-----
Machinists:									
Male.....	1923	331	2,952	50.0	.683	34.15	100.0	100.0	100.0
	1925	374	3,820	49.9	.702	35.03	99.8	102.8	102.6
	1927	395	3,794	49.5	.728	36.04	99.0	108.6	105.5
	1929	379	3,036	49.8	.769	38.80	99.6	108.2	107.8

* Included with "Other employees" in 1925.

* Included with "Other skilled employees" in 1923, 1925, and 1927.

* Included with "Other employees" in 1923, 1925, and 1927.

* Included with "Other employees" in 1925 and 1927.

TABLE 1.—Average hours and earnings, with index numbers, 1923 to 1929, by occupation and sex—Continued

MACHINE SHOPS—Continued

Occupation and sex	Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers of—		
							Full-time hours per week	Earnings per hour	Full-time earnings per week
By Occupation—Continued									
Machinists' and toolmakers' helpers:									
Male.....	1923	251	1,616	50.4	\$0.464	\$23.39	100.0	100.0	100.0
	1925	262	1,641	49.8	.494	24.60	98.8	106.5	105.2
	1927	269	1,671	50.1	.510	25.55	99.4	108.9	109.2
	1929	229	1,006	50.3	.504	25.35	99.8	108.6	108.4
Milling-machine operators:									
Male.....	1923	268	1,938	50.0	.605	30.25	100.0	100.0	100.0
	1925	339	2,925	48.7	.653	32.45	99.4	107.9	107.3
	1927	343	2,872	49.7	.685	34.04	99.4	113.2	112.5
	1929	358	3,440	50.2	.697	34.99	100.4	116.2	115.7
Female.....	1925	7	32	49.4	.497	24.55			
	1927	3	17	48.8	.489	23.86			
	1929	5	15	47.6	.504	23.99			
Packers and craters: ¹									
Male.....	1925	274	1,488	50.5	.520	26.26			
	1927	288	1,793	50.1	.537	26.90			
	1929	239	1,455	50.0	.547	27.35			
Female.....	1925	10	68	49.7	.354	17.59			
	1927	7	44	49.5	.389	19.26			
	1929	15	50	49.0	.371	18.18			
Pattern makers: ¹									
Male.....	1927	235	1,228	49.6	.841	41.71			
	1929	288	1,652	49.9	.846	42.22			
Planer operators:									
Male.....	1923	272	1,339	50.6	.663	33.55	100.0	100.0	100.0
	1925	327	1,838	50.2	.705	35.39	99.2	106.3	105.6
	1927	339	1,818	50.5	.742	37.47	99.8	111.9	111.7
	1929	344	1,963	50.7	.754	38.23	100.2	113.7	113.9
Polishers and buffers: ¹⁰									
Male.....	1927	109	580	49.4	.699	34.53			
	1929	115	587	50.1	.674	33.77			
Female.....	1927	3	6	49.0	.450	22.06			
Screw-machine operators: ¹¹									
Male.....	1923	177	1,047	50.6	.564	28.54	100.0	100.0	100.0
	1925	215	1,482	49.8	.643	32.02	98.4	114.0	112.2
	1927	218	1,520	49.8	.664	33.07	98.4	117.7	115.9
Female.....	1927	3	10	48.7	.435	21.18			
Screw-machine operators, hand: ¹²									
Male.....	1929	155	966	50.2	.676	33.94			
Female.....	1929	2	18	49.5	.426	21.09			
Screw-machine operators, semi-automatic: ¹³									
Male.....	1929	41	171	51.5	.644	33.17			
Screw-machine operators, automatic: ¹³									
Male.....	1929	144	762	51.4	.758	38.96			
Sheet-metal machine operators: ¹⁰									
Male.....	1927	137	867	50.2	.603	30.27			
	1929	149	1,186	49.4	.630	31.12			
Female.....	1927	12	167	48.7	.420	20.45			
	1929	9	63	48.9	.440	21.52			
Tool makers:									
Male.....	1923	274	1,661	50.4	.693	34.93	100.0	100.0	100.0
	1925	346	2,573	50.0	.737	36.35	99.2	104.9	104.1
	1927	354	2,863	49.7	.756	37.57	98.6	109.1	107.6
	1929	350	2,850	50.0	.780	39.00	99.2	112.6	111.7

¹ Included with "Laborers" in 1923.¹⁰ Included with "Other skilled employees" in 1923 and 1925.¹¹ Included with "Other machine operators" in 1923 and 1925.¹² This occupation was divided in 1929, into 3 groups: Hand, semiautomatic, and automatic.¹³ Included with "Screw-machine operators" in 1923, 1925, and 1927.

TABLE 1.—Average hours and earnings, with index numbers, 1923 to 1929, by occupation and sex—Continued

MACHINE SHOPS—Continued

Occupation and sex	Year	Number of establishments	Number of employ-ees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers of—		
							Full-time hours per week	Earnings per hour	Full-time earnings per week
By Occupation—Continued									
Other machine operators:¹¹									
Male.....	1923	289	2,670	50.5	\$0.556	\$28.08	100.0	100.0	100.0
	1925	371	4,066	50.5	.630	31.82	100.0	113.3	113.3
Female.....	1923	6	76	48.2	.422	20.34	100.0	100.0	100.0
	1925	16	201	48.8	.441	21.52	101.2	104.5	105.8
Other precision-machine operators:¹⁰									
Male.....	1927	316	2,001	50.5	.659	33.28	-----	-----	-----
	1929	301	1,813	51.0	.655	33.41	-----	-----	-----
Female.....	1927	8	122	49.3	.330	16.27	-----	-----	-----
	1929	11	211	48.8	.428	20.89	-----	-----	-----
Other skilled employees:									
Male.....	1923	356	5,312	50.9	.618	31.46	100.0	100.0	100.0
	1925	458	9,602	50.4	.647	32.61	99.0	104.7	103.7
	1927	468	11,113	50.1	.650	32.57	98.4	105.2	103.5
	1929	470	10,786	50.3	.686	34.51	98.8	111.0	109.7
Female.....	1923	4	36	51.3	.313	16.06	100.0	100.0	100.0
	1925	13	215	48.9	.372	18.19	95.3	118.8	113.3
	1927	27	317	47.7	.401	19.13	93.0	128.1	119.1
	1929	25	409	50.0	.375	18.75	97.5	119.8	116.7
Other employees:									
Male.....	1923	386	6,035	52.0	.459	23.87	100.0	100.0	100.0
	1925	498	9,715	52.5	.514	26.99	101.0	112.0	113.1
	1927	487	9,352	50.3	.526	26.46	96.7	114.6	110.9
	1929	467	8,108	50.3	.488	24.55	96.7	106.3	102.8
Female.....	1923	8	117	48.7	.325	15.83	100.0	100.0	100.0
	1925	23	143	49.2	.352	17.32	101.0	108.3	109.4
	1927	20	133	49.3	.309	15.23	101.2	95.1	96.2
	1929	18	298	49.0	.345	16.91	100.6	106.2	106.8

¹⁰ Included with "Other machine operators" in 1923 and 1925.

¹¹ This occupation was divided in 1927, into 2 groups: Sheet-metal machine operators and other precision-machine operators.

Index numbers of average full-time hours per week, average earnings per hour, and full-time earnings per week are shown in Table 1 with the 1923 average as the base or 100 per cent. The purpose of these numbers is to make easy the comparison of the averages one year with another over the period from 1923 to 1929. Examples: Average full-time hours per week of males and females in all occupations in foundries decreased from 5.24 or an index of 100 in 1923 to 51.5 or an index of 98.3 in 1925; to 51.1 or an index of 97.5 in 1927; and to an average of 51.0 or an index of 97.3 in 1929. Average earnings per hour increased from an index of 100 in 1923 to 109.3 in 1925; to 111.8 in 1927 and 1929; and average full-time earnings per week increased from an index of 100 in 1923 to 107.5 in 1925, and to 109.1 in 1927; and decreased to 108.8 in 1929. The difference in the trend of index numbers of average earnings per hour and average full-time earnings per week is due to the changes from year to year of average full-time hours per week.

Data for 1923 are presented in Table 1 for 32,166 wage earners in 351 foundries and 58,914 wage earners in 429 machine shops; for

1925 for 40,393 wage earners in 413 foundries and 86,274 wage earners in 511 machine shops; for 1927 for 38,943 wage earners in 417 foundries and 86,779 wage earners in 526 machine shops; and for 1929 for 40,391 wage earners in 399 foundries and 91,491 wage earners in 508 machine shops. Males were employed in each of these establishments. Females were employed in 22 of the 351 foundries and in 19 of the 429 machine shops in 1923; in 43 of the 413 foundries and in 36 of the 511 machine shops in 1925; in 42 of the 417 foundries and in 50 of the 526 machine shops in 1927; and in 41 of the 399 foundries and in 56 of the 508 machine shops in 1929.

It was not practicable for the bureau to make a complete census of all plants, but data were obtained from a sufficient number in each State in which the industry is of material importance to represent fairly the conditions in those States and in the country as a whole. Care was taken not to obtain too many plants from the large industrial centers, and in cases of extremely large plants only a percentage of the employees were used, so as not to give undue weight to such plants. A very large proportion of the establishments covered in 1929 was also included in 1923, 1925, and 1927. The 28 States included in the study were determined by the number of wage earners reported in the industry by the Census of Manufactures of the United States, each having a sufficient number of wage earners in the industry to warrant inclusion. Only 4 per cent of the total number of wage earners were employed in the States not included in the report.

Average full-time hours per week for males in all occupations in foundries decreased from 52.4 in 1923 to 51.5 in 1925, to 51.1 in 1927; and to 51.0 in 1929; and for females, decreased from 49.3 in 1923 to 49.0 in 1925 and 1927, and increased to 49.7 in 1929.

In 1929 average full-time hours per week by occupations for males in foundries ranged from 49.6 for molders, hand, bench, to 52.2 for crane operators, and those for females ranged from 49.1 for core makers to 51.6 for laborers.

Average earnings per hour in foundries for males in all occupations combined increased from 56 cents in 1923 to 61.2 cents in 1925, to 62.6 cents in 1927, and decreased to 62.5 cents in 1929; and for females increased from 40.4 cents in 1923 to 42.7 cents in 1925, to 45.9 cents in 1927, and decreased to 45.1 cents in 1929. Average earnings per hour by occupations for males in 1929 ranged from 49 cents for laborers to 83.3 cents for pattern makers, and for females ranged from 38.6 cents for laborers to 49.2 cents for the group designated as "Other employees."

Average full-time earnings per week in foundries for males in all occupations combined increased from \$29.34 in 1923 to \$31.52 in 1925, to \$31.99 in 1927, and decreased to \$31.88 in 1929; and for females increased from \$19.92 in 1923 to \$20.92 in 1925, to \$22.49 in 1927, and decreased to \$22.41 in 1929; and for both sexes in all occupations combined, or the industry, increased from \$29.24 in 1923 to \$31.42 in 1925, to \$31.89 in 1927, and decreased to \$31.82 in 1929. Average full-time earnings per week by occupations for males in 1929 ranged from \$25.53 for laborers to \$41.73 for pattern makers.

Data are shown for females in foundries for core makers and laborers only, and for a miscellaneous group designated "Other employees."

Table 2 presents for each sex and for both sexes combined in each State, in foundries and in machine shops, the number of establishments and wage earners included in the 1927 and the 1929 studies, average full-time hours per week, average earnings per hour, and average full-time earnings per week.

Average full-time hours of males in foundries ranged by States from 45.3 to 54.5 per week in 1927 and from 45.9 to 56.4 per week in 1929. Averages of females ranged from 45.6 to 51.6 per week in 1927 and from 45.7 to 53.0 per week in 1929. In machine shops averages of males ranged from 45.0 to 54.3 per week in 1927 and from 45.9 to 54.1 per week in 1929, and averages of females ranged from 43.0 to 51.6 per week in 1927 and from 47.1 to 51.6 per week in 1929.

Average earnings per hour of males in foundries ranged by States from 39.1 to 74.0 cents in 1927, and from 39.6 to 74.5 cents in 1929. Averages of females ranged from 40.5 to 53.7 cents in 1927 and from 36.6 to 52.4 cents in 1929. In machine shops, averages of males ranged from 43.3 to 74.6 cents in 1927 and from 43.4 to 77.9 cents in 1929. Averages of females ranged from 34.5 to 46.7 cents in 1927 and from 35.7 to 42.4 cents per hour in 1929.

Average full-time earnings per week of males in foundries ranged by States from \$21.31 to \$34.71 in 1927 and from \$20.95 to \$35.11 in 1929. Averages of females ranged from \$19.89 to \$26.21 in 1927 and from \$17.75 to \$23.95 in 1929. In machine shops averages of males ranged from \$23.51 to \$34.32 in 1927 and from \$22.70 to \$35.76 in 1929. Averages of females ranged from \$17.01 to \$23.44 in 1927 and from \$17.85 to \$21.31 per week in 1929.

TABLE 2.—Number of establishments and of wage earners, and average hours and earnings, 1927 and 1929, by sex and State

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time weekly earnings	
	1927	1929	1927	1929	1927	1929	1927	1929	1927	1929
	FOUNDRIES									
MALES										
Alabama.....	4	4	265	100	54.1	63.5	\$0.458	\$0.456	\$24.51	\$24.40
California.....	21	18	1,065	1,185	46.9	45.9	.740	.745	34.71	34.20
Colorado.....	3	3	266	307	47.0	49.2	.577	.596	27.12	29.32
Connecticut.....	16	16	1,537	1,629	52.2	50.8	.562	.611	30.00	31.04
Georgia.....	7	8	493	427	54.5	52.9	.391	.396	21.31	20.95
Illinois.....	28	28	2,835	3,036	49.5	50.5	.669	.665	33.12	33.58
Indiana.....	16	16	2,419	2,446	50.9	52.6	.589	.590	29.98	31.03
Iowa.....	11	9	755	959	53.2	52.9	.615	.614	32.72	32.48
Kansas.....	9	9	228	260	53.9	55.1	.474	.480	25.55	26.45
Kentucky.....	7	7	159	204	48.9	50.6	.500	.512	24.45	25.91
Louisiana.....	5	4	219	246	49.7	56.4	.481	.436	23.91	24.69
Maine.....	4	4	182	248	50.8	50.7	.589	.556	29.92	28.14
Maryland.....	8	7	486	421	52.1	50.9	.554	.558	28.86	28.40
Massachusetts.....	28	28	3,141	2,408	48.6	48.7	.677	.681	33.58	33.16
Michigan.....	39	37	4,389	4,334	51.7	51.9	.640	.644	33.09	33.42
Minnesota.....	5	6	439	457	53.2	52.0	.596	.565	31.71	28.86
Missouri.....	12	15	667	764	51.4	52.1	.629	.610	32.32	31.78
New Hampshire.....	8	6	195	143	49.6	50.9	.635	.599	31.50	20.49
New Jersey.....	17	16	2,880	2,368	52.0	50.6	.627	.636	32.00	32.18
New York.....	25	28	2,747	3,392	50.5	50.1	.657	.647	33.18	32.41
Ohio.....	52	44	4,550	4,323	52.2	51.8	.630	.625	32.89	32.38

¹ Increase due to change by one establishment from 44 hours per week in 1927 to 54 in 1929, affecting a considerable number of wage earners. Identical plants covered in both years.

TABLE 3.—Number of establishments and of wage earners, and average hours and earnings, 1927 and 1929, by sex and State—Continued

FOUNDRIES—Continued

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time weekly earnings	
	1927	1929	1927	1929	1927	1929	1927	1929	1927	1929
MALES—continued										
Oregon.....	7	5	224	206	45.3	46.1	\$0.659	\$0.677	\$29.85	\$31.21
Pennsylvania.....	40	39	5,066	5,285	51.1	51.6	.625	.608	31.94	31.22
Rhode Island.....	8	9	751	1,065	51.5	51.5	.611	.619	31.47	31.57
Tennessee.....	7	7	419	323	49.5	49.3	.470	.461	28.37	22.28
Texas.....	10	6	439	378	51.2	49.8	.470	.468	24.06	24.20
Washington.....	7	7	371	316	46.9	48.3	.603	.727	32.50	35.11
Wisconsin.....	13	13	1,917	2,155	52.3	51.2	.636	.644	33.26	32.97
Total.....	417	399	38,504	40,082	51.1	51.0	.626	.626	31.99	31.58
FEMALES										
Georgia.....		1		(¹)		(²)		(²)		(²)
Illinois.....	4	5	60	29	48.8	49.0	.537	.447	26.21	21.00
Indiana.....	2	2	50	39	50.0	50.0	.416	.434	20.80	21.70
Iowa.....	1		(¹)		(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Kentucky.....	2	3	5	8	47.0	50.0	.446	.412	20.94	20.60
Massachusetts.....	2	1	7	(¹)	48.0	(¹)	.474	(¹)	22.75	(¹)
Michigan.....	8	10	84	105	51.6	51.5	.434	.427	22.20	21.99
Minnesota.....	1		(¹)		(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
New Jersey.....	4	4	57	60	49.2	49.6	.451	.466	22.19	23.21
New York.....	7	5	65	54	45.6	48.8	.501	.489	22.85	23.86
Ohio.....	2	1	22	(¹)	49.0	(¹)	.406	(¹)	19.89	(¹)
Pennsylvania.....	3	2	33	19	48.7	48.5	.419	.366	20.41	17.75
Rhode Island.....	2	2	10	11	50.6	53.0	.405	.408	20.40	21.62
Wisconsin.....	4	5	21	37	46.9	45.7	.517	.524	24.25	23.95
Total.....	42	41	439	349	49.0	49.7	.459	.451	22.49	22.41
MALES AND FEMALES										
Alabama.....	4	4	255	190	54.1	52.5	.453	.446	24.51	24.40
California.....	21	18	1,065	1,185	46.9	45.9	.740	.745	34.71	34.20
Colorado.....	2	3	266	307	47.0	49.2	.577	.596	27.12	29.82
Connecticut.....	16	16	1,537	1,629	52.2	50.8	.592	.611	30.90	31.04
Georgia.....	7	8	493	429	54.5	52.9	.391	.395	21.31	30.90
Illinois.....	23	23	2,895	3,685	49.5	50.5	.666	.683	32.97	33.48
Indiana.....	16	16	2,478	2,485	50.9	52.5	.586	.587	29.83	30.82
Iowa.....	11	9	758	959	53.2	52.9	.614	.614	32.66	32.48
Kansas.....	9	9	228	280	53.9	55.1	.474	.480	25.55	26.45
Kentucky.....	7	7	164	207	48.8	50.6	.498	.510	24.35	25.51
Louisiana.....	5	4	219	246	49.7	56.4	.481	.436	23.91	24.59
Maine.....	4	4	182	248	50.8	50.7	.589	.555	29.92	28.14
Maryland.....	8	7	486	421	52.1	50.9	.554	.558	28.88	26.40
Massachusetts.....	23	23	3,148	2,410	49.6	48.7	.677	.680	33.69	33.12
Michigan.....	39	37	4,473	4,439	51.7	51.9	.636	.640	32.96	33.52
Minnesota.....	5	6	443	457	53.1	52.0	.594	.555	31.54	28.86
Missouri.....	12	15	667	764	51.4	52.1	.629	.610	32.23	31.78
New Hampshire.....	8	6	195	143	49.6	50.9	.635	.599	31.50	30.49
New Jersey.....	17	16	2,437	2,493	51.9	50.5	.623	.633	32.23	31.97
New York.....	25	22	2,810	3,446	50.4	50.1	.654	.644	32.67	32.26
Ohio.....	52	44	4,573	4,331	52.2	51.8	.629	.625	32.37	32.39
Oregon.....	7	5	224	208	45.3	46.1	.659	.677	29.85	31.21
Pennsylvania.....	40	39	5,119	5,394	51.1	51.6	.624	.607	31.89	31.22
Rhode Island.....	8	9	741	1,077	51.5	51.5	.608	.610	31.31	31.43
Tennessee.....	7	7	419	322	49.5	49.2	.470	.461	23.27	24.39
Texas.....	10	6	439	378	51.2	49.8	.470	.468	24.06	24.20
Washington.....	7	7	371	316	46.9	48.3	.603	.727	32.50	35.11
Wisconsin.....	13	13	1,948	2,202	52.2	51.1	.634	.643	33.09	32.95
Total.....	417	399	38,943	40,391	51.1	51.0	.624	.624	31.89	31.58

¹ Increase due to change by one establishment from 44 hours per week in 1927 to 54 in 1929, affecting a considerable number of wage earners. Identical plants covered in both years.

² Included in total.

10 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

TABLE 2.—Number of establishments and of wage earners, and average hours and earnings, 1927 and 1929, by sex and State—Continued

MACHINE SHOPS

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time weekly earnings	
	1927	1929	1927	1929	1927	1929	1927	1929	1927	1929
MALES										
Alabama.....	6	6	365	284	54.2	50.0	\$0.543	\$0.551	\$29.43	\$27.55
California.....	27	23	2,239	2,133	46.0	45.9	.746	.779	34.32	35.76
Colorado.....		2		654		48.1		.619		29.77
Connecticut.....	19	19	3,418	4,104	50.9	51.0	.639	.639	32.53	32.59
Georgia.....	8	8	336	332	54.3	52.3	.433	.434	23.51	22.70
Illinois.....	38	36	10,086	11,149	49.7	50.0	.685	.691	34.04	34.55
Indiana.....	16	16	2,944	2,965	50.9	51.0	.566	.564	28.81	28.76
Iowa.....	9	6	773	1,032	52.8	54.1	.515	.552	27.19	29.86
Kansas.....	10	10	309	436	51.1	54.1	.518	.508	26.47	27.48
Kentucky.....	9	10	407	624	47.3	50.7	.554	.526	26.20	26.67
Louisiana.....	6	5	252	217	51.5	54.1	.566	.489	29.15	26.45
Maine.....	4	4	466	650	47.8	49.0	.555	.544	26.53	26.66
Maryland.....	8	7	725	705	47.7	50.0	.605	.656	28.86	32.80
Massachusetts.....	40	38	7,707	7,673	48.9	49.3	.611	.630	29.88	31.06
Michigan.....	36	36	5,626	5,580	51.2	51.9	.627	.639	32.10	33.16
Minnesota.....	6	8	656	856	50.1	50.4	.593	.578	29.71	29.13
Missouri.....	21	19	1,343	1,153	51.3	51.4	.576	.574	29.55	29.50
New Hampshire.....	9	6	657	535	50.2	49.0	.638	.625	32.03	30.63
New Jersey.....	31	38	4,016	3,624	49.5	49.5	.647	.685	32.03	33.91
New York.....	26	32	8,740	8,958	48.5	48.7	.662	.683	32.11	33.26
Ohio.....	89	85	13,960	13,965	50.3	50.1	.619	.646	31.14	32.36
Oregon.....	6	6	313	396	45.0	47.2	.701	.691	31.55	32.62
Pennsylvania.....	45	48	11,977	12,537	51.2	51.7	.622	.615	31.85	31.80
Rhode Island.....	13	10	1,851	3,104	50.4	50.8	.594	.592	29.94	30.07
Tennessee.....	8	8	458	540	49.2	50.8	.540	.550	26.57	27.94
Texas.....	14	10	853	742	49.8	47.6	.531	.583	26.44	27.75
Washington.....	7	7	481	732	47.2	47.6	.714	.732	33.70	34.84
Wisconsin.....	15	15	4,333	4,255	52.6	51.6	.602	.639	31.67	32.97
Total.....	526	508	85,309	89,935	50.1	50.3	.629	.641	31.51	32.24
FEMALES										
Connecticut.....	1	2	(¹)	7	(¹)	50.0	(¹)	.424	(¹)	21.20
Illinois.....	2	6	47	86	51.6	50.7	.391	.377	20.18	19.11
Indiana.....	1	3	(¹)	49	(¹)	50.0	(¹)	.357	(¹)	17.85
Kentucky.....	1	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Maine.....	1		(¹)		(¹)		(¹)		(¹)	(¹)
Massachusetts.....	8	10	84	95	47.9	47.1	.434	.414	20.79	19.50
Michigan.....	16	10	345	261	50.2	51.6	.467	.411	23.44	21.21
New Hampshire.....	1	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
New Jersey.....	2	2	81	45	50.0	50.0	.377	.397	18.85	19.85
New York.....	3	6	277	411	48.1	47.8	.389	.408	18.71	19.50
Ohio.....	6	7	287	302	49.3	49.2	.345	.382	17.01	18.79
Pennsylvania.....	5	5	192	153	48.1	48.4	.398	.423	19.14	20.47
Rhode Island.....	2	2	67	111	43.0	51.1	.445	.417	19.14	21.31
Tennessee.....		1		(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Wisconsin.....	1		(¹)		(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Total.....	60	56	1,470	1,556	48.9	49.3	.403	.399	19.71	19.67
MALES AND FEMALES										
Alabama.....	6	6	365	284	54.2	50.0	.543	.551	29.43	27.55
California.....	27	23	2,239	2,133	46.0	45.9	.746	.779	34.32	35.76
Colorado.....		2		654		48.1		.619		29.77
Connecticut.....	19	19	3,419	4,111	50.9	51.0	.639	.639	32.53	32.59
Georgia.....	8	8	336	332	54.3	52.3	.433	.434	23.51	22.70
Illinois.....	38	36	10,133	11,205	49.7	50.0	.684	.689	33.99	34.48
Indiana.....	16	16	2,976	3,014	50.8	51.0	.564	.561	28.65	28.61
Iowa.....	9	6	773	1,032	52.8	54.1	.515	.552	27.19	29.86
Kansas.....	10	10	309	436	51.1	54.1	.518	.508	26.47	27.48
Kentucky.....	9	10	429	652	47.4	50.9	.540	.512	25.60	26.06
Louisiana.....	6	5	252	217	51.5	54.1	.566	.489	29.15	26.45
Maine.....	4	4	467	650	47.8	49.0	.554	.544	26.48	26.66
Maryland.....	8	7	725	705	47.7	50.0	.605	.656	28.86	32.80
Massachusetts.....	40	38	7,791	7,768	48.9	49.3	.609	.629	29.78	30.96
Michigan.....	36	36	5,971	5,841	51.2	51.8	.619	.630	31.69	32.63
Minnesota.....	6	8	656	856	50.1	50.4	.593	.578	29.71	29.13
Missouri.....	21	19	1,343	1,153	51.3	51.4	.576	.574	29.55	29.50

¹ Included in total.

TABLE 2.—Number of establishments and of wage earners, and average hours and earnings, 1927 and 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time weekly earnings	
	1927	1929	1927	1929	1927	1929	1927	1929	1927	1929
MALES AND FEMALES—CON.										
New Hampshire.....	9	6	685	572	50.2	49.0	\$0.629	\$0.610	\$31.58	\$29.89
New Jersey.....	31	28	4,097	3,669	49.5	49.5	.642	.682	31.78	33.76
New York.....	26	32	9,017	9,369	48.5	48.6	.654	.672	31.72	32.66
Ohio.....	89	85	14,267	14,267	50.3	50.1	.614	.641	30.88	32.11
Oregon.....	6	6	313	396	45.0	47.2	.701	.691	31.55	32.62
Pennsylvania.....	45	48	12,169	12,690	51.1	51.7	.619	.612	31.63	31.64
Rhode Island.....	13	10	1,918	3,215	50.2	50.8	.590	.586	29.62	29.77
Tennessee.....	8	8	458	541	49.2	50.8	.540	.550	28.57	27.94
Texas.....	14	10	853	742	49.8	47.6	.531	.583	28.44	27.75
Washington.....	7	7	481	732	47.2	47.6	.714	.732	33.70	34.84
Wisconsin.....	15	15	4,337	4,255	52.6	51.6	.602	.639	31.67	32.97
Total.....	526	508	86,779	91,491	50.1	50.3	.625	.638	31.31	32.09

The above table shows that average earnings per hour and average full-time earnings per week of machine-shop employees in Alabama, Georgia, Louisiana, Tennessee, and Texas were higher in 1927 and 1929 than the average of foundry employees in these States. Machinists in these States were paid higher wages than in many other States. Many of the shops in them have few or no "machine operators" or specialists, but on the other hand employ first-class machinists capable of operating, setting up, and repairing the various kinds of machines used in machine-shop work and also the fitting and assembling of the various parts of machinery. The tables of this bulletin show that while the total number of machine-shop wage earners covered in the five Southern States are only 2.3 per cent of the total covered in all States, the machinists covered in the five States are 6.1 per cent of the total number of machinists covered in all States, and that the average earnings per hour for the machinists covered in the five Southern States are \$0.762, compared with \$0.739 for all machinists in all States covered.

AVERAGE AND CLASSIFIED EARNINGS PER HOUR, BY OCCUPATION

Table 3 shows average earnings per hour and the percentage distribution, according to earnings, of employees in 8 representative occupations in foundries and in 17 representative occupations in machine shops in 1923, 1925, 1927, and 1929. The figures for the wage earners in these occupations fairly represent the percentage distribution, according to average earnings per hour, of the wage earners in all occupations in foundries and machine shops. Data in the table are for males in all of the 8 occupations in foundries and of the 17 occupations in machine shops and for females for 1 occupation only (core makers) in foundries. Average and classified earnings per hour for the wage earners in this table are also shown for each State in Table B, page 71.

12 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

The foundry wage workers in this table represent 85.6 per cent of the total number covered in 1923, 84.3 per cent in 1925, and 82.5 per cent of the number covered in 1927 and 1929. In machine shops the number of wage workers shown in this table as compared with the total number covered was 71.7 per cent in 1923, 67 per cent in 1925, 65.9 per cent in 1927, and 65.3 per cent in 1929.

Reading the figures for chippers and rough grinders in explanation of the data in the table, it is seen that average earnings per hour increased from an average of 46.5 cents in 1923 to 52.1 cents in 1925, to 53.7 cents in 1927, and to 53.8 cents in 1929, and that the average earnings per hour of 9 per cent of the 4,233 chippers and rough grinders covered in 1929 were less than 40 cents per hour, of 29 per cent were 40 and under 50 cents, of 34 per cent were 50 and under 60 cents, of 18 per cent were 60 and under 70 cents, and of 10 per cent were 70 cents and over per hour.

TABLE 3.—Average and classified earnings per hour in 8 specified occupations in foundries and 17 in machine shops, 1923 to 1929, by sex and year

Occupation and sex	Year	Number of establishments	Number of employees	Average earnings per hour	Per cent of employees whose earnings per hour were—														
					Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 35 cents	35 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 \$1.25	\$1.25 and under \$1.50	\$1.50 and over	
Chippers and rough grinders:																			
Male.....	1923	319	2,923	\$0.465	1	1	2	6	12	42	25	7	2	1	(1)	(1)	(1)	(1)	(1)
	1925	353	4,110	.521	(1)	1	1	2	6	34	33	13	5	3	1	(1)	(1)	(1)	(1)
	1927	379	3,847	.537	(1)	1	(1)	2	4	31	36	16	7	2	1	(1)	(1)	(1)	(1)
	1929	397	4,293	.538	(1)	1	1	3	4	29	34	18	6	3	1	(1)	(1)	(1)	(1)
Core makers:																			
Male.....	1923	345	2,526	.690	(1)	(1)	(1)	1	1	9	19	22	26	17	4	1	(1)	(1)	(1)
	1925	393	3,067	.734	(1)	(1)	(1)	(1)	1	6	13	19	20	19	14	7	(1)	(1)	(1)
	1927	401	3,040	.755	(1)	(1)	(1)	1	1	4	12	16	30	30	16	9	(1)	(1)	(1)
	1929	387	3,370	.744	(1)	(1)	(1)	1	1	6	12	18	30	17	15	9	(1)	(1)	(1)
Female.....	1923	22	246	.431	3	4	10	12	15	25	30	8	2	1	(1)	(1)	(1)	(1)	(1)
	1925	43	353	.444	1	5	6	10	16	30	20	7	2	1	(1)	(1)	(1)	(1)	(1)
	1927	41	324	.491	2	2	9	9	16	28	22	11	4	3	2	1	(1)	(1)	(1)
	1929	38	280	.469	(1)	2	8	13	11	26	21	11	4	1	1	1	(1)	(1)	(1)
Laborers:¹																			
Male.....	1923	343	9,265	.428	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	1925	399	10,931	.481	(1)	1	2	4	8	47	29	6	2	2	1	(1)	(1)	(1)	(1)
	1927	401	11,017	.491	(1)	(1)	2	3	5	45	32	7	3	2	(1)	(1)	(1)	(1)	(1)
	1929	384	10,990	.490	(1)	1	1	4	6	43	33	9	3	1	(1)	(1)	(1)	(1)	(1)
Molders, hand, bench:																			
Male.....	1923	363	2,379	.687	(1)	(1)	(1)	1	1	5	20	27	37	14	4	2	(1)	(1)	(1)
	1925	325	2,363	.768	(1)	(1)	1	(1)	1	3	12	23	19	16	16	8	2	(1)	(1)
	1927	324	2,063	.789	(1)	(1)	(1)	(1)	1	3	10	19	20	10	17	10	2	(1)	(1)
	1929	321	2,098	.783	(1)	(1)	(1)	(1)	1	4	9	19	19	17	18	11	2	(1)	(1)
Molders, hand, floor:																			
Male.....	1923	346	4,904	.729	(1)	(1)	(1)	(1)	(1)	2	11	24	31	23	5	3	(1)	(1)	(1)
	1925	401	5,612	.802	(1)	(1)	(1)	(1)	(1)	1	6	18	22	22	19	9	1	(1)	(1)
	1927	402	5,375	.820	(1)	(1)	(1)	(1)	(1)	2	6	14	19	23	22	12	1	(1)	(1)
	1929	385	5,483	.828	(1)	(1)	(1)	(1)	(1)	1	5	14	23	21	22	14	1	(1)	(1)
Molders, machine:¹																			
Male.....	1923	161	1,993	.678	(1)	(1)	(1)	(1)	1	5	16	22	22	17	10	6	1	(1)	(1)
	1925	229	3,140	.733	(1)	(1)	(1)	(1)	1	5	13	28	21	18	14	7	1	(1)	(1)
	1927	220	3,102	.753	(1)	(1)	(1)	(1)	1	6	15	22	21	16	11	6	1	(1)	(1)
	1929	249	3,854	.734	(1)	(1)	(1)	(1)	1	6	15	22	21	16	11	6	1	(1)	(1)
Molders' helpers, floor:¹																			
Male.....	1923	234	1,966	.433	1	4	3	7	8	38	28	8	3	1	(1)	(1)	(1)	(1)	(1)
	1925	285	2,642	.460	1	2	3	7	8	33	29	12	4	1	(1)	(1)	(1)	(1)	(1)
	1927	247	1,820	.484	2	2	2	9	7	33	29	12	4	1	(1)	(1)	(1)	(1)	(1)
	1929	251	1,919	.502	(1)	1	1	2	4	42	35	10	4	1	(1)	(1)	(1)	(1)	(1)

¹ Less than 1 per cent.

¹ Not classified in 1923.

TABLE 3.—Average and classified earnings per hour in 8 specified occupations in foundries and 17 in machine shops, 1923 to 1929, by sex and year—Continued

FOUNDRIES—Continued

Occupation and sex	Year	Number of establishments	Number of employees	Average earnings per hour	Per cent of employees whose earnings per hour were—														
					Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 35 cents	35 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 \$1.25	\$1.25 and under \$1.50	\$1.50 and over	
Pattern makers:																			
Male.....	1923	283	1,314	\$0.750				(1)		2	10	26	25	15	14	8	(1)	(1)	
	1925	346	1,827	.804						1	5	18	22	23	18	12		1	(1)
	1927	259	1,512	.830					(1)	1	4	12	22	27	20	14		1	(1)
	1929	191	1,127	.833						1	5	13	20	24	19	16		2	

MACHINE SHOPS

Assemblers:¹																			
Male.....	1923	310	5,681	\$0.575															
	1925	306	7,151	.634	(1)	(1)	(1)	(1)	1	11	27	31	18	8	2	1	(1)	(1)	
	1927	368	8,019	.663			(1)	(1)	1	9	24	30	22	9	3	1	(1)	(1)	
	1929	335	7,670	.657	(1)	(1)	(1)	1	1	10	21	27	25	10	3	1	(1)	(1)	
Boring-mill operators:¹																			
Male.....	1923	271	1,455	.660				(1)											
	1925	341	2,135	.688	(1)	(1)		(1)	(1)	5	15	31	29	14	4	2	(1)		
	1927	354	2,208	.727					1	3	11	26	30	21	6	2	(1)		
	1929	372	2,333	.750				(1)	(1)	2	9	24	30	21	8	4	(1)		(1)
Drill press operators:																			
Male.....	1923	350	3,634	.527	(1)	(1)	1	4	6	31	30	18	6	2	(1)	(1)			
	1925	423	5,012	.579	(1)	(1)	1	1	3	19	33	24	13	4	1	(1)	(1)		
	1927	433	4,759	.605		(1)		1	3	14	29	28	17	6	1	(1)	(1)		
	1929	440	5,291	.628		(1)	(1)	1	2	13	27	28	17	8	2	1	(1)	(1)	
Fitters and bench hands:																			
Male.....	1923	271	4,721	.616	(1)	(1)		1	2	16	28	25	16	10	1	(1)	(1)		
	1925	388	8,157	.643		(1)	(1)	2	9	25	29	20	11	2	1	(1)	(1)		
	1927	332	6,661	.662		(1)	(1)	1	6	21	31	25	10	3	1	(1)	(1)		
	1929	367	7,715	.677		(1)	(1)	1	7	21	29	22	13	5	2	(1)	(1)		
Grinding-machine operators:¹																			
Male.....	1923	221	1,235	.586															
	1925	267	2,016	.637				1	1	11	27	31	16	10	2	1	(1)	(1)	
	1927	296	2,285	.668		(1)	(1)	1	8	20	30	22	13	4	1	1	(1)	(1)	
	1929	313	2,888	.701		(1)	(1)	(1)	7	19	24	23	16	7	3	(1)	(1)		
Laborers:¹																			
Male.....	1923	375	8,355	.418															
	1925	439	9,833	.456	(1)	1	1	3	10	58	23	4	2	(1)	(1)	(1)			
	1927	459	8,842	.456	(1)	1	1	4	8	56	26	4	1	(1)	(1)	(1)			
	1929	452	8,506	.469	(1)	(1)	1	4	8	48	30	6	1	(1)	(1)	(1)			

Lathe operators, engine:																				
Male.....	1923	347	4,421	.633			1	2	11	27	29	20	7	2	1					
	1925	401	5,856	.663	(1)			1	6	22	32	23	12	4	1					
	1927	414	5,964	.695				5	5	16	29	28	16	4	2					
	1929	421	5,640	.717				8	14	14	27	26	19	6	3					
Lathe operators, turret:¹																				
Male.....	1923	261	2,147	.610																
	1925	328	3,393	.647	(1)			1	10	25	30	20	11	2	1					
	1927	343	3,167	.675				1	9	19	25	24	16	5	2					
	1929	369	3,855	.700				1	7	16	26	26	16	6	2					
Machinists:																				
Male.....	1923	331	2,952	.683					3	15	36	26	13	3	1					
	1925	374	3,820	.702				2	2	13	35	29	16	4	2					
	1927	395	3,794	.723				1	1	9	31	32	18	5	2					
	1929	379	3,036	.789				2	8	28	31	31	18	6	3					
Machinists' and tool makers' helpers:¹																				
Male.....	1923	251	1,616	.464																
	1925	262	1,641	.494	(1)		1	3	35	39	11	2	(1)	(1)						
	1927	269	1,671	.510			1	4	37	37	15	3	(1)	(1)						
	1929	229	1,006	.504			1	2	41	36	12	4	(1)	(1)						
Milling-machine operators:																				
Male.....	1923	268	1,938	.605			1	2	17	28	27	16	7	1	(1)					
	1925	339	2,925	.653			(1)	1	8	25	31	20	12	1	(1)					
	1927	343	2,872	.685			(1)	1	6	18	28	27	13	3	(1)					
	1929	358	3,440	.697			(1)	1	7	17	25	26	15	6	(1)					
Pattern makers:¹																				
Male.....	1927	235	1,228	.841				(1)	3	10	22	29	20	13	3					
	1929	288	1,652	.846				1	3	11	23	28	17	17	3					
Planer operators:																				
Male.....	1923	272	1,339	.663			(1)	(1)	8	23	32	23	10	2	2					
	1925	327	1,838	.705			(1)	(1)	3	16	31	27	15	4	3					
	1927	339	1,818	.742			(1)	(1)	2	11	26	26	19	8	4					
	1929	344	1,963	.754			(1)	(1)	2	10	24	29	20	8	6					
Screw-machine operators:¹																				
Male.....	1923	177	1,047	.564			(1)	(1)	9	27	31	21	8	2	1					
	1925	215	1,482	.643			(1)	1	7	22	29	26	10	3	1					
	1927	213	1,520	.664			(1)	1	7	22	29	26	10	3	1					
Screw-machine operators, hand:¹																				
Male.....	1929	155	966	.676			(1)	2	7	20	30	21	14	3	2					
Screw-machine operators, semiautomatic:¹																				
Male.....	1929	41	171	.644			1	2	15	23	23	21	13	1	2					
Screw-machine operators, automatic:¹																				
Male.....	1929	144	762	.758			(1)	(1)	5	11	20	22	19	10	9					
Toolmakers:¹																				
Male.....	1923	274	1,661	.603			(1)	(1)	(1)	7	31	35	18	6	2					
	1925	346	2,573	.727			(1)	(1)	(1)	4	23	36	22	11	3					
	1927	354	2,863	.756			(1)	(1)	(1)	4	23	36	22	11	3					
	1929	350	2,850	.780			(1)	(1)	(1)	4	19	31	30	12	4					

¹ Less than 1 per cent.

² Not classified in 1923.

³ Included with "Other skilled employees" in 1923 and 1925.

⁴ Not classified in 1923. This occupation was divided in 1929 into 3 groups: Hand, semiautomatic, and automatic.

⁵ Included with "Screw-machine operators" in 1923, 1925, and 1927.

REGULAR OR CUSTOMARY HOURS OF OPERATION

Table 4 shows the per cent of employees in each of 8 representative occupations in foundries and of 17 in machine shops at each classified group of full-time hours per week in 1923, 1925, 1927, and 1929, and also shows for each of these occupations average full-time hours per week in each of these years. For a distribution of the number of employees in 1929 in each occupation and State, by full-time hours per week, see Table C, page 91.

The regular or customary full-time hours per week are the number of hours per shift that a foundry or a machine shop under normal conditions is in operation without taking into consideration the hours actually worked by individual employees during the period covered. There was only one shift in the vast majority of the establishments included in this report. Reading the figures for chippers and rough grinders in explanation of the data in the table it is seen that full-time hours decreased from an average of 52.5 per week in 1923 to 51.5 in 1925 and to 51.1 in 1927, and then increased to 51.4 per week in 1929; that the full-time hours of 1 per cent of the 4,233 chippers and rough grinders covered in 1929 were under 44 per week, of 2 per cent were 44 per week, of 8 per cent were over 44 and under 48 per week, of 20 per cent were 48 per week, of 3 per cent were over 48 and under 50 per week, etc.; also that the full-time hours of 34 per cent of the 4,233 wage earners in this occupation were less than 50 hours per week, of 22 per cent were 50 per week, and of 45 per cent were over 50 per week.

TABLE 4.—Average and classified full-time hours per week in 8 specified occupations in foundries and 17 in machine shops, 1923 to 1929, by sex and year

FOUNDRIES

Occupation and sex	Year	Number of establishments	Number of employees	Average full-time hours per week	Per cent of employees whose full-time hours per week were—												
					Under 44	44	Over 44 and under 48	48	Over 48 and under 50	50	Over 50 and under 54	54	Over 54 and under 55	55	Over 55 and under 60	60	Over 60
Chippers and rough grinders:																	
Male.....	1923	219	2,928	52.5		1	(1)	32	9	14	8	26	(1)	3	3	7	3
	1925	263	4,116	51.5	(1)	1	8	30	5	33	7	20	2		1	8	(1)
	1927	279	3,657	51.1	(1)	2	8	22	2	22	6	20	1	8	1	6	1
	1929	267	4,288	51.4	1	2	8	30	3	23	8	20	2	7	2	5	1
Core makers:																	
Male.....	1923	245	2,536	51.4		2	1	33	8	12	6	21		7	2	5	2
	1925	292	2,667	50.2	2	2	6	21	6	39	6	19	(1)	6	(1)	3	(1)
	1927	401	2,040	50.4	2	4	6	30	1	30	6	18		4	1	4	(1)
	1929	287	2,370	49.9	2	4	10	30	3	18	7	13	1	4	2	2	
Female.....	1923	22	240	49.2		12	5	24	20	30	3	14		1			
	1925	43	353	48.6	4	8	6	27	16	30	3	5					
	1927	41	324	48.4	6	9	5	31	6	33	4	8					
	1929	28	260	49.1		5	16	31	18	29	2	12		1			
Laborers:																	
Male.....	1923	343	9,265	53.5	(1)	(1)	(1)	22	4	12	6	26	(1)	9	1	11	6
	1925	389	10,931	52.5	(1)	1	4	16	6	21	6	22	1	6	1	10	4
	1927	401	11,017	52.1	1	2	5	20	2	23	6	21	(1)	7	2	10	3
	1929	284	10,960	52.1	1	2	6	16	3	24	5	21	1	3	3	8	3
Molders, hand, bench:																	
Male.....	1923	262	2,279	51.2		2	1	27	15	13	8	12		6	2	2	3
	1925	226	2,263	50.2	3	2	5	23	11	24	9	17	2	(1)	2		
	1927	324	2,063	50.5	2	3	13	22	2	17	4	23		5	2	5	
	1929	321	2,098	49.6	3	4	15	24	3	22	8	13	(1)	5	2	2	
Molders, hand, floor:																	
Male.....	1923	346	4,904	51.2	(1)	3	2	37	3	13	7	20		6	1	6	2
	1925	401	5,612	50.4	2	2	6	33	4	17	6	20	(1)	5	1	4	
	1927	402	5,275	49.9	3	6	8	30	3	17	6	18		4	1	4	
	1929	285	5,453	50.0	2	5	10	32	4	16	6	19	1	4	2	2	(1)
Molders, machines:																	
Male.....	1923	161	1,993	51.9	(1)	(1)		23	6	16	10	27		11	1	6	
	1925	229	3,140	50.1	5	(1)	5	24	6	28	9	17	(1)	3	(1)	3	
	1927	220	3,102	50.4	4	(1)	8	20	1	32	5	21	(1)	4	2	2	1
	1929	249	3,554	50.4	2	(1)	9	21	4	30	6	19	1	5	3	1	
Molders' helpers, floor:																	
Male.....	1923	234	1,986	52.2		3	(1)	26	2	15	7	28		8	2	8	2
	1925	285	2,642	51.8	1	3	6	19	3	18	6	26	(1)	4	2	11	1
	1927	247	1,820	51.2	1	6	6	22	3	16	7	25	2	7	1	4	1
	1929	261	1,919	51.1	(1)	4	6	26	4	17	6	22	2	3	4	4	1

¹Less than 1 per cent.

TABLE 4.—Average and classified full-time hours per week in 8 specified occupations in foundries and 17 in machine shops, 1923 to 1929, by sex and year—Continued

FOUNDRIES—Continued

Occupation and sex	Year	Number of establishments	Number of employees	Average full-time hours per week	Per cent of employees whose full-time hours per week were—												
					Under 44	44	Over 44 and under 48	48	Over 48 and under 50	50	Over 50 and under 54	54	Over 54 and under 55	55	Over 55 and under 60	60	Over 60
Pattern makers:																	
Male.....	1923	283	1,314	51.1		6	2	24	8	19	8	16		9	2	4	(1)
	1925	346	1,827	50.4	(1)	3	8	22	9	27	6	12	1	8	2	3	
	1927	259	1,512	50.3	(1)	4	6	23	4	33	11	7	1	7	2	2	(1)
	1929	191	1,127	50.1	(1)	7	4	22	6	31	5	17		6	1	1	

MACHINE SHOPS

Assemblers:																	
Male.....	1923	310	5,681	50.6	(1)	3	4	26	4	26	8	6		16	5	1	(1)
	1925	306	7,151	49.6		1	5	31	5	35	7	4	(1)	8	2	(1)	
	1927	368	8,019	50.1		2	8	26	6	31	13	3	(1)	8	2	1	(1)
	1929	335	7,670	50.1		3	2	26	7	39	11	3		5	3	1	(1)
Boring-mill operators:																	
Male.....	1923	271	1,455	50.8	(1)	5	4	24	4	25	9	7		15	4	1	1
	1925	341	2,135	50.4		2	7	25	7	26	9	8	1	12	2	1	(1)
	1927	354	2,208	50.7		5	6	21	7	28	11	5	1	10	1	3	2
	1929	372	2,333	51.1		4	7	20	7	27	12	5		7	3	4	4
Drill-press operators:																	
Male.....	1923	350	3,634	50.8	(1)	4	2	27	4	28	9	7		12	5	1	4
	1925	423	5,012	50.4	(1)	3	5	27	5	30	10	6	(1)	10	2	1	1
	1927	433	4,759	50.1		7	4	22	5	37	9	3	(1)	8	1	2	1
	1929	440	5,291	50.3	(1)	7	5	20	6	35	10	5		6	2	3	2
Fitters and bench hands:																	
Male.....	1923	271	4,721	49.9		14	3	26	3	23	9	4		12	3	1	(1)
	1925	388	8,157	49.8	(1)	5	11	29	4	25	10	4	(1)	8	3	1	(1)
	1927	332	6,661	49.5		6	4	31	5	31	9	4	(1)	6	4	1	(1)
	1929	367	7,715	49.8	(1)	5	8	29	6	29	10	4	(1)	7	2	(1)	(1)
Grinding-machine operators:																	
Male.....	1923	221	1,255	50.5	(1)	7	3	23	2	30	10	5	(1)	13	5	1	
	1925	267	2,016	50.3		2	5	28	4	32	10	6	(1)	10	2	1	(1)
	1927	298	2,265	50.1		4	4	23	9	36	11	3	1	8	1	1	(1)
	1929	313	2,888	51.0	(1)	4	3	19	11	31	9	7		7	2	3	3
Laborers:																	
Male.....	1923	375	8,355	51.1		4	2	26	3	27	8	8		15	5	2	1
	1925	439	9,833	50.6	(1)	3	5	28	4	31	9	6	(1)	11	3	1	1
	1927	459	8,342	50.4		3	4	23	6	36	8	6	(1)	9	2	2	(1)
	1929	462	8,506	50.5	(1)	5	4	21	6	35	11	6	(1)	7	3	1	1

REGULAR OR CUSTOMARY HOURS OF OPERATION

Lathe operators, engine:																			
Male	1923	347	4,421	50.9	(1)	7	3	25	4	25	9	9		18	3	1	1	1	1
	1925	401	5,856	50.3		4	7	24	6	29	8	8	1	10	2	1	1	(1)	1
	1927	414	5,964	50.2		7	5	21	6	32	10	6		8	3	1	1	(1)	1
	1929	421	4,640	50.3	(1)	7	9	19	6	30	11	5	(1)	8	2	1	1	(1)	1
Lathe operators, turret:																			
Male	1923	251	2,147	50.5	(1)	4	2	35	3	25	8	4		12	6	1	1	(1)	1
	1925	328	3,393	50.2		3	4	32	6	29	8	5		11	5	1	1	(1)	1
	1927	343	3,167	50.0		5	4	20	4	33	9	3		8	2	1	1	(1)	1
	1929	359	3,855	50.5	(1)	4	5	24	5	36	8	3	(1)	7	2	1	1	(1)	1
Machinists:																			
Male	1923	331	2,952	50.0		12	5	29	3	21	5	13		7	5	1	1	(1)	1
	1925	374	3,820	49.9	(1)	3	4	29	7	25	8	9		6	3	1	1	(1)	1
	1927	395	3,794	49.5		14	4	24	4	32	9	6		4	3	1	1	(1)	1
	1929	379	3,036	49.8	(1)	9	3	18	8	35	0	5	1	5	3	1	1	(1)	1
Machinists' and toolmakers' helpers:																			
Male	1923	251	1,616	50.4		9	1	35	3	18	5	12		12	3	1	1	(1)	1
	1925	262	1,641	49.8	(1)	10	3	23	3	29	7	5	1	7	3	1	1	(1)	1
	1927	269	1,671	50.1		12	3	20	3	32	12	6		10	2	1	1	(1)	1
	1929	229	1,006	50.3	(1)	7	4	22	5	35	10	6	(1)	8	2	1	1	(1)	1
Milling-machine operators:																			
Male	1923	268	1,938	50.0		7	4	34	3	24	9	4		0	3	1	1	(1)	1
	1925	339	2,925	49.7		3	10	32	6	27	9	3		7	3	1	1	(1)	1
	1927	343	2,872	49.7		8	6	27	7	28	11	3		7	3	1	1	(1)	1
	1929	358	3,440	50.2	(1)	4	6	27	11	25	11	3	(1)	6	2	1	1	(1)	1
Pattern makers:¹																			
Male	1927	235	1,228	49.6		6	6	27	4	27	13	4		9	3	1	1	(1)	1
	1929	268	1,652	49.9		8	6	21	4	33	14	3	1	9	2	1	1	(1)	1
Planer operators:																			
Male	1923	272	1,339	50.6	(1)	7	3	24	2	28	9	8		12	4	2	1	(1)	1
	1925	327	1,838	50.2	(1)	5	7	25	4	26	9	8	1	10	3	1	1	(1)	1
	1927	339	1,818	50.5		5	6	24	5	31	9	7	1	7	2	1	1	(1)	1
	1929	344	1,963	50.7	(1)	4	7	21	4	35	9	6		6	1	1	1	(1)	1
Screw-machine operators:³																			
Male	1923	177	1,047	50.6		4	2	30	4	27	9	4		13	5	1	1	(1)	1
	1925	215	1,482	49.8		3	8	30	7	29	11	2	(1)	8	2	1	1	(1)	1
	1927	213	1,520	49.8		3	6	27	18	26	11	1		5	1	1	1	(1)	1
Screw-machine operators, hand:⁴																			
Male	1929	155	966	50.2		2	5	22	20	32	7	3		2	2	4	2	(1)	1
Screw-machine operators, semiautomatic:⁴																			
Male	1929	41	171	51.5		2	5	19	5	30	23	2		6	4	5	5	(1)	1
Screw-machine operators, automatic:⁴																			
Male	1929	144	782	51.4		4	3	17	17	30	6	5		6	1	6	5	(1)	1
Toolmakers:																			
Male	1923	274	1,661	50.4		6	2	30	3	27	11	5		11	4	2	1	(1)	1
	1925	346	2,573	50.0		2	6	32	4	30	11	4		8	2	1	1	(1)	1
	1927	354	2,863	49.7		3	5	32	7	32	11	2	(1)	5	2	1	1	(1)	1
	1929	350	2,850	50.0	(1)	5	3	26	8	35	10	4	(1)	5	1	1	1	(1)	1

¹ Less than 1 per cent.

² Included with "Other skilled employees" in 1923 and 1925.

³ This occupation was divided in 1929 into 3 groups: Hand, semiautomatic, and automatic.

⁴ Included with "Screw-machine operators" in 1923, 1925, and 1927.

20 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

Table 5 shows the regular or customary full-time hours Monday to Thursday, Friday, Saturday, and per week for each of 399 foundries and 508 machine shops in 28 States in 1929. In some establishments the full-time hours of a few employees or occupations vary from the full-time hours per day or per week of the majority of the employees in such establishments, but the prevailing hours of the greater number of employees are presented in this table as the hours of the establishment as a whole.

The full-time hours of foundries range from 8 per day Monday to Friday or 40 per week for 3 establishments to 10 per day or 60 per week for 15 establishments. The hours of 56 establishments were less than 48 per week; of 101 were 48 per week; of 78 were 54 per week; and of 20 were 55 per week. In machine shops full-time hours ranged from 8 per day Monday to Friday or 40 per week for 1 establishment to 10 per day or 60 per week for 2 establishments. The hours of 58 establishments were less than 48 per week; of 105 were 48 per week; of 166 were 50 per week; of 42 were 54 per week; and of 39 were 55 per week.

The 5-day week with no work on Saturday was in operation in 23 foundries and 6 machine shops in 1929. Days of operation per week in 8 foundries and 1 machine shop alternated from 5 in one week to 6 days in the next.

-Classification of foundry and machine-shop establishments in each State by full-time hours per week and per day, 1929

FOUNDRIES

Full-time hours per week	Full-time hours per day			Number of establishments in—																	Total establishments												
	Monday to Thursday	Friday	Saturday	Alabama	California	Colorado	Connecticut	Georgia	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Missouri		New Hampshire	New Jersey	New York	Ohio	Oregon	Pennsylvania	Rhode Island	Tennessee	Texas	Washington	Wisconsin	
40	8	8	0						1																								1
42½	8½	8½	0		1				1																	1							1
44	9	9	1		1				1																								1
44½	9½	9½	1		1				1																								1
45	9	9	1		1				2				1					2						1									1
45½	9½	9½	1		1				2		1							1					4		1								1
45¾	9¾	9¾	1		1				2		1							1					4	1	1								1
47	10	10	1		1				3									1															1
47½	10½	10½	1		1				3									1															1
47¾	10¾	10¾	1		1				3									1															1
48	10	10	1		1				0		1		1			2	12	4		4	2	4	6	16	3	4			3	2	5		2
48½	10½	10½	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
48¾	10¾	10¾	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
49	11	11	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
49½	11½	11½	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
49¾	11¾	11¾	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
50	12	12	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
50½	12½	12½	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
50¾	12¾	12¾	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
51	13	13	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
51½	13½	13½	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
51¾	13¾	13¾	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
52	14	14	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
52½	14½	14½	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
53	15	15	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
53½	15½	15½	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
54	16	16	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
54½	16½	16½	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
55	17	17	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
55½	17½	17½	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
56	18	18	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
56½	18½	18½	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
57	19	19	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
57½	19½	19½	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
58	20	20	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
58½	20½	20½	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
59	21	21	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
59½	21½	21½	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2
60	22	22	1		1				1							1	1	4		4	2	4	1	16	3	4			3	2	5		2

¹ Do not work every other Saturday.

¹ Females.

¹ Males.

TABLE 5.—Classification of foundry and machine-shop establishments in each State by full-time hours per week and per day, 1929—Continued

FOUNDRIES—Continued

Full-time hours per week	Full-time hours per day				Number of establishments in—																			Total establishments									
	Monday to Thursday	Friday	Saturday	Sunday	Alabama	California	Colorado	Connecticut	Georgia	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Missouri	New Hampshire	New Jersey		New York	Ohio	Oregon	Pennsylvania	Rhode Island	Tennessee	Texas	Washington	Wisconsin
44	8	8	4																														1
50	8	8	4																													1	
47	8½	8½	4½							1																						1	
50	8	8	4																														
48	8	8	4																														
50	8	8	4															1															
49½	8	8	4½																					1									
50	8	8	5																														
50	10	10	0		1	1	5	2	2	6	1			4		2	2	3	12	1												2	
50½	9	9	0																														
51	8½	8½	8½					1																									
51	9	9	9								1																						
51¼	9¼	9¼	9¼																														
51½	9¼	9¼	9¼																								1						
49½	8	8	4½																														
52	8	8	4						1																								
52	9½	9½	4½																														
52½	10½	10½	9																														
52½	9	9	7¼																														
52½	9½	9½	9																														
53	9	9	9						1																								
53½	9½	9½	8½		1						1																						
48	8	8	8																														
54	8	8	8																														
	9	9	9																														
	9¼	9¼	7¾			1	2	2	6	7	2	6			1	1	1		8	2												1	
	9½	9½	7½																														
	9½	9½	5¾																														
	9½	9½	8¾																														
	9½	9½	9																														
	9½	9½	9																														
	10	9	8		1																												

534	034	094	5																	1																			2		
	0	0	9	1					4	1	1	4					1		1	2			2	1						1							18				
	014	014	734													1																	1						2		
	014	014	714																																				1		
	014	014	614																																				1		
	034	034	574									1													1														1		
54	034	034	574																																				10		
	034	034	574				1		2																														6		
	044	044	5	1				1															5							1											10
	044	044	5					1																																	6
	054	054	454																																						1
	10	9	5																																						1
	10	014	414																1																						1
544	10	10	414																																						1
40	8	8	30																																						1
58	10	10	35																																						1
55	10	10	5				3	1	2				1																										26		
554	10	10	514																																						1
56	1014	1014	514																																						1
564	1014	1014	514																																						1
58	10	10	8																																						3
59	10	10	9																																						3
60	10	10	16											1																											2
Total				6	23	2	19	8	36	16	6	10	16	5	4	7	38	36	8	19	6	28	32	85	6	46	10	8	10	7	15					368					

Females.

Males.

REGULAR OR CUSTOMARY HOURS OF OPERATION 25

CHANGES IN HOURS AND WAGE RATES

During the 1929 study data were obtained as to changes in full-time hours and wage rates in foundries and machine shops between July 1, 1927, and the period of the 1929 study.

Only 14 of the 399 foundries and 19 of the 508 machine shops reported changes in full-time hours. In 4 foundries and 10 machine shops hours were increased and in 10 foundries and 9 machine shops hours were decreased.

Only 15 of the 399 foundries and 15 of the 508 machine shops covered in 1929 reported changes in wage rates. Rates were increased in 13 foundries and 15 machine shops and decreased in 2 foundries as shown in Table 6.

TABLE 6.—Changes in wage rates in 15 foundries and 15 machine shops between July 1, 1927, and the period of the 1929 study

FOUNDRIES			
Employees whose rates were changed	Number of establishments	Amount of change	
		Increase	Decrease
All employees.....	1	3½ to 5 per cent.....	
All hourly rate workers.....	1	7½ per cent.....	
All piece workers.....	1	10 per cent.....	
Chippers.....	1	\$4 to \$4.50 and \$5 to \$5.50 per day.....	
Molders.....	1	\$5.40 to \$7 per day.....	
Common labor.....	1	2½ cents per hour.....	
Mechanics.....	1	5 cents per hour.....	
Molders.....	1	25 cents per day.....	
Molders on hourly rate.....	1	5 cents per hour.....	
Core makers and molders on daily rate.....	1	50 cents per day.....	
Core makers and molders.....	1	10 cents per hour.....	
Do.....	3	5 cents per hour.....	
Do.....	1		Average, 6.8 per cent.
Do.....	1		Average, 0.3 per cent.

MACHINE SHOPS			
Employees whose rates were changed	Number of establishments	Amount of change	
		Increase	Decrease
All employees.....	1	2 per cent.....	
Do.....	1	3½ to 5 per cent.....	
Do.....	2	5 per cent.....	
Do.....	3	10 per cent.....	
Do.....	1	Average, 11 per cent.....	
All hourly rate workers.....	1	7½ per cent.....	
All piece workers.....	1	10 per cent.....	
Common labor.....	1	2½ cents per hour.....	
Machinists.....	3	5 cents per hour.....	
Sheet-metal workers.....	1	6 cents per hour.....	

PAY FOR OVERTIME, 1929

Overtime is ordinarily understood to be any time worked in excess of the regular or customary hours of work per day and is usually paid for at a higher rate than for regular working time. Approximately 29 per cent of the plants covered in this study paid for overtime at the same rate as for regular hours. In some plants the regular rate was paid until a certain number of hours per day had been worked in addition to the customary hours of the plant. Example: The regular hours of a plant were 8 per day and 48 per week, but the extra rate for overtime was not paid except for time

worked in excess of 9 hours per day or 54 per week. The 1 hour of overtime per day in excess of the regular 8 hours was paid for at the regular rate. In a considerable number of plants included in the 1929 study, the overtime rate was $1\frac{1}{4}$ or $1\frac{1}{2}$ times the regular rate for a specified number of hours or to a certain time, as 7 p. m., and then two times the regular rate. In some plants the extra rate for overtime was paid to all employees, in others to employees in certain occupations only. Most of the plants that pay a higher rate for overtime than for regular hours per day also provide for an extra rate for work on Sunday and holidays. There is, however, very little work on Sunday and holidays in this industry. Table 7 shows that 238 of the 399 foundries and 400 of the 508 machine shops covered in the 1929 study paid part or all employees extra rates for overtime and for work on Sunday and holidays.

TABLE 7.—Pay for overtime and for Sunday and holiday work, employees entitled, and rate, 1929

FOUNDRIES

Number of establishments	Employees entitled	Times regular rate for—	
		Overtime (time worked in excess of regular hours per day or week)	Sunday and holiday work
62	All employees.....	$1\frac{1}{4}$	$1\frac{1}{4}$
38	do.....	$1\frac{1}{4}$	2
9	do.....	$1\frac{1}{2}$ to midnight, then 2.....	2
1	do.....	do.....	$1\frac{1}{2}$
4	do.....	$1\frac{1}{4}$	$1\frac{1}{4}$
5	do.....	1.....	$1\frac{1}{2}$
3	do.....	1 for first hour per day, then $1\frac{1}{2}$	$1\frac{1}{2}$
1	do.....	do.....	2
8	do.....	$1\frac{1}{4}$	$1\frac{1}{4}$
3	do.....	$1\frac{1}{2}$ after regular hours per week.....	$1\frac{1}{2}$
2	do.....	1 for first 2 hours per week, then $1\frac{1}{2}$	$1\frac{1}{2}$
3	do.....	1 for first 2 hours per day, then $1\frac{1}{2}$	$1\frac{1}{2}$
1	do.....	$1\frac{1}{4}$ for first 2 hours per day, then 2.....	2
1	do.....	$1\frac{1}{4}$ for first 2 hours per day, then 2.....	2
1	do.....	$1\frac{1}{4}$ for first hour per day, then $1\frac{1}{2}$	$1\frac{1}{2}$
1	do.....	$1\frac{1}{4}$ for first 4 hours per day, then 2.....	2
1	do.....	$1\frac{1}{4}$ for first 5 hours per day, then 2.....	2
1	do.....	1 for first half hour: and Saturday p. m., then $1\frac{1}{4}$	2
1	do.....	1.....	(1)
1	do.....	$1\frac{1}{2}$	(2)
2	do.....	2.....	2
1	do.....	$1\frac{1}{4}$ for jobbing work.....	$1\frac{1}{4}$
1	do.....	2 for contract work.....	2
1	do.....	$1\frac{1}{4}$ from 6 p. m. to 9 p. m., then $1\frac{1}{2}$	$1\frac{1}{4}$
1	{Union workers.....	$1\frac{1}{2}$ after regular hours per day.....	$1\frac{1}{2}$
1	{Nonunion workers.....	$1\frac{1}{4}$ after regular hours per day.....	$1\frac{1}{4}$
6	Core makers and molders.....	$1\frac{1}{2}$	2
2	do.....	$1\frac{1}{2}$	$1\frac{1}{2}$
3	do.....	$1\frac{1}{2}$ after regular hours per week.....	$1\frac{1}{2}$
1	Core makers, molders, and apprentices.....	$1\frac{1}{2}$	2
1	Core makers, cranemen, and molders.....	$1\frac{1}{4}$	$1\frac{1}{2}$
1	Core makers, molders, and repair men.....	$1\frac{1}{4}$	$1\frac{1}{2}$
1	Core makers, molders, and pattern makers.....	$1\frac{1}{2}$ after regular hours per week.....	1
1	Core makers, laborers, molders, and pattern makers.....	$1\frac{1}{2}$	$1\frac{1}{2}$
1	Core makers, millwrights, molders, and pattern makers.....	$1\frac{1}{2}$	$1\frac{1}{2}$
1	Core makers, molders, pattern makers, and rough carpenters.....	$1\frac{1}{4}$	2
2	{Core makers and molders.....	2.....	2
2	{All others.....	$1\frac{1}{4}$	$1\frac{1}{4}$
1	{Core makers and molders.....	$1\frac{1}{4}$	2
1	{All others.....	$1\frac{1}{4}$	$1\frac{1}{4}$
1	{Core makers and molders.....	$1\frac{1}{2}$ to midnight, then 2.....	2
1	{All others.....	$1\frac{1}{2}$ after midnight.....	$1\frac{1}{4}$

¹ $1\frac{1}{4}$ for Sunday and 1 for holidays.

² 2 for Sunday and $1\frac{1}{2}$ for holidays.

TABLE 7.—Pay for overtime and for Sunday and holiday work, employees entitled, and rate, 1929—Continued

FOUNDRIES—Continued

Number of establishments	Employees entitled	Times regular rate for—	
		Overtime (time worked in excess of regular hours per day or week)	Sunday and holiday work
2	Core makers and molders.....	2	2
	All others.....	1½ Monday to Friday, Saturday 1	1½
1	Core makers, molders, and pattern makers.....	2	2
1	All others.....	1 for first hour per day, then 1½	1½
1	Core makers, molders, pattern makers, and rough carpenters.....	1½	2
1	All others except laborers.....	1½	1½
1	Chippers, core makers, and molders.....	1½	1½
1	Cutters and welders.....	1	1½
1	Cupola tenders, molders, and pattern makers.....	1½	2
1	Crane operators, day laborers, and sand blasters.....	1½	1½
1	Laborers.....	1½	1½
1	All others.....	1½ for first 4 hours, then 2	2
1	Laborers and sand blasters.....	1 for first hour per day, then 1½	1½
1	All employees.....	1½ after regular hours per week	2
1	Molders, bench and floor.....	1½	1½
1	Molders.....	1½ if hourly rate is 80 cents or over	1½
1	Pattern makers and rough carpenters.....	1 for first hour per day, then 1½	1½
1	Molders.....	2	2
1	Helpers and laborers.....	1½	1½
1	Molders and pattern makers on hourly rate.....	1½	1½
1	Pattern makers.....	1½	2
1	Pattern makers on hourly rate.....	1½ after regular hours per day	1½
1	Core room, melting, annealing, shipping, maintenance, and yard employees on hourly rate.....	1 for first hour per day, then 1½	1½
1	Crane operators and others on hourly rates.....	1 for first 3 hours per day, then 1½	1½
1	Pattern makers.....	1½ after regular hours per week	1½
2	do.....	1½	1½
1	Rough carpenters.....	1½ after regular hours per week	1½
1	Millwrights.....	1½	1½
1	Millwrights, pattern makers, and rough carpenters.....	1	1½
1	Head electricians.....	1½	2
1	All others.....	1	1½
1	Maintenance men.....	1 for first 5 hours per week, then 1½	1½
1	Welders.....	1½	1½
1	Day workers.....	1½	1½
1	do.....	1 for first hour per day, then 1½	1½
1	do.....	1½	1½
1	do.....	1½	2
1	Night workers.....	1 for first 5 hours per week, then 1½	2
1	Day workers.....	1½ to midnight, then 2	2
1	Night workers.....	1½	2
1	Day workers.....	1 for first hour per day, then 1½	2
1	Night workers.....	1 for first 2 hours per night, then 1½	2
1	Day workers.....	1 for first hour per day, then 1½	1½
1	Night workers.....	1½	1½
1	Day workers.....	1½ to midnight, then 2	2
1	Night workers.....	1½	2
2	All productive employees.....	1½	1½
1	do.....	1½ for first 2½ hours per day, then 2	2
1	do.....	1½	2
3	Time workers.....	1½	2
7	do.....	1½	1½
1	do.....	1½ after regular hours per day	1½
1	do.....	1 for first hour per day, then 1½	2
1	do.....	1½	1½
1	All time workers except cupola tenders.....	1½	1½
1	All except rail crew, janitors, and sweepers.....	1½	1½
1	All except sweepers.....	1½	1½
3	All except laborers.....	1½	1½
1	All except clean-up men, chippers, and rough grinders on night work, and truck drivers.....	1½	2
1	All except elevator operators.....	1 for first 4½ hours per week, then 1½	2
1	All except shakers-out.....	1½	1½
1	All except laborers.....	1½	2
1	All except molders.....	1½	* 1½
1	Time workers.....	5 cents per hour 6 p. m. to midnight, then 10 cents per hour above rate.	(9)

* Breakdown work.

* 1 plus 10 cents per hour.

TABLE 7.—Pay for overtime and for Sunday and holiday work, employees entitled, and rate, 1929—Continued

MACHINE SHOPS

Number of establishments	Employees entitled	Times regular rate for—	
		Overtime (time worked in excess of regular hours per day or week)	Sunday and holiday work
106	All employees	1 1/4	1 1/4
73	do	1 1/4	2
16	do	1 1/4 to midnight, then 2	2
13	do	2	2
8	do	1 1/4	1 1/4
22	do	1 1/2 after regular hours per week	1 1/4
5	do	1 1/4	1 1/4
6	do	1 for first hour per day, then 1 1/4	1 1/4
6	do	1 1/2 for first 4 hours per day, then 2	2
4	do	1 1/2 for first 5 hours per day, then 2	2
3	do	1 1/4 after regular hours per week	1 1/4
1	do	1	2
1	do	1 1/4	1
1	do	1 to midnight, then 1 1/4	1 1/4
1	do	1 1/2 for first 4 hours Monday to Friday, for first 8 hours Saturday, then 2	2
1	do	1 for first 3/4 hour per day, then 1 1/4	1
1	do	do	1 1/4
1	do	1 1/4 for first hour per day, then 1 1/4	1 1/4
2	do	1 for first 2 hours per day, then 1 1/4	1 1/4
1	do	1 1/4 for 5 week days and 1 1/4 Saturday p. m.	1
1	do	1 1/2 for jobbing work	1 1/2
1	do	2 for contract work	2
1	do	1 for first half hour on week days and Saturday afternoon, then 1 1/4	2
1	do	1 1/2; Saturday afternoon straight time	1 1/2
1	do	1 for first hour per day, then 1 1/4	1 1/4
1	do	1 for first 5 hours per week, then 1 1/4	1 1/4
1	do	1 for less than 2 hours per day; 1 1/2 for 2 hours or more	1 1/2
1	do	1 1/4 for first 3 hours per day, then 2	2
1	do	1 1/2 for first 7 hours, then 2	2
1	do	1 1/4	1 1/4
1	do	1 1/2 for first 2 hours per day, then 2	2
1	do	1 1/2; Saturday afternoon straight time	2
1	do	1 1/4; Saturday afternoon straight time	1 1/4
1	do	1 plus 15 cents per hour	(9)
1	do	1 1/4	(9)
1	do	1 1/2 to midnight, then 1 1/4	2
1	do	1 plus 5 cents per hour 6 p. m. to midnight; then 1 plus 10 cents per hour	(9)
1	do	1 1/4 for first 4 hours, then 2	2
1	do	1 1/2 for first 4 hours, then 2	(7)
2	Not reported	1 1/4	1 1/4
1	Inside employees	2	2
1	Outside employees	2 1/4	2
7	Productive employees	1 1/4	1 1/4
2	do	1 1/4	1 1/2
1	do	1 1/4	1 1/4
5	do	1 1/4	2
1	do	1 for first hour per day, 1 1/4 next 6 hours, then 2	2
1	do	1 1/4 for first 2 1/4 hours per day, then 2	2
1	do	2	2
1	Day workers	1 1/4 to midnight, then 2	2
1	Night workers	1 for any overtime in first 50 hours per week; 1 1/2 for any overtime after 50; regular hours 13 each of 5 nights per week	2
1	Day workers on time rate	1 1/4	1 1/4
2	Day workers	1 1/4	2
1	do	1 1/2 to midnight, then 2	2
1	Night workers	1 1/2	1 1/2
1	Day workers	1 for first hour per day, then 1 1/4	1 1/2
1	do	1 1/2; Saturday afternoon 1 1/4	2
1	do	1 for first 4 hours per week, then 1 1/4	1 1/2
1	Night workers	1 1/4 after regular hours per week	1 1/4

¹ 1 plus 10 cents per hour.
² 1 plus 15 cents per hour.
³ 1 1/4 on Sunday and 1 1/4 on holidays.

⁴ 1 1/4 first 4 hours, then 2.
⁵ First 8 hours, then 2 1/4.

TABLE 7.—Pay for overtime and for Sunday and holiday work, employees entitled, and rate, 1929—Continued

MACHINE SHOPS—Continued

Number of establishments	Employees entitled	Times regular rate for—	
		Overtime (time worked in excess of regular hours per day or week)	Sunday and holiday work
1	Productive day workers.....	1½ to midnight, then 2.....	2
1	Nonproductive day workers.....	1½.....	1½
6	Night workers.....	1½.....	2
18	Time workers.....	1½.....	2
1	do.....	1½.....	1½
1	do.....	1½ after regular hours per week.....	1½
1	do.....	1½ to midnight, then 2.....	2
2	do.....	1½.....	1½
1	do.....	1½.....	1½
1	All except laborers.....	1½.....	1½
1	All except laborers, janitors, and watchmen.....	1½ for first 4 hours Monday to Friday, for first 8 hours Saturday; then 2.....	2
1	All except crane operators, inspectors, and warehousemen.....	1½.....	1½
1	All except weekly workers.....	1½ after regular hours per week.....	1½
1	All except electricians and part of laborers.....	1½.....	1½
1	All except weekly workers.....	1½.....	1½
1	All except painters.....	1½.....	1½
1	All time workers on day shift except floor sweepers and part of laborers.....	1½.....	2
1	All except maintenance workers.....	1 for first hour per day, then 1½.....	1½
1	All not on bonus plan.....	1½.....	1½
1	All except laborers.....	1.....	1½
1	All except 1 blacksmith, 1 blacksmith's helper, 1 boiler maker, 1 laborer, and 2 machinists.....	1½.....	1½
1	Employees working on jobs outside plant.....	1½.....	2
3	All except sweepers.....	1½.....	1½
1	Part of time workers.....	1½.....	1½
1	All except salaried employees.....	1½ from 6 p. m. to 9 p. m., then 1½.....	1½
1	All except shipping-department employees.....	1½ after regular hours per week.....	1½
1	All except crane operators and laborers.....	1½ to midnight, then 2.....	2
1	All except craters, laborers, painters, plasterers, and sanders.....	1½.....	1½
1	All except galvanizing and tank shop employees.....	1½.....	1½
1	All skilled employees except assemblers.....	1½.....	1½
1	All except laborers.....	1½.....	2
1	All except blacksmiths, blacksmiths' helpers, and pattern makers.....	1½.....	2
1	All except carpenters, electricians, and millwrights.....	1.....	1½
1	All except laborers.....	1½ on certain work.....	1½
1	All except loaders, packers, and erectors.....	1½.....	1½
1	A few skilled employees.....	1½.....	1½
2	Toolmakers.....	1½.....	1½
1	Millwrights.....	1½.....	1½
1	Head electricians.....	1½.....	2
1	All others.....	1.....	1½
1	Laborers and stockmen.....	1½.....	1½
1	Heat-treating department employees.....	1½.....	1½
1	Boiler makers.....	2.....	2
1	All others.....	1½.....	2
1	Skilled employees.....	1½.....	1½
1	Assemblers, blacksmiths, machine operators, mechanics, and toolmakers on day force.....	1½ for first 2 hours, then 2.....	2
1	All others.....	1½.....	1½
1	Crane operators, inspectors, and laborers.....	1½.....	1½
1	Blacksmiths and blacksmiths' helpers.....	2.....	2
1	All others.....	1½.....	1½
1	Coppersmiths.....	2.....	2
1	All others.....	1½ to midnight, then 2.....	2
1	Machinists.....	1½.....	1½
1	Machinists and machine operators.....	1½.....	2
1	Assemblers, fitters, and bench hands, and machine hands.....	1½.....	2
1	Blacksmiths, blacksmiths' helpers, and machine operators.....	1½.....	1½
1	Erectors, painters, and testers.....	1½.....	1½
1	Machinists and machine operators.....	1½.....	1½
1	do.....	1½ to midnight, then 2.....	2
1	Skilled employees.....	1½.....	1½
1	Machine operators and their helpers.....	1½.....	1½
1	Maintenance men.....	1½ after regular hours per week.....	1½

BONUS SYSTEMS

A bonus system is an arrangement by which the earnings of a certain part or all of the employees in an establishment at piece or time rates would be increased under certain conditions. Earnings at piece or time rates were increased by the addition of a bonus of a stated amount or of a specified per cent of earnings, for production, efficiency, attendance, length of service, or by the payment at basic rates for all or part of the time saved by doing a job or piece of work in less than the standard of time allowed or established for it by a time study.

Bonus systems were in effect in 45 of the 399 foundries and in 117 of the 508 machine shops covered at the time of the 1929 study. The number of establishments, the employees entitled to receive the bonus, the amount of the bonus, and the conditions necessary in order to receive the bonus are given in Table 8. Bonus systems were in operation in plants covered in 1929 in California, Colorado, Connecticut, Illinois, Indiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Washington, and Wisconsin. Bonus systems are more numerous in foundries and machine shops than in any other industries covered in wage reports by the bureau.

In 18 foundries and 83 machine shops a time-saving bonus only was paid to part or all of the employees for doing work of a set standard in less than the stated period of time allowed for it. Some establishments paid employees for all of time saved while others paid for only a portion of the time at regular hourly rates. Example: A standard of 50 hours was set for the completion of a certain job or piece of work. An employee completed the work in 40 hours, thereby saving 10 hours. He was paid for the 40 hours that he actually worked and also a bonus of one-half of the 10 hours saved. In another plant he would have been paid for the 40 hours worked and also for all of the 10 hours saved.

In nine foundries and five machine shops a production bonus only was paid to part or to all of the employees. This form of bonus was earned on all or on various percentages of production above a certain standard quantity generally paid for at a rate per piece. The bonus in some plants was based on individual production and in others on the production by a group of employees. In the latter the bonus for the group was divided among the employees according to the basic rate and the hours worked by each individual in the group during the pay period.

Six foundries and six machine shops reported efficiency bonus systems only, similar to the production bonus except that payments were based on earnings of individuals and percentages of efficiency during the pay period. This bonus applied to part or to all of the employees in these establishments.

Five foundries and two machine shops reported an "attendance" bonus only, affecting part or all of the employees for regular attendance during a specified period of time or for working a set number of hours per day or night.

Two foundries and four machine shops reported a "service" bonus only, for all employees in the service a specified period of time. Example: An employee's earnings were increased by a bonus of 1 per cent of his annual earnings at regular rate after one year of service,

2 per cent after two years, 3 per cent after three years, etc., to 5 per cent after five years of continuous service.

Three foundries and four machine shops reported systems based on the estimated labor cost of a job only. When the labor cost was less than the estimated cost 35 to 100 per cent of the difference was prorated among the workers on the job based on individual rate and time on the job.

Three machine shops reported penalties in addition to a time saving system. If a job was completed in more than the time allotted to it, the excess time at hourly rate was deducted as penalty from regular earnings in one plant and one-half the excess was deducted in the other two plants.

Three machine shops reported a bonus which was a percentage of the yearly earnings of only such employees as were on the pay rolls Christmas when the bonus was paid.

One machine shop paid a "punctuality and full-time attendance" bonus of two hours per week at hourly rates to all employees who were on time and worked a full week.

In addition to the above, "efficiency and time-saving" bonuses were paid in one foundry and one machine shop, "service and attendance" in one foundry and one machine shop, "profit-sharing and production" and "service and efficiency" each in one machine shop, and "time-saving and attendance" bonuses in two machine shops.

TABLE 8.—Bonus systems of 45 foundries and 117 machine shops, 1929

FOUNDRIES

Number of establishments	Kind of bonus	Employees entitled	Amount of bonus	Conditions
1	Time saving	All employees	All of time saved at regular rate.	Complete job in less than allotted time.
3	do	do	One-half of time saved at regular rate.	Do.
1	do	All employees except crane operators and cupola tenders.	do	Do.
1	do	Pieceworkers	do	Do.
2	do	Productive employees	do	Do.
1	do	Cupola tenders and laborers.	do	Do.
1	do	Molders	All of time saved at regular rate.	Do.
1	do	All employees except laborers.	One-half of time saved at regular rate.	Do.
1	do	Molders	One-third of time saved at regular rate.	Do.
1	do	Core makers, chippers, and rough grinders.	All of time saved at regular rate.	Do.
1	do	Core makers, chippers, and rough grinders, molders, pattern makers, and sand blasters.	One-half of time saved at regular rate.	Do.
1	do	Molders and cleaning-room employees.	Three-fourths of time saved at regular rate.	Do.
1	do	Core makers and molders.	One-half of time saved at regular rate.	Do.
1	do	Molders using dry sand.	do	Do.
1	do	Molders	do	Do.
1	Production	Molders, machine	Varies with different jobs. The piece rate increased with each step-up in production over the set standard.	Production in excess of set standard.

TABLE 8.—*Bonus systems of 45 foundries and 117 machine shops, 1929—Continued*

FOUNDRIES—Continued

Number of establishments	Kind of bonus	Employees entitled	Amount of bonus	Conditions
1	Production	Molders	Three-fourths of cost per mold for each one produced over fixed standard. Cost was computed by dividing rate per hour of molders by standard per hour.	Production in excess of set standard.
1	do	Molders, hand, bench	A specified amount for each casting produced over fixed standard in addition to hours worked times rate per hour.	Do.
1	do	All productive employees.	A specified rate for each unit produced over fixed standard per day.	Do.
1	do	Molders	4 cents for each casting produced over set standard.	Do.
1	do	All employees	1 per cent of earnings at basic rates for each pound produced per man-hour over set standard per month.	Do.
1	do	do	1 minute at basic rate for each pound produced over set standard per pay period.	Do.
1	do	Molders, machine	One-fourth cent for each casting produced over set standard.	Do.
1	do	Molders	5 per cent of earnings at basic rate for production of set standard. The per cent increased by sliding scale as production increased over the standard.	Production equal to or in excess of set standard.
1	Appraised labor cost.	Chippers and rough grinders.	One-half of the difference when the actual was less than the set standard of cost was prorated among employees according to earnings at basic rate.	Labor cost less than set standard of cost.
1	do	Molders	The difference when the actual was less than the set standard of labor cost.	Do.
1	do	All productive employees.	The difference was prorated among employees by earnings at basic rate, when the actual was less than the set standard of labor cost.	Do.
1	Efficiency	do	A specified per cent of earnings at basic rate for each per cent of efficiency over set standard.	Efficiency in excess of set standard.
1	do	do	Seven-tenths of 1 per cent of earnings at basic rate for efficiency of 68 per cent of set standard. The per cent increased by sliding scale as efficiency increased to 75 per cent of earnings for efficiency of 100 per cent.	Efficiency of 68 per cent or more of set standard.
1	do	All employees	0.018 cent for efficiency of 50 per cent and for each per cent over 50.	Efficiency of 50 per cent or more of set standard.

34 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

TABLE 8.—*Bonus systems of 45 foundries and 117 machine shops, 1929—Continued*

FOUNDRIES—Continued

Number of establishments	Kind of bonus	Employees entitled	Amount of bonus	Conditions
1	Efficiency.....	Core makers, molders, and pattern makers.	Two-thirds per cent of earnings at basic rate for each per cent of efficiency from 71 to 100. The bonus for each per cent of efficiency over 100 was 1 per cent of earnings at basic rate in addition to the 20 per cent for efficiency of 100 per cent.	Efficiency in excess of 70 per cent of set standard.
1	.....do.....	Cranemen, melters, melters' helpers, and pitmen.	10 per cent of earnings at basic rate for time worked on difficult job.	When on difficult job.
1	.....do.....	Molders and their helpers.	Specified per cent of earnings at basic rate for each per cent of efficiency from 75 to 100 per cent, inclusive, of set standard.	Efficiency in excess of set standard.
1	Production and efficiency.	.....do.....	Regular piece rate for all castings produced, good and bad, when bad castings were less than the standard allowance. Also regular rate for each good casting within allowance for bad castings. Example: The set standard was 600 with an allowance of 12. An employee produced 600 including 8 bad castings. There were 4 good castings within the allowance. He was paid for the 600 and 4 good within the allowance or 604 at 1¼ cents per piece or \$7.55.	Production of set standard and bad castings less than standard allowance.
1	Time saving.....	All others.....	One-half of time saved at regular rate.	Complete job in less than allotted time.
1	Attendance.....	Time workers.....	1 hour per day at regular rate.	Work full day.
1	.....do.....	Molders.....	10 per cent of weekly earnings when \$30 or more.	Work full time and earn \$30 or more per week.
1	.....do.....	Night productive employees.	25 cents per night.....	Work at least 9 hours per night.
1	.....do.....	All employees.....	2½ hours in half month at regular rate.	Work all time that there was work in half month pay period.
1	.....do.....	Molders.....	1 hour per day at regular rate.	Work 8¼ hours per day.
1	Service and attendance.	.....do.....	Not to exceed 5 per cent of earnings at basic rate.	Not reported.
1	Service.....	All employees.....	1 per cent of earnings at basic rate for service of 6 months to 2½ years; 2 per cent for 2½ to 5 years; 3 per cent for 5 to 7½ years; and 5 per cent for service of 7½ years and over.	In service 6 months or more.
1	.....do.....	.....do.....	1 per cent of annual earnings at basic rate for service of 1 year, 2 per cent for 2 years; 3 per cent for 3 years; 4 per cent for 4 years; 5 per cent for 5 years and over	In service 1 year or more.

TABLE 8.—*Bonus systems of 45 foundries and 117 machine shops, 1929*—Continued

MACHINE SHOPS

Number of establishments	Kind of bonus	Employees entitled	Amount of bonus	Conditions
8	Time saving	All employees	All of time saved at regular rate.	Complete job in less than allotted time.
2	do	do	Three-fourths of time saved at regular rate.	Do.
1	do	do	The per cent of earnings at basic rate that two-thirds of the time saved was of the time allowed for the job. Example: An employee whose rate was 60 cents per hour did a job in 21 hours of the allotted time of 30 hours, thus saving 9 hours, two-thirds of the time saved or 6 was 20 per cent of the allotted time of 30 hours. The employee in 21 hours at his rate earned \$12.00. His bonus was 20 per cent of the \$12.00 or \$2.52.	Do.
8	do	do	One-half of time saved at regular rate.	Do.
1	do	do	One-third of regular rate for each hour or fraction of hour saved.	Do.
1	do	All employees on standard production.	One-half of time saved at regular rate.	Do.
1	do	Machine operators	Part of time saved, ranging from 2 to 20 per cent, depending on type of work, at regular rate.	Do.
1	do	Assemblers	A specified per cent of time saved varying with types of job, but not to exceed 50 per cent at regular rate.	Do.
1	do	Day machine operators	One-half of time saved at regular rate.	Do.
18	do	All productive employees	do	Do.
1	do	Machine operators	All of time saved at regular rate.	Do.
2	do	do	do	Do.
1	do	Pieceworkers	do	Do.
1	do	Productive employees	70 per cent of time saved at regular rate.	Do.
1	do	All employees except elevator operators, laborers, and pattern makers.	do	Do.
1	do	All employees except laborers and machinists' helpers.	All of time saved at regular rate.	Do.
1	do	Fitters and bench hands	do	Do.
1	do	All employees except laborers, pattern makers, and toolmakers.	One-half of time saved at regular rate.	Do.
1	do	Part of machine operators	All of time saved at regular rate.	Do.
1	do	Productive employees	25 cents for each hour of time saved.	Do.
1	do	Toolmakers	One-half of time saved at regular rate.	Do.
7	do	Machine operators on production.	do	Do.
1	do	do	60 cents for each hour of time saved.	Do.
1	do	do	All of time saved at regular rate.	Do.
1	do	do	45 per cent of time saved at regular rate.	Do.
1	do	Fitters and bench hands, machine operators, painters, and packers and craters.	All of time saved at regular rate.	Do.

TABLE 8.—*Bonus systems of 45 foundries and 117 machine shops, 1929—Continued*

MACHINE SHOPS—Continued

Number of establishments	Kind of bonus	Employees entitled	Amount of bonus	Conditions
1	Time saving....	Machinists, machine operators, toolmakers, and die setters.	One-half of time saved at regular rate.	Complete job in less than allotted time.
1	do.....	Boring mill, lathe, and milling-machine operators.	do.....	Do.
1	do.....	Mechanics.....	12 cents for each hour of time saved.	Do.
1	do.....	All employees except laborers.	One-half of time saved at regular rate.	Do.
1	do.....	Fitters and bench hands, machinists, pattern makers, and toolmakers.	40 per cent of time saved at regular rate.	Do.
1	do.....	Assemblers, fitters, and bench hands, machinists, and machine operators.	One-half of time saved at regular rate.	Do.
1	do.....	Assemblers, boiler makers, blacksmiths, coil builders, machine operators, machinists, and welders.	All of time saved at regular rate.	Do.
1	do.....	Bench hands and machine operators.	One-half of time saved at regular rate.	Do.
1	do.....	Pattern makers.....	do.....	Do.
1	do.....	Machine operators and apprentices.	do.....	Do.
1	do.....	Assemblers, machine operators, and testers.	All of time saved at regular rate multiplied by the differential for each particular operation. Differential not reported.	Do.
1	do.....	Machine shop, paint shop, and assembly.	One-half of time saved at regular rate.	Do.
1	do.....	All employees except sweepers.	One-half, three-fourths, or all of time saved, varying with nature of job; at regular rate.	Do.
1	do.....	Machine hands and machinists.	0.0064 cent for each minute saved.	Do.
		(Machine operators.....	80 per cent of time saved at regular rate.	Completion by machine operators of job of machine work in less than allotted time.
2	do.....	Crane operators and working foremen.	15 per cent of time saved by machine operators prorated among employees by earnings at basic rate.	
		Maintenance men, electricians, and others more remotely connected with production.	5 per cent of time saved by machine operators prorated among employees by earnings at basic rate.	Complete job in less than allotted time.
1	do.....	Planer operators and die-sinkers.	All of time saved at regular rate.	
1	do.....	Machine operators in transmission department.	do.....	Do.
1	do.....	All employees.....	One-half of time saved at regular rate.	Do.
1	Group efficiency.	Assemblers.....	1 per cent of earnings at basic rate for efficiency between 100¼ and 101¼ of set standard; each 1½ per cent from 101¼ to 109; each 2 per cent from 109 to 115; each 2½ per cent from 115 to 120; each 3 per cent from 120 to 135; and for each 3¼ per cent of efficiency from 135 to 221¼ per cent. The bonus ranged from 1 to 41 per cent of earnings at basic rate.	Efficiency in excess of 100¼ per cent of set standard.

BONUS SYSTEMS

TABLE 8.—*Bonus systems of 45 foundries and 117 machine shops, 1929—Continued*

MACHINE SHOPS—Continued

Number of establishments	Kind of bonus	Employees entitled	Amount of bonus	Conditions
1	Time saving	All employees	One-half of time saved at regular rate.	Complete job in less than allotted time. Perfect attendance in week.
	Attendance	do	10 per cent of earnings at basic rates. 5 per cent of earnings at basic rates.	
1	Time saving	do	One-half of time saved at regular rate.	Complete job in less than allotted time. Work full time in half month.
	Attendance	do	2 1/4 hours each half month at regular rate.	
1	Group time saving.	All productive employees.	All time saved prorated among employees in proportion to the time worked by each at regular rate.	Complete job in less than allotted time.
1	do	All employees.	do	Do. Do.
1	Time saving and penalty.	Machine operators in roll shop.	One-half of time saved at regular rate. Penalty—One-half of time in excess of allowed time at regular rate deducted from earnings at basic rate.	Penalty.
1	do	All productive employees.	One-half of time saved at regular rate. Penalty—One-half of time in excess of allowed time at regular rate deducted from earnings at basic rate.	Complete job in less than allotted time. Penalty.
1	do	do	One-half of time saved at regular rate. Penalty—All time in excess of allowed time at regular rate deducted from earnings at basic rate.	Complete job in less than allotted time. Penalty.
1	Time saving	Machine operators in transmission department.	All of time saved at regular rate.	Complete job in less than set standard.
1	Production	All employees.	Three-fourths of cost per piece for each one produced over the set standard. Cost per piece was computed by dividing the rate per hour of individual by the set standard per hour. Production of less than the set standard on any one or more days required to be made up and exceeded to get bonus.	Production in excess of set standard.
2	do	All productive employees.	Not reported.	Do. Do.
1	do	do	One-half of production in excess of set standard at basic rate.	Do.
1	do	All employees.	One-fourth to all of production in excess of set standard, varying with nature of work at basic rate.	
1	Profit sharing and service.	All productive labor	Average of 11 per cent of yearly earnings at basic rate.	Profit by establishments sufficient to warrant bonus and service by employee 3 months prior to beginning of quarterly bonus period. Production in excess of set standard.
	Production	do	One-half of production in excess of set standard at regular rate.	
	Appraised labor cost.	Assemblers	One-half of the difference when the actual was less than the appraised labor cost prorated on basis of hours worked and rate.		Labor cost less than "appraised cost."

38 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

TABLE 8.—*Bonus systems of 45 foundries and 117 machine shops, 1929—Continued*

MACHINE SHOPS—Continued

Number of establishments	Kind of bonus	Employees entitled	Amount of bonus	Conditions
1	Appraised labor cost.	All employees.....	35 per cent of the difference when the actual was less than the appraised cost.	Labor cost of job less than the appraised cost.
1	do.....	All production employees.	The difference when the actual was less than the appraised cost prorated among employees by earnings at basic rate.	Do.
2	do.....	do.....	One-half of the difference when the actual was less than the appraised cost prorated among employees by earnings at basic rate.	Do.
1	Efficiency.....	do.....	Per cent of earnings at basic rate increased by sliding scale with per cent of efficiency in excess of the set standard.	Efficiency in excess of set standard.
1	do.....	do.....	5 per cent of earnings at basic rate for efficiency of 75 per cent of set standard. The per cent of earnings at basic rate increased by sliding scale to 25 for efficiency of 100 per cent and to 30 for efficiency of 125 per cent of the set standard.	Efficiency of 75 per cent or more of set standard.
1	do.....	do.....	Seven-tenths of 1 per cent of earnings at basic rate for efficiency of 68 per cent of the set standard. The per cent of earnings increased by sliding scale as efficiency increased, to 25 per cent for efficiency of 100. The bonus for each per cent of efficiency over 100 was 1 per cent of earnings at basic rate in addition to the 25 per cent for efficiency of 100 per cent.	Efficiency of 68 per cent or more of set standard.
1	do.....	All employees.....	The amount of the bonus varies with the bonus classes into which employees are divided according to skill, etc. The bonus is entirely independent of wage rate. For efficiency of 50 per cent of the set standard the bonus was one-tenth of the bonus for 100 per cent of efficiency. Example: The bonus for 100 per cent of efficiency was 25 cents per day for Class I and for 50 per cent was one-tenth of 25 cents of 2.5 cents per day. For each per cent of increase in efficiency over 50, the bonus for 50 per cent was increased by nine-tenths of the bonus for 100 per cent divided by 50.	Efficiency of 50 per cent or more of set standard.

TABLE 8.—*Bonus systems of 45 foundries and 117 machine shops, 1929—Continued*
MACHINE SHOPS—Continued

Number of establishments	Kind of bonus	Employees entitled	Amount of bonus	Conditions
1	Efficiency	Machine operators	1 per cent of weekly earnings at basic rate for efficiency of 72 per cent of set standard. The per cent of earnings at basic rate increased by sliding scales with efficiency to 20 for efficiency of 100 per cent. The bonus for each per cent of efficiency over 100 was 1 per cent of earnings at basic rate in addition to the 20 per cent for efficiency of 100 per cent.	Efficiency of 72 per cent or more of set standard.
1	do	All productive employees.	1 per cent of earnings at basic rate for efficiency of 75 per cent of set standard. The per cent of earnings at basic rate increased by sliding scales with efficiency to 20 per cent for efficiency of 100.	Efficiency in excess of 75 per cent of set standard.
1	Attendance	All employees	5 hours at regular rate each 4 weeks' full attendance.	Full-time attendance in 4 weeks.
1	do	Night productive workers.	25 cents per night.	Attendance of 9 or more of the 13 regular hours per night.
1	Punctuality	All employees	2 hours per week at regular rate.	On time each day and work full time in week.
1	Attendance	do	One-fourth hour each day, Monday to Friday, at regular rate.	Full-time attendance in week.
1	Service	All in service 1 year or longer.	1 per cent of yearly earnings.	In service 1 year or more.
1	do	Employees in service entire year.	6 per cent of yearly earnings at basic rate.	In service entire year.
1	do	All employees	5 per cent of earnings in year at basic rate for service of 1 year; 6 per cent for service over 1 and less than 2 years; and 7 per cent for service of 2 or more years.	In service year or more.
1	do	do	1½ per cent of earnings at basic rate for the 6 months next preceding payment of the bonus for service of 6 months and under 2½ years; 2½ per cent for service of 2½ and under 5 years; 5 per cent for service of 5 and under 7½ years; 7½ per cent for service of 7½ years and over.	In service 6 months or more.
1	Service and efficiency.	Testers	Ranged from \$1 for employees who in week at basic rate earned \$20 to \$10 for those who earned \$60 in week.	Earnings of \$20 or more in week.
1	Service and attendance.	All employees	Average of 6.65 per cent of earnings at basic rate for service and attendance combined. The maximum was 5 per cent of earnings at basic rate for service and 5 per cent for attendance.	Not reported.
1	Christmas	do	3 per cent of yearly earnings.	On roll Christmas.
1	do	do	2 per cent of yearly earnings.	Do.
1	do	do	1 per cent of yearly earnings.	Do.

CLASSIFIED DAYS WORKED BY EMPLOYEES, 1929

Table 9 shows the percentage distribution of employees in 8 of the representative occupations in foundries and 17 in machine shops according to the number of days on which they worked in one week. "Days worked" as used in this table means the number of calendar days or parts of days on which employees did some work. A full day or any part of a day was counted as a day. The average number of days worked by employees in the occupation is a simple average obtained by dividing the aggregate number of days on which any work was done by the total number of employees in the occupation.

The table shows that 65 per cent of the 4,233 chippers and rough grinders worked on 6 days during the week covered, 24 per cent on 5 days, 6 per cent on 4 days, 2 per cent on 3 days, 2 per cent on 2 days, and 1 per cent on 1 day, and also that 1 per cent worked on 7 days during the week. The average for all was 5.5 days.

TABLE 9.—Number of days on which employees in 8 specified occupations in foundries and 17 in machine shops worked in one week, 1929, by sex

Occupation and sex	Number of establishments	Number of employees	Average number of days on which employees worked in one week	Per cent of employees who in one week worked						
				1 day	2 days	3 days	4 days	5 days	6 days	7 days
FOUNDRIES										
Chippers and rough grinders:										
Male.....	367	4,233	5.5	1	2	2	6	24	65	1
Core makers:										
Male.....	387	3,370	5.4	1	1	2	7	31	57	(1)
Female.....	38	280	5.0	2	1	6	16	32	43	
Laborers:										
Male.....	334	10,980	5.4	2	2	3	7	28	57	2
Molders, hand, bench:										
Male.....	321	2,098	5.3	1	1	2	9	39	48	(1)
Molders, hand, floor:										
Male.....	336	5,453	5.3	1	1	2	8	33	54	(1)
Molders, machine:										
Male.....	249	3,854	5.2	1	2	3	8	39	48	(1)
Molders' helpers, floor:										
Male.....	261	1,919	5.4	2	2	3	6	24	63	1
Pattern makers:										
Male.....	191	1,127	5.7	(1)	1	1	3	17	77	1
MACHINE SHOPS										
Assemblers:										
Male.....	535	7,670	5.7	(1)	1	1	3	13	81	1
Boring-mill operators:										
Male.....	372	2,333	5.6	1	1	2	8	20	72	1
Drill-press operators:										
Male.....	440	5,291	5.6	1	1	2	4	19	72	1
Fitters and bench hands:										
Male.....	367	7,715	5.7	(1)	1	2	2	13	80	2
Grinding-machine operators:										
Male.....	313	2,888	5.6	(1)	1	2	4	21	72	1
Laborers:										
Male.....	452	8,606	5.7	1	1	2	3	13	78	2
Lathe operators, engine:										
Male.....	421	5,640	5.7	1	1	2	8	16	77	1
Lathe operators, turret:										
Male.....	359	3,856	5.6	1	1	3	4	21	70	1
Machinists:										
Male.....	379	4,036	5.7	(1)	1	1	8	15	78	2
Less than 1 per cent.										

TABLE 9.—Number of days on which employees in 8 specified occupations in foundries and 17 in machine shops worked in one week, 1929, by sex—Continued

MACHINE SHOPS—Continued

Occupation and sex	Number of establishments	Number of employees	Average number of days on which employees worked in one week	Per cent of employees who in one week worked						
				1 day	2 days	3 days	4 days	5 days	6 days	7 days
Machinists' and toolmakers' helpers:										
Male.....	229	1,006	5.7	1	1	2	3	13	77	3
Milling-machine operators:										
Male.....	358	3,440	5.7	(¹)	1	1	3	17	76	1
Pattern makers:										
Male.....	288	1,652	5.7	(¹)	1	1	2	13	82	(¹)
Planer operators:										
Male.....	344	1,963	5.7	(¹)	1	2	3	18	75	1
Screw-machine operators, hand:										
Male.....	155	966	5.6	1	1	1	4	22	71	---
Screw-machine operators, semiautomatic:										
Male.....	41	171	5.6	1	---	2	7	18	72	1
Screw-machine operators, automatic:										
Male.....	144	762	5.6	(¹)	(¹)	1	5	22	71	(¹)
Toolmakers:										
Male.....	350	2,850	5.7	1	1	1	2	12	83	(¹)

¹ Less than 1 per cent.

Indexes of employment and of pay rolls in foundries and machine shops and for machine tools and steam fittings, etc. (machine shops engaged in making tools used in machine shops and steam fittings, etc., that require machining), are presented separately in Table 10 for each of the months and years from January, 1923, to December, 1929. The data as presented in all other tables of this report for foundries and machine shops with the exception of Table 11 include machine tools and steam fittings, etc. Since the data as published by the bureau in monthly reports on "Trend of employment" are collected and compiled separately for machine tools and steam fittings, etc., they are shown separately in this table. These numbers were computed from the amount or volume of employment and the amount of the pay rolls for each of the months and years as shown in this table, with the 1926 average number of employees and the 1926 average amount of pay rolls taken as the base, or 100 per cent.

During the period January, 1923, to December, 1929, the monthly volume of employment index in foundries and machine shops was highest (120.5) in July, 1923, and lowest (85.9) in September, 1924, and pay rolls were highest (118.8) in June, 1923, and lowest (77.5) in September, 1924. Indexes by years were: Employment, 115.3 in 1923, 93 in 1924, 93.1 in 1925, 100 in 1926, 93.8 in 1927, 92.3 in 1928, and 104.3 in 1929, and pay rolls were 110.7 in 1923, 87.2 in 1924, 90.6 in 1925, 100 in 1926, 92.4 in 1927, 92.8 in 1928, and 108.1 in 1929.

42 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

TABLE 10.—Indexes of employment and of pay-roll totals, January, 1923, to December, 1929, by month and year

[Average for 1926=100]

FOUNDRIES AND MACHINE SHOPS

Month	Employment							Pay-roll totals						
	1923	1924	1925	1926	1927	1928	1929	1923	1924	1925	1926	1927	1928	1929
January.....	107.7	102.4	90.4	96.9	97.1	86.3	97.6	94.8	95.9	86.6	95.7	95.2	82.4	97.7
February.....	112.0	100.7	92.5	99.7	99.4	88.4	101.3	100.7	96.0	91.0	100.9	101.4	88.2	106.7
March.....	115.8	100.5	93.4	101.2	99.5	89.9	104.4	107.1	96.6	92.6	103.4	101.7	90.8	111.0
April.....	118.0	99.4	93.8	101.2	98.0	90.7	106.8	112.8	96.1	90.6	102.3	98.2	91.1	114.1
May.....	118.7	95.3	93.4	100.6	96.0	92.4	108.3	116.8	91.7	91.9	102.0	96.6	93.6	115.4
June.....	119.8	92.7	93.8	102.4	94.9	92.8	108.6	118.8	87.0	91.0	103.7	94.6	94.8	113.5
July.....	120.5	88.5	92.6	101.4	93.7	92.7	108.4	116.8	78.2	88.2	98.2	90.1	91.8	109.7
August.....	120.0	87.0	92.0	101.2	93.2	93.2	105.3	115.0	78.2	87.9	100.0	91.0	93.6	109.0
September.....	118.0	85.9	92.4	100.6	91.1	94.2	105.7	114.4	77.5	85.5	97.8	86.9	93.7	108.1
October.....	114.3	86.2	93.3	99.7	89.3	94.9	104.7	113.8	80.4	91.7	100.2	85.9	97.9	109.5
November.....	111.5	87.2	94.1	97.0	86.6	95.6	101.2	109.3	81.7	93.4	96.3	82.7	96.8	102.5
December.....	107.7	90.0	95.4	98.4	86.4	96.3	99.3	108.6	87.6	96.5	99.6	84.9	99.0	100.2
Average.....	115.3	93.0	93.1	100.0	93.8	92.3	104.3	110.7	87.2	90.6	100.0	92.4	92.8	108.1

MACHINE TOOLS

January.....	90.8	80.7	100.2	100.9	88.3	120.1	83.6	76.2	100.4	100.1	88.4	129.1
February.....	92.2	81.9	100.6	100.1	90.7	124.3	85.8	78.3	101.0	99.6	94.1	138.0
March.....	92.3	81.4	102.0	98.8	92.6	129.0	86.1	77.5	102.1	99.1	98.2	142.3
April.....	89.8	81.6	101.5	97.0	95.1	129.7	84.4	78.0	101.9	95.3	101.5	144.0
May.....	107.9	86.3	102.2	94.4	97.7	130.3	85.5	80.9	79.6	99.4	104.0	143.1
June.....	107.0	83.7	83.5	99.6	93.3	99.4	132.3	97.3	77.5	81.1	99.1	135.3
July.....	104.2	77.3	84.9	96.4	90.6	100.9	133.2	91.5	66.9	82.4	96.8	103.5
August.....	80.2	66.9	79.0	90.7	81.1	95.4	131.2	73.5	57.8	77.9	90.1	100.8
September.....	98.9	75.4	88.3	100.4	90.4	106.8	134.9	88.8	65.3	81.3	98.2	113.4
October.....	98.4	75.3	92.0	101.8	90.2	110.2	135.8	88.6	67.2	91.9	102.8	120.9
November.....	94.2	76.3	95.7	102.3	88.6	114.2	132.0	85.0	69.1	95.8	103.6	125.6
December.....	94.2	78.3	98.8	101.9	88.5	118.2	124.6	87.4	74.4	101.1	104.5	132.8
Average.....	98.1	82.0	85.8	100.0	92.8	100.8	129.8	88.5	74.9	83.4	100.0	92.2

STEAM FITTINGS, ETC.

January.....	97.8	96.5	103.0	90.8	80.8	81.2	92.7	94.3	102.4	89.1	75.5	78.4
February.....	99.6	98.6	105.0	94.9	83.1	84.3	100.5	101.1	104.9	97.4	84.9	88.0
March.....	102.6	98.6	103.4	93.9	84.3	82.6	105.0	100.7	105.0	96.2	84.9	85.7
April.....	104.5	97.5	102.6	94.0	84.3	81.4	104.8	92.3	102.5	94.3	82.2	82.8
May.....	106.2	102.1	97.0	100.8	92.9	84.4	102.7	102.2	95.1	100.7	94.1	86.1
June.....	106.0	100.1	96.9	101.3	93.6	84.1	102.4	97.8	91.4	103.7	94.5	85.5
July.....	105.3	96.6	97.2	97.9	94.1	80.7	98.7	90.9	92.0	96.3	90.9	80.4
August.....	105.6	97.5	99.7	100.2	94.5	86.8	76.6	93.8	91.6	97.0	99.8	87.8
September.....	104.8	97.9	101.9	100.4	96.1	83.0	77.2	97.8	94.4	93.2	100.8	84.8
October.....	103.4	98.1	105.8	99.0	93.7	83.0	79.1	99.9	97.4	106.2	101.1	93.5
November.....	99.3	96.0	105.8	95.5	88.3	79.4	78.5	94.6	83.0	102.0	93.1	82.0
December.....	96.0	90.1	105.2	90.5	83.4	72.8	74.0	94.4	84.2	103.0	89.6	80.2
Average.....	103.3	98.6	100.1	100.0	92.5	82.2	78.5	98.0	95.4	97.4	100.0	91.9

IMPORTANCE OF FOUNDRIES AND MACHINE SHOPS

The importance of this industry may be judged from the fact that nearly all, if not all, other industries depend upon the products of foundries and machine shops for tools and machinery to carry on their business.

The figures shown in Table 11 were taken from the United States census reports for years 1914, 1919, 1921, 1923, 1925, and 1927. These figures are shown under six different headings: Foundries and machine shops; engines, steam, gas, and water; machine tools; pumps (hand and power) and pumping equipment; steam fittings, etc.; and text

machinery. While these articles are practically all produced in foundries and machine shops, the different groups have grown to such importance as to be treated separately by the census. Under these six headings are shown for each of the six years the number of establishments, the cost of material, the value of products, the average number of employees; the average number of wage earners, amounts paid to wage earners, and the average per capita yearly earnings of wage earners as computed by the Bureau of Labor Statistics.

TABLE 11.—Establishments, cost of material, value of products, wage earners, and earnings of wage earners, in specified years, 1914 to 1927

[From United States Census of Manufactures, 1925 and 1927]

Industry	Number of establishments	Cost of material	Value of products	Average number of employees	Average number of wage earners	Amount paid to wage earners	Average per capita yearly earnings of wage earners
Foundries and machine shops:		<i>Millions</i>	<i>Millions</i>			<i>Millions</i>	
1914.....	10,640	\$358	\$867	421,149	362,471	\$244	\$673.56
1919.....	10,934	948	2,289	569,646	482,767	623	1,289.59
1921.....	9,013	653	1,566	390,816	321,363	412	1,283.16
1923.....	8,531	936	2,337	532,821	448,777	642	1,431.52
1925.....	8,154	884	2,233	481,212	397,838	591	1,485.03
1927.....	8,318	873	2,260	482,755	397,814	591	1,485.78
Engines, steam, gas, and water:							
1914.....	446	31	72	36,106	29,657	21	722.28
1919.....	370	218	465	96,193	77,617	105	1,358.41
1921.....	296	112	199	43,691	35,567	52	1,462.17
1923.....	249	125	267	57,695	48,495	71	1,461.55
1925.....	220	146	314	59,394	51,099	74	1,440.05
1927.....	215	165	368	63,433	54,341	85	1,560.35
Machine tools:							
1914.....	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
1919.....	403	59	212	61,630	53,111	66	1,246.05
1921.....	348	24	68	25,854	21,307	25	1,185.14
1923.....	350	41	137	40,101	33,373	47	1,418.42
1925.....	329	44	144	37,279	30,831	47	1,515.08
1927.....	355	46	160	42,642	35,269	62	1,484.75
Pumps, steam and other power:							
1914.....	183	9	24	8,722	8,322	6	667.53
1919.....	239	36	85	17,154	16,072	20	1,227.70
1921.....	221	27	70	16,442	12,186	14	1,146.36
1923.....	229	34	93	19,124	14,550	20	1,373.92
1925.....	253	50	120	23,333	17,935	25	1,409.43
1927.....	278	53	131	24,609	18,671	27	1,452.46
Steam fittings, etc:							
1914.....	295	27	64	31,638	26,388	17	634.30
1919.....	261	72	160	43,791	36,686	46	1,246.87
1921.....	274	50	127	37,004	30,808	40	1,285.25
1923.....	236	83	222	51,127	44,141	65	1,468.17
1925.....	225	77	229	49,974	43,260	64	1,478.95
1927.....	232	77	225	49,599	42,893	65	1,511.93
Textile machinery:							
1914.....	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
1919.....	432	46	122	35,772	31,823	37	1,147.87
1921.....	421	45	129	34,469	31,025	39	1,251.59
1923.....	428	50	141	40,041	35,672	46	1,290.16
1925.....	379	39	122	32,530	27,869	37	1,344.28
1927.....	367	36	117	30,438	26,154	36	1,394.86
Total:							
1914.....	11,564	425	1,027	497,615	426,838	288	674.40
1919.....	12,639	1,379	3,333	824,186	698,076	897	1,283.89
1921.....	10,573	911	2,159	548,276	452,256	582	1,286.91
1923.....	10,023	1,269	3,197	740,909	625,008	891	1,426.33
1925.....	9,560	1,240	3,162	683,722	568,832	838	1,472.88
1927.....	9,765	1,250	3,261	693,476	575,142	856	1,489.50

¹ Included in foundries and machine shops prior to 1919.

A comparison of the total figures for the six census years shows that the number of employees for 1919 is greater than for either of the other years, while the 1927 average per capita yearly earnings are greater than for any other year. The conditions for the year 1919

were abnormal. The demands upon the industry caused by the World War were still in effect and were largely responsible for the unusual numbers of employees, the large number of establishments, the high value of the products, and the large sum paid to wage earners. While the figures for 1919 are abnormally high, those for 1921 are abnormally low. A period of great depression in the industry followed the census for 1919, and extended into the census for 1921. The figures for 1923 show that the industry had by that time recovered from the slump of 1921, and had entered upon a period of development more nearly approximating natural or normal growth in the industry than is shown by the figures for either 1919 or 1921. The figures for 1925 and 1927, compared with those for 1923, show decreases in number of establishments and of wage earners and in amount paid to wage earners, and increases in the average per capita yearly earnings.

SCOPE AND METHOD

The figures presented in this bulletin are limited to wage earners and cover all workers of this class, beginning with those who receive the raw materials and supplies, including all who perform the various operations of manufacture, and ending with those who pack or otherwise prepare the product for shipment. Executive employees, clerks, employees engaged in construction or repair of buildings, employees in forge and boiler shops, and those whose duties were mainly supervisory are excluded.

The 1929 study of the industry, like those of former years, covered a representative group of establishments in each State where foundries and machine shops are of material importance. On account of the very large variety of products manufactured in machine shops, the study was limited to those establishments in which the machinery used was fairly comparable. The machine shops included in the study are engaged in the machining and assembling of parts for and the construction of engines; of textile, glass-blowing, flour-milling, mining, laundry, woodworking, excavating, road-building, hoisting, steel-mill and rolling-mill machinery; of ice, brick, rubber, shoe, and sugar-making machinery; of cotton gins, elevators, conveyors, pumps, pipe-line equipment, printing presses, valves and other machined fittings for heating, steam and water systems; and also machine tools (machines used in machine shops), etc. A number of machine shops which were engaged in repair work are also included. While the machines used in the establishments included in the study vary in type and size with the product manufactured, the operations are essentially the same. No machine shops were included whose principal product was agricultural implements, automobiles or automobile parts, dynamos, motors, magnets, or other electrical units, locomotive railroad cars or car wheels, cash registers, calculating machines, typewriters, sewing machines, hardware, stoves, or stove equipment.

The foundries included were mainly engaged in casting parts for the same class of products as those made in the machine shops covered in the study. In a large number of cases data were obtained from one company or plant for both a foundry and a machine shop. No forge or boiler shop was included if it was operated as a separate unit.

The 1929 study covered 399 foundries and 508 machine shops in 28 States. In selecting establishments from which to obtain data the bureau undertook to represent all States in which the industry is of material importance, the measure of importance being the number of wage earners as reported by the United States Census of Manufactures.

TABLE 12.—Number of wage earners in 1927, as reported by the United States Census of Manufactures, and the number of establishments and wage earners for which data are shown for 1929, by State

State	Wage earners in foundries and machine shops reported by United States census, in 1927	Number of establishments and of employees for which data are shown by the Bureau of Labor Statistics for 1929					
		Foundries		Machine shops		Foundries and machine shops combined	
		Establishments	Employees	Establishments	Employees	Establishments	Employees
Alabama.....	2,974	4	190	6	294	10	474
California.....	16,630	16	1,185	23	2,123	41	3,318
Colorado.....	1,426	3	307	2	654	5	961
Connecticut.....	26,152	16	1,620	19	4,111	25	5,740
Georgia.....	3,015	3	420	8	332	16	761
Illinois.....	62,154	26	2,605	26	11,206	64	14,870
Indiana.....	24,354	16	2,485	16	3,014	32	5,499
Iowa.....	6,266	9	969	6	1,682	15	1,991
Kansas.....	2,782	9	260	10	426	19	696
Kentucky.....	2,120	7	287	10	652	17	859
Louisiana.....	1,378	4	246	6	217	9	463
Maine.....	1,043	4	243	7	650	8	898
Maryland.....	3,667	7	421	7	706	14	1,126
Massachusetts.....	39,498	26	2,410	26	7,768	66	16,178
Michigan.....	56,529	27	4,439	36	5,841	73	10,280
Minnesota.....	7,214	6	487	4	856	14	1,213
Missouri.....	8,617	15	764	19	1,153	34	1,917
New Hampshire.....	3,016	6	143	6	672	12	715
New Jersey.....	26,003	16	2,403	28	3,669	44	6,072
New York.....	67,187	28	3,440	32	9,369	60	12,815
Ohio.....	72,466	44	4,321	85	14,267	129	18,598
Oregon.....	1,536	5	208	6	396	11	604
Pennsylvania.....	75,197	39	5,304	48	12,680	87	17,994
Rhode Island.....	4,784	9	1,077	10	3,215	19	4,292
Tennessee.....	2,671	7	362	8	541	15	923
Texas.....	5,861	6	278	10	742	16	1,720
Washington.....	2,714	7	316	7	722	14	1,048
Wisconsin.....	32,619	13	2,202	15	4,255	28	6,457
All other States.....	24,349						
Total.....	573,142	399	40,391	508	91,491	997	121,882

The actual number of plants and of wage earners covered in both foundries and machine shops in each State in 1929 is shown in Table 12. For comparison the figures as reported by the United States Census of Manufactures for 1927, the latest year for which figures are available, are also shown. The table shows that 96 per cent of the wage earners employed in foundries and machine shops are located in the 28 States covered by the bureau and that data for 23 per cent of them are shown in this report.

The data included in the 1929 study were taken by agents of the bureau for practically all establishments directly from the pay rolls, time-clock cards, and other records of the establishments for a representative pay period. A few establishments prepared data for the bureau from their records. Data were taken for only part of the

total number of wage earners in a few very large establishments, as the inclusion of all of them would have tended to impair the representative averages for the States in which these establishments are located. A very large per cent of the establishments included in the report pays employees every week compared with a small per cent that pays every two weeks or twice each month. Data for those that pay every two weeks or half month were so taken as to make it possible to present figures for one week for wage earners in all establishments. Approximately 93 per cent of the 1929 data are for a pay-roll period in June, July, August, or September. The averages, therefore, are fairly representative of wage conditions in those months.

The average earnings per hour for employees in each occupation were computed by dividing the total weekly earnings of all employees in the occupation during the pay-roll period by the total hours worked in one week by such employees.

The 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 during the pay period covered. The full-time hours of each employee were used in arriving at this average, even though some employees worked more or less than full time on account of entering or leaving the service during the pay period, overtime, sickness, disability, or some other cause.

Average full-time earnings per week for employees of 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 during the time that was actually worked in the pay period covered.

GENERAL TABLES

In addition to the text tables already shown, five general tables, which show the data in considerable detail, are presented 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, 1929, by occupation, sex, and State.

This table shows for each occupation and State all of the various averages which have been computed from the data collected in 1929. The presentation in this table in parallel columns of "Average full-time hours per week" and "Average hours actually worked in one week" is for the purpose of easy comparison of the average hours actually worked in one week with the hours that would have been worked in one week had all employees in the occupation worked no more nor less than full time. One shows the average full-time hours per week under normal conditions, while the other shows the average hours actually worked in one week by all employees in the occupation. 1

Tables B, C, D, and E are distribution tables and are limited to 25 principal occupations—8 in foundries and 17 in machine shops.

TABLE B.—Average and classified earnings per hour in 25 specified occupations, 1929, by sex and State.

TABLE C.—Average and classified full-time hours per week in 25 specified occupations, 1929, by sex and State.

TABLE D.—Average and classified hours actually worked in one week in 25 specified occupations, 1929, by sex and State.

TABLE E.—Average and classified actual earnings in one week in 25 specified occupations, 1929, by sex and State.

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, 1929, by occupation, sex, and State

FOUNDRIES

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Chippers, and rough grinders, male:									
Alabama.....	3	23	5.3	53.9	46.8	86.8	\$0.318	\$17.14	\$14.87
California.....	18	123	5.6	45.8	45.8	100.0	.628	28.76	28.76
Colorado.....	3	44	5.7	49.8	51.7	103.8	.486	24.20	25.11
Connecticut.....	15	111	5.4	49.4	49.5	100.2	.518	25.49	25.53
Georgia.....	7	50	5.7	52.9	54.3	102.6	.235	12.43	12.74
Illinois.....	28	449	5.3	51.8	49.0	94.6	.595	30.82	29.16
Indiana.....	16	170	5.7	53.1	51.8	97.6	.509	27.03	26.35
Iowa.....	9	103	5.2	53.2	46.5	87.4	.522	27.77	24.29
Kansas.....	9	37	5.8	58.7	52.5	89.4	.366	21.48	19.23
Kentucky.....	6	15	5.9	48.7	54.2	111.3	.408	19.87	22.13
Louisiana.....	3	39	5.6	56.2	49.5	88.1	.343	19.28	16.98
Maine.....	4	44	5.8	53.5	57.2	106.9	.433	23.17	24.78
Maryland.....	7	43	5.7	52.0	50.2	96.5	.439	22.83	22.01
Massachusetts.....	26	346	5.5	49.4	46.3	93.7	.535	26.43	24.78
Michigan.....	32	401	5.4	52.1	50.3	96.5	.571	29.75	28.71
Minnesota.....	6	46	5.6	51.9	47.8	92.1	.510	26.47	24.38
Missouri.....	15	71	5.7	52.6	50.7	96.4	.485	25.51	24.58
New Hampshire.....	5	19	5.5	51.2	49.6	96.9	.480	24.58	23.80
New Jersey.....	14	293	5.5	50.3	50.0	99.4	.576	28.97	28.84
New York.....	24	334	5.4	49.5	50.5	102.0	.598	29.60	30.18
Ohio.....	38	365	5.4	53.6	50.2	93.7	.496	26.59	24.88
Oregon.....	5	26	5.7	45.5	44.0	96.7	.558	25.39	24.58
Pennsylvania.....	39	593	5.5	52.3	49.7	95.0	.540	28.24	26.84
Rhode Island.....	8	149	5.5	51.0	48.4	94.9	.518	26.42	25.08
Tennessee.....	5	60	5.3	49.4	46.1	93.3	.297	14.67	13.71
Texas.....	5	30	5.7	52.2	48.7	93.3	.348	18.17	16.97
Washington.....	7	32	5.2	48.2	42.2	87.6	.656	31.62	27.69
Wisconsin.....	12	217	5.5	52.3	50.0	95.6	.623	32.58	31.18
Total.....	367	4,233	5.5	51.4	49.4	96.1	538	27.65	26.59
Core makers, male:									
Alabama.....	3	11	5.8	53.9	52.1	96.7	.589	31.75	30.69
California.....	18	140	5.7	45.0	44.4	98.7	.923	41.54	40.99
Colorado.....	3	22	5.8	48.5	47.4	97.7	.788	38.22	37.38
Connecticut.....	16	114	5.2	48.6	44.9	92.4	.778	37.81	34.92
Georgia.....	7	33	5.6	52.2	49.7	95.2	.421	21.98	20.94
Illinois.....	27	331	5.5	49.4	47.6	96.4	.741	36.61	35.28
Indiana.....	16	177	5.5	50.9	47.7	93.7	.723	36.80	34.50
Iowa.....	9	88	5.1	52.1	46.3	88.9	.756	39.39	35.00
Kansas.....	8	19	5.7	54.6	51.4	94.1	.569	31.07	29.25
Kentucky.....	7	12	5.6	49.4	47.0	95.1	.647	31.96	30.42
Louisiana.....	3	9	5.7	55.6	50.8	91.4	.736	40.92	37.39
Maine.....	4	13	5.5	50.2	47.5	94.6	.459	23.04	21.78
Maryland.....	6	43	5.4	50.6	48.0	94.9	.620	31.37	29.78
Massachusetts.....	28	169	5.3	48.6	44.0	90.5	.842	40.92	37.06
Michigan.....	35	344	5.3	50.9	47.0	92.3	.711	36.19	33.38
Minnesota.....	6	41	5.1	51.8	43.2	83.4	.654	33.88	28.28
Missouri.....	15	66	5.6	51.1	46.9	91.8	.745	38.07	34.93
New Hampshire.....	5	8	5.4	50.8	46.4	91.3	.623	31.65	28.88
New Jersey.....	15	128	5.5	51.5	47.8	92.8	.835	43.00	39.91
New York.....	27	282	5.4	50.1	49.6	99.0	.711	35.62	35.26
Ohio.....	44	393	5.5	50.1	48.7	97.2	.784	39.28	38.18
Oregon.....	5	15	6.0	46.1	44.8	97.2	.720	33.19	32.22
Pennsylvania.....	38	522	5.2	50.2	44.8	89.2	.749	37.60	33.52
Rhode Island.....	9	87	5.6	50.4	50.9	101.0	.657	33.11	33.45
Tennessee.....	7	24	5.3	49.1	44.1	89.8	.692	29.07	26.10

48 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

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, 1929, by occupation, sex, and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Core makers, male—Continued.									
Texas.....	6	23	5.1	48.4	42.5	87.8	\$0.578	\$27.98	\$24.52
Washington.....	7	24	5.4	48.1	43.3	90.0	.818	39.35	35.46
Wisconsin.....	13	222	5.5	49.0	47.7	97.3	.740	36.26	35.32
Total.....	387	3,370	5.4	49.9	46.9	94.0	.744	37.13	34.95
Core makers, female:									
Georgia.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Illinois.....	4	24	4.6	48.2	37.8	78.4	.489	23.57	18.49
Indiana.....	2	22	5.3	50.0	45.2	90.4	.506	25.30	22.88
Kentucky.....	2	3	5.7	50.0	48.3	96.6	.412	20.60	19.92
Massachusetts.....	1	(2)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Michigan.....	10	70	4.6	50.7	39.3	77.5	.435	22.05	17.11
New Jersey.....	3	35	5.2	49.7	42.7	85.9	.490	24.35	20.89
New York.....	5	51	5.3	48.8	43.7	89.5	.490	23.91	21.43
Ohio.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania.....	2	17	4.5	48.4	39.1	80.8	.344	16.65	13.45
Rhode Island.....	3	10	5.8	53.0	49.8	94.0	.417	22.10	20.77
Wisconsin.....	4	36	5.3	45.6	39.4	86.4	.526	23.99	20.73
Total.....	38	280	5.0	49.1	41.6	84.7	.469	23.03	19.51
Crane operators, male:									
Alabama.....	3	5	5.0	53.9	48.8	90.5	.519	27.97	25.31
California.....	10	22	5.9	51.9	52.4	101.0	.638	33.11	33.45
Colorado.....	2	13	5.7	50.7	57.7	113.8	.516	26.16	29.77
Connecticut.....	11	54	5.5	50.2	50.0	99.6	.545	27.36	27.26
Georgia.....	5	5	5.8	53.9	56.7	105.2	.406	21.88	23.08
Illinois.....	15	66	5.6	53.4	57.7	108.1	.641	34.23	36.97
Indiana.....	12	30	5.8	52.5	52.3	99.6	.573	30.08	30.00
Iowa.....	6	19	4.5	53.2	41.1	77.3	.564	30.00	23.14
Kentucky.....	2	4	6.0	50.0	61.0	122.0	.468	23.40	28.54
Louisiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine.....	3	4	5.8	48.0	56.5	117.7	.550	28.40	31.06
Maryland.....	6	7	5.9	51.4	52.5	102.1	.452	23.23	23.72
Massachusetts.....	18	51	5.6	48.4	50.2	103.7	.593	28.70	29.80
Michigan.....	17	74	5.5	55.6	55.7	100.2	.599	33.30	33.34
Minnesota.....	5	15	5.4	52.8	50.4	95.5	.471	24.87	23.74
Missouri.....	8	24	5.7	49.9	51.3	102.8	.632	31.54	32.45
New Jersey.....	11	72	5.9	51.6	59.2	114.7	.576	29.72	34.10
New York.....	12	81	5.9	50.2	61.7	122.9	.633	31.78	39.10
Ohio.....	27	89	5.8	54.7	55.6	101.6	.684	31.94	32.48
Oregon.....	3	5	6.0	44.8	48.4	108.0	.666	29.39	31.78
Pennsylvania.....	35	175	5.6	52.0	53.6	103.1	.565	29.38	30.28
Rhode Island.....	6	8	5.6	49.8	57.7	115.9	.561	27.94	32.39
Tennessee.....	2	7	5.3	49.7	50.5	101.6	.381	18.94	19.24
Texas.....	2	3	5.7	54.3	60.1	110.7	.349	18.95	21.00
Washington.....	3	8	6.0	48.0	42.5	88.5	.675	32.40	28.64
Wisconsin.....	12	83	5.8	53.8	58.7	109.1	.578	31.10	33.94
Total.....	237	927	5.7	52.2	55.0	105.4	.682	30.38	32.04
Cupola tenders, male:									
Alabama.....	4	4	5.8	52.4	52.4	100.0	.385	20.17	20.17
California.....	16	18	5.8	46.2	49.0	106.1	.749	34.60	36.68
Colorado.....	2	2	6.5	51.1	57.2	111.9	.794	40.57	45.39
Connecticut.....	16	23	5.5	50.7	50.6	99.8	.683	34.63	34.57
Georgia.....	8	8	5.4	54.8	50.9	92.9	.425	23.29	21.61
Illinois.....	27	35	5.8	51.6	56.4	109.3	.730	37.67	41.20
Indiana.....	15	23	5.5	53.1	49.9	94.0	.605	32.13	30.15
Iowa.....	8	13	5.3	51.7	49.0	94.8	.595	30.76	29.16
Kansas.....	8	8	5.5	54.8	52.0	94.9	.480	26.30	24.95
Kentucky.....	7	11	5.4	51.1	49.9	97.7	.501	25.60	25.03
Louisiana.....	4	4	6.0	56.5	55.2	97.7	.437	24.69	24.09
Maine.....	4	5	5.6	48.4	50.7	104.8	.581	28.12	29.47
Maryland.....	7	10	5.6	50.4	49.3	97.8	.547	27.57	26.97
Massachusetts.....	25	31	5.5	49.5	49.2	99.4	.704	34.85	34.61
Michigan.....	29	37	5.8	51.5	54.8	106.4	.665	34.25	36.46
Minnesota.....	5	5	6.0	52.6	54.7	104.2	.629	33.02	34.38

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, 1929, by occupation, sex, and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Cupola tenders, male—Contd.									
Missouri.....	15	16	5.0	52.7	51.7	98.1	\$0.630	\$33.20	\$32.54
New Hampshire.....	6	6	5.3	50.7	45.7	90.1	.610	30.93	27.88
New Jersey.....	16	32	5.9	60.3	57.6	114.5	.628	31.59	36.16
New York.....	23	38	5.6	49.3	55.1	111.8	.643	31.70	35.46
Ohio.....	42	53	5.8	52.6	53.4	101.5	.655	34.45	34.97
Oregon.....	4	6	5.8	47.3	46.4	98.1	.659	31.17	30.55
Pennsylvania.....	37	69	5.5	51.0	51.8	101.6	.627	31.98	32.48
Rhode Island.....	9	14	5.9	51.2	58.8	114.8	.577	29.54	33.94
Tennessee.....	7	9	5.6	48.9	46.1	94.3	.433	21.17	19.94
Texas.....	5	5	5.4	48.6	47.0	96.7	.485	23.97	22.76
Washington.....	6	6	5.8	48.5	49.3	101.6	.712	34.33	35.13
Wisconsin.....	9	9	5.6	51.3	55.9	109.0	.648	33.24	36.25
Total.....	364	500	5.7	51.0	52.6	103.1	.634	32.33	33.34
Laborers, male:									
Alabama.....	4	64	5.3	53.4	48.7	91.2	.287	15.86	14.45
California.....	18	295	5.6	46.4	45.6	104.7	.585	27.14	23.45
Colorado.....	3	35	4.9	51.0	48.6	95.3	.424	21.62	20.62
Connecticut.....	16	481	5.2	51.7	48.5	93.8	.501	25.90	24.31
Georgia.....	8	157	5.5	54.5	52.1	95.6	.261	14.22	13.68
Illinois.....	28	1,067	5.3	50.6	49.2	97.2	.541	27.37	26.61
Indiana.....	16	865	5.2	53.9	48.3	89.6	.462	24.90	22.30
Iowa.....	9	247	5.3	53.9	49.3	91.5	.483	26.03	23.85
Kansas.....	9	63	5.6	54.2	51.4	94.8	.369	20.00	19.01
Kentucky.....	6	57	5.1	60.1	46.7	93.2	.387	19.39	18.10
Louisiana.....	4	106	5.3	56.6	49.7	87.8	.293	16.58	14.56
Maine.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Maryland.....	7	91	5.7	53.3	52.6	98.0	.391	21.00	20.56
Massachusetts.....	26	493	5.4	48.7	45.7	93.8	.518	25.23	23.66
Michigan.....	33	1,147	5.3	52.7	50.4	95.6	.533	28.09	26.84
Minnesota.....	6	114	5.1	53.1	45.5	85.7	.449	23.84	20.46
Missouri.....	15	169	5.3	53.7	48.7	90.7	.431	23.14	21.02
New Hampshire.....	6	17	5.1	50.5	44.0	87.1	.456	23.03	20.06
New Jersey.....	14	723	5.2	60.8	49.1	96.7	.490	25.35	24.48
New York.....	27	1,000	5.4	51.5	53.2	103.3	.534	27.59	28.41
Ohio.....	44	1,356	5.5	53.4	52.3	97.9	.467	24.94	24.41
Oregon.....	5	38	5.7	46.1	46.0	99.8	.514	23.70	23.64
Pennsylvania.....	36	1,350	5.4	52.7	50.7	96.2	.468	24.66	23.71
Rhode Island.....	9	230	5.6	52.2	53.8	103.1	.514	26.63	27.65
Tennessee.....	7	100	5.1	49.1	42.9	87.4	.291	14.29	12.49
Texas.....	5	86	5.0	52.8	47.1	89.2	.343	18.11	16.13
Washington.....	7	62	5.1	48.5	43.4	89.5	.573	27.79	24.83
Wisconsin.....	13	514	5.6	53.1	53.5	100.8	.515	27.35	27.58
Total.....	384	10,980	5.4	52.1	50.2	96.4	.490	25.63	24.59
Laborers, female:									
Illinois.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Indiana.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Michigan.....	2	34	5.1	53.2	44.3	83.3	.403	21.44	17.84
New Jersey.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
New York.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Pennsylvania.....	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Total.....	7	74	5.2	51.6	44.7	86.6	.386	19.92	17.26
Molders, hand, bench, male:									
Alabama.....	17	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
California.....	1	71	5.6	44.9	44.0	98.0	.919	41.26	40.48
Colorado.....	2	2	4.0	48.1	33.8	70.3	.945	45.45	31.91
Connecticut.....	16	142	5.0	50.6	44.4	87.7	.716	36.23	31.79
Georgia.....	6	30	5.3	50.0	45.3	90.6	.600	30.00	27.17
Illinois.....	24	169	5.5	49.1	46.9	95.5	.797	39.13	37.36
Indiana.....	15	126	5.5	51.3	47.8	93.2	.733	37.60	35.06
Iowa.....	9	42	4.8	52.0	44.8	86.2	.788	41.50	35.74
Kansas.....	6	9	5.7	55.3	52.7	95.3	.618	28.65	27.29
Kentucky.....	4	7	5.7	48.9	47.2	96.5	.704	34.43	33.21
Louisiana.....	2	8	5.0	58.8	47.6	80.8	.489	28.75	23.19

¹Data included in total.

50 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

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, 1929, by occupation, sex, and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Molders, hand, bench, male—Continued.									
Maine.....	4	20	5.5	52.5	48.6	92.6	\$0.707	\$37.12	\$34.37
Maryland.....	5	19	5.7	48.6	46.7	96.1	.679	33.00	31.74
Massachusetts.....	25	209	5.1	47.8	39.0	81.6	.887	42.40	34.56
Michigan.....	34	268	5.3	49.4	44.1	89.3	.845	41.74	37.30
Minnesota.....	6	26	4.9	50.3	42.3	84.1	.643	32.34	27.18
Missouri.....	7	31	5.1	51.7	43.7	84.5	.780	40.33	34.14
New Hampshire.....	5	24	4.8	49.8	40.3	80.9	.694	34.56	27.98
New Jersey.....	14	88	5.3	49.6	45.3	91.3	.850	42.16	38.52
New York.....	25	199	5.3	49.6	46.1	92.9	.745	36.95	34.32
Ohio.....	32	142	5.3	48.9	44.4	90.8	.851	41.61	37.77
Oregon.....	4	13	5.9	46.2	44.4	96.1	.795	36.73	35.33
Pennsylvania.....	26	250	5.1	50.9	46.0	90.4	.747	38.02	34.37
Rhode Island.....	9	88	5.4	50.4	46.7	92.7	.777	39.16	36.29
Tennessee.....	3	11	5.2	49.5	43.9	88.7	.618	30.59	27.12
Texas.....	3	15	5.0	46.7	42.7	91.4	.586	26.43	24.17
Washington.....	4	7	5.3	48.0	40.4	84.2	.844	40.51	34.13
Wisconsin.....	13	84	5.4	50.4	47.4	94.0	.721	36.34	34.21
Total.....	321	2,098	5.3	49.6	44.8	90.3	.783	38.84	35.12
Molders, hand, floor, male:									
Alabama.....	4	39	5.3	53.5	46.6	87.1	.727	38.69	33.86
California.....	18	207	5.5	44.9	42.9	95.5	.996	43.37	41.40
Colorado.....	3	33	5.5	48.4	47.7	98.6	.849	41.09	40.51
Connecticut.....	16	286	5.2	48.2	45.2	93.8	.801	38.61	36.21
Georgia.....	8	54	5.1	50.7	42.7	84.2	.742	37.62	31.71
Illinois.....	28	438	5.4	49.5	46.2	93.3	.864	42.77	39.90
Indiana.....	16	347	5.2	51.7	44.3	85.7	.768	39.71	35.98
Iowa.....	9	129	4.9	51.1	43.8	85.7	.802	40.98	35.14
Kansas.....	9	54	5.7	54.4	51.7	95.0	.632	34.38	32.67
Kentucky.....	7	51	5.6	51.5	50.0	97.1	.694	32.65	31.69
Louisiana.....	4	52	5.4	56.5	48.8	86.4	.731	41.30	35.67
Maine.....	4	46	5.4	48.2	44.5	92.3	.696	33.55	30.99
Maryland.....	7	81	5.3	49.0	44.2	90.2	.790	38.71	34.94
Massachusetts.....	28	312	5.4	48.4	43.8	90.5	.918	44.43	40.24
Michigan.....	34	435	5.3	51.5	46.5	90.3	.804	41.41	37.38
Minnesota.....	6	62	4.9	52.0	43.6	83.8	.715	37.18	31.16
Missouri.....	13	146	5.2	51.8	44.3	85.5	.785	40.66	34.78
New Hampshire.....	6	37	5.2	51.1	45.1	88.3	.714	36.49	32.17
New Jersey.....	16	246	5.5	50.2	46.8	93.2	.886	44.48	41.43
New York.....	27	370	5.3	48.9	45.7	93.5	.847	41.42	38.72
Ohio.....	40	657	5.4	50.4	46.0	91.3	.878	44.25	40.41
Oregon.....	5	32	5.9	46.3	44.9	97.0	.852	39.45	38.25
Pennsylvania.....	37	708	5.2	50.7	46.0	90.7	.805	40.81	37.01
Rhode Island.....	8	131	5.5	50.4	48.7	96.6	.775	39.06	37.79
Tennessee.....	7	74	4.9	49.0	41.4	84.5	.750	36.75	31.02
Texas.....	6	55	5.1	47.4	43.0	90.7	.728	34.51	31.30
Washington.....	7	63	5.3	48.4	41.8	86.4	.862	42.69	36.85
Wisconsin.....	12	308	5.5	48.7	46.9	96.3	.863	42.03	40.52
Total.....	385	5,453	5.3	50.0	45.6	91.2	.828	41.40	37.75
Molders, machine, male:									
Alabama.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
California.....	8	20	5.6	46.7	47.3	101.3	.685	31.99	32.38
Colorado.....	2	22	5.6	49.4	49.2	99.6	.647	31.96	31.81
Connecticut.....	8	118	5.1	55.8	48.2	86.4	.667	37.22	32.19
Georgia.....	3	18	5.3	52.7	49.0	93.0	.630	33.20	30.87
Illinois.....	17	387	5.2	50.1	46.0	91.8	.780	39.08	35.87
Indiana.....	11	244	5.4	50.9	46.4	91.2	.716	36.44	33.26
Iowa.....	6	89	5.0	52.1	45.5	87.3	.707	36.83	32.17
Kansas.....	5	17	5.6	54.7	51.3	93.8	.588	32.16	30.17
Kentucky.....	2	16	5.1	50.0	46.5	93.0	.519	25.95	24.15
Louisiana.....	2	3	6.0	58.0	56.2	96.9	.397	23.03	22.28
Maine.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maryland.....	4	39	5.7	51.2	49.1	95.9	.609	31.18	29.94
Massachusetts.....	23	284	5.2	48.4	43.7	90.3	.794	38.43	34.66
Michigan.....	25	566	5.1	51.5	46.2	89.7	.679	34.97	31.38

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, 1929, by occupation, sex, and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Molders, machine, male—Con.									
Minnesota	4	34	4.7	51.2	39.6	77.3	\$0.633	\$32.41	\$25.05
Missouri	9	44	5.4	50.6	46.4	91.7	.710	35.93	32.95
New Hampshire	2	10	5.6	52.8	50.5	95.6	.585	30.89	29.54
New Jersey	14	180	5.2	50.4	45.2	89.7	.817	41.18	36.98
New York	20	434	5.2	49.5	49.3	99.6	.723	35.79	35.64
Ohio	26	427	5.3	49.4	45.2	91.5	.814	40.21	36.78
Oregon	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania	29	413	5.2	49.8	45.3	91.0	.724	36.06	32.83
Rhode Island	8	176	5.6	52.2	49.2	94.3	.717	37.43	35.30
Tennessee	2	7	5.3	49.1	49.7	101.2	.481	23.62	23.90
Texas	2	12	4.8	46.3	40.6	87.7	.658	30.47	26.73
Washington	3	11	4.8	48.0	40.2	83.8	.786	37.73	31.62
Wisconsin	11	255	5.3	50.2	47.7	95.0	.759	38.10	36.20
Total	249	3,854	5.2	50.4	46.5	92.3	.734	36.99	34.12
Molders' helpers, floor, male:									
Alabama	3	12	5.7	52.5	50.4	94.2	.355	18.99	17.87
California	13	75	5.8	45.6	49.3	108.1	.581	26.49	28.64
Colorado	3	40	5.5	48.9	52.5	107.4	.475	23.23	24.94
Connecticut	11	83	5.2	50.0	45.1	90.2	.490	24.60	22.68
Georgia	4	23	4.8	53.5	42.5	79.4	.275	14.71	11.69
Illinois	12	76	5.6	51.4	50.6	98.4	.562	28.89	28.44
Indiana	14	103	5.1	51.7	43.8	84.7	.515	26.63	22.54
Iowa	4	30	5.3	52.7	46.6	88.4	.413	21.77	19.24
Kansas	2	3	6.3	54.0	64.5	119.4	.340	18.36	21.95
Kentucky	5	9	4.8	50.4	44.9	89.1	.388	19.56	17.39
Louisiana	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine	3	26	5.0	46.4	40.4	87.1	.415	19.26	16.76
Maryland	3	18	4.6	49.8	40.8	81.9	.438	21.81	17.88
Massachusetts	15	79	5.3	49.4	46.5	94.1	.513	25.34	23.85
Michigan	26	196	5.4	52.4	51.5	98.3	.497	26.04	25.56
Minnesota	5	32	4.6	52.0	41.2	79.2	.435	22.62	17.91
Missouri	9	88	5.5	52.5	49.5	94.3	.507	26.62	25.10
New Hampshire	3	9	4.9	51.3	44.1	86.0	.466	23.85	20.48
New Jersey	14	169	5.6	50.4	51.0	101.2	.537	27.06	27.37
New York	20	143	5.7	50.0	52.5	105.0	.595	29.75	31.26
Ohio	20	195	5.3	54.7	49.3	90.1	.440	24.07	21.69
Oregon	4	24	5.8	46.3	45.9	99.1	.524	24.26	24.09
Pennsylvania	32	294	5.3	52.2	47.8	91.6	.504	26.31	24.11
Rhode Island	5	37	5.6	49.8	51.7	103.8	.456	22.71	23.56
Tennessee	4	19	5.3	49.3	47.3	95.9	.321	15.83	15.21
Texas	4	17	5.5	48.5	50.6	104.3	.413	20.03	20.92
Washington	6	30	4.9	48.0	38.7	80.6	.585	28.08	22.61
Wisconsin	6	84	5.6	48.4	47.8	98.8	.518	25.07	24.77
Total	251	1,919	5.4	51.1	48.5	94.9	.502	25.65	24.36
Pattern makers, male:									
Alabama	3	10	5.4	52.7	45.5	86.3	.767	40.42	34.93
California	10	32	5.9	44.8	44.6	99.6	1.094	48.83	48.78
Colorado	3	20	5.0	44.4	40.2	90.5	.985	43.73	39.55
Connecticut	5	12	5.1	55.4	45.7	82.5	.703	38.95	32.10
Georgia	6	12	5.8	50.7	49.1	96.8	.802	40.66	39.38
Illinois	22	149	5.6	50.2	47.5	94.6	.797	40.01	37.91
Indiana	9	54	5.6	52.0	48.2	92.7	.963	50.08	46.89
Iowa	6	17	5.7	52.5	49.3	93.9	.730	38.33	35.99
Kansas	6	8	6.0	55.1	56.7	102.9	.824	45.40	46.72
Kentucky	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Louisiana	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maryland	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Massachusetts	6	24	5.9	48.8	46.6	95.5	.796	38.84	37.09
Michigan	8	124	5.8	48.4	47.0	97.1	.731	35.33	34.35
Minnesota	21	151	5.7	50.6	50.2	99.2	.901	45.59	45.29
Mississippi	2	6	5.8	49.8	48.1	96.6	.714	35.56	34.34
Missouri	10	33	5.8	49.2	46.4	94.3	.991	48.76	46.02
New Hampshire	3	4	6.0	53.0	54.8	103.4	.717	38.00	39.25
New Jersey	11	102	5.7	50.4	48.0	95.2	.864	43.55	41.49
New York	11	103	5.6	49.9	50.2	100.6	.820	40.92	41.14

1 Data included in total.

52 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

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, 1929, by occupation, sex, and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Pattern makers, male—Contd.									
Ohio.....	12	70	5.9	50.3	55.9	111.1	\$0.820	\$41.25	\$45.86
Oregon.....	3	7	6.0	45.1	45.1	100.0	.934	42.15	42.15
Pennsylvania.....	14	110	5.6	51.0	50.3	98.6	.786	29.97	38.54
Rhode Island.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Tennessee.....	2	6	5.2	49.7	45.3	91.1	.936	46.52	42.42
Texas.....	4	6	4.5	47.9	35.8	74.7	.883	42.30	31.63
Washington.....	4	16	5.7	48.0	45.3	94.4	1.029	49.20	46.55
Wisconsin.....	6	35	5.9	52.6	50.9	96.8	.762	40.06	38.83
Total.....	191	1,127	5.7	50.1	48.9	97.6	.833	41.72	40.69
Rough carpenters, male:									
Alabama.....	3	3	5.7	51.8	48.2	93.1	.583	30.20	28.06
California.....	18	21	5.8	45.8	47.6	103.9	.716	32.79	34.13
Colorado.....	2	6	6.0	44.7	51.8	115.9	.513	22.93	26.57
Connecticut.....	16	24	5.5	51.7	50.0	96.7	.597	30.86	29.90
Georgia.....	4	6	5.2	51.8	46.3	89.4	.496	25.69	22.96
Illinois.....	20	35	5.6	50.9	49.6	97.4	.649	33.03	32.18
Indiana.....	16	34	5.9	51.5	52.0	101.0	.559	28.79	29.07
Iowa.....	6	10	5.8	54.2	51.9	95.8	.477	25.85	24.74
Kansas.....	3	3	5.7	56.0	52.7	94.1	.482	26.99	25.37
Kentucky.....	4	5	5.6	48.5	50.0	103.1	.445	21.66	22.26
Louisiana.....	3	3	6.0	57.3	54.0	94.2	.450	25.79	24.32
Maine.....	3	7	5.9	49.1	48.4	98.6	.553	27.15	26.77
Maryland.....	6	8	6.0	49.5	48.6	98.2	.579	28.66	28.12
Massachusetts.....	20	34	5.5	48.6	44.4	91.4	.693	33.66	30.78
Michigan.....	29	53	5.8	52.4	53.3	101.7	.646	33.85	34.40
Minnesota.....	5	7	6.0	53.2	53.9	101.3	.530	28.20	28.55
Missouri.....	8	13	5.8	52.3	53.7	102.7	.643	33.63	34.54
New Hampshire.....	2	2	6.0	51.0	51.5	101.0	.500	25.50	25.75
New Jersey.....	8	41	5.4	50.7	47.9	94.5	.566	29.71	28.09
New York.....	19	33	5.8	49.1	50.5	102.9	.676	33.19	34.09
Ohio.....	31	48	5.8	51.8	51.6	99.6	.704	36.47	36.34
Oregon.....	4	5	5.4	45.6	41.7	91.4	.607	27.66	25.29
Pennsylvania.....	26	55	5.5	50.8	48.4	95.3	.596	30.28	28.84
Rhode Island.....	5	12	5.7	52.2	50.0	95.6	.634	33.16	31.68
Tennessee.....	2	4	5.8	49.5	47.5	96.0	.512	25.34	24.33
Texas.....	3	4	5.8	49.0	47.5	96.9	.607	24.84	24.10
Washington.....	3	3	6.0	48.0	45.8	95.4	.698	33.50	31.99
Wisconsin.....	10	20	5.8	50.6	51.6	102.0	.648	32.79	33.46
Total.....	270	509	5.7	50.7	49.9	98.4	.622	31.54	31.03
Sand blasters, male:									
Alabama.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
California.....	5	7	5.3	46.1	42.7	92.6	.630	29.04	26.90
Connecticut.....	12	18	5.4	52.2	49.9	95.6	.555	28.97	27.71
Georgia.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Illinois.....	12	22	5.4	51.2	53.7	104.9	.671	34.26	36.06
Indiana.....	11	23	5.4	53.2	48.9	91.7	.528	28.14	25.81
Iowa.....	8	12	5.5	53.0	51.6	97.4	.512	27.14	26.40
Kansas.....	3	3	5.3	54.0	58.4	108.1	.400	21.60	23.36
Kentucky.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Louisiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine.....	2	2	5.5	52.0	49.5	95.2	.443	23.04	21.92
Maryland.....	2	6	5.8	49.7	47.8	96.2	.435	21.62	20.79
Massachusetts.....	14	21	5.7	50.0	51.0	102.0	.695	29.76	30.31
Michigan.....	20	48	5.4	53.4	50.9	95.3	.708	37.81	36.04
Minnesota.....	4	8	5.6	50.4	46.3	91.9	.572	28.83	26.49
Missouri.....	4	5	5.6	50.4	50.7	100.6	.639	27.17	27.33
New Hampshire.....	3	3	5.3	51.3	55.7	108.6	.490	25.14	27.25
New Jersey.....	8	14	5.6	50.4	53.5	106.2	.536	27.01	28.70
New York.....	14	25	5.3	49.0	50.0	100.2	.651	32.48	32.58
Ohio.....	8	12	5.6	55.0	50.4	91.6	.487	26.79	24.55
Oregon.....	2	3	6.0	45.3	50.2	110.8	.577	26.14	28.85
Pennsylvania.....	23	44	5.5	51.1	49.3	96.5	.584	29.84	28.90
Rhode Island.....	6	13	5.5	51.7	53.3	103.1	.528	27.19	28.03
Tennessee.....	2	6	5.2	49.3	49.3	100.0	.320	15.79	15.79
Texas.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)

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, 1929, by occupation, sex, and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Sand blasters, male—Continued.									
Washington.....	3	3	5.7	48.0	43.7	91.0	\$0.666	\$31.49	\$28.67
Wisconsin.....	11	22	5.5	68.0	55.4	86.5	.683	39.61	37.82
Total.....	183	337	5.6	51.9	50.8	97.9	.692	30.72	30.05
Other employees, male:									
Alabama.....	3	12	5.3	54.0	45.1	83.5	.904	31.28	17.75
California.....	17	154	5.7	47.3	47.2	99.8	.705	33.35	33.28
Colorado.....	3	48	5.7	49.4	54.3	100.9	.608	30.04	32.98
Connecticut.....	18	183	8.6	52.0	60.6	97.3	.529	27.51	26.77
Georgia.....	6	29	5.1	52.7	44.6	84.6	.454	23.90	20.26
Illinois.....	25	412	5.5	51.2	51.6	100.8	.623	31.90	32.19
Indiana.....	15	250	5.7	52.8	52.4	99.2	.642	28.62	28.44
Iowa.....	8	160	5.7	53.7	53.2	99.1	.616	33.66	32.78
Kansas.....	8	36	5.8	54.8	55.1	100.5	.400	21.92	22.06
Kentucky.....	6	15	5.8	53.2	55.7	104.7	.662	29.90	31.32
Louisiana.....	3	14	5.1	54.3	45.0	82.9	.464	25.20	20.88
Maine.....	4	22	5.8	47.9	49.5	103.3	.611	29.27	30.26
Maryland.....	6	32	5.7	51.2	49.4	96.5	.422	21.61	20.83
Massachusetts.....	26	255	5.6	49.2	48.2	96.0	.602	29.62	29.02
Michigan.....	31	614	5.4	52.0	51.6	99.2	.696	33.07	32.85
Minnesota.....	6	61	5.4	51.5	47.7	92.6	.559	28.63	26.55
Missouri.....	11	58	5.7	52.1	49.0	94.0	.627	27.46	25.86
New Hampshire.....	3	4	6.0	49.5	48.3	97.6	.543	26.88	26.19
New Jersey.....	16	265	5.7	50.2	51.8	103.2	.601	30.17	31.15
New York.....	28	340	8.7	49.7	52.6	107.8	.618	30.71	33.13
Ohio.....	43	516	5.7	51.1	52.6	102.9	.662	29.74	30.59
Oregon.....	5	32	5.7	46.2	45.8	99.1	.810	37.42	37.11
Pennsylvania.....	36	702	5.6	51.7	51.6	99.8	.665	30.24	30.19
Rhode Island.....	8	113	5.8	52.5	54.9	104.6	.531	27.88	29.16
Tennessee.....	7	45	5.7	49.7	49.8	100.2	.601	24.90	24.92
Texas.....	5	20	6.0	48.2	49.9	103.5	.603	24.24	25.10
Washington.....	5	51	5.5	48.5	45.3	93.4	.698	33.76	31.51
Wisconsin.....	13	312	5.8	51.9	54.5	105.0	.555	28.90	30.30
Total.....	360	4,725	5.6	51.2	51.6	100.8	.692	30.31	30.60
Other employees, female:									
Indiana.....	1	()	()	()	()	()	()	()	()
Michigan.....	1	()	()	()	()	()	()	()	()
Pennsylvania.....	1	()	()	()	()	()	()	()	()
Rhode Island.....	1	()	()	()	()	()	()	()	()
Wisconsin.....	1	()	()	()	()	()	()	()	()
Total.....	5	5	5.0	50.5	44.5	88.1	.492	24.85	21.88
All employees, male:									
Alabama.....	4	190	5.4	58.5	48.2	90.1	.456	24.40	22.01
California.....	18	1,185	5.6	45.9	46.3	100.9	.745	34.20	34.51
Colorado.....	3	307	5.4	49.2	50.1	101.8	.506	29.32	29.87
Connecticut.....	16	1,629	5.3	50.8	47.5	93.5	.611	31.04	29.02
Georgia.....	8	427	5.4	52.9	49.3	93.2	.396	20.95	19.53
Illinois.....	28	3,636	5.4	50.5	48.7	96.4	.665	33.58	32.37
Indiana.....	16	2,446	5.4	52.6	48.1	91.4	.590	31.03	28.34
Iowa.....	9	959	5.2	52.9	47.9	90.5	.614	32.48	29.39
Kansas.....	9	290	5.7	55.1	52.6	95.5	.480	26.45	25.26
Kentucky.....	7	204	5.4	50.6	49.3	97.4	.512	26.91	25.24
Louisiana.....	4	246	5.4	56.4	49.6	87.9	.436	24.59	21.63
Maine.....	4	248	5.5	50.7	50.6	99.8	.555	28.14	28.10
Maryland.....	7	421	5.6	50.9	48.4	95.1	.558	28.40	26.99
Massachusetts.....	28	2,408	5.4	48.7	45.1	92.6	.681	33.16	30.71
Michigan.....	37	4,334	5.3	51.9	49.2	94.8	.644	33.42	31.65
Minnesota.....	6	457	5.1	52.0	45.1	86.7	.555	28.86	25.04
Missouri.....	16	764	5.4	52.1	47.8	91.7	.610	31.79	29.19
New Hampshire.....	6	143	5.2	50.9	45.8	90.0	.599	30.40	27.47
New Jersey.....	16	2,353	5.4	50.6	49.3	97.4	.636	32.18	31.35
New York.....	28	3,392	5.4	50.1	51.0	101.8	.647	32.41	32.96
Ohio.....	44	4,323	5.5	51.8	49.9	96.3	.625	32.38	31.18

¹ Data included in total.

54 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

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, 1929, by occupation, sex, and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
All employees, male—Contd.									
Oregon.....	5	208	5.8	46.1	45.4	98.5	\$0.677	\$31.21	\$30.70
Pennsylvania.....	39	5,285	5.4	51.6	48.8	94.6	.608	31.37	29.65
Rhode Island.....	9	1,066	5.6	51.5	50.9	98.8	.612	31.52	31.19
Tennessee.....	7	382	5.2	49.2	44.8	91.1	.461	22.68	20.66
Texas.....	6	278	5.2	49.8	45.8	92.0	.488	24.30	22.36
Washington.....	7	316	5.3	48.3	42.8	88.6	.727	35.11	31.13
Wisconsin.....	13	2,165	5.6	51.2	50.8	99.2	.644	32.97	32.75
Total.....	399	40,032	5.4	51.0	48.8	95.7	.625	31.88	30.50
All employees, female:									
Georgia.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Illinois.....	5	29	4.8	49.0	39.4	80.4	.447	21.90	17.60
Indiana.....	2	39	5.4	50.0	45.9	91.8	.434	21.70	19.92
Kentucky.....	2	3	5.7	50.0	48.3	96.6	.412	20.60	19.92
Massachusetts.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Michigan.....	10	105	4.8	51.5	41.0	79.6	.427	21.99	17.52
New Jersey.....	4	50	5.0	49.8	42.2	84.7	.466	23.21	19.66
New York.....	5	54	5.4	48.8	44.1	90.4	.489	23.86	21.55
Ohio.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania.....	2	19	4.6	48.5	40.7	83.9	.366	17.75	14.88
Rhode Island.....	3	11	5.5	53.0	47.9	90.4	.408	21.62	19.53
Wisconsin.....	5	37	5.2	45.7	39.5	86.4	.524	23.95	20.74
Total.....	41	359	5.1	49.7	42.3	85.1	.451	22.41	19.08
All employees, male and female:									
Alabama.....	4	190	5.4	53.5	48.2	90.1	.456	24.40	22.01
California.....	18	1,185	5.6	45.9	46.3	100.9	.745	34.20	34.51
Colorado.....	3	307	5.4	49.2	50.1	101.8	.596	29.32	29.87
Connecticut.....	16	1,629	5.3	50.8	47.5	93.5	.611	31.04	29.02
Georgia.....	8	429	5.4	52.9	49.3	93.2	.395	20.90	19.49
Illinois.....	28	3,665	5.4	50.5	48.6	96.2	.663	33.48	32.26
Indiana.....	16	2,485	5.4	52.5	48.0	91.4	.587	30.82	28.21
Iowa.....	9	959	5.2	52.9	47.9	90.5	.614	32.48	29.39
Kansas.....	9	260	5.7	55.1	52.6	95.5	.480	26.45	25.26
Kentucky.....	7	207	5.4	50.6	49.3	97.4	.510	25.81	25.16
Louisiana.....	4	246	5.4	56.4	49.6	87.9	.436	24.59	21.63
Maine.....	4	248	5.5	50.7	50.6	99.8	.555	28.14	28.10
Maryland.....	7	421	5.6	50.9	48.4	95.1	.558	28.40	26.99
Massachusetts.....	28	2,410	5.4	48.7	45.1	92.6	.680	33.12	30.70
Michigan.....	37	4,439	5.3	51.9	49.0	94.4	.640	33.22	31.32
Minnesota.....	6	457	5.1	52.0	45.1	86.7	.555	28.86	25.04
Missouri.....	15	764	5.4	52.1	47.8	91.7	.610	31.78	29.19
New Hampshire.....	6	143	5.2	50.9	45.8	90.0	.599	30.49	27.47
New Jersey.....	16	2,403	5.4	50.5	49.1	97.2	.633	31.97	31.11
New York.....	28	3,446	5.4	50.1	50.9	101.6	.644	32.26	37.65
Ohio.....	44	4,331	5.5	51.8	49.9	90.3	.625	32.38	31.17
Oregon.....	5	208	5.8	46.1	45.4	98.5	.677	31.21	30.70
Pennsylvania.....	39	5,304	5.4	51.6	48.7	94.4	.607	31.32	29.60
Rhode Island.....	9	1,077	5.6	51.5	50.9	98.8	.610	31.42	31.07
Tennessee.....	7	382	5.2	49.2	44.8	91.1	.461	22.68	20.66
Texas.....	6	278	5.2	49.8	45.8	92.0	.488	24.30	22.36
Washington.....	7	316	5.3	48.3	42.8	88.6	.727	35.11	31.13
Wisconsin.....	13	2,202	5.6	51.1	50.6	99.0	.643	32.86	32.55
Total.....	399	40,391	5.4	51.0	48.7	95.5	.624	31.82	30.39

MACHINE SHOPS

Assemblers, male:									
Alabama.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
California.....	11	124	5.7	45.6	44.2	96.9	\$0.789	\$35.98	\$34.88
Colorado.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Connecticut.....	12	138	5.8	50.7	54.0	106.5	.731	37.06	39.45
Georgia.....	3	13	5.7	52.0	51.2	98.5	.374	19.45	19.16

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Assemblers, male—Continued.									
Illinois.....	22	888	5.8	50.4	49.9	99.0	\$0.695	\$35.03	\$34.69
Indiana.....	14	391	5.6	51.1	48.9	95.7	.548	28.00	26.76
Iowa.....	6	101	5.2	53.6	48.5	90.5	.566	30.34	27.46
Kansas.....	4	59	5.5	56.6	50.8	89.8	.367	20.79	18.61
Kentucky.....	7	47	5.4	52.3	47.9	91.6	.437	22.86	20.94
Louisiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine.....	4	40	5.9	49.1	51.1	104.1	.552	27.10	28.21
Maryland.....	5	70	5.8	49.3	49.0	99.4	.667	32.88	32.73
Massachusetts.....	26	1,284	5.8	49.4	50.1	101.4	.638	31.52	31.97
Michigan.....	38	564	5.7	51.4	50.8	98.8	.656	33.72	33.29
Minnesota.....	5	68	5.4	50.4	45.2	89.7	.559	28.17	25.26
Missouri.....	10	113	5.8	51.6	51.8	100.4	.603	31.11	31.22
New Hampshire.....	3	57	5.9	48.9	48.4	99.0	.658	32.18	31.85
New Jersey.....	14	221	5.8	49.3	49.5	100.4	.696	34.31	34.45
New York.....	20	735	5.6	48.2	47.4	98.3	.716	34.51	33.91
Ohio.....	56	977	5.7	49.8	49.8	100.0	.683	34.04	34.04
Oregon.....	4	27	5.9	46.8	47.1	100.6	.753	35.24	35.46
Pennsylvania.....	37	921	5.7	51.2	51.7	101.0	.673	34.46	34.77
Rhode Island.....	5	315	5.8	50.2	49.5	98.6	.612	30.72	30.25
Tennessee.....	4	38	5.8	49.2	48.1	97.8	.544	26.76	26.14
Texas.....	5	38	5.8	49.6	47.6	96.0	.415	20.58	19.76
Washington.....	4	62	5.3	47.7	42.6	89.3	.771	36.78	32.83
Wisconsin.....	13	345	5.6	50.4	50.2	99.6	.652	32.86	32.72
Total.....	335	7,670	5.7	50.1	49.7	99.2	.657	32.92	32.68
Assemblers, female:									
Illinois.....	2	10	5.4	49.8	45.7	91.8	.484	24.10	22.13
Indiana.....	2	18	5.3	50.0	44.1	88.2	.409	20.45	18.03
Massachusetts.....	3	27	5.3	48.0	39.1	81.5	.403	19.34	15.74
Michigan.....	4	74	5.3	51.1	45.5	89.0	.495	25.29	22.52
New Jersey.....	2	22	5.8	50.0	48.5	97.0	.334	16.70	16.18
New York.....	2	25	5.6	47.2	43.5	92.2	.405	19.12	17.64
Ohio.....	2	3	5.7	49.5	44.5	89.9	.451	22.32	20.07
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Rhode Island.....	2	10	5.7	51.6	49.8	96.5	.451	23.27	22.44
Total.....	20	190	5.4	49.8	44.8	90.0	.441	21.96	19.75
Blacksmiths, male:									
Alabama.....	3	4	5.8	51.6	48.3	93.6	.788	40.66	38.02
California.....	14	23	6.0	46.5	47.5	102.2	.929	43.20	44.12
Colorado.....	2	5	6.0	48.1	51.5	107.1	.740	35.59	38.07
Connecticut.....	17	42	5.9	50.8	53.4	105.1	.712	36.17	37.99
Georgia.....	5	7	5.9	52.3	48.4	92.5	.750	39.23	36.31
Illinois.....	27	86	5.7	50.0	49.8	99.6	.777	38.85	38.73
Indiana.....	15	24	5.8	51.1	50.6	99.0	.705	36.03	35.68
Iowa.....	5	7	5.6	51.4	50.4	98.1	.686	35.26	34.56
Kansas.....	8	10	5.8	54.2	51.5	95.0	.683	37.02	35.20
Kentucky.....	8	12	5.6	50.4	47.8	94.8	.697	35.13	33.28
Louisiana.....	4	4	5.0	51.5	45.0	87.4	.779	40.12	35.08
Maine.....	3	6	6.0	47.0	47.0	100.0	.681	32.02	32.02
Maryland.....	4	6	6.0	49.3	50.3	102.0	.595	29.33	29.94
Massachusetts.....	29	81	5.9	48.6	48.1	99.0	.730	35.48	35.15
Michigan.....	30	54	5.6	51.2	48.7	95.1	.765	39.17	37.29
Minnesota.....	7	19	5.7	50.1	47.4	94.6	.667	33.42	31.61
Missouri.....	11	13	6.2	51.4	44.3	86.2	.641	32.95	28.39
New Hampshire.....	5	6	6.0	50.7	52.3	103.2	.635	32.19	33.21
New Jersey.....	22	38	5.8	49.8	49.5	99.4	.715	35.61	35.42
New York.....	25	71	5.7	49.0	46.6	95.1	.804	39.40	37.46
Ohio.....	64	122	5.7	49.8	50.5	101.4	.701	34.91	35.46
Oregon.....	5	7	6.1	46.9	52.6	112.2	.630	38.93	43.70
Pennsylvania.....	41	121	5.6	51.4	49.9	97.1	.733	37.68	36.57
Rhode Island.....	7	14	5.9	49.9	50.5	101.2	.772	38.52	39.08
Tennessee.....	8	16	5.5	50.9	46.5	91.4	.825	41.99	38.33
Texas.....	8	15	5.9	47.9	48.3	100.8	.757	36.26	36.54
Washington.....	6	9	5.6	47.9	44.6	93.1	.816	39.09	36.35
Wisconsin.....	14	35	5.7	50.9	50.9	100.0	.759	38.63	38.63
Total.....	397	857	5.7	50.1	49.3	98.4	.742	37.17	36.61

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Blacksmiths' helpers, male:									
Alabama	3	6	5.2	50.9	46.1	90.6	\$0.372	\$18.93	\$17.11
California	11	26	5.8	45.9	46.8	102.0	.664	30.46	31.03
Colorado	2	14	5.9	48.1	53.1	110.4	.550	26.46	29.20
Connecticut	14	43	5.8	50.8	53.2	104.7	.508	25.70	26.87
Georgia	3	5	5.6	52.5	45.3	86.3	.317	16.64	14.36
Illinois	17	60	5.8	49.5	50.0	101.0	.591	28.25	29.54
Indiana	10	20	5.9	51.2	51.0	99.6	.482	24.66	24.61
Iowa	6	7	5.7	50.4	51.0	101.2	.448	22.58	22.85
Kansas	5	10	6.0	54.9	55.1	100.4	.466	25.03	25.12
Kentucky	5	12	5.8	50.2	50.2	100.0	.478	23.96	23.96
Louisiana	4	6	5.3	54.0	48.2	89.3	.365	16.71	17.62
Maine	3	5	6.0	46.4	46.6	100.4	.502	23.29	23.37
Maryland	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Massachusetts	23	88	5.7	48.4	46.0	95.0	.521	25.22	23.98
Michigan	14	36	5.8	51.7	51.1	98.8	.519	26.63	26.53
Minnesota	6	12	6.0	50.5	50.9	100.8	.472	23.84	24.05
Missouri	5	7	5.6	49.7	45.4	91.3	.517	25.69	23.51
New Jersey	15	32	6.0	49.6	51.7	104.2	.544	26.98	28.14
New York	21	78	5.5	48.9	43.9	89.8	.597	29.10	26.20
Ohio	44	76	5.8	49.7	49.7	100.0	.532	26.42	26.42
Oregon	4	5	5.2	45.9	44.2	96.3	.608	27.91	26.86
Pennsylvania	24	133	5.5	51.5	49.3	95.7	.530	27.30	26.15
Rhode Island	5	14	6.0	50.4	53.5	106.2	.543	27.37	29.04
Tennessee	8	19	5.4	49.8	44.4	89.2	.400	19.92	17.76
Texas	7	27	5.7	47.9	46.7	97.5	.490	23.47	22.85
Washington	5	11	5.2	50.2	45.0	89.6	.627	31.46	28.25
Wisconsin	11	36	5.7	50.7	51.6	101.8	.559	28.34	28.83
Total	285	800	5.7	49.9	48.8	97.8	.534	26.65	26.07
Boring-mill operators, male:									
Alabama	3	16	5.4	50.2	46.9	93.4	.747	37.50	35.05
California	16	68	5.7	45.4	44.5	98.0	.862	39.18	38.46
Colorado	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Connecticut	17	142	5.6	51.7	52.1	100.8	.761	39.24	39.60
Georgia	4	10	5.8	51.1	48.6	95.1	.474	24.22	22.99
Illinois	29	249	5.6	51.6	51.3	99.4	.795	41.02	40.75
Indiana	13	44	5.7	51.0	51.7	101.4	.686	34.99	35.46
Iowa	4	19	5.3	53.9	49.9	92.6	.639	34.44	31.93
Kansas	5	6	5.8	56.0	55.3	98.8	.529	29.62	29.26
Kentucky	4	8	5.9	49.4	49.6	100.4	.671	33.16	33.29
Louisiana	3	9	5.1	49.1	42.6	86.8	.665	32.66	28.84
Maine	2	14	5.9	44.9	45.0	100.2	.572	28.68	28.74
Maryland	5	18	5.7	50.1	52.0	103.8	.723	36.22	37.60
Massachusetts	32	160	5.8	49.1	50.5	102.9	.718	35.26	36.30
Michigan	19	90	5.6	53.1	52.0	97.9	.695	36.90	36.11
Minnesota	7	27	5.4	50.9	49.3	94.9	.685	34.87	33.07
Missouri	10	33	5.7	50.4	51.1	101.4	.706	35.58	36.04
New Hampshire	2	4	6.0	48.0	50.5	105.2	.686	32.98	34.66
New Jersey	22	94	5.8	50.2	52.2	104.0	.814	40.86	42.46
New York	27	167	5.7	49.6	49.8	100.4	.767	38.04	38.24
Ohio	71	473	5.6	51.2	51.8	101.2	.759	38.86	39.29
Oregon	3	12	6.1	46.0	53.0	115.2	.838	38.56	44.41
Pennsylvania	39	400	5.7	53.0	54.0	101.9	.738	39.11	39.81
Rhode Island	7	48	5.5	52.5	50.5	96.2	.618	32.46	31.20
Tennessee	4	15	5.7	50.1	48.5	96.8	.673	33.72	32.61
Texas	4	6	5.8	50.2	47.9	95.4	.583	29.27	27.94
Washington	5	27	5.4	47.1	45.2	96.0	.845	39.80	38.19
Wisconsin	14	163	5.5	52.4	54.5	104.0	.770	40.35	41.93
Total	372	2,333	5.6	51.1	51.6	101.0	.750	38.33	38.69
Crane operators, male:									
Alabama	3	6	5.2	52.4	44.7	85.3	.535	28.03	23.91
California	12	29	6.0	46.6	48.9	105.2	.660	30.69	32.27
Colorado	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Connecticut	9	47	6.7	61.9	54.1	106.1	.503	25.65	27.20
Illinois	21	98	5.7	50.0	51.1	102.2	.676	28.76	29.37

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Crane operators, male—Contd.									
Indiana.....	7	25	5.9	51.3	50.8	99.0	\$0.506	\$25.96	\$25.69
Iowa.....	3	4	5.8	52.0	50.7	97.5	.466	24.23	23.59
Kansas.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Kentucky.....	3	4	6.0	49.4	51.6	104.5	.429	21.19	22.13
Louisiana.....	2	2	6.0	51.0	49.5	97.1	.464	23.66	22.98
Maine.....	2	3	6.0	46.0	49.0	106.5	.555	25.53	27.18
Massachusetts.....	13	30	6.0	48.9	54.1	110.6	.896	29.14	32.24
Michigan.....	10	31	5.9	51.3	53.8	104.9	.555	28.47	29.85
Minnesota.....	4	17	5.6	51.5	51.7	100.4	.523	26.93	27.03
Missouri.....	6	10	5.8	49.5	50.2	101.4	.598	29.00	29.99
New Jersey.....	16	46	5.8	49.6	54.0	108.9	.592	29.26	31.95
New York.....	20	97	5.8	49.1	50.8	103.5	.578	28.28	29.39
Ohio.....	40	188	5.7	50.8	53.5	105.3	.557	28.20	29.84
Oregon.....	3	10	5.2	47.2	41.1	87.1	.641	30.26	26.29
Pennsylvania.....	26	249	5.7	52.1	55.4	106.3	.534	27.63	29.55
Rhode Island.....	2	2	6.0	50.8	50.8	100.0	.500	25.28	26.38
Tennessee.....	3	9	5.4	52.7	51.3	97.3	.461	24.20	23.66
Washington.....	3	6	5.8	47.9	47.9	100.0	.657	31.49	31.49
Wisconsin.....	13	92	5.5	51.8	53.9	104.7	.555	28.68	29.95
Total.....	223	360	5.7	50.7	53.0	104.5	.565	28.14	29.43
Crane operators, female:									
Connecticut.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	2	7	5.7	50.7	51.9	102.4	.425	21.55	22.05
Drill-press operators, male:									
Alabama.....	4	15	5.8	47.9	49.2	102.7	.478	22.80	23.43
California.....	20	97	5.6	44.1	45.2	98.0	.690	31.81	31.20
Colorado.....	2	38	5.9	48.1	51.8	107.7	.630	30.80	32.62
Connecticut.....	19	189	5.6	51.0	51.2	100.4	.637	32.49	32.61
Georgia.....	6	30	5.4	54.0	50.4	93.3	.359	19.29	18.07
Illinois.....	23	924	5.6	49.5	49.6	100.2	.705	34.90	34.96
Indiana.....	15	211	5.5	61.0	48.5	95.1	.512	26.11	24.81
Iowa.....	6	36	5.0	54.3	47.3	87.1	.591	32.00	27.92
Kansas.....	6	22	4.4	55.4	60.0	90.3	.431	23.88	21.55
Kentucky.....	8	43	5.6	56.6	49.5	97.8	.456	23.07	22.58
Louisiana.....	2	9	6.0	59.3	61.4	103.5	.370	21.94	22.76
Maine.....	3	39	6.0	49.4	52.9	107.1	.582	26.28	28.15
Maryland.....	5	41	5.3	50.2	51.4	102.4	.676	33.04	34.75
Massachusetts.....	37	466	5.7	49.2	49.2	100.0	.612	30.12	30.12
Michigan.....	27	228	5.7	51.6	49.0	96.9	.597	30.76	29.83
Minnesota.....	5	47	5.3	50.4	45.5	92.3	.674	28.98	26.69
Missouri.....	15	77	5.3	51.7	50.4	97.5	.514	26.87	25.89
New Hampshire.....	4	30	4.7	46.6	45.5	93.6	.630	30.62	28.68
New Jersey.....	23	261	5.7	49.6	51.3	103.4	.896	34.52	35.71
New York.....	29	417	4.6	48.9	47.3	96.7	.654	31.98	30.89
Ohio.....	76	790	5.6	50.4	59.6	100.2	.627	31.60	31.63
Oregon.....	6	37	5.5	47.0	44.3	94.3	.567	27.69	26.00
Pennsylvania.....	46	709	5.5	53.3	50.9	97.3	.696	31.12	30.29
Rhode Island.....	9	114	5.6	51.2	48.9	96.5	.616	31.49	30.09
Tennessee.....	5	22	5.7	49.3	48.0	97.4	.606	29.86	24.31
Texas.....	8	74	5.7	44.9	45.3	96.6	.488	22.69	22.09
Washington.....	7	47	5.3	47.2	43.2	91.5	.677	31.95	29.26
Wisconsin.....	16	278	5.5	52.1	51.6	99.0	.647	33.71	33.38
Total.....	440	5,291	5.6	50.2	49.6	98.6	.628	31.69	31.17
Drill-press operators, female:									
Illinois.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Indiana.....	2	14	5.8	50.0	50.1	100.2	.529	16.45	16.48
Massachusetts.....	2	5	5.4	45.6	41.3	90.6	.609	23.21	20.99
Michigan.....	4	17	5.2	49.8	44.4	89.2	.686	28.04	23.71
New Jersey.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	3	17	5.8	48.8	46.7	95.7	.562	17.67	16.91
Ohio.....	2	13	5.2	42.4	42.4	100.0	.392	19.26	16.62

Data included in total.

58 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Drill-press operators, female—									
Continued									
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Rhode Island.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	17	77	5.4	49.2	45.1	91.7	\$0.410	\$20.17	\$18.46
Fitters and bench hands, male:									
Alabama.....	2	13	5.8	50.3	50.8	101.0	.694	34.91	35.25
California.....	20	204	5.8	45.0	45.8	101.8	.848	38.16	38.82
Colorado.....	2	41	6.0	48.1	52.6	109.4	.628	30.21	33.06
Connecticut.....	19	659	5.6	51.1	51.8	101.4	.667	34.08	34.53
Georgia.....	2	4	6.0	50.1	50.1	100.0	.588	29.46	29.46
Illinois.....	29	788	5.8	49.4	50.5	102.2	.732	36.16	36.98
Indiana.....	13	163	5.8	51.1	51.3	100.4	.627	32.04	32.15
Iowa.....	4	19	5.4	53.2	49.9	93.8	.624	33.20	31.12
Kansas.....	3	16	6.1	54.4	55.2	101.5	.524	28.51	28.91
Kentucky.....	9	57	5.5	50.2	45.6	90.8	.631	31.68	28.75
Louisiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine.....	2	17	5.4	48.9	44.6	91.2	.493	24.11	21.98
Maryland.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Massachusetts.....	27	356	5.8	49.0	48.9	99.8	.660	32.34	32.28
Michigan.....	23	283	5.7	51.4	49.5	96.3	.657	33.77	32.53
Minnesota.....	4	17	5.3	49.6	45.6	91.9	.619	30.70	28.24
Missouri.....	10	80	5.9	52.0	51.4	98.8	.555	28.86	28.53
New Hampshire.....	3	35	6.0	49.2	49.3	100.2	.664	32.67	32.77
New Jersey.....	24	545	5.7	49.2	51.3	104.3	.734	36.11	37.62
New York.....	27	936	5.7	48.8	49.0	100.4	.730	35.62	35.75
Ohio.....	61	1,786	5.8	49.3	51.1	103.7	.648	31.95	33.10
Oregon.....	3	19	5.8	47.2	45.5	96.4	.747	35.26	34.00
Pennsylvania.....	43	899	5.7	51.0	51.9	101.8	.649	33.10	33.72
Rhode Island.....	8	340	5.6	50.5	49.3	97.6	.593	29.95	29.25
Tennessee.....	3	11	5.9	48.2	50.6	105.0	.653	31.47	33.08
Texas.....	5	34	5.9	48.2	47.9	99.4	.734	35.38	35.11
Washington.....	6	62	5.8	47.6	46.1	96.8	.760	36.18	35.04
Wisconsin.....	13	324	5.8	52.0	52.4	100.8	.658	34.22	34.49
Total.....	367	7,715	5.7	49.8	50.5	101.4	.677	33.71	34.19
Fitters and bench hands, female:									
Illinois.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Hampshire.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Jersey.....	2	4	6.0	50.0	49.1	98.2	.394	19.70	19.35
New York.....	3	65	5.9	47.7	47.5	99.6	.476	22.71	22.61
Ohio.....	3	26	5.9	47.3	48.6	102.7	.513	24.26	24.95
Pennsylvania.....	2	31	5.7	48.5	47.3	97.5	.416	20.18	19.66
Rhode Island.....	2	29	5.7	51.3	48.3	94.2	.407	20.88	19.68
Total.....	14	175	5.8	48.6	47.9	98.6	.450	21.87	21.55
Grinding-machine operators, male:									
Alabama.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
California.....	12	69	5.6	48.0	46.4	96.7	.793	38.06	36.78
Colorado.....	2	21	5.7	48.0	51.4	107.1	.755	36.24	38.81
Connecticut.....	18	184	5.8	51.1	52.1	102.0	.661	33.78	34.45
Illinois.....	23	453	5.6	50.9	50.8	99.8	.761	38.73	38.65
Indiana.....	14	47	5.8	50.8	51.6	101.6	.594	30.18	30.66
Iowa.....	2	51	5.1	54.9	48.9	89.1	.681	31.90	28.42
Kansas.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Kentucky.....	5	20	5.9	52.9	52.3	98.9	.436	23.06	22.81
Louisiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine.....	3	23	6.0	47.9	49.6	103.5	.596	28.55	29.54
Maryland.....	3	31	5.5	51.5	53.0	102.9	.762	39.24	40.36
Massachusetts.....	30	235	5.9	50.2	52.2	104.0	.667	33.48	34.85
Michigan.....	25	403	5.3	53.6	48.4	90.3	.745	39.93	36.08
Minnesota.....	4	19	5.1	50.2	43.1	85.9	.666	33.43	28.72
Missouri.....	9	26	5.8	52.6	52.0	98.9	.560	29.46	29.12
New Hampshire.....	2	21	6.0	48.3	49.6	102.5	.631	30.48	31.22
New Jersey.....	14	76	5.3	49.2	47.5	96.5	.711	34.98	33.79
New York.....	21	222	5.8	48.4	48.1	99.4	.729	35.28	35.07

¹Data included in total.

TABLE A.—Average number of days on which employees worked, average full-time and actual hours per week, average earnings per hour, and per cent of full time worked, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Grinding-machine operators, male—Continued.									
Ohio.....	63	429	5.7	50.3	51.1	101.6	\$0.698	\$35.11	\$35.66
Oregon.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania.....	32	225	5.7	50.9	50.9	100.0	.687	34.99	34.99
Rhode Island.....	7	179	5.6	51.8	49.9	96.3	.638	33.05	31.85
Tennessee.....	3	8	6.0	51.5	54.9	106.6	.518	26.68	28.40
Texas.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Washington.....	3	14	5.6	47.1	45.0	95.8	.800	37.68	36.06
Wisconsin.....	13	111	5.5	52.0	51.1	98.3	.704	36.61	36.01
Total.....	313	2,988	5.6	51.0	50.2	98.4	.701	35.75	35.19
Grinding-machine operators, female:									
Indiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Kentucky.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Michigan.....	2	3	4.7	52.0	39.0	75.0	.371	19.29	14.45
New Hampshire.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Rhode Island.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	7	19	5.4	50.6	46.4	91.7	.343	17.36	15.93
Hammersmiths, male:									
California.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Colorado.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Connecticut.....	3	6	6.0	49.2	53.9	109.6	.832	40.93	44.78
Illinois.....	6	67	5.0	50.4	43.1	85.5	1.202	60.58	51.81
Indiana.....	3	8	5.6	55.4	55.1	99.5	.641	35.51	35.31
Iowa.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Massachusetts.....	2	9	5.8	50.0	48.0	96.0	.602	30.10	28.91
Michigan.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Minnesota.....	3	8	5.4	52.9	45.9	88.0	.703	37.19	30.89
New York.....	3	10	5.6	47.4	44.2	93.2	.896	42.47	39.64
Ohio.....	6	41	5.8	50.2	50.7	101.0	.837	42.02	42.41
Oregon.....	2	6	5.0	48.0	38.8	80.8	.838	40.22	32.55
Pennsylvania.....	11	37	5.4	49.8	46.8	94.0	.779	38.79	36.47
Rhode Island.....	2	2	5.0	47.5	43.0	90.5	.491	23.32	21.12
Tennessee.....	2	9	5.7	53.4	55.2	103.4	.439	23.44	24.21
Washington.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	3	5	6.0	51.0	58.6	114.9	.958	48.86	56.15
Total.....	52	226	5.4	50.3	47.5	94.4	.888	44.67	42.15
Helpers, not otherwise specified, male:									
Alabama.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
California.....	15	87	5.8	46.3	46.6	100.6	.633	29.31	29.50
Colorado.....	2	94	5.7	48.1	50.0	104.0	.470	22.61	23.50
Connecticut.....	13	101	5.7	50.0	51.2	102.4	.498	24.90	25.61
Georgia.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Illinois.....	17	338	5.5	49.7	47.4	95.4	.589	29.27	27.91
Indiana.....	12	123	5.6	52.0	49.6	95.4	.466	24.23	23.09
Iowa.....	2	28	5.2	54.7	49.1	89.8	.423	23.14	20.78
Kansas.....	3	12	5.4	58.0	51.3	88.4	.369	21.40	18.95
Kentucky.....	4	21	5.3	49.5	44.4	89.7	.535	26.48	23.75
Louisiana.....	3	7	5.0	50.6	42.7	84.4	.336	17.00	14.34
Maine.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maryland.....	4	48	5.8	48.9	49.0	100.2	.448	21.91	21.96
Massachusetts.....	26	219	5.8	47.9	48.1	100.4	.516	24.72	24.80
.....	24	233	5.8	51.6	51.1	99.0	.501	25.85	25.60
.....	6	46	5.3	50.7	45.2	89.2	.461	23.37	20.94
.....	10	29	5.6	50.0	51.3	102.6	.449	22.45	23.03
.....	2	9	5.6	48.2	44.0	91.3	.294	14.17	12.93
.....	16	133	5.8	49.1	48.8	99.4	.533	26.17	25.99
.....	24	261	5.7	48.5	47.2	97.3	.545	26.43	25.71
.....	62	691	5.5	50.3	48.6	96.6	.497	25.00	24.14
.....	4	47	5.7	48.0	46.9	97.7	.527	25.30	24.71

60 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Helpers, not otherwise specified, male—Continued.									
Pennsylvania.....	42	626	5.6	51.7	50.9	98.5	\$0.507	\$26.21	\$25.79
Rhode Island.....	3	9	6.0	51.6	52.7	102.1	.493	25.44	25.95
Tennessee.....	4	25	5.5	54.7	51.2	93.6	.376	20.57	19.25
Texas.....	3	12	5.7	48.2	47.7	99.0	.413	19.97	19.68
Washington.....	4	13	5.0	47.8	38.8	81.2	.546	20.10	21.20
Wisconsin.....	14	198	5.8	50.9	53.5	106.1	.547	27.84	29.24
Total.....	322	3,443	5.6	50.2	49.2	98.0	.514	25.80	25.31
Laborers, male:									
Alabama.....	5	58	5.9	50.7	52.4	103.4	.299	15.16	15.66
California.....	17	180	5.7	46.1	46.0	99.8	.573	26.42	26.33
Colorado.....	2	68	5.7	48.0	49.0	102.1	.466	22.37	22.82
Connecticut.....	19	360	5.8	51.0	54.2	106.3	.476	24.28	25.83
Georgia.....	7	68	5.6	52.1	49.5	95.0	.240	12.50	11.88
Illinois.....	28	1,313	5.7	49.8	50.1	100.6	.509	25.35	25.48
Indiana.....	16	330	5.5	50.9	49.5	97.2	.430	21.89	21.29
Iowa.....	6	167	5.1	54.0	47.5	88.0	.442	23.87	20.98
Kansas.....	8	75	5.4	54.4	49.3	90.6	.396	19.91	18.00
Kentucky.....	7	50	5.4	50.5	45.5	90.1	.372	18.79	16.92
Louisiana.....	3	55	5.5	58.0	54.5	94.0	.280	16.24	15.25
Maine.....	4	39	5.5	48.3	45.1	93.4	.420	20.29	18.94
Maryland.....	5	40	5.5	51.0	48.1	94.3	.429	21.88	20.63
Massachusetts.....	35	619	5.8	49.6	50.6	102.0	.484	24.01	24.50
Michigan.....	31	480	5.7	51.9	50.5	97.3	.479	24.86	24.18
Minnesota.....	8	88	5.3	50.8	44.6	87.8	.426	21.64	19.03
Missouri.....	12	103	5.8	52.0	52.0	100.0	.408	21.22	21.22
New Hampshire.....	5	29	5.7	48.5	48.9	100.8	.462	22.41	22.61
New Jersey.....	26	406	5.8	49.5	50.5	102.0	.507	25.10	25.60
New York.....	30	737	5.7	48.7	48.8	100.2	.511	24.89	24.92
Ohio.....	82	1,205	5.7	49.8	51.3	103.0	.473	23.06	23.74
Oregon.....	4	7	5.6	46.3	43.4	93.7	.509	23.57	22.10
Pennsylvania.....	48	1,337	5.7	52.0	51.5	99.0	.443	23.04	22.81
Rhode Island.....	10	212	5.8	50.5	53.4	105.7	.458	23.13	24.47
Tennessee.....	7	89	5.4	50.6	47.2	93.3	.333	16.85	15.73
Texas.....	7	74	5.7	48.6	48.6	100.0	.404	19.62	19.62
Washington.....	5	32	5.8	48.3	48.6	100.6	.529	25.55	25.68
Wisconsin.....	15	285	5.7	52.1	52.6	101.0	.482	25.11	25.32
Total.....	452	8,506	5.7	50.5	50.5	100.0	.469	23.66	23.66
Laborers, female:									
Indiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Rhode Island.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	3	11	5.4	50.8	45.4	89.4	.349	17.73	15.84
Lathe operators, engine, male:									
Alabama.....	3	29	5.8	51.4	50.0	97.3	.730	37.52	36.53
California.....	20	248	5.8	45.5	45.7	100.4	.859	39.06	39.36
Colorado.....	2	28	5.5	48.1	50.7	105.4	.720	34.63	36.48
Connecticut.....	18	336	5.6	51.2	51.3	100.2	.674	34.51	34.56
Georgia.....	5	38	5.6	51.7	49.6	95.9	.597	30.86	29.57
Illinois.....	30	613	5.7	50.7	50.7	100.0	.770	39.07	39.07
Indiana.....	13	90	5.8	51.4	52.5	102.1	.671	34.49	35.25
Iowa.....	6	64	5.2	53.2	47.1	88.5	.626	33.30	29.49
Kansas.....	5	34	5.4	51.1	46.0	90.0	.685	35.00	31.50
Kentucky.....	7	27	5.9	48.7	48.7	100.0	.644	31.37	31.37
Louisiana.....	3	16	5.3	54.3	49.1	90.4	.670	32.57	29.57
Maine.....	3	22	5.7	47.3	48.2	101.9	.572	28.57	28.57
Maryland.....	5	39	5.3	51.7	48.0	92.8	.652	32.57	30.57
Massachusetts.....	31	468	5.8	49.9	50.3	100.8	.652	32.57	32.57
Michigan.....	27	316	5.6	51.2	49.7	97.1	.652	32.57	32.57
Minnesota.....	8	52	5.2	50.7	45.3	89.3	.652	32.57	32.57
Missouri.....	14	128	5.7	49.9	49.2	98.6	.652	32.57	32.57
New Hampshire.....	5	44	5.8	49.3	49.3	100.0	.652	32.57	32.57
New Jersey.....	24	212	5.6	49.7	49.7	100.0	.652	32.57	32.57

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Lathe operators, engine, male—Continued.									
New York.....	29	487	5.7	48.6	50.3	103.5	\$0.777	\$37.76	\$39.08
Ohio.....	74	953	5.6	50.5	50.5	100.0	.702	35.49	35.49
Oregon.....	6	52	5.8	47.1	47.6	101.1	.793	37.35	37.73
Pennsylvania.....	42	687	5.6	52.1	52.1	100.0	.732	38.13	38.13
Rhode Island.....	9	208	5.6	51.6	49.7	96.3	.614	31.68	30.54
Tennessee.....	6	35	5.7	50.8	50.4	99.2	.717	36.42	36.18
Texas.....	6	125	5.9	46.9	47.1	100.4	.704	33.02	33.13
Washington.....	6	69	5.6	47.5	46.1	97.1	.788	37.43	36.29
Wisconsin.....	14	220	5.6	51.3	51.9	101.2	.722	37.04	37.50
Total.....	421	5,640	5.7	50.3	50.2	99.8	.717	36.07	36.01
Lathe operators, turret, male:									
Alabama.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
California.....	16	117	5.6	47.1	45.8	97.2	.770	36.27	35.23
Colorado.....	2	48	5.9	48.0	51.6	107.5	.657	31.54	33.91
Connecticut.....	18	164	5.5	52.1	51.7	99.2	.689	35.90	35.61
Georgia.....	4	10	5.8	52.2	50.7	97.1	.409	21.35	20.71
Illinois.....	25	566	5.6	50.5	50.4	99.8	.798	40.30	40.20
Indiana.....	14	120	5.4	50.7	47.6	93.9	.655	33.21	31.15
Iowa.....	5	36	4.8	54.6	45.5	83.3	.635	34.67	28.89
Kansas.....	3	5	4.6	55.2	43.0	77.9	.426	23.52	18.31
Kentucky.....	6	23	5.6	50.1	50.1	100.0	.521	26.05	26.05
Louisiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine.....	2	119	5.8	49.6	48.5	97.8	.512	25.40	24.83
Maryland.....	4	33	5.4	49.9	49.9	100.0	.749	37.39	37.39
Massachusetts.....	31	448	5.7	48.9	51.1	104.5	.695	33.99	35.53
Michigan.....	25	191	5.3	51.7	46.7	90.3	.670	34.64	31.29
Minnesota.....	4	19	4.8	49.8	41.0	82.3	.673	33.52	27.58
Missouri.....	11	29	5.8	52.4	52.0	99.2	.376	30.18	29.93
New Hampshire.....	4	25	5.9	48.9	48.2	98.6	.671	32.81	32.34
New Jersey.....	21	163	5.5	50.2	50.1	99.8	.789	39.61	39.58
New York.....	24	241	5.6	49.2	48.5	98.6	.705	34.69	34.17
Ohio.....	62	436	5.6	50.6	50.5	99.8	.703	35.57	35.50
Oregon.....	3	14	5.3	48.0	40.9	85.2	.729	34.99	29.80
Pennsylvania.....	39	574	5.5	52.2	50.6	96.9	.673	35.13	34.10
Rhode Island.....	8	165	5.8	50.7	49.7	98.0	.613	31.08	30.45
Tennessee.....	4	11	5.5	51.0	47.4	92.9	.664	33.86	31.47
Texas.....	4	51	5.9	46.7	47.0	100.6	.698	32.60	32.81
Washington.....	5	46	5.3	47.0	44.9	95.5	.753	35.39	33.84
Wisconsin.....	13	210	5.5	53.3	53.6	100.6	.706	37.63	37.85
Total.....	359	3,855	5.6	50.5	49.9	98.8	.700	35.35	34.92
turret, female:									
.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
.....	2	6	4.7	50.0	37.9	75.8	.544	27.20	20.61
.....	3	13	5.4	48.9	41.1	84.0	.432	21.12	17.78
.....	6	32	5.9	51.1	53.2	104.1	.723	36.95	38.41
.....	98	5.9	44.9	46.0	102.4	.891	40.01	41.01	
.....	35	5.6	48.1	49.0	101.9	.738	35.50	36.21	
.....	90	5.8	51.6	53.0	102.7	.755	38.96	39.97	
.....	27	5.2	52.7	43.8	83.1	.677	35.68	29.61	
.....	51	5.7	46.5	49.6	106.7	.826	38.41	40.98	
.....	32	5.7	50.6	50.3	99.4	.667	33.75	33.55	
.....	40	5.3	53.3	49.3	92.5	.632	33.69	31.14	
.....	53	5.8	50.3	50.4	100.2	.783	39.38	39.44	
.....	38	5.6	50.9	48.2	94.7	.641	32.63	30.91	
.....	31	5.4	49.9	46.8	93.8	.798	39.82	37.40	
.....	42	5.6	49.7	47.0	94.6	.590	29.32	27.73	
.....	51	5.8	48.3	48.9	101.2	.690	33.33	33.71	
.....	27	5.7	49.5	49.6	100.2	.661	32.72	32.81	

62 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Machinists, male—Continued.									
Michigan	29	220	5.7	51.1	50.1	98.0	\$0.774	\$39.55	\$38.74
Minnesota	8	26	5.5	51.3	49.8	97.1	.660	33.86	32.92
Missouri	17	82	5.7	51.4	50.0	97.3	.708	36.39	35.42
New Hampshire	5	51	5.9	51.2	50.5	98.6	.674	34.51	33.99
New Jersey	20	129	5.8	49.9	51.4	103.0	.731	36.48	37.57
New York	25	267	5.8	48.8	50.7	103.9	.766	37.38	38.84
Ohio	47	300	5.8	50.3	51.1	101.6	.756	38.03	38.60
Oregon	3	8	5.6	47.5	50.0	105.3	.855	40.61	42.80
Pennsylvania	36	455	5.7	52.2	52.3	100.2	.690	36.02	36.08
Rhode Island	10	149	5.7	50.5	49.2	97.4	.657	33.18	32.28
Tennessee	8	43	5.3	50.4	48.0	95.2	.765	38.56	36.73
Texas	7	52	5.6	47.8	45.5	95.2	.809	38.67	36.76
Washington	7	63	5.8	47.9	47.5	99.2	.790	37.84	37.57
Wisconsin	10	64	5.8	51.7	55.5	107.4	.683	35.31	37.94
Total	379	3,036	5.7	49.8	50.2	100.8	.739	36.80	37.11
Machinists' and toolmakers' helpers, male:									
Alabama	4	5	5.4	54.4	51.7	95.0	.441	23.99	22.80
California	6	28	5.7	45.3	46.2	102.0	.652	29.54	30.10
Colorado	2	9	6.2	48.1	53.5	111.2	.500	24.05	26.78
Connecticut	12	58	5.9	51.4	53.0	103.1	.515	26.47	27.30
Georgia	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Illinois	17	72	5.6	49.4	50.1	101.4	.581	28.70	29.10
Indiana	15	48	5.6	51.1	49.4	96.7	.494	25.24	24.44
Iowa	3	15	5.0	54.1	48.6	89.8	.474	25.64	22.11
Kansas	5	11	4.7	51.0	39.6	77.6	.421	21.47	11.00
Kentucky	6	11	5.7	49.5	46.7	94.3	.440	21.78	20.00
Louisiana	3	6	5.3	48.0	45.3	94.4	.471	22.61	20.00
Maine	3	17	5.6	48.2	48.3	100.2	.480	23.14	22.00
Maryland	3	31	5.7	48.8	50.5	103.5	.476	23.22	22.00
Massachusetts	14	81	5.7	48.2	46.4	96.3	.502	24.20	22.00
Michigan	15	80	5.8	52.6	52.0	98.9	.479	25.20	22.00
Minnesota	5	17	5.4	50.6	47.4	93.7	.450	22.77	21.00
Missouri	3	7	5.7	52.3	50.7	96.9	.469	24.53	22.00
New Hampshire	4	15	5.3	49.3	43.9	89.0	.466	22.97	21.00
New Jersey	16	56	5.8	49.6	51.1	103.0	.542	26.88	25.00
New York	19	57	5.7	49.7	50.0	100.6	.550	27.34	25.00
Ohio	19	58	5.7	50.3	51.7	102.8	.515	25.90	24.00
Oregon	2	6	5.5	44.0	40.7	92.5	.571	25.12	22.00
Pennsylvania	26	143	5.7	51.7	52.4	101.4	.481	24.82	22.00
Rhode Island	5	47	5.9	51.1	51.7	101.2	.469	22.00	21.00
Tennessee	2	7	5.7	52.0	53.6	103.1	.407	20.00	19.00
Texas	6	48	5.1	47.4	41.6	87.8	.446	22.00	20.00
Washington	4	12	5.8	48.0	49.2	102.5	.600	28.00	27.00
Wisconsin	9	60	5.7	53.0	54.9	103.6			
Total	229	1,006	5.7	50.3	50.0	99.4			
Milling-machine operators, male:									
Alabama	2	10	5.4	53.1	49.9				
California	15	62	5.7	46.0	44.0				
Colorado	2	26	5.8	48.1					
Connecticut	17	104	5.7	51					
Illinois	26	379	5.7						
Indiana	14	55	5.7						
Iowa	2	25	5.1						
Kansas	3	3	6.0						
Kentucky	5	15	5.8						
Louisiana	1	(1)	(1)						
Maine	3	27	5.7						
Maryland	4	27	5.2						
Massachusetts	32	402	5.7						
Michigan	27	164	5.7						
Minnesota	6	22	5.4						
Missouri	9	35	5.8						
New Hampshire	4	33	6.9						

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 hours, and per cent of full time worked, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Milling-machine operators, male—Continued.									
New Jersey	20	96	5.7	49.3	50.6	102.6	\$0.783	\$38.60	\$39.67
New York	28	481	5.8	48.3	49.5	102.5	.756	36.51	37.39
Ohio	64	576	5.7	50.3	51.2	101.8	.702	35.31	35.96
Oregon	4	10	6.1	47.6	49.0	102.9	.846	40.27	41.39
Pennsylvania	37	425	5.6	51.7	52.0	100.6	.681	35.21	35.43
Rhode Island	7	175	5.8	50.7	49.5	97.6	.601	30.47	29.72
Tennessee	4	7	6.0	51.2	55.8	109.0	.620	31.74	34.63
Texas	3	45	6.0	46.6	48.3	103.6	.456	21.25	22.03
Washington	4	33	5.3	46.8	44.6	95.3	.761	35.61	33.93
Wisconsin	15	112	5.5	53.1	52.1	98.1	.700	37.17	36.48
Total	358	3,440	5.7	50.2	50.6	100.8	.697	34.99	35.27
Milling-machine operators, female:									
Massachusetts	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York	2	6	5.8	48.3	47.3	97.9	.520	25.12	24.59
Rhode Island	2	4	5.8	51.0	48.9	95.9	.484	24.68	23.66
Total	5	15	5.8	47.6	46.1	96.8	.504	23.99	23.22
Packers and craters, male:									
Alabama	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
California	7	23	5.8	45.7	47.4	103.7	.634	28.97	30.05
Connecticut	10	46	6.0	51.5	53.1	103.1	.535	27.55	28.40
Georgia	2	8	6.0	51.6	52.8	102.3	.356	18.37	18.78
Illinois	20	173	5.9	49.4	48.7	98.0	.564	27.86	27.45
Indiana	9	101	5.7	51.4	51.8	100.8	.466	23.95	24.14
Iowa	4	25	5.4	54.0	50.3	93.1	.469	25.33	23.60
Kansas	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Kentucky	4	7	5.9	51.6	51.5	99.8	.512	26.42	26.35
Louisiana	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maryland	4	11	5.6	51.0	49.8	97.6	.500	25.50	24.91
Massachusetts	25	191	5.8	49.3	50.9	103.2	.579	28.54	29.47
Michigan	25	115	5.7	51.1	50.3	98.4	.558	28.51	28.08
Minnesota	6	15	6.0	50.6	51.3	101.4	.488	24.69	25.02
Missouri	9	31	5.9	51.3	51.9	101.2	.465	23.85	24.13
New Jersey	8	74	5.9	49.6	51.7	104.2	.607	30.11	31.43
New York	14	145	5.9	49.0	50.1	102.2	.555	27.20	27.78
Ohio	37	184	5.8	49.4	52.3	105.9	.569	28.11	29.74
Pennsylvania	31	174	5.8	50.9	51.9	102.0	.534	27.18	27.71
Rhode Island	4	42	5.8	51.0	49.8	97.6	.586	29.89	29.21
Tennessee	2	3	6.0	48.5	49.2	101.4	.392	19.01	19.28
Texas	2	18	5.7	48.3	50.8	105.2	.463	22.36	23.54
Washington	2	5	5.4	47.4	42.7	90.1	.708	33.56	30.19
Wisconsin	10	53	5.9	49.6	55.3	111.5	.532	26.39	29.42
Total	239	1,455	5.8	50.0	51.0	102.0	.547	27.35	27.94
Packers and craters, female:									
Connecticut	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Illinois	4	11	5.6	49.7	48.1	96.8	.423	21.02	20.32
Massachusetts	3	5	6.0	46.6	46.0	100.9	.368	16.78	16.93
Michigan	2	16	6.0	50.0	48.3	96.6	.312	15.00	15.04
New York	3	10	5.9	48.0	47.0	97.9	.369	17.71	17.32
Ohio	2	7	5.0	49.5	40.3	81.4	.430	21.29	17.31
Total	15	50	5.8	49.0	46.7	95.3	.371	18.18	17.31
Pattern makers, male:									
Alabama	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
California	14	68	5.7	45.2	45.3	100.2	1.117	50.49	50.66
Colorado	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Connecticut	15	100	5.8	49.9	52.5	105.2	.848	42.32	44.54
Georgia	2	9	5.7	49.9	47.5	95.2	.712	35.53	33.80
Illinois	15	115	5.6	48.1	45.5	94.6	.952	45.79	43.36
Indiana	9	47	5.7	49.9	48.1	96.4	.811	40.47	39.01
Iowa	2	3	6.0	50.0	50.0	100.0	.682	33.11	33.11

1 Data included in total.

64 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Pattern makers, male—Contd.									
Kansas	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Kentucky	2	14	6.0	49.8	48.5	97.4	\$0.682	\$33.96	\$33.05
Louisiana	8	9	6.0	51.8	53.5	103.3	.822	42.58	43.99
Maine	3	14	5.9	50.0	50.0	100.0	.639	31.95	31.95
Maryland	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Massachusetts	33	174	5.9	49.2	49.1	99.8	.769	37.83	37.76
Michigan	14	39	5.6	51.7	49.2	95.2	.795	41.10	39.15
Minnesota	5	21	5.6	49.6	46.0	92.7	.437	36.56	33.91
Missouri	3	5	6.0	48.5	56.9	117.3	.848	41.13	48.25
New Hampshire	4	6	5.8	49.7	50.5	101.6	.822	40.85	41.49
New Jersey	17	66	5.9	48.8	49.2	100.8	.923	45.04	45.45
New York	26	173	5.7	49.0	47.8	97.6	.879	43.07	42.03
Ohio	48	230	5.6	50.8	48.4	95.3	.867	44.04	41.99
Oregon	2	4	5.2	45.0	44.2	98.2	1.007	45.32	44.49
Pennsylvania	32	283	5.7	52.4	51.8	98.9	.836	43.81	43.34
Rhode Island	8	48	5.7	49.9	47.9	96.0	.720	35.93	34.47
Tennessee	8	16	5.4	49.4	43.6	88.3	.855	42.24	37.30
Texas	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Washington	3	15	5.7	47.5	44.8	94.3	1.021	48.50	45.69
Wisconsin	10	177	5.9	50.1	52.5	104.8	.792	39.68	41.57
Total	288	1,652	5.7	49.9	49.3	98.8	.846	42.22	41.70
Planer operators, male:									
Alabama	3	6	6.0	49.4	49.6	100.4	.714	35.27	35.43
California	13	27	5.8	46.4	46.3	99.8	.876	40.65	40.57
Colorado	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Connecticut	16	190	5.8	50.8	53.6	105.5	.734	37.29	39.35
Georgia	3	3	6.0	51.0	50.8	99.6	.670	34.17	34.07
Illinois	24	171	5.8	50.1	51.3	102.4	.818	40.98	41.97
Indiana	12	36	5.8	50.8	51.5	101.4	.737	37.44	37.95
Iowa	4	10	5.1	51.7	41.5	80.3	.649	33.55	26.95
Kansas	5	7	5.7	54.3	53.4	98.3	.597	32.42	31.93
Kentucky	6	13	5.8	49.5	49.6	100.2	.663	32.82	32.93
Louisiana	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine	3	20	6.0	48.2	51.1	106.0	.587	28.29	30.01
Maryland	3	14	4.9	51.1	46.6	91.2	.666	34.03	31.04
Massachusetts	33	208	5.8	49.3	49.9	101.2	.720	35.50	35.92
Michigan	20	98	5.7	50.6	50.4	99.6	.684	34.61	34.44
Minnesota	8	12	5.6	51.3	48.9	95.3	.687	35.24	33.60
Missouri	6	25	6.0	49.1	51.0	103.9	.776	38.10	39.56
New Hampshire	3	14	5.9	49.7	50.0	100.6	.664	33.00	33.23
New Jersey	23	85	5.8	49.7	51.8	104.2	.796	39.56	41.24
New York	21	155	5.6	49.2	49.8	101.2	.767	37.74	38.19
Ohio	66	463	5.6	50.9	51.5	101.2	.761	38.73	39.16
Oregon	3	4	6.0	47.0	47.6	101.3	.762	35.81	36.28
Pennsylvania	39	230	5.5	53.6	53.7	100.2	.780	41.81	41.91
Rhode Island	7	37	5.5	51.5	50.5	98.1	.674	34.71	34.04
Tennessee	3	6	6.0	49.2	48.8	99.2	.706	34.74	34.40
Texas	3	6	6.0	47.3	47.2	99.8	.725	34.29	34.24
Washington	5	24	5.5	47.7	45.1	94.5	.778	37.11	35.04
Wisconsin	10	96	5.4	53.5	53.2	99.4	.771	41.25	41.02
Total	344	1,963	5.7	50.7	51.3	101.2	.754	38.23	38.72
Polishers and buffers, male:									
Alabama	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
California	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Connecticut	7	12	5.8	51.2	51.1	99.8	.546	27.96	27.90
Illinois	9	56	5.9	50.5	52.2	103.4	.741	37.42	38.69
Indiana	3	6	5.2	50.0	46.0	92.0	.709	35.45	32.62
Iowa	2	2	5.5	51.0	45.5	89.2	.478	24.38	24.75
Kentucky	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maryland	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Massachusetts	14	79	5.5	49.0	47.2	96.3	.653	32.00	30.81
Michigan	10	83	5.7	50.0	49.5	99.0	.792	39.60	39.25
Minnesota	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Missouri	2	5	5.8	54.0	51.6	95.4	.681	28.67	27.35

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Polishers and buffers, male—Continued.									
New Hampshire.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Jersey.....	4	17	5.6	49.8	47.6	95.6	\$0.752	\$37.45	\$35.81
New York.....	11	45	5.8	48.5	47.3	97.5	.709	34.39	33.52
Ohio.....	21	129	5.8	49.3	48.8	99.0	.695	34.26	33.89
Pennsylvania.....	13	50	5.8	53.4	55.3	103.6	.592	31.61	32.76
Rhode Island.....	5	61	5.8	50.1	49.5	98.8	.592	29.06	29.32
Washington.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	6	10	5.9	50.8	51.3	101.0	.647	32.87	33.14
Total.....	115	587	5.7	50.1	49.6	99.0	.674	33.77	33.46
Screw-machine operators, hand, male:									
California.....	3	4	5.8	49.0	47.8	97.6	.588	28.81	28.09
Connecticut.....	7	31	5.8	49.6	48.0	96.8	.664	32.93	31.88
Illinois.....	11	74	5.6	49.9	49.7	99.6	.715	35.66	35.55
Indiana.....	6	17	5.5	50.6	46.6	92.1	.645	32.64	30.07
Kansas.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Kentucky.....	3	7	5.9	50.6	50.2	99.2	.581	29.40	29.17
Maine.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maryland.....	2	2	5.5	48.0	43.2	90.0	.717	34.42	30.94
Massachusetts.....	18	106	5.6	48.4	49.9	103.1	.682	33.01	34.07
Michigan.....	11	83	5.4	52.7	49.2	93.4	.787	41.47	38.69
Minnesota.....	2	3	5.0	49.5	42.8	86.5	.687	34.01	29.42
Missouri.....	3	9	5.4	52.0	46.1	88.7	.582	30.26	26.87
New Hampshire.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Jersey.....	4	29	6.0	50.0	55.0	110.0	.696	34.80	36.24
New York.....	16	99	5.7	48.9	48.4	99.0	.673	32.91	32.56
Ohio.....	38	264	5.5	50.7	49.5	97.6	.683	34.63	33.85
Pennsylvania.....	10	53	5.4	49.6	49.6	100.0	.669	33.14	33.14
Rhode Island.....	7	115	5.7	50.4	48.9	97.0	.586	29.53	28.66
Tennessee.....	2	2	6.0	48.8	60.0	123.0	.520	25.38	31.20
Wisconsin.....	9	58	5.5	51.6	51.8	100.4	.654	33.75	33.87
Total.....	155	966	5.6	50.2	49.4	98.4	.676	33.94	33.42
Screw-machine operators, hand, female:									
Ohio.....	2	18	5.6	49.5	45.5	91.9	.426	21.09	19.37
Screw-machine operators, semi-automatic, male:									
Alabama.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Connecticut.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Georgia.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Indiana.....	7	30	5.3	51.7	46.5	89.9	.531	27.45	24.71
Kentucky.....	2	6	6.0	53.8	54.1	100.6	.481	25.88	26.02
Massachusetts.....	5	24	5.7	50.5	48.0	95.0	.640	32.32	30.73
Michigan.....	2	5	6.0	54.4	56.2	103.3	.526	26.61	29.57
New Jersey.....	5	15	6.0	49.3	52.5	106.5	.770	37.96	40.45
New York.....	5	13	5.7	47.7	49.9	104.6	.704	33.58	35.12
Ohio.....	3	37	5.5	56.0	53.6	95.7	.684	36.30	34.64
Pennsylvania.....	3	27	5.3	49.3	46.9	95.1	.727	35.84	34.06
Rhode Island.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Tennessee.....	4	6	6.0	51.8	52.3	101.0	.570	29.53	29.79
Texas.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	41	171	5.6	51.5	49.9	96.9	.644	33.17	32.16
Screw-machine operators, automatic, male:									
Alabama.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
California.....	2	4	5.5	49.1	45.6	92.9	.634	31.13	28.91
Colorado.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Connecticut.....	6	13	5.6	52.5	51.1	97.3	.624	32.76	31.89
Illinois.....	16	80	5.7	49.9	50.1	100.4	.810	40.42	40.54
Indiana.....	7	49	5.8	50.1	50.9	101.6	.640	32.06	32.56

1 Data included in total.

66 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Screw-machine operators, automatic, male—Continued.									
Iowa.....	2	15	4.9	55.4	50.3	90.8	\$0.580	\$32.13	\$29.17
Kentucky.....	4	23	5.9	52.2	52.5	100.6	.434	22.65	22.78
Maine.....	2	8	5.8	50.6	51.8	102.4	.633	32.03	32.78
Maryland.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Massachusetts.....	13	57	5.8	49.4	50.8	102.8	.739	36.51	37.58
Michigan.....	11	79	5.0	60.5	52.4	86.6	.835	50.52	43.72
Minnesota.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Missouri.....	3	5	6.0	49.5	50.0	101.0	.510	25.25	25.48
New Hampshire.....	2	2	6.0	49.0	49.0	100.0	.580	28.44	28.44
New Jersey.....	4	34	6.0	50.0	53.3	106.6	.785	39.25	41.83
New York.....	13	46	5.8	48.6	52.8	108.6	.760	36.94	40.10
Ohio.....	24	202	5.6	50.5	50.2	99.4	.829	41.86	41.56
Pennsylvania.....	14	49	5.6	51.2	51.2	100.0	.711	36.42	36.42
Rhode Island.....	5	33	5.8	50.1	49.3	98.4	.754	37.78	37.16
Tennessee.....	2	4	6.0	53.3	55.0	103.2	.556	29.63	30.58
Texas.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Washington.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	8	30	5.4	51.8	50.0	96.5	.742	38.44	37.13
Total.....	144	762	5.6	51.4	51.1	99.4	.758	38.96	38.73
Sheet-metal machine operators, male:									
California.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Connecticut.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Illinois.....	16	266	5.6	49.4	48.5	98.2	.727	35.91	35.31
Indiana.....	10	84	5.6	51.3	49.6	96.7	.573	29.39	28.41
Iowa.....	3	16	5.0	53.9	49.8	92.4	.571	30.78	28.42
Kansas.....	2	3	5.7	54.0	49.0	90.7	.498	26.89	24.40
Kentucky.....	4	7	6.0	50.1	52.4	104.6	.531	26.60	27.83
Maine.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maryland.....	3	4	6.0	49.5	52.5	106.1	.557	27.57	29.27
Massachusetts.....	11	100	5.7	48.8	46.2	94.7	.497	24.25	22.93
Michigan.....	16	114	5.7	51.2	50.5	98.6	.643	32.92	32.44
Minnesota.....	4	21	5.4	50.1	48.7	97.2	.456	22.85	22.20
Missouri.....	5	10	5.8	49.9	48.1	96.4	.542	27.05	26.09
New Hampshire.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Jersey.....	6	32	5.7	49.1	47.6	96.9	.647	31.77	30.83
New York.....	12	152	5.8	48.3	47.9	99.2	.621	29.99	29.76
Ohio.....	20	80	5.8	49.0	48.8	99.6	.645	31.61	31.48
Oregon.....	2	5	6.0	48.0	48.5	101.0	.694	33.31	33.66
Pennsylvania.....	19	143	5.7	51.0	50.3	98.6	.601	30.65	30.22
Rhode Island.....	2	13	5.9	50.6	52.0	102.8	.659	33.35	34.28
Tennessee.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	9	53	5.6	50.0	51.2	102.4	.671	33.55	34.40
Total.....	149	1,136	5.7	49.4	49.0	99.2	.630	31.12	30.83
Sheet-metal machine operators, female:									
Illinois.....	2	6	5.7	51.3	50.2	97.9	.417	21.39	20.94
Indiana.....	2	4	5.5	50.0	45.5	91.0	.435	21.75	19.75
Michigan.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	2	24	6.0	47.4	46.5	98.1	.486	23.04	22.61
Ohio.....	2	25	5.3	49.5	42.3	85.5	.386	19.11	16.32
Total.....	9	63	5.6	48.9	45.0	92.0	.440	21.52	19.78
Toolmakers, male:									
Alabama.....	2	2	5.5	49.5	45.5	91.9	.751	37.17	34.18
California.....	15	77	5.9	45.9	48.4	105.4	.983	45.12	47.60
Colorado.....	2	25	5.7	48.0	53.5	111.5	.761	38.53	40.72
Connecticut.....	17	145	5.8	51.4	52.4	101.9	.809	41.58	42.43
Georgia.....	4	10	5.8	51.8	51.8	100.0	.717	37.17	37.17
Illinois.....	26	366	5.7	49.9	49.6	99.4	.783	39.07	38.85
Indiana.....	14	76	5.8	50.4	51.3	101.8	.753	38.23	38.92
Iowa.....	2	15	4.9	54.4	47.2	86.8	.684	37.21	32.27
Kansas.....	4	7	5.6	54.0	48.4	89.6	.649	35.05	31.40
Kentucky.....	6	13	5.8	50.2	47.4	94.4	.769	33.60	36.42

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, 1929, by occupation, sex, and State—Continued

MACHINE SEEPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Toolmakers, male—Continued.									
Maine.....	4	11	6.0	48.9	55.4	113.3	\$0.680	\$33.25	\$37.64
Maryland.....	4	73	5.7	49.7	52.6	105.8	.798	39.66	41.96
Massachusetts.....	31	384	5.7	50.3	51.1	101.6	.737	37.07	37.61
Michigan.....	27	144	5.8	51.2	51.6	99.6	.827	42.84	42.71
Minnesota.....	7	22	5.2	51.2	46.8	91.2	.695	35.65	32.51
Missouri.....	11	28	5.9	51.5	50.6	98.3	.680	35.02	34.41
New Hampshire.....	2	19	6.0	48.2	50.0	103.5	.778	37.58	38.88
New Jersey.....	13	88	5.9	49.5	50.1	101.2	.797	39.45	39.93
New York.....	27	367	5.7	48.4	46.6	96.3	.826	39.98	38.54
Ohio.....	58	463	5.8	49.9	51.2	102.6	.784	39.12	40.18
Oregon.....	3	4	6.0	45.0	48.1	106.9	.854	38.43	41.10
Pennsylvania.....	37	197	5.7	51.1	51.5	100.8	.753	38.48	38.79
Rhode Island.....	8	178	5.9	51.0	50.9	99.8	.686	34.99	34.95
Tennessee.....	3	10	5.9	50.8	50.6	99.6	.800	40.64	40.45
Texas.....	4	22	5.8	47.3	46.8	98.9	.853	40.35	39.90
Washington.....	6	14	5.9	47.7	47.2	99.0	.830	39.59	39.19
Wisconsin.....	13	110	5.8	50.7	53.0	104.5	.759	38.48	40.20
Total.....	350	2,850	5.7	50.0	50.4	100.8	.780	39.00	39.26
Other precision-machine operators, male:									
Alabama.....	3	4	5.3	49.5	43.9	88.7	.626	30.09	27.45
California.....	9	18	5.9	48.3	46.3	100.0	.773	35.75	35.75
Colorado.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Connecticut.....	16	90	5.8	51.0	53.8	105.5	.691	35.24	37.19
Georgia.....	5	33	5.5	52.6	47.5	90.3	.408	21.46	19.37
Illinois.....	23	310	5.6	51.9	51.5	99.2	.706	36.64	36.35
Indiana.....	12	49	5.9	51.5	52.5	101.9	.583	30.02	30.63
Iowa.....	2	37	4.9	55.0	45.3	82.4	.611	33.61	27.73
Kansas.....	2	2	6.0	54.0	56.2	104.1	.604	32.62	33.92
Kentucky.....	3	9	5.9	48.7	45.4	93.4	.580	28.25	28.09
Louisiana.....	2	4	6.0	59.5	61.3	103.0	.494	29.39	30.24
Maine.....	2	13	5.9	48.2	49.9	103.5	.600	28.92	29.95
Maryland.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Massachusetts.....	15	77	5.8	49.6	52.5	105.8	.586	29.07	30.74
Michigan.....	16	60	5.7	50.7	48.3	95.3	.656	33.26	31.69
Minnesota.....	5	24	5.3	50.3	45.0	89.5	.578	29.07	26.03
Missouri.....	7	48	5.8	53.0	53.3	100.6	.536	28.41	28.55
New Hampshire.....	2	14	5.9	48.1	48.0	99.8	.680	32.71	32.60
New Jersey.....	20	74	5.6	49.3	48.2	97.8	.685	33.77	33.04
New York.....	28	176	5.7	49.1	50.6	103.1	.653	32.06	33.08
Ohio.....	60	326	5.7	49.8	51.8	104.0	.656	32.67	33.95
Oregon.....	2	7	5.9	48.0	48.3	100.6	.616	29.57	29.76
Pennsylvania.....	38	238	5.7	52.2	53.3	102.1	.667	34.82	35.52
Rhode Island.....	6	55	5.9	50.5	50.0	99.0	.606	30.60	30.26
Texas.....	4	17	5.9	48.9	48.7	99.6	.563	27.53	27.39
Washington.....	4	18	5.5	47.1	44.5	94.5	.737	34.71	32.79
Wisconsin.....	13	100	5.5	53.8	54.6	101.5	.695	37.39	37.99
Total.....	301	1,813	5.7	51.0	51.4	100.8	.655	33.41	33.67
Other precision-machine operators, female:									
Massachusetts.....	2	13	5.9	44.6	41.5	93.0	.551	24.57	22.83
Michigan.....	2	2	6.0	50.0	50.0	100.0	.633	31.65	31.64
New Jersey.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	3	28	5.8	48.0	45.9	95.6	.424	20.35	19.47
Ohio.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania.....	2	55	5.7	48.8	46.5	95.3	.455	22.20	21.17
Total.....	11	211	5.7	48.8	46.1	94.5	.428	20.89	19.75
Other skilled employees, male:									
Alabama.....	4	16	5.8	49.6	49.4	99.6	.707	35.07	34.94
California.....	20	207	5.8	46.5	48.1	103.4	.838	38.97	40.32
Colorado.....	2	113	5.9	48.0	51.1	106.5	.709	34.03	36.21
Connecticut.....	19	340	5.8	50.6	53.1	104.9	.698	35.32	37.06
Georgia.....	6	18	5.8	50.8	50.8	100.0	.514	26.10	26.10

¹ Data included in total

68 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Other skilled employees, male—Continued.									
Illinois.....	36	1,468	5.8	50.4	51.0	101.2	\$0.696	\$35.06	\$35.48
Indiana.....	16	391	5.8	51.0	51.1	100.2	.615	31.37	31.45
Iowa.....	6	156	5.4	54.4	52.2	96.0	.576	31.33	30.05
Kansas.....	7	42	5.8	54.9	54.0	98.4	.603	33.10	32.55
Kentucky.....	10	63	5.5	49.9	48.1	96.4	.678	33.83	32.63
Louisiana.....	3	13	5.8	57.1	58.8	103.0	.663	37.86	39.00
Maine.....	4	77	5.9	49.1	52.2	106.3	.647	31.77	33.77
Maryland.....	7	89	5.7	49.8	50.7	101.8	.715	35.61	36.28
Massachusetts.....	36	738	5.8	48.8	50.1	102.7	.673	32.84	33.70
Michigan.....	36	1,014	5.7	52.4	50.5	96.4	.677	35.47	34.17
Minnesota.....	8	119	5.5	50.2	47.1	93.8	.657	32.98	30.91
Missouri.....	16	111	5.6	51.8	49.7	95.9	.600	31.08	29.78
New Hampshire.....	5	74	5.9	48.7	49.4	101.4	.614	29.90	30.34
New Jersey.....	24	346	5.9	49.6	51.5	103.8	.719	35.66	37.03
New York.....	32	1,418	5.7	48.5	48.7	100.4	.728	35.31	35.47
Ohio.....	77	1,338	5.7	50.0	50.5	101.0	.669	33.45	33.79
Oregon.....	6	60	5.3	47.2	42.6	90.3	.759	35.82	32.30
Pennsylvania.....	47	1,665	5.7	51.1	51.3	100.4	.675	34.49	34.62
Rhode Island.....	10	272	5.8	50.5	51.0	101.0	.636	32.12	32.43
Tennessee.....	8	58	5.5	51.7	47.8	92.5	.720	37.22	34.45
Texas.....	5	17	5.6	47.6	45.7	96.0	.714	33.99	32.65
Washington.....	5	58	5.5	47.8	44.9	93.9	.806	38.53	36.22
Wisconsin.....	15	505	5.8	51.3	54.6	106.4	.710	36.42	38.75
Total.....	470	10,786	5.7	50.3	50.6	100.6	.686	34.51	34.73
Other skilled employees, female:									
Illinois.....	2	20	5.9	51.4	49.8	96.9	.327	16.81	16.32
Indiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Kentucky.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Massachusetts.....	2	14	3.5	48.0	29.1	60.6	.407	19.54	11.85
Michigan.....	7	139	5.4	52.3	47.0	89.9	.356	18.62	16.72
New Jersey.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	4	118	5.8	47.6	45.9	96.4	.387	18.42	17.77
Ohio.....	3	30	5.0	48.8	38.7	79.3	.380	18.54	14.69
Pennsylvania.....	2	21	5.8	48.0	46.6	97.1	.360	17.28	16.77
Rhode Island.....	2	50	5.9	50.6	49.8	98.4	.427	21.61	21.27
Total.....	25	409	5.6	50.0	46.0	92.0	.375	18.75	17.27
Other employees, male:									
Alabama.....	6	26	5.8	49.9	49.8	99.8	.411	20.51	20.50
California.....	21	233	5.8	45.9	46.5	101.3	.606	27.82	28.16
Colorado.....	2	44	6.0	48.0	53.5	111.5	.475	22.80	25.41
Connecticut.....	19	382	5.7	50.7	52.9	104.3	.438	22.21	23.17
Georgia.....	6	44	5.7	53.9	52.9	98.1	.336	18.11	17.75
Illinois.....	30	796	5.7	50.3	50.1	99.6	.519	26.11	26.02
Indiana.....	16	298	5.7	50.9	50.7	99.6	.486	24.74	24.66
Iowa.....	6	83	5.5	54.1	50.7	93.7	.483	26.13	24.51
Kansas.....	9	48	5.6	55.1	50.9	92.4	.413	22.76	21.00
Kentucky.....	10	61	5.9	51.5	51.1	99.2	.377	19.42	19.24
Louisiana.....	5	22	5.9	49.0	48.9	99.8	.308	15.09	15.07
Maine.....	4	54	5.9	48.8	50.5	103.5	.414	20.20	20.88
Maryland.....	6	41	5.6	48.7	47.7	97.9	.461	22.45	22.01
Massachusetts.....	36	490	5.8	49.4	49.2	99.6	.489	24.16	24.06
Michigan.....	30	358	5.7	51.7	64.3	124.4	.450	23.27	28.95
Minnesota.....	8	110	5.8	50.1	49.1	98.0	.515	25.80	25.27
Missouri.....	15	99	5.9	51.1	51.4	100.6	.449	22.94	23.04
New Hampshire.....	4	28	6.0	48.6	49.9	102.7	.511	24.83	25.51
New Jersey.....	24	256	5.8	49.4	50.0	101.2	.551	27.22	27.58
New York.....	32	906	5.7	48.8	49.0	100.4	.526	25.67	25.80
Ohio.....	79	1,208	5.8	49.9	50.5	101.2	.523	26.10	26.41
Oregon.....	6	53	5.7	47.2	46.0	97.5	.549	25.91	25.27
Pennsylvania.....	47	1,487	5.7	51.5	52.0	101.0	.464	23.90	24.11
Rhode Island.....	9	266	5.8	50.8	50.9	100.2	.420	21.34	21.38
Tennessee.....	8	66	5.7	50.5	48.6	96.2	.383	19.34	18.61
Texas.....	8	36	6.1	47.7	50.2	105.2	.503	23.99	25.23

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
Other employees, male—Contd.									
Washington.....	7	88	5.8	47.7	46.6	97.7	\$0.571	\$27.24	\$26.61
Wisconsin.....	14	525	5.8	51.2	53.3	104.1	.447	22.89	23.82
Total.....	467	8,108	5.8	50.3	51.2	101.8	.488	24.55	24.99
Other employees, female:									
Indiana.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Kentucky.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Massachusetts.....	5	19	5.4	48.0	42.8	89.2	.333	15.98	14.26
Michigan.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Hampshire.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York.....	3	116	5.7	48.0	46.1	96.0	.375	18.00	17.30
Ohio.....	2	74	5.7	49.5	47.0	94.9	.302	14.95	14.21
Pennsylvania.....	2	35	5.7	48.0	46.1	96.0	.397	19.06	18.30
Rhode Island.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Tennessee.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	18	296	5.7	49.0	46.7	95.3	.345	16.91	16.10
All employees, male:									
Alabama.....	6	284	5.8	50.0	49.6	99.2	.551	27.55	27.33
California.....	23	2,133	5.8	45.9	46.2	100.7	.779	35.76	35.99
Colorado.....	2	654	5.8	48.1	51.3	106.7	.619	29.77	31.72
Connecticut.....	19	4,104	5.7	51.0	52.5	102.9	.639	32.59	33.54
Georgia.....	8	332	5.6	52.3	49.5	94.6	.434	22.70	21.49
Illinois.....	36	11,149	5.7	50.0	50.1	100.2	.691	34.55	34.64
Indiana.....	16	2,965	5.6	51.0	50.1	98.2	.564	28.76	28.25
Iowa.....	6	1,032	5.2	54.1	48.8	90.2	.552	29.86	26.94
Kansas.....	10	436	5.6	54.1	50.2	92.8	.508	27.48	25.51
Kentucky.....	10	624	5.7	50.7	48.8	96.3	.526	26.67	25.66
Louisiana.....	5	217	5.6	54.1	51.5	95.2	.489	26.45	25.18
Maine.....	4	650	5.8	49.0	49.6	101.2	.544	26.66	27.00
Maryland.....	7	705	5.6	50.0	50.2	100.4	.656	32.80	32.98
Massachusetts.....	38	7,673	5.8	49.3	50.0	101.4	.630	31.06	31.49
Michigan.....	36	5,580	5.7	51.9	51.0	98.3	.639	33.16	32.63
Minnesota.....	8	856	5.4	50.4	46.8	92.9	.578	29.13	27.03
Missouri.....	19	1,153	5.8	51.4	50.9	99.0	.574	29.50	29.20
New Hampshire.....	6	535	5.9	49.0	48.8	99.6	.625	30.63	30.47
New Jersey.....	28	3,624	5.7	49.5	50.7	102.4	.685	33.91	34.76
New York.....	32	8,958	5.7	48.7	48.7	100.0	.683	33.27	33.27
Ohio.....	85	13,965	5.7	50.1	50.7	101.2	.646	32.36	32.73
Oregon.....	6	396	5.6	47.2	45.8	97.0	.601	32.62	31.64
Pennsylvania.....	48	12,537	5.7	51.7	51.7	100.0	.615	31.78	31.78
Rhode Island.....	10	3,104	5.7	50.8	50.1	98.6	.592	30.07	29.67
Tennessee.....	8	540	5.6	50.8	48.5	95.5	.550	27.94	26.71
Texas.....	10	742	5.8	47.6	46.9	98.5	.583	27.75	27.37
Washington.....	7	732	5.6	47.6	45.4	95.4	.732	34.84	33.24
Wisconsin.....	15	4,255	5.7	51.6	52.9	102.5	.639	32.97	33.77
Total.....	508	89,935	5.7	50.3	50.4	100.2	.641	32.24	32.30
All employees, female:									
Connecticut.....	2	7	5.7	50.0	51.1	102.2	.424	21.20	21.66
Illinois.....	6	56	5.7	50.7	48.3	95.3	.377	19.11	18.22
Indiana.....	3	49	5.4	50.0	45.3	90.6	.357	17.85	16.18
Kentucky.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Massachusetts.....	10	95	5.3	47.1	39.7	84.3	.414	19.50	16.44
Michigan.....	10	261	5.4	51.6	46.1	89.3	.411	21.21	18.98
New Hampshire.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Jersey.....	2	45	5.8	50.0	48.5	97.0	.397	19.85	19.28
New York.....	6	411	5.8	47.8	46.1	96.4	.408	19.50	18.80
Ohio.....	7	302	5.5	49.2	45.2	91.9	.382	18.79	17.28
Pennsylvania.....	5	153	5.7	48.4	46.6	96.3	.413	20.47	19.69
Rhode Island.....	2	111	5.8	51.1	49.0	95.9	.427	21.31	20.47
Tennessee.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	56	1,556	5.6	49.3	46.1	93.5	.399	19.67	18.41

1 Data included in total.

70 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

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, 1929, by occupation, sex, and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average number of days worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full-time hours actually worked	Average earnings per hour	Average full-time earnings per week	Average earnings made in one week
All employees, male and female:									
Alabama.....	6	284	5.8	50.0	49.6	99.2	\$0.551	\$27.55	\$27.33
California.....	23	2,133	5.8	45.9	46.2	100.7	.779	35.76	35.99
Colorado.....	2	654	5.8	48.1	51.3	106.7	.619	29.77	31.72
Connecticut.....	19	4,111	5.7	51.0	52.5	102.9	.639	32.59	33.52
Georgia.....	8	332	5.6	52.3	49.5	94.6	.434	22.70	21.49
Illinois.....	36	11,205	5.7	50.0	50.1	100.2	.689	34.45	34.55
Indiana.....	16	3,014	5.6	51.0	50.0	98.0	.561	28.61	28.06
Iowa.....	6	1,032	5.2	54.1	48.8	90.2	.552	29.96	26.94
Kansas.....	10	436	5.6	54.1	50.2	92.8	.508	27.48	25.51
Kentucky.....	10	652	5.7	50.9	49.0	96.3	.512	26.06	25.06
Louisiana.....	5	217	5.6	54.1	51.5	95.2	.489	26.45	25.18
Maine.....	4	650	5.8	49.0	49.6	101.2	.544	26.66	27.00
Maryland.....	7	705	5.6	50.0	50.2	100.4	.656	32.80	32.98
Massachusetts.....	38	7,768	5.8	49.3	49.8	101.0	.628	30.96	31.31
Michigan.....	36	5,841	5.6	51.8	50.8	98.1	.630	32.63	32.02
Minnesota.....	8	856	5.4	50.4	46.8	92.9	.578	29.13	27.03
Missouri.....	19	1,153	5.8	51.4	50.9	99.0	.574	29.50	29.20
New Hampshire.....	6	572	5.9	49.0	48.8	99.6	.610	29.89	29.77
New Jersey.....	28	3,669	5.8	49.5	50.7	102.4	.682	33.76	34.57
New York.....	32	9,369	5.7	48.6	48.6	100.0	.672	32.64	32.64
Ohio.....	85	14,267	5.7	50.1	50.6	101.0	.641	32.11	32.41
Oregon.....	6	396	5.6	47.2	45.8	97.0	.691	32.62	31.64
Pennsylvania.....	48	12,690	5.7	51.7	51.7	100.0	.612	31.64	31.64
Rhode Island.....	10	3,215	5.7	50.8	50.1	98.6	.586	29.77	29.36
Tennessee.....	8	541	5.6	50.8	48.5	95.5	.550	27.94	26.69
Texas.....	10	742	5.8	47.6	46.9	98.5	.583	27.75	27.37
Washington.....	7	732	5.6	47.6	45.4	95.4	.732	34.84	33.24
Wisconsin.....	15	4,255	5.7	51.6	52.9	102.5	.639	32.97	33.77
Total.....	508	91,491	5.7	50.3	50.3	100.0	.638	32.09	32.06

TABLE B.—Average and classified earnings per hour in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State

FOUNDRIES

Occupation, sex, and State	Number of—		Average earnings per hour	Number of employees whose earnings per hour were—																					
	Establishments	Employees		Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 35 cents	35 and under 40 cents	40 and under 45 cents	45 and under 50 cents	50 and under 55 cents	55 and under 60 cents	60 and under 65 cents	65 and under 70 cents	70 and under 75 cents	75 and under 80 cents	80 and under 85 cents	85 and under 90 cents	90 and under 95 cents	95 cents and under \$1.00	\$1.00 and under \$1.25	\$1.25 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2.00	
Chippers and rough grinders, male:																									
Alabama.....	3	23	\$0.318			2	18	3																	
California.....	18	123	.628						4	18	31	18	20	15	11	4		1	1						
Colorado.....	3	44	.486					1	17	7	8	6	1	3	1										
Connecticut.....	15	111	.516					1	7	32	39	17	10	5											
Georgia.....	7	50	.235		35	4	9	2																	
Illinois.....	26	449	.595				1	25	28	33	61	59	99	74	20	28	15	6							
Indiana.....	16	170	.509			1		3	37	60	23	15	9	6	8	3	4	1							
Iowa.....	9	103	.522					25	16	10	12	12	8	10	3	3	3				1				
Kansas.....	9	37	.366				12	11	9	5	1														
Kentucky.....	6	15	.408				2	2	8	1	2														
Louisiana.....	3	39	.343			2	17	10	10																
Maine.....	4	44	.433					3	31	2	6		1		1										
Maryland.....	7	43	.439				5	14	6	6	7														
Massachusetts.....	26	346	.535					4	58	29	130	53	34	15	9	5	6	1					2		
Michigan.....	32	401	.571	1			12	15	31	53	96	53	39	25	23	17	17	6	6	4	3				
Minnesota.....	6	46	.510						15	7	6	8	3	3	2										
Missouri.....	15	71	.485			1	8	3	9	19	9	14	6	1	1										
New Hampshire.....	5	19	.480						9	2	3			4											
New Jersey.....	14	293	.578					1		72	40	79	36	28	7	9	18	3				2			
New York.....	24	334	.598				1	5	20	30	62	88	54	23	13	12	9	7	6	1	3				
Ohio.....	38	365	.496					9	102	101	69	32	25	16	6	5									
Oregon.....	5	26	.558							1	6														
Pennsylvania.....	39	593	.540					15	101	104	127	70	77	51	11	17	9	4	4	2	1				
Rhode Island.....	8	149	.518						19	45	48	12	9	11	5										
Tennessee.....	5	60	.297		7	23	19	2	8	1															
Texas.....	5	30	.348		2	6	5	8	4	5															
Washington.....	7	32	.656								3	6	6	7	3	3	1								
Wisconsin.....	12	217	.626					1	2	41	57	23	20	14	9	11	14	10	6	2	6	1			
Total.....	367	4,233	.538	1	44	39	111	163	547	670	832	602	458	313	136	120	95	38	26	18	18	1			

GENERAL TABLES

TABLE B.—Average and classified earnings per hour in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—
Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of—		Average earnings per hour	Number of employees whose earnings per hour were—																					
	Establishments	Employees		Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 35 cents	35 and under 40 cents	40 and under 45 cents	45 and under 50 cents	50 and under 55 cents	55 and under 60 cents	60 and under 65 cents	65 and under 70 cents	70 and under 75 cents	75 and under 80 cents	80 and under 85 cents	85 and under 90 cents	90 and under 95 cents	95 cents and under \$1.00	\$1.00 and under \$1.25	\$1.25 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2.00	
Core makers, male:																									
Alabama.....	3	11	\$0.589							4			3	1	2	1									
California.....	18	140	.923								3	1	2	4	2	13	7	7	6	3	92				
Colorado.....	3	22	.788										2	3	3	1	7	3	3						
Connecticut.....	16	114	.778			1			2	2	6	7	6	12	14	15	34	8	3	4					
Georgia.....	7	33	.421			11	5	6	1	4	1	1		2	2										
Illinois.....	27	331	.741			5	11	15	11	14	13	23	22	43	26	47	17	21	14	49					
Indiana.....	16	177	.723				1		6	11	15	25	28	24	22	8	4	7	3	23					
Iowa.....	9	89	.756					1	2	2	6	6	5	10	24	12	11	3	1	4	1				
Kansas.....	8	19	.569				1	3			2	2	2	1											
Kentucky.....	7	12	.647					1		1	1	1	2	1	5	4									
Louisiana.....	3	9	.736				1						1	1	4	2	1								
Maine.....	4	13	.459			6	1			1	2	1	2												
Maryland.....	6	43	.620				4	1	7	5	5	5	2	1	3		4	6	6	5					
Massachusetts.....	28	169	.842					3	2	4	3	8	5	7	11	12	4	98	6	5	1				
Michigan.....	35	344	.711			2	2	14	19	23	19	40	31	34	51	48	19	19	14	8	1				
Minnesota.....	6	41	.654					1	3	5	1	13	5	5	1	4	3								
Missouri.....	15	66	.745				7	1	3		8	4	5	4	2	2	1	24	4	1					
New Hampshire.....	5	8	.623							3	1	1		1	1	1									
New Jersey.....	15	128	.835			4			1	13	2	9	2	8	8	7	13	27	8	25	1				
New York.....	27	282	.711				2	15	14	31	19	31	29	22	26	23	20	26	6	17	1				
Ohio.....	44	393	.784			4	13	10	22	16	19	31	33	38	37	34	19	76	20	45	2				
Oregon.....	5	15	.720					1	1		1	1	2	1	3	3	1								
Pennsylvania.....	38	522	.749			1	1		9	29	39	62	56	55	51	65	32	37	47	36					
Rhode Island.....	9	87	.657				1	3	5	7	12	10	9	13	8	8	5	2							
Tennessee.....	7	34	.592			3		2	5	3	4	6	1	3	1	1	5								
Texas.....	6	23	.578					6	1	7		1	2	1	1	4	1								
Washington.....	7	24	.818						1			1		1	9	3	2	5	2						
Wisconsin.....	13	222	.740					2	1	14	13	32	30	25	31	36	14	9	9	6					
Total.....	387	3,370	.744			23	50	89	112	207	193	316	287	320	356	349	221	376	146	316	7	1	1		
Core makers, female:																									
Georgia.....	1	(1)	(1)		(1)																				

Illinois.....	4	24	.489		1	8	2	4	4	2	4	3	1	1												
Indiana.....	2	23	.506	1	2	2	2	4	5	1	2	8	1	2												
Kentucky.....	2	3	.412				2				1															
Massachusetts.....	1	(1)	(1)							(1)																
Michigan.....	10	70	.435	3	14	6	6	11	8		7	7	2	1	2				1	2						
New Jersey.....	3	35	.490				7	5	6	2			1													
New York.....	5	51	.490		2	6	7	8	5	8	(1)	3	5	2		3	2									
Ohio.....	1	(1)	(1)				(1)	(1)		(1)		(1)	(1)													
Pennsylvania.....	2	17	.344		4	5	2	6																		
Rhode Island.....	3	10	.417	1		3	1	2			1		2													
Wisconsin.....	4	36	.526			3	1	5	3	12	5	4	1					1								
Total.....	38	280	.469	1	6	23	36	32	42	31	36	24	22	10	3	8	2	1	1	2						
Laborers, male:																										
Alabama.....	4	64	.297	1	9	54																				
California.....	18	295	.585				1	6	13	55	78	100	22	*17	2	1										
Colorado.....	3	55	.424				5	40	6	4																
Connecticut.....	16	481	.501		2	2	13	59	161	127	77	14	11	8	3	2						1	1			
Georgia.....	8	157	.261	32	81	39	5																			
Illinois.....	28	1,067	.541		3	10	50	154	243	211	105	86	84	47	35	27	4	5	5	2		2				
Indiana.....	16	865	.462				1	73	354	184	162	31	25	18	5	3	4									
Iowa.....	9	247	.483			3	28	56	63	36	38	11	5	3									4			
Kansas.....	9	63	.369		1	24	13	17	4	3																
Kentucky.....	6	57	.387	1		8	12	29	7																	
Louisiana.....	4	106	.293	18	5	74	8							1												
Maine.....	1	(1)	(1)				(1)	(1)	(1)	(1)	(1)															
Maryland.....	7	91	.391	1		2	58	22	4	1			1													
Massachusetts.....	29	493	.518				2	58	148	115	95	34	21	8	5	4		3								
Michigan.....	33	1,147	.533		5	19	21	100	179	427	127	102	69	41	25	11		7	2	5	5	1	1			
Minnesota.....	6	114	.449		1	32	3	36	15	14	3	1	1	1	4	2										
Missouri.....	15	169	.431	1	30	41	30	32	16	12	4	1	3													
New Hampshire.....	6	17	.456				6	2		6	2															
New Jersey.....	14	723	.499		1	5	21	49	228	261	104	33	11	7	3											
New York.....	27	1,000	.534		1	15	57	249	322	162	80	60	60	32	22	10	5	3								
Ohio.....	44	1,356	.477		3	46	518	387	253	79	40	1	12	6	4	5							2	3		
Oregon.....	5	38	.514				1	2	16	10																
Pennsylvania.....	38	1,350	.468			22	69	525	311	268	65	28	16	14	13	13		5	1							
Rhode Island.....	9	230	.514		1	2	5	25	62	82	14	18	9	9		1		2								
Tennessee.....	7	100	.291	15	27	49	7	2																		
Texas.....	5	86	.343		6	36	35	8	1																	
Washington.....	7	62	.573				1			22	18	10	4	3	2	1							2			
Wisconsin.....	13	514	.515		1	4	14	28	212	143	49	21	16	14	8	2										
Total.....	384	10,980	.470	68	144	421	547	2,188	2,549	2,541	1,069	590	364	216	129	83	29	15	10	15	1	1				
Molders, hand, bench, male:																										
Alabama.....	1	(1)	(1)												(1)											
California.....	17	71	.919										3		10	7	5	2					44			
Colorado.....	2	2	.645													1										
Connecticut.....	16	142	.716				1	2	6	2	4	13	22	17	11	19	22	7	6		4	6				

* Data included in total.

TABLE B.—Average and classified earnings per hour in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—
Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of—		Average earnings per hour	Number of employees whose earnings per hour were—																									
	Estab-lish-ments	Em-ployees		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 85	85 and under 90	90 and under 95	95 cents and under \$1.00	\$1.00 and under \$1.25	\$1.25 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2.00					
				cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents	cents			
Assemblers, male—Continued.																													
Indiana	14	391	\$0.548			1	1	13	105	63	52	30	31	30	18	16	10	12	7	2									
Iowa	6	101	.566					2	16	7	17	13	15	24	4	2													
Kansas	4	59	.367				16	30	4	8	1																		
Kentucky	7	47	.437			1	10	5	6	9	10	4																	
Louisiana	1	(1)	(1)				(1)		(1)	(1)																			
Maine	4	40	.552						3	11	10	6	4	3	1	1													
Maryland	5	70	.667					3	3	8	7	3	6	7	6	13	5	6		1	1	1							
Massachusetts	36	1,284	.638		1	5	8	10	47	94	166	196	196	168	144	102	61	25	32	14	15								
Michigan	28	564	.656					15	28	67	55	108	87	68	65	37	15	11	1	7	2								
Minnesota	5	68	.559					18	6	9	10	6		8	7	2	1		1										
Missouri	10	113	.603					1	8	13	26	14	11	12	4	2	16	6											
New Hampshire	3	57	.658					3	3	3	8	5	3	4	6	23	2												
New Jersey	14	221	.606				2	4	3	14	25	36	27	24	25	26	24	6	1	3	1								
New York	20	735	.716	1		2		7	9	11	15	23	84	144	189	85	50	53	35	12	13					2			
Ohio	56	977	.683					4	11	78	140	161	170	165	110	70	32	20	11	6	9								
Oregon	4	27	.753							1	1			2	4	12	4	2											
Pennsylvania	37	921	.673				11	36	52	102	107	118	141	121	88	56	27	23	14	26	5	1							
Rhode Island	5	315	.612					7	25	73	56	60	37	26	11	5	4	4	2	4	4								
Tennessee	4	38	.544			1		2	5	6	5	6	2	4	7														
Texas	5	38	.415				3	11	12	8	3	1																	
Washington	4	62	.771							2	1	3	8	20	14	5	1	1	1	1									
Wisconsin	13	345	.652			1	1		6	26	31	42	75	56	47	25	15	9	7	1	3								
Total	335	7,670	.657	1	2	15	51	107	330	436	789	834	1,026	1,028	979	941	479	283	181	70	92	23	3						
Boring-mill operators, male:																													
Alabama	3	16	.747								1			1	6	3	4		1										
California	16	68	.803									2		4	3	10	15	13	4	11	5	1							
Colorado	1	(1)	(1)						(1)	(1)		(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)								
Connecticut	17	142	.761					2	1	5	9	18	12	14	26	24	7	10	5	9									
Georgia	4	10	.474			2		3	2	1	2	2	1																
Illinois	29	249	.795					1	5	5	11	13	27	30	40	35	21	16	29	16									
Indiana	13	44	.686					1		3	5	1		11	12	8	2		1										

TABLE B.—Average and classified earnings per hour in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—
Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of—		Average earnings per hour	Number of employees whose earnings per hour were—																				
	Establishments	Employees		Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 35 cents	35 and under 40 cents	40 and under 45 cents	45 and under 50 cents	50 and under 55 cents	55 and under 60 cents	60 and under 65 cents	65 and under 70 cents	70 and under 75 cents	75 and under 80 cents	80 and under 85 cents	85 and under 90 cents	90 and under 95 cents	95 cents and under \$1.00	\$1.00 and under \$1.25	\$1.25 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2.00
Drill-press operators, male—Con																								
Washington.....	7	47	\$.677						2	6	3	2	8	12	11	3								
Wisconsin.....	15	278	.647				1	1	5	8	45	47	50	42	34	16	12	8	2	1	5	1		
Total.....	440	5,291	.628	4	17	52	99	269	408	704	719	789	702	501	418	250	183	90	36	45	5			
Fitters and bench hands, male:																								
Alabama.....	2	13	.694								1	2	4	2	2	2								
California.....	20	204	.848											2	5	41	55	50	29	9	12			
Colorado.....	2	41	.628					3	4	3	10	5	4	4	6	1	1							
Connecticut.....	19	659	.667					7	17	83	90	108	109	95	50	46	31	8	9	6				
Georgia.....	2	4	.588							1			2	1										
Illinois.....	29	788	.732				1	8	17	42	73	99	94	114	98	74	57	46	22	41	2			
Indiana.....	13	163	.627				2	1	8	23	29	30	29	24	7	6		4						
Iowa.....	4	19	.624							2	4	6	4	3										
Kansas.....	3	16	.524					2	1	6	5	1	1											
Kentucky.....	9	57	.631				1	3	6	3	3	1	11	10	9		5		1			4		
Louisiana.....	1	(1)	(1)														(1)							
Maine.....	2	17	.493					3	2	3	4	2	2	1										
Maryland.....	1	(1)	(1)											(1)										
Massachusetts.....	27	356	.660				3	3	10	25	30	39	50	51	67	34	26	7	3		8			
Michigan.....	23	283	.657				1	4	20	27	35	53	36	27	29	21	20	4	3	3				
Minnesota.....	4	17	.619							1	4	3	3	1	2									
Missouri.....	10	80	.555		1	1	2	8	19	6	10	1	4	5	4	2	8	7	1		1			
New Hampshire.....	3	35	.664						2	2	4	7	6	4	8	1						1		
New Jersey.....	24	545	.734						9	6	42	35	68	77	66	40	57	64	56	7	15		1	
New York.....	27	936	.730				4	19	34	55	65	104	85	109	132	145	88	47	14	30	4	1		
Ohio.....	61	1,786	.648			1	2	9	50	91	157	257	350	340	209	142	88	39	20	19	10	2		
Oregon.....	3	19	.747									3	1	4	8	1			1	1				
Pennsylvania.....	43	899	.649			5	21	30	24	38	95	94	146	106	139	84	51	26	21	10	7	2		
Rhode Island.....	8	340	.593				1	1	11	34	47	99	77	39	13	9	5	3	1	1				
Tennessee.....	3	11	.653							4	1	1	1	1	2	1			1					
Texas.....	5	34	.734								1	1	5	6	4	8	4	1	4					

Washington.....	6	62	.760											3	2	4	7	30	10	4	2																	
Wisconsin.....	13	324	.658						1	13	42			65	54	48	41	29	16	5	3	2																
Total.....	367	7,715	.677						1	7	30	65	178	327	678	917	1,193	1,070	952	763	626	403	250	100	138	15	2											
Grinding-machine operators, male:																																						
Alabama.....	1	(1)	(1)																																			
California.....	12	69	.793																																			
Colorado.....	2	21	.755																																			
Connecticut.....	18	184	.661																																			
Illinois.....	23	453	.761																																			
Indiana.....	14	47	.594																																			
Iowa.....	2	51	.581																																			
Kansas.....	1	(1)	(1)																																			
Kentucky.....	5	20	.436																																			
Louisiana.....	1	(1)	(1)			(1)																																
Maine.....	3	23	.696																																			
Maryland.....	3	31	.762																																			
Massachusetts.....	30	235	.667																																			
Michigan.....	25	403	.745																																			
Minnesota.....	4	19	.666																																			
Missouri.....	9	26	.560																																			
New Hampshire.....	2	21	.631																																			
New Jersey.....	14	76	.711																																			
New York.....	21	222	.729																																			
Ohio.....	63	429	.698																																			
Oregon.....	1	(1)	(1)																																			
Pennsylvania.....	32	225	.687																																			
Rhode Island.....	7	179	.638																																			
Tennessee.....	3	8	.518																																			
Texas.....	1	(1)	(1)																																			
Washington.....	3	14	.800																																			
Wisconsin.....	13	111	.704																																			
Total.....	313	2,888	.701																																			
Laborers, male:																																						
Alabama.....	5	58	.299																																			
California.....	17	180	.573																																			
Colorado.....	2	68	.466																																			
Connecticut.....	19	860	.476																																			
Georgia.....	7	68	.240																																			
Illinois.....	28	1,313	.509																																			
Indiana.....	16	330	.430																																			
Iowa.....	6	167	.442																																			
Kansas.....	8	75	.366																																			
Kentucky.....	7	50	.372																																			
Louisiana.....	3	55	.280																																			
Maine.....	4	39	.420																																			
Maryland.....	5	40	.429																																			
Massachusetts.....	35	619	.484																																			

..Data included in total.

TABLE B.—Average and classified earnings per hour in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of—		Average earnings per hour	Number of employees whose earnings per hour were—																								
	Establishments	Employees		Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 35 cents	35 and under 40 cents	40 and under 45 cents	45 and under 50 cents	50 and under 55 cents	55 and under 60 cents	60 and under 65 cents	65 and under 70 cents	70 and under 75 cents	75 and under 80 cents	80 and under 85 cents	85 and under 90 cents	90 and under 95 cents	95 cents and under \$1.00	\$1.00 and under \$1.25	\$1.25 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2.00				
Laborers, male—Continued.																												
Michigan.....	31	480	\$0.479			7	14	38	100	92	124	47	32		20													
Minnesota.....	8	88	.426				3	10	45	20	6	2																
Missouri.....	12	103	.408					6	17	63	8	7	1															
New Hampshire.....	5	29	.462				1	6	7	7	6	1																
New Jersey.....	26	406	.507				12	15	47	91	123	67	28	6	8													
New York.....	30	737	.511			2	1	27	87	133	265	122	64	22	9	2												
Ohio.....	82	1,205	.463				5	18	118	360	304	252	105	36	5	1												
Oregon.....	4	7	.609								6	1																
Pennsylvania.....	48	1,337	.443				4	46	182	529	278	215	46	16	11	3	2	3	2									
Rhode Island.....	10	212	.458					3	17	67	81	25	10	9														
Tennessee.....	7	89	.333				4	52	19	13	1																	
Texas.....	7	74	.404				0	30	10	14	3	2	1	1	3	1	1	1	1									
Washington.....	5	32	.529						1	1	22	4	1	2	1													
Wisconsin.....	15	285	.482				1	2	10	63	109	59	21	14	4													
Total.....	452	8,506	.469	1	39	97	305	689	2,287	1,832	1,778	799	387	154	62	37	16	12	3	6	2							
Lathe, operators, engine, male:																												
Alabama.....	3	29	.730								2	1	3	1	6	6	8	1	1									
California.....	20	248	.859								2	3	7	9	11	34	55	48	27	28	20	4						
Colorado.....	2	28	.720					1					5	6	4	3	2	3		1	1							
Connecticut.....	18	336	.674					2	4	12	36	31	43	70	43	41	19	8	5	5	7							
Georgia.....	5	38	.697					1	4	6	3	1	4	13	2	4												
Illinois.....	30	613	.770				1		2	8	27	30	50	52	88	90	86	87	24	21	36	2						
Indiana.....	13	90	.671						1	7	12	4	10	12	17	14	8											
Iowa.....	6	64	.626						1		7	5	22	22	7													
Kansas.....	5	34	.685					4		2	2	8	1	2	1	3					10							
Kentucky.....	7	27	.644								1	2	15	2	2	4	1											
Louisiana.....	3	16	.670						2	3		1	2		2	6												
Maine.....	3	22	.579							2	5	5	5	3	2													
Maryland.....	5	39	.655					1	1	3	4	4	5	3	10	3	1	1	1	1	1							
Massachusetts.....	31	468	.654			1			4	18	43	87	92	73	68	29	18	16	7	6	6							

Michigan.....	27	316	.679					7	6	35	49	55	56	9	31	20	14	14	8	15	2		
Minnesota.....	8	52	.658					4	4	5	5	6	17	5	8	4							
Missouri.....	14	128	.689			1	14	6	6	10	10	12	10	10	3	28	10	2		11	1		
New Hampshire.....	5	44	.650							6	2	14	9	4	6	3							
New Jersey.....	24	212	.769			1				4	7	10	26	43	89	29	30	13	6	4			
New York.....	20	487	.777			2	6	3	3	10	13	28	69	70	59	93	68	23	27	14	3		
Ohio.....	74	983	.702			2	1	17	20	42	81	131	160	171	188	92	47	17	19	15			
Oregon.....	6	52	.793							1	1	1	3		25	11	6	1		2	1		
Pennsylvania.....	42	687	.732			3	1	5	31	45	108	120	99	87	72	48	25	11	29	3			
Rhode Island.....	9	208	.614			3	7	9	32	88	49	33	19	9	6	1	2			1			
Tennessee.....	6	35	.717						2		1	5	17	6	1	2				1			
Texas.....	6	125	.704				1	5	11	12	11	13	12	22	18	15	4			1			
Washington.....	6	69	.788						1	1		1	7	17	32	4	2	3		1			
Wisconsin.....	14	220	.722					1		9	27	28	34	45	25	19	7	8	7	10			
Total.....	421	5,640	.717			1	7	16	73	121	350	463	725	822	779	714	632	417	179	139	186	16	
Lathe operators, turret, male:																							
Alabama.....	1	(1)	(1)								(1)	(1)	(1)	(1)		(1)							
California.....	16	117	.770						1	10	11	15	14	15	15	7	17	4	8				
Colorado.....	2	48	.657				4	3	9	5	5	7	1	6	3	1	1	2	1				
Connecticut.....	18	164	.689			2			5	14	20	21	20	34	17	12	11	4	1	3			
Georgia.....	4	10	.409			4	2	2	1	1	1	1		1									
Illinois.....	25	556	.798				2		1	6	12	30	39	44	46	78	106	90	43	18	40	1	
Indiana.....	14	120	.655				4		4	8	10	17	9	16	26	12	9	4		1			
Iowa.....	5	36	.635						1	2	3	3	14	11	1								
Kansas.....	3	5	.426				1	1	2		1												
Kentucky.....	6	23	.521						4	8	3		3	4	1								
Louisiana.....	1	(1)	(1)					(1)															
Maine.....	2	119	.512			10	22	21	26	24	7	7	1			1							
Maryland.....	4	33	.749					2	1	1	1	2	8	5	4	2	3			1	1		
Massachusetts.....	31	448	.695				1	7	18	29	45	65	81	56	61	39	26	14	5	1	1		
Michigan.....	25	191	.670			2	1	16	21	20	25	26	14	27	16	9	10	1	3				
Minnesota.....	4	19	.673						2	2	3	5	1	4	2								
Missouri.....	11	29	.576				1	4	1	5	3	2	5	3	1	2				1			
New Hampshire.....	4	25	.671						1	2	5	4	3	2	6					2			
New Jersey.....	21	163	.789						8	4	6	24	32	20	21	27	17	8	6				
New York.....	5	241	.705					9	13	11	17	15	33	45	24	13	10	4	2				
Ohio.....	62	436	.703				7	12	31	30	65	77	67	61	27	26	12	13	8				
Oregon.....	3	14	.729						2		1			9	2								
Pennsylvania.....	39	574	.673			3	4	24	48	68	89	87	99	71	53	12	7	2	7				
Rhode Island.....	8	155	.613				4	17	25	30	20	24	18	10	5	1	1						
Tennessee.....	4	11	.664						1			6	2	2									
Texas.....	4	51	.696				1	2	2	3	1	3	5	4	1	11	1						
Washington.....	5	46	.753						1			3	3	1	14	16	4			1			
Wisconsin.....	13	210	.706				6	7	15	16	32	24	31	30	25	8	9	2	5				
Total.....	359	3,855	.700			4	5	31	82	174	271	359	453	535	501	509	383	253	146	62	85	2	

1 Data included in total.

TABLE B.—Average and classified earnings per hour in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—
Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of—		Average earnings per hour	Number of employees whose earnings per hour were—																						
	Establishments	Employees		Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 35 cents	35 and under 40 cents	40 and under 45 cents	45 and under 50 cents	50 and under 55 cents	55 and under 60 cents	60 and under 65 cents	65 and under 70 cents	70 and under 75 cents	75 and under 80 cents	80 and under 85 cents	85 and under 90 cents	90 and under 95 cents	95 cents and under \$1.00	\$1.00 and under \$1.25	\$1.25 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2.00		
Machinists, male:																										
Alabama	6	32	\$0.723										2	7	7	12	3	1								
California	13	98	.891												3	7	33	14	9	8	24					
Colorado	2	35	.738												3	7	11	7	1					1		
Connecticut	15	90	.755								1	5	12	10	17	15	10	7	6	3	3	1				
Georgia	6	27	.677									2	1	2	16	2	1	1	2							
Illinois	30	381	.826								7	11	27	35	51	47	45	45	14	15	84					
Indiana	16	82	.667					1	2		4	6	12	26	16	11	2	2								
Iowa	6	40	.632									9	14	9	6	1			1							
Kansas	9	53	.783						2		1	3	7	7	8	7	1	2	3		10	2				
Kentucky	7	38	.641					2	3		3	2	2	3	19	8	1	1								
Louisiana	5	31	.798								2	2	2	2	2	8	12	2	2	4	1					
Maine	4	42	.590								10	8	8	15		1										
Maryland	5	51	.690												20	6		1								
Massachusetts	23	127	.661						1	1	8	9	30	29	29	16	2									
Michigan	29	220	.774						1		3	9	25	21	23	31	89	23	25	6	13	1				
Minnesota	8	26	.660								2	2	2	4	4	6	2									
Missouri	17	82	.708								3	2	7	16	10	12	13	9	4		7					
New Hampshire	5	51	.674								1	1	2	29	4	6	8	4								
New Jersey	20	129	.731								1	7	15	20	24	20	23	11	3	3	1	1				
New York	25	267	.766						1	1	1	2	11	42	45	57	47	17	23	1	11	1				
Ohio	47	300	.756								2	13	23	51	57	64	36	15	2		9	16				
Oregon	3	8	.855												2	1										
Pennsylvania	36	455	.699			1	7	16	10		19	32	69	86	79	55	39	13	19	2	7	1				
Rhode Island	10	149	.657					1	2		9	26	47	24	17	8	5	2	3		5	1				
Tennessee	8	43	.765										1	1	12	15	19	7	2							
Texas	7	52	.809										6	2		11	7	15	11							
Washington	7	63	.790												2	20	20	14	2	3	1	1				
Wisconsin	10	64	.683					1	1		3	3	16	12	16	6	4	1	2							
Total	379	3,036	.739			1	7	24	27	88	161	386	458	490	445	361	195	142	55	185	10	1				

Machinists' and toolmakers' helpers, male¹

Alabama	4	5	441																											
California	6	28	652				1					2																		
Colorado	2	2	9	500								3												1						
Connecticut	12	58	515			1		2		5		13																		
Georgia	1	(1)	(1)			(1)																								
Illinois	17	72	581				1		7		10			20	5	6		9		7		5		1			1			
Indiana	15	48	494			-1		4		3		4		20	4	4		4		1										
Iowa	3	15	474				1		1		4			2	6															
Kansas	6	5	11	421			1		1		3		2	2	2															
Kentucky	6	6	11	440			1		1		2		2	2																
Louisiana	3	3	6	471			1		1		2		2	2																
Maine	3	3	17	450			1		2		3		2	2																
Maryland	3	3	31	476					4		4		8	3																
Massachusetts	14	81	502			1		1	2		12		26	18		8		7		3		2								
Michigan	15	80	479			2		1	7		21		15	14		6		9		4		1								
Minnesota	5	5	17	450							7		7	2																
Missouri	3	3	7	469							3		1	3																
New Hampshire	4	4	15	466			1				3		2						1											
New Jersey	16	56	542								7		3	16		19		3		5		5		2						
New York	19	87	550								3		9	15		13		10		5		5		1						
Ohio	19	58	515				1		3		3		6	11		14		5		4		4		1						
Oregon	2	2	6	671							1		1	1		1		1		2		2								
Pennsylvania	26	143	481				1		19		33		36	24		15		9		2		2		2						
Rhode Island	5	5	47	469							13		20	10		3														
Tennessee	2	2	7	407							2		4																	
Texas	6	4	48	446					1		1		19	8																
Washington	4	4	12	603									19	2																
Wisconsin	9	9	60	487					2		8		34	10		4		3		1		1		1						
Total	229	1,006	5,504			6	16	55	177	239	219	132	74	46	23	16	1	2												
Milling-machine operators, male:																														
Alabama	2	10	639													1		2				1		3						
California	15	62	809											2		3		3		8		5		4						
Colorado	2	2	26	652					2		2			2		5		4		2		2		2						
Connecticut	17	194	653				1		3		17		29	20		5		22		34		26		18						
Illinois	26	379	775								9		14	28		7		31		49		49		18						
Indiana	14	55	594				1		1		2		11	9		9		7		36		47		42						
Iowa	2	2	25	604							2					3		6		11		3		6						
Kansas	3	3	3	675												3														
Kentucky	5	5	15	472												1		1												
Louisiana	1	(1)	(1)						3		3					1						2		1						
Maine	3	3	27	552			(1)						2																	
Maryland	4	4	27	841									4		10		5													
Massachusetts	32	402	871											16		38		54		2		2		7						
Michigan	27	164	666				1		1		12		16	32		40		34		62		72		53						
Minnesota	6	6	22	665							3		12	16		18		1		18		16		14						
Missouri	9	9	35	590					2				5																	
New Hampshire	4	4	33	673									1		2		2						2		3					

¹Data included in total.

TABLE B.—Average and classified earnings per hour in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of—		Average earnings per hour	Number of employees whose earnings per hour were—																						
	Establishments	Employees		Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 35 cents	35 and under 40 cents	40 and under 45 cents	45 and under 50 cents	50 and under 55 cents	55 and under 60 cents	60 and under 65 cents	65 and under 70 cents	70 and under 75 cents	75 and under 80 cents	80 and under 85 cents	85 and under 90 cents	90 and under 95 cents	95 cents and under \$1.00	\$1.00 and under \$1.25	\$1.25 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2.00		
Milling-machine operators, male—Continued.																										
New Jersey	20	96	\$0.783					1	1		3		12	19	16	8	15	12	5	1						
New York	23	481	.756					1	6	5	23	25	22	66	67	82	84	53	24	13	9					
Ohio	64	576	.702					2	11	17	37	62	74	100	75	76	43	30	14	19	11	1	1			
Oregon	4	10	.846								1				1	4	1				2					
Pennsylvania	37	425	.681					2	8	26	44	40	65	56	54	65	31	8	8	6	11	1				
Rhode Island	7	175	.601						10	19	25	29	33	32	19	6		1								
Tennessee	4	7	.620								2		2	1	2											
Texas	3	45	.456					10	13	9	6	4	1	2												
Washington	4	33	.761								3		2	2				13	9	3						
Wisconsin	15	112	.700					1	4	2	11	12	16	15	13			10	10	5	3	6	1			
Total	358	3,440	.697				8	22	95	161	276	318	398	479	457	428	304	199	113	81	91	8	2			
Pattern makers, male:																										
Alabama	1	(1)	(1)													(1)										
California	14	68	1.117															6	5			50	6	1		
Colorado	1	(1)	(1)													(1)			(1)			(1)				
Connecticut	15	100	.848								1		5	9	8	10	14	10	19	6	18					
Georgia	2	9	.712										1	1	2	1	1	2								
Illinois	15	115	.952										1	3	4	4	5	11	30	6	13	8	30			
Indiana	9	47	.811											10	4	6	4	4			1	17				
Iowa	2	3	.662										1	1		1										
Kansas	1	(1)	(1)							(1)									(1)							
Kentucky	8	14	.652								2		2	1	3	4	1	1								
Louisiana	2	9	.822															6	2	1						
Maine	3	14	.639								2	1	5	2	2	1	1									
Maryland	1	(1)	(1)							(1)			(1)	(1)	(1)											
Massachusetts	33	174	.769						1	2	4	7	16	10	20	28	34	20	25	4	3					
Michigan	14	39	.795								1	1	4	7	4	4	2	2	2	6	5	1				
Minnesota	5	21	.737									1	1	2	2	3	8	2	2							
Missouri	3	5	.818														1	1	1	1						
New Hampshire	4	6	.822									1					1	1	1	1						

New Jersey.....	17	56	.923							1	1	2	7	10	4	8	5	28					
New York.....	26	173	.879					1		1		1	15	23	22	32	15	46					
Ohio.....	48	230	.867							5	2	3	10	28	24	38	27	32	45	1			
Oregon.....	2	4	1.007																				
Pennsylvania.....	32	283	.836							3	7	15	6	20	37	63	29	31	11	38	3		
Rhode Island.....	8	48	.720					1	2	1		3	4	11	16	7							
Tennessee.....	8	16	.855							1		2	1	1	2			3	5				
Texas.....	1	(1)								(1)		(1)				(1)					1		
Washington.....	3	15	1.021							3								2	12		1		
Wisconsin.....	10	177	.792									9	18	37	42	30	20	12	8	4			
Total.....	288	1,652	.846					3	8	20	25	90	85	145	235	237	197	172	108	284	42	1	
Planer operators, male:																							
Alabama.....	3	6	.714									1											
California.....	13	27	.876							1		1				1	4	2	5	6	4	3	
Colorado.....	1	(1)	(1)													(1)							
Connecticut.....	16	190	.734					4	11	14	20	33	29	30	13	12	9	6	9				
Georgia.....	3	3	.870																				
Illinois.....	24	171	.818							4	15	30	23	19	18	16	6	4	36				
Indiana.....	12	36	.737						3		3	7	7	4	5	2	3						
Iowa.....	4	10	.649							2	2	1	2	2	2						1		
Kansas.....	5	7	.697					1		1	2	1											
Kentucky.....	6	13	.663						2			4					3	1					
Louisiana.....	1	(1)	(1)													(1)							
Maine.....	3	20	.887					2	8	1	5	1	2				1						
Maryland.....	3	14	.666					1		1	2	1	1										
Massachusetts.....	33	208	.720						4	8	11	16	27	22	36	32	17	4	13	9	1	10	2
Michigan.....	20	98	.684					1	2	4	5	17	9	26	8	2	5	4	6		3		
Minnesota.....	8	12	.687						1		1	1		4	4	3	3						
Missouri.....	6	25	.776								3	1				1	1	7			1		
New Hampshire.....	3	14	.664								1	1		1	2	1	8						
New Jersey.....	23	155	.796							3	7	11	3	12	17	16	12	9	7	3	5	6	
New York.....	21	155	.707								3	7	11	20	27	25	28	16	7	5	6		
Ohio.....	66	463	.761					1	1	7	10	25	40	61	59	2	61	38	28	9	22	3	1
Oregon.....	3	4	.762																				
Pennsylvania.....	39	230	.780					4	2	13	10	14	23	34	28	30	24	12	17	19			
Rhode Island.....	7	37	.674						1	1	1	13	9	5	4	1				1			
Tennessee.....	3	6	.706								1	1		1	1								
Texas.....	3	6	.725										1	1	2	1	1						
Washington.....	5	24	.778							1						8	10	3					
Wisconsin.....	10	96	.771					1		3	4	12	13	18	10	7	3	6	4	10			
Total.....	344	1,963	.784					3	14	32	83	107	192	276	290	286	226	168	100	55	125	5	1
Screw-machine operators, hand,																							
male:																							
California.....	3	4	.588									2	2	2	4		1						
Connecticut.....	7	31	.664					1		4	2	4	2	4	4		4		1	1			
Illinois.....	11	74	.715					4		3	5	4	3	6	1	12	10	10	9	3	2	2	
Indiana.....	6	17	.645							3	3	4	3	1	2	2	4						

¹Data included in total.

TABLE B.—Average and classified earnings per hour in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of—		Average earnings per hour	Number of employees whose earnings per hour were—																				
	Establishments	Employees		Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 35 cents	35 and under 40 cents	40 and under 45 cents	45 and under 50 cents	50 and under 55 cents	55 and under 60 cents	60 and under 65 cents	65 and under 70 cents	70 and under 75 cents	75 and under 80 cents	80 and under 85 cents	85 and under 90 cents	90 and under 95 cents	95 cents and under \$1.00	\$1.00 and under \$1.25	\$1.25 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2.00
Screw-machine operators, hand, male—Continued.																								
Kansas.....	1	(1)	(1)				(1)			(1)														
Kentucky.....	3	7	\$0.581					1		2														
Maine.....	1	(1)	(1)											(1)										
Maryland.....	2	2	.717						1															
Massachusetts.....	18	108	.682					2	2	3	9	6	18	25	13	14	5	5	4	2				
Michigan.....	11	83	.787					1		2	6	13	7	5	4	4	9	8	2	5	15	2		
Minnesota.....	2	3	.687													1								
Missouri.....	3	9	.882					1	1	1	1	3					2							
New Hampshire.....	1	(1)	(1)										(1)	(1)										
New Jersey.....	4	29	.696					3	4	1			1	7	4	2		2	1	1	3			
New York.....	16	69	.673					1		4	1	12	27	16	17	6	9	4	1	1	1			
Ohio.....	38	264	.683					2	3	8	22	27	34	48	38	32	33	11	3	2	1			
Pennsylvania.....	10	53	.669						2	2	3	7	11	6	5	5	9	1			2			
Rhode Island.....	7	115	.686					1	1	2	15	20	32	14	3	3	2							
Tennessee.....	2	2	.520																					
Wisconsin.....	9	58	.654						1	4	4	13	7	9	9	6	1	4						
Total.....	155	966	.676				3	17	18	54	75	116	148	142	115	92	84	47	15	14	24	2		
Screw-machine operators, semi-automatic, male:																								
Alabama.....	1	(1)	(1)							(1)														
Connecticut.....	1	(1)	(1)											(1)										
Georgia.....	1	(1)	(1)								(1)													
Indiana.....	7	30	.531						5	9	3	4	2	6	1									
Kentucky.....	2	6	.481					1	1	2	1													
Massachusetts.....	5	24	.640								4	5	5	4	3	3								
Michigan.....	2	5	.526						2															
New Jersey.....	5	15	.770								1		1	2	1	4	3	2						
New York.....	5	13	.704						2		1	1	2	1	1	1								
Ohio.....	3	37	.684					2	1	1	6	1	2	6	3	5	5	3	1	1				
Pennsylvania.....	8	27	.727								3	1	2	3	8	4	3	2						

Rhode Island.....	1	(1)	(1)							(1)																																
Tennessee.....	4	6	.570																																							
Texas.....	1	(1)	(1)							(1)	(1)	(1)																														
Total.....	41	171	.644																																							
Screw-machine operators, auto-																																										
matic, male:																																										
Alabama.....	1	(1)	(1)																																							
California.....	2	4	.634									1												1																		
Colorado.....	1	(1)	(1)								(1)	(1)	(1)																													
Connecticut.....	6	13	.824								1	1	3																													
Illinois.....	16	80	.810								1	1	4											1	1	4																
Indiana.....	7	49	.640										4	4	8	4	6	4	7	5	10	15	8	4	6	6																
Iowa.....	2	15	.580										2	2	3	3	2	4	5	2	2	3	2																			
Kentucky.....	4	23	.434			2	3	6		1		1											1																			
Maine.....	2	8	.633									1											2																			
Maryland.....	1	(1)	(1)																																							
Massachusetts.....	13	57	.739									3	5	7	10	7							(1)	(1)	(1)	(1)	(1)	(1)	(1)													
Michigan.....	11	79	.835								3	2	9	3	3	4	6																					21	2			
Minnesota.....	1	(1)	(1)																				(1)	(1)																		
Missouri.....	3	5	.510									1	3	1																												
New Hampshire.....	2	2	.590									1	1	1																												
New Jersey.....	4	34	.785									1	2	9	7	1	5	1	6	4	4	4	2	2	6																	
New York.....	13	46	.760								1	1	3	5	5	5	5	4	9	5	26	22	18	3	2	4	4															
Ohio.....	24	202	.829						1	1	1	1	1	4	16	22	26	26	22	15	16	16	3	3	2	18	26															
Pennsylvania.....	14	49	.711									3	3	5	3	9	10	7	2	2	5	4	1	1	1	1	1															
Rhode Island.....	5	33	.754									1	1	4	4	4	9	2	5	4	1																					
Tennessee.....	2	4	.556										2																													
Texas.....	1	(1)	(1)											(1)																												
Washington.....	1	(1)	(1)																																							
Wisconsin.....	8	30	.742										1	5	6	1	3	7	3																							
Total.....	144	762	.758																																							
Toolmakers, male:																																										
Alabama.....	2	2	.751																																							
California.....	15	77	.983																																							
Colorado.....	2	25	.761													2	6	5	7	3	1																					
Connecticut.....	17	145	.809													1	3	9	21	40	29	17	12	6	7																	
Georgia.....	4	10	.717																																							
Illinois.....	26	306	.783										1	8	25	27	33	39	61	53	53	16	24	24	2																	
Indiana.....	14	76	.758													3	11	22	14	19	3	2																				
Iowa.....	2	15	.684																																							
Kansas.....	4	7	.649																																							
Kentucky.....	6	13	.769									1	1	1																												
Maine.....	4	11	.680											1																												
Maryland.....	4	73	.798											2	3																											
Massachusetts.....	31	364	.737										1	7	8	49	62	82	73	39	21	9	5	7																		
Michigan.....	27	144	.827										5	2	6	9	12	14	9	87	32	6	11	1																		

¹ Data included in total.

TABLE B.—Average and classified earnings per hour in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of—		Average earnings per hour	Number of employees whose earnings per hour were—																					
	Establishments	Employees		Under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 35 cents	35 and under 40 cents	40 and under 45 cents	45 and under 50 cents	50 and under 55 cents	55 and under 60 cents	60 and under 65 cents	65 and under 70 cents	70 and under 75 cents	75 and under 80 cents	80 and under 85 cents	85 and under 90 cents	90 and under 95 cents	95 cents and under \$1.00	\$1.00 and under \$1.25	\$1.25 and under \$1.50	\$1.50 and under \$1.75	\$1.75 and under \$2.00	
Toolmakers, male—Continued.																									
Minnesota.....	7	22	\$0.695							1		2	5	2	1	5	5	1							
Missouri.....	11	26	.689					1	2				1	4	7	1	3	4	5						
New Hampshire.....	2	19	.778									1			2	5	4	2	2						
New Jersey.....	13	88	.707										1	6	15	13	28	19	4	1	1				
New York.....	27	367	.828								2	3	18	15	15	29	94	85	69	18	19				
Ohio.....	58	463	.784							1	4	8	36	49	74	73	80	71	42	9	15	1			
Oregon.....	3	4	.854												1		1	1							
Pennsylvania.....	37	197	.753										5	21	27	44	32	10	8	3	4				
Rhode Island.....	8	178	.686										3	25	30	48	38	8	10	6	2				
Tennessee.....	3	10	.900												1	4	4								
Texas.....	4	22	.853												2		10		7	2					
Washington.....	6	14	.830											1		3	3	4	1	2					
Wisconsin.....	13	110	.759																						
Total.....	350	2,850	.780				1	3	4	32	88	215	323	424	455	479	364	235	94	123	8	2			

TABLE C.—Average and classified full-time hours per week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State

FOUNDRIES

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—															
				40	Over 40 and under 44	44	Over 44 and under 45	45	Over 45 and under 48	48	Over 48 and under 50	50	Over 50 and under 54	54	Over 54 and under 55	55	Over 55 and under 60	60	Over 60
				Chippers and rough grinders, male:															
Alabama	3	23	53.9										5	18					
California	18	123	45.8	4		59			11	45		4							
Colorado	3	44	49.8							14	26		4						
Connecticut	15	111	49.4		8		4	21		5								3	6
Georgia	7	50	52.9								3	2	23	11			4		7
Illinois	26	449	51.8			6		32		69	18	77	57	150		5			35
Indiana	16	170	53.1									56	31	98		3	6		7
Iowa	9	103	53.2					3		9		2	6	31		26	26		1
Kansas	9	37	58.7							1							33		3
Kentucky	6	15	48.7			3	2					9							1
Louisiana	3	39	56.2											19				18	2
Maine	4	44	53.5									3		40					
Maryland	7	43	52.0			1				7		15		18					3
Massachusetts	26	346	49.4							205		79	3	56					
Michigan	32	401	52.1			3		1	81	26	4	93	10	102			17	27	40
Minnesota	6	46	51.9									13	12	2					2
Missouri	15	71	52.6							7	13	9	2	4				4	
New Hampshire	5	19	51.2							5		6		8					
New Jersey	14	293	50.3							111		106		74				2	
New York	94	334	49.5					52	5	121		96		23				29	8
Ohio	38	365	53.6	15			1	4		72	19	46	37	47			18		80
Oregon	5	26	45.5			16				10									
Pennsylvania	39	593	52.3	6				35	18	50	8	92	91	57	59	121		40	16
Rhode Island	8	149	51.0					8			13	61	67						
Tennessee	5	60	49.4							17		43							
Texas	5	30	52.2							7	3	6		8					6
Washington	7	32	48.2							30		2		2					
Wisconsin	12	217	52.3						40	40	6	35	14	4		66			4
Total	367	4,233	51.4	25	8	88	8	236	74	837	110	924	329	866	84	289	100	221	34

GENERAL TABLES

TABLE C.—Average and classified full-time hours per week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—															
				40	Over 40 and under 44	44	Over 44 and under 45	45	Over 45 and under 48	48	Over 48 and under 50	50	Over 50 and under 54	54	Over 54 and under 55	55	Over 55 and under 60	60	Over 60
				Core makers, male:															
Alabama	3	11	53.9											2	9				
California	18	140	45.0	4		97			14	21		4							
Colorado	3	22	48.5								13	5							
Connecticut	16	114	48.6	16	7		6	12		5		44		13			3	8	
Georgia	7	33	52.2							2	2	2	9	17		1			
Illinois	27	331	49.4	8		19		49		66	9	69	58	53					
Indiana	16	177	50.9				4		3	50		47		71		2			
Iowa	9	88	52.1					4		23		1	8	29		21		2	
Kansas	8	19	54.6											17				2	
Kentucky	7	12	49.4				2			3			6					1	
Louisiana	3	9	55.6													2		1	
Maine	4	13	50.2			3						5							
Maryland	6	43	50.6							11		22		8				1	
Massachusetts	23	169	48.6			4				128		28	1	8					
Michigan	35	344	50.9				8	68		35	18	44	34	92		25	9	11	
Minnesota	6	41	51.8								17	3		21					
Missouri	15	66	51.1					3		27		1	1	32			2		
New Hampshire	5	8	50.8							3		2		3					
New Jersey	15	128	51.5							43		16	1	68					
New York	27	282	50.1					29	5	103	1	32	40	56		14			
Ohio	44	393	50.1	13			1	13	9	179	10	58		72		11		27	
Oregon	5	15	46.1			7				8									
Pennsylvania	38	522	50.2	7		2		41	15	159	1	130	46	14	37	39	31		
Rhode Island	9	87	50.4					3			36	28	14			2	4		
Tennessee	7	34	49.1							16		18							
Texas	6	23	48.4						9	7	2	5							
Washington	7	24	48.1							23		1							
Wisconsin	13	222	49.0						46	97	6	42	21	3		7			
Total	387	3,370	49.9	48	7	132	21	222	101	1,013	117	612	236	598	37	122	51	53	
Core makers, female:																			
Georgia	1	(1)	(1)								(1)								
Illinois	4	24	48.2					5	11	3				5					

Indiana.....	2	22	50.0								22							
Kentucky.....	2	3	50.0								3							
Massachusetts.....	1	(1)	(1)						(1)									
Michigan.....	10	70	50.7				7				43		16			4		
New Jersey.....	3	35	49.7							19	9		7					
New York.....	5	51	45.8				4			12	35							
Ohio.....	1	(1)	(1)							(1)								
Pennsylvania.....	2	17	45.4							14								
Rhode Island.....	3	10	53.0								2		6					
Wisconsin.....	4	36	45.6			14		2	16				4					
Total.....	38	280	49.1			14		18	27	58	37	82	6	34		4		
Laborers, male:																		
Alabama.....	4	64	53.4							4			25	35				
California.....	18	293	46.4	3		202			26	42			10	7				12
Colorado.....	3	55	51.0			1					7		31			9		
Connecticut.....	16	481	51.7		23		11	36		17		202				23		59
Georgia.....	8	157	54.5								6	6	12	101		13		17
Illinois.....	28	1,067	50.6			12		196		158	8	279	146	168		27		69
Indiana.....	16	865	53.9									237		480		30		103
Iowa.....	9	247	53.9					12		21		4	25	92		18	37	43
Kansas.....	9	63	54.2							4				53			1	5
Kentucky.....	6	57	50.1				4	4		11			31					7
Louisiana.....	4	106	56.6															34
Maine.....	1	(1)	(1)											53			19	
Maryland.....	7	91	53.3							10		24		(1)		(1)		1
Massachusetts.....	26	493	48.7		45	13				276		94	18	45				11
Michigan.....	33	1,147	52.7				5	175		18	14	304	43	303		43	102	98
Minnesota.....	6	114	53.1								26	39	4	23				16
Missouri.....	15	169	53.7					2		21		4	2	108		4	24	3
New Hampshire.....	6	17	50.5							6		6		5				
New Jersey.....	14	72	50.8							207		74		219		12	11	
New York.....	27	1,000	51.5					46	11	187		19	468	141		74		12
Ohio.....	44	1,356	53.4	2				19	5	209		125	194	180		65	85	340
Oregon.....	5	38	46.1			24				14								
Pennsylvania.....	38	1,350	52.7		11			47	16	251		8	273	180		85	74	247
Rhode Island.....	9	230	52.2					10				56	72	47		6	28	30
Tennessee.....	7	100	49.8									1	24					11
Texas.....	5	86	52.8							21		9						31
Washington.....	7	62	48.5											5		3		
Wisconsin.....	13	514	53.1						50	155		6	24	52	12	1	114	12
Total.....	384	10,980	52.1	83	68	252	20	547	129	1,779	276	2,645	576	2,256	88	728	290	889
Molders, hand, bench, male:																		
Alabama.....	1	(1)	(1)											(1)				
California.....	17	71	44.9						13	10								
Colorado.....	2	2	48.1			43												
Connecticut.....	16	142	50.6		4	20		2	15	17							11	15
Georgia.....	6	30	50.0							5		1		8		16		

¹Data included in total.

TABLE C.—Average and classified full-time hours per week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—														
				40	Over 40 and under 44	44	Over 44 and under 45	45	Over 45 and under 48	48	Over 48 and under 50	50	Over 50 and under 54	54	Over 54 and under 55	55	Over 55 and under 60	60
Molders, hand, bench, male—Continued																		
Illinois.....	24	169	49.1	11		17		8		41		38	31	23				
Indiana.....	15	128	51.3			9				14		41	62					
Iowa.....	9	42	52.0					2		11		1	3	11		14		
Kansas.....	6	9	55.3											7			2	
Kentucky.....	4	7	48.9							4		3						
Louisiana.....	2	5	58.8											1			4	
Maine.....	4	20	52.5			1						5		14				
Maryland.....	5	19	48.6							12		6		1				
Massachusetts.....	25	209	47.8			4		57		116		11	1	20				
Michigan.....	34	268	49.4	5			1	50	28	33	1	99	7	24		9	4	
Minnesota.....	6	26	50.3								14	8		4			8	
Missouri.....	7	31	51.7							14		9		9				
New Hampshire.....	5	24	49.8							9		12		3				
New Jersey.....	14	88	49.6							32		49	1	6				
New York.....	25	199	49.6					26	7	76	9	29		24				
Ohio.....	32	142	48.9	14		5	1	11	1	61	13	2		21		28	11	
Oregon.....	4	13	46.2			6				7								
Pennsylvania.....	26	250	50.9					44	16	24	1	30	74		1	40	17	
Rhode Island.....	9	88	50.4					3			17	48	19				1	
Tennessee.....	3	11	49.5							3		8						
Texas.....	3	15	46.7					5	9	1								
Washington.....	4	7	48.0							7								
Wisconsin.....	13	84	50.4						13	4	7	36	11	3		10		
Total.....	321	2,098	49.6	39	20	85	4	221	87	502	64	455	163	271	1	103	41	42
Molders, hand, floor, male:																		
Alabama.....	4	39	53.5							2			17	20				
California.....	18	207	44.9	11		141			21	26		8						
Colorado.....	3	33	48.4							9	18	6						
Connecticut.....	16	286	48.2	31	7		9	63		18		104		46			3	
Georgia.....	8	54	50.7							7	5	15	18	4		5		
Illinois.....	28	438	49.5	25		39		10		114	36	76	32	106				
Indiana.....	16	347	51.7			10				52		51	18	156				

Iowa.....	9	129	51.1					2		56		4	11	28		83			
Kansas.....	9	84	54.4							2				49				6	
Kentucky.....	7	51	51.6				10			9		17						15	
Louisiana.....	4	32	56.8											28			22		7
Maine.....	4	40	48.2			21								14					
Maryland.....	7	51	49.0							50				27					
Massachusetts.....	28	312	49.4			5		37		205			6	30					
Michigan.....	34	435	51.0				11	45	12	84	8		24	98		42	9	41	2
Minnesota.....	6	62	52.2								21		8	36					
Missouri.....	18	146	51.8							67			7	57			25		
New Hampshire.....	6	37	51.1							10				12					
New Jersey.....	16	246	50.2					50	10	113			4	62			1		
New York.....	27	370	48.9					18	9	105	4			53			3		
Ohio.....	5	657	50.4	11				8	4	300	61	14		170			81	32	2
Oregon.....	5	32	46.3				14			18									
Pennsylvania.....	37	705	50.7					9		81	33			121	12	137	112	44	32
Rhode Island.....	8	131	50.4						4	22			34	71				90	37
Tennessee.....	7	74	49.0							36				58					
Texas.....	6	65	47.4					10	13	30	2								
Washington.....	7	68	48.4							65			8						
Wisconsin.....	12	308	48.7						73	168				6	19	8	14		2
Total.....	385	5,453	50.0	78	7	247	34	320	171	1,737	195	851	315	1,053	32	207	96	106	4
Molders, machine, male:																			
Alabama.....	1	(1)	(1)											(1)					
California.....	8	20	46.7						5										
Colorado.....	2	22	49.4							10				5					
Connecticut.....	8	118	55.8	2					1					15				32	25
Georgia.....	3	18	52.7											7					
Illinois.....	17	387	50.1						1					43					
Indiana.....	11	244	50.9						19					58					
Iowa.....	6	86	52.1						18					9				19	
Kansas.....	5	17	54.7							4									2
Kentucky.....	2	16	50.0											16					
Louisiana.....	2	3	58.0																2
Maine.....	1	(1)	(1)																2
Maryland.....	4	39	51.2											1					
Massachusetts.....	23	284	48.4					5		1				26					
Michigan.....	25	566	51.5						1	54				158					
Minnesota.....	4	34	51.2						1	69	10			21		180	11	194	43
Missouri.....	9	44	50.6											15				36	1
New Hampshire.....	2	10	52.8							11				7					
New Jersey.....	14	180	50.4											2					
New York.....	20	434	49.5							69	1			8		158		25	48
Ohio.....	26	427	49.4	36					3	5				23		79		82	17
Oregon.....	1	(1)	(1)											(1)					
Pennsylvania.....	20	413	49.8	82					9	14				93	20	83	74	16	23
Rhode Island.....	8	176	52.2						5					35		46		27	14
Tennessee.....	2	7	49.1											4		61			39
Texas.....	3	12	48.3							7				8					

¹ Data included in total.

TABLE C.—Average and classified full-time hours per week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—															
				40	Over 40 and under 44	44	Over 44 and under 45	45	Over 45 and under 48	48	Over 48 and under 50	50	Over 50 and under 54	54	Over 54 and under 55	55	Over 55 and under 60	60	Over 60
Molders, machine, male—Continued.																			
Washington.....	3	11	48.0						11										
Wisconsin.....	11	255	50.2					58	1	23	109	23	1		40				
Total.....	249	3,854	50.4	70		19	1	255	98	819	135	1,138	233	715	23	181	121	47	
Molders' helpers, floor, male:																			
Alabama.....	3	12	53.5						1					11					
California.....	13	75	45.6			44			11	20									
Colorado.....	3	40	48.9							29	8			3					
Connecticut.....	11	83	50.0	2	1		2	11		4		39		21		3			
Georgia.....	4	23	53.5										11	5		8			4
Illinois.....	12	76	51.4							27	14	8		12					13
Indiana.....	14	103	51.7					2		24	14	17	8	54					
Iowa.....	4	30	52.7							6			21	2					1
Kansas.....	2	3	54.0											3					
Kentucky.....	5	9	50.4							3				5				1	
Louisiana.....	1	(1)	(1)														(1)		
Maine.....	3	26	46.4			19						2		5					
Maryland.....	3	18	49.8							6		10		2					
Massachusetts.....	15	79	49.4									25		11					
Michigan.....	26	196	52.4					3	17		9	40	19	47		8		33	
Minnesota.....	5	32	52.0									9	7	15				1	
Missouri.....	9	88	52.5							20		2		66					
New Hampshire.....	3	9	51.3									6		3					
New Jersey.....	14	169	50.4							63		58	3	42		3			
New York.....	20	143	50.0					7	4	77	8	13		39					
Ohio.....	20	195	54.7					4	9	33	4	1	13	59		3	38	11	20
Oregon.....	4	24	46.3			10				14									
Pennsylvania.....	32	294	52.2					27	3	29	2	63	38	29	41	37	28	8	1
Rhode Island.....	5	37	49.8					4			4	24	5						
Tennessee.....	4	19	49.3							7		12							
Texas.....	4	17	48.5						8	8								1	
Washington.....	6	30	48.0							30									

Wisconsin.....	6	84	48.4						11	62		5	5	1					
Total.....	251	1,919	51.1	2	1	73	5	73	46	493	74	335	123	490	41	57	69	75	22
Pattern makers, male:																			
Alabama.....	3	10	52.7									3	2	5					
California.....	10	32	44.8			28			2	3		1							
Colorado.....	3	20	44.4			18				2									
Connecticut.....	5	12	55.4									1		7			3	1	
Georgia.....	6	12	50.7								2	7				1			
Illinois.....	22	149	50.2			9		6		20	21	47	16	31					
Indiana.....	9	54	52.0			6						11	1	36					
Iowa.....	6	17	52.5							4		2	5	2		6			
Kansas.....	6	8	55.1										2	4					2
Kentucky.....	1	(1)	(1)															(1)	(1)
Louisiana.....	1	(1)	(1)																
Maine.....	1	(1)	(1)					(1)											
Maryland.....	6	24	48.8							18		4		2					
Massachusetts.....	8	124	48.4		3					90		31							
Michigan.....	21	161	50.6			11	1	12		7	13	30		33		24			
Minnesota.....	2	6	49.8								3	3							
Missouri.....	10	33	49.2					16		2			1	14					
New Hampshire.....	3	4	53.0									1		3					
New Jersey.....	11	102	50.4							19		63		20					
New York.....	11	103	49.9					2		32		55		7		7			
Ohio.....	12	70	50.3						3	19	26	3		20					
Oregon.....	3	7	45.1			5				2									
Pennsylvania.....	14	110	51.0						3	12		60	8			27			(1)
Rhode Island.....	1	(1)	(1)																
Tennessee.....	2	6	49.7							1		5							
Texas.....	4	6	47.9						2	3	1								
Washington.....	4	16	48.0							16									
Wisconsin.....	6	35	52.6									6	18	9		2			
Total.....	191	1,127	50.1		3	80	1	36	10	250	66	350	54	193		67	11	6	

MACHINE SHOPS

Assemblers, male:																			
Alabama.....	1	(1)	(1)					(1)											
California.....	11	124	45.6			83				20	6	15							
Colorado.....	1	(1)	(1)							(1)									
Connecticut.....	12	138	50.7					8		3		92	11	4		20			
Georgia.....	3	13	52.0									2	11						
Illinois.....	22	888	50.4			68				71	79	432	83	69		82			4
Indiana.....	14	391	51.1									251	124	5				11	
Iowa.....	6	101	53.6							7		6				30		58	
Kansas.....	4	59	56.6										10	23					26

¹ Data included in total.

TABLE C.—Average and classified full-time hours per week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—															
				40	Over 40 and under 44	44	Over 44 and under 45	45	Over 45 and under 48	48	Over 48 and under 50	50	Over 50 and under 54	54	Over 54 and under 55	55	Over 55 and under 60	60	Over 60
Assemblers, male—Continued.																			
Kentucky	7	47	52.3							7		16				23	1		
Louisiana	1	(1)	(1)														(1)		
Maine	4	40	49.1			6						34						2	
Maryland	5	70	49.3							35		34							
Massachusetts	36	1,284	49.4		26					579		590	68	1		20			
Michigan	23	564	51.4							57	20	308	27	59		53	30	9	
Minnesota	5	68	50.4								45	16				6		1	
Missouri	10	113	51.6						7	30	5	4	10	55			1	1	
New Hampshire	3	57	45.9							32		25							
New Jersey	14	221	49.3							73	5	143							
New York	20	735	48.2		18				18	607	7	51	25	1		8			
Ohio	56	977	49.8		16				15	242	217	266	182	12		27			
Oregon	4	27	46.8		8					19									
Pennsylvania	37	921	51.2						52	81	183	272	146	10		86	110	1	
Rhode Island	5	315	50.2									284	29				2		
Tennessee	4	38	49.2							1	27	6				5			
Texas	5	38	49.6							17	45		28		1				
Washington	4	62	47.7							40	41								
Wisconsin	13	345	50.4									150	103			11			
Total	335	7,670	50.1			225	8	14	150	1,991	543	3,018	829	240		371	210	58	13
Boring-mill operators, male:																			
Alabama	3	16	50.2					8					3	4					1
California	16	68	45.4			45			3	15		4							
Colorado	1	(1)	(1)								(1)								
Connecticut	17	142	51.7				7			7		81	14	3		17		6	7
Georgia	4	10	51.1									3	7						
Illinois	29	249	51.6			12				29	44	62	17	55		11		15	4
Indiana	13	44	51.0									31	10			1		2	
Iowa	4	19	53.9									2	2			6		2	
Kansas	6	5	56.0											4				2	
Kentucky	4	8	48.4								5		2			1			
Louisiana	3	9	49.1			6											1	2	
Maine	2	14	44.9			12						2							

Maryland	5	18	50.1					9		6				2		1	
Massachusetts	32	150	49.1		7			65		72				1		2	
Michigan	19	90	53.1				2	8		24						8	
Minnesota	7	27	50.9					21		1				25		2	
Missouri	10	38	50.4		1		3	14		4				15			
New Hampshire	2	4	48.0					4									
New Jersey	22	94	50.2					26		2				59		2	2
New York	27	107	49.6		1		2	11		8				6		5	1
Ohio	71	473	51.2		5		12	59		103				46		57	19
Oregon	3	12	46.0		6			6									
Pennsylvania	39	400	53.0		6			4		54				13		144	39
Rhode Island	7	48	52.5				1							19		21	16
Tennessee	4	15	50.1							9							4
Texas	4	5	50.2					1		2							1
Washington	5	27	47.1				5	12		10							
Wisconsin	14	163	52.4					23		28							
Total	372	2,333	51.1		95		7	33		126		462		162		633	261
Drill-press operators, male:																	
Alabama	4	15	47.9														
California	20	97	46.1		63			11		3							
Colorado	2	35	48.1														
Connecticut	19	189	51.0				6										
Georgia	6	20	54.0														
Illinois	32	924	49.5		237												
Indiana	15	211	51.0														
Iowa	6	86	54.3														
Kansas	6	22	55.4		1												
Kentucky	8	43	50.6					1		16							
Louisiana	2	9	59.3														
Maine	3	29	49.4		3												
Maryland	5	41	50.2							25							
Massachusetts	37	466	49.2		28					180							
Michigan	27	238	51.5					4		15							
Minnesota	8	47	50.4														
Missouri	15	77	51.7		1			4		16							
New Hampshire	4	30	48.6							21							
New Jersey	23	261	49.6							72							
New York	29	417	48.9		7		4	23		259							
Ohio	76	780	50.4		9		22	59		154							
Oregon	6	27	47.0		7					20							
Pennsylvania	46	709	52.3							110							
Rhode Island	9	114	51.2					6									
Tennessee	5	22	49.3							14							
Texas	5	74	46.9		13					35							
Washington	7	47	47.2					8		15							
Wisconsin	15	278	52.1							39							
Total	440	5,291	50.8		13		356	6	65	200		1,067		338		1,836	518

¹ Data included in total.

TABLE C.—Average and classified full-time hours per week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—															
				40	Over 40 and under 44	44	Over 44 and under 45	45	Over 45 and under 48	48	Over 48 and under 50	50	Over 50 and under 54	54	Over 54 and under 55	55	Over 55 and under 60	60	Over 60
Fitters and bench hands, male:																			
Alabama	2	13	50.3					8						3					2
California	20	204	45.0			159			3	30	3	9							
Colorado	2	41	48.1							15	26								
Connecticut	19	659	51.1				11			76		407	9	26		110		14	6
Georgia	2	4	50.1									3							
Illinois	29	788	49.4	2		193				37	40	264	192	38		9		7	6
Indiana	13	163	51.1									98	60	3			2		
Iowa	4	19	53.2							4		1		6		7		1	
Kansas	3	16	54.4											15				1	
Kentucky	9	57	50.2						5	26		13				7	6		
Louisiana	1	(1)	(1)			(1)													
Maine	2	17	48.9			3						14							
Maryland	1	(1)	(1)							(1)									
Massachusetts	27	356	49.0			18						185	23	4		20			
Michigan	23	283	51.4							50	28	106	90	4	55				
Minnesota	4	17	49.6									12	5						
Missouri	10	80	52.0							22	4		4	50					
New Hampshire	3	35	49.2							14		21							
New Jersey	24	645	49.2							214	5	322	1	3					
New York	27	936	48.8			2		36	155	499	41	113	10	45		7	28		
Ohio	61	1,788	49.3					70	175	678	277	279	129	35		137	6		
Oregon	3	19	47.2			4				15									
Pennsylvania	43	899	51.0						48	235	8	258	127	15	10	65	124	5	4
Rhode Island	8	340	50.5					16				180	142					2	
Tennessee	3	11	48.2							10		1							
Texas	5	34	48.2							10	15	4	5						
Washington	6	62	47.6							25	37								
Wisconsin	13	324	52.0							30	48	34	93			119			
Total	367	7,715	49.8	2	382	11	130	451	2,214	448	2,223	795	298	10	537	166	30	18	

Grinding-machine operators, male:

Alabama	1	(1)	(1)										(1)						
California	12	69	48.0		19			15	20	2								4	
Colorado	2	21	48.0					20	1										
Connecticut	18	184	51.1			2		11		124	2							1	1
Illinois	23	463	50.9		70			6	14	175	96		17	3	9			27	6
Indiana	14	47	50.8							36	10		1					1	
Iowa	2	51	54.9										30		16			5	
Kansas	1	(1)	(1)										(1)						
Kentucky	5	20	52.9					4		3					13				
Louisiana	1	(1)	(1)															(1)	
Maine	3	23	47.9		8					15									
Maryland	3	31	51.5					17											2
Massachusetts	30	285	50.2		18			62		83	28				44				
Michigan	25	403	53.6			1		11	120	83	5	86	17	6	21	1		1	52
Minnesota	4	19	50.2						17					1	1				
Missouri	9	26	52.6		1			3	1		3	18							
New Hampshire	2	21	48.3					18		3									
New Jersey	14	76	49.2					45		25		1		5					
New York	21	222	48.4		1		22	160	6	21	8	2	2						
Ohio	63	429	50.3		1	4	25	95	116	105	35	8		17	1	14		3	8
Oregon	1	(1)	(1)					(1)											
Pennsylvania	32	225	50.9				9	63	6	78	27	1		13	20			3	3
Rhode Island	7	179	51.8			4				127	17							31	
Tennessee	3	6	51.5					4						4					
Texas	1	(1)	(1)		(1)		(1)	7											
Washington	3	14	47.1			2		5											
Wisconsin	13	111	52.0					11	14		25	32			23	1			3
Total	313	2,888	51.0		3	118	2	11	86	555	310	904	263	199	20	206	45	89	77
Laberers, male:																			
Alabama	5	58	50.7							16	1	22							2
California	17	180	46.1		94		17	5	60	13	7							1	
Colorado	2	68	48.0						42	26									
Connecticut	19	360	51.0			4			28		249	9	13		50			2	7
Georgia	7	68	52.1							12	31	21		4					
Illinois	28	1,313	49.8		267				95	83	494	181	121	58				19	5
Indiana	16	330	50.9							223	96				5				
Iowa	6	167	54.0					1		20		92		48				6	
Kansas	3	75	54.4					5				58			6			6	
Kentucky	7	50	50.5					22		14				14					
Louisiana	3	55	58.0														32	20	
Maine	4	39	48.3		13						24			2					
Maryland	5	40	51.0					15		11		1		18					
Massachusetts	35	619	49.6		11			173		399	21	2		12					1
Michigan	31	480	51.9		4			61	25	174	45	71	9	68	13	2		3	3
Minnesota	5	58	50.8						68	5				12	1				2
Missouri	12	103	52.0					28	8	6	4	53						3	1
New Hampshire	5	29	48.5					22		7									

¹ Data included in total.

TABLE C.—Average and classified full-time hours per week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—															
				40	Over 40 and under 44	44	Over 44 and under 45	45	Over 45 and under 48	48	Over 48 and under 50	50	Over 50 and under 54	54	Over 54 and under 55	55	Over 55 and under 60	60	Over 60
				Laborers, male—Continued.															
New Jersey	26	406	49.5						143	3	247	6					1	2	
New York	30	737	48.7			6		2	139	10	91	20	19		15	13			
Ohio	82	1,205	49.8			12		10	64	397	237	247	109	15		92	1	17	
Oregon	4	7	46.3			3				4									
Pennsylvania	48	1,337	52.0					1	21	166	27	491	227	41	10	129	171	40	
Rhode Island	10	212	50.5					6				143	61					2	
Tennessee	7	89	50.6							43	7	11			3		23	2	
Texas	7	74	48.6			3			33	6	2	22			8				
Washington	5	32	48.3						3	28								1	
Wisconsin	15	285	52.1						22	24		57	112			65			
Total	452	8,506	50.5		3	403	4	36	287	1,783	509	2,970	923	550	19	605	243	119	52
Lathe operators, engine, male:																			
Alabama	3	29	51.4					11					3	13					2
California	20	248	45.5			108			4	39	19	18							
Colorado	2	28	48.1							10	18								
Connecticut	18	336	51.2					13		34		200	20	8		38		14	9
Georgia	5	38	51.7									13	24						1
Illinois	30	613	50.7			3		93		22	36	234	94	86		14		18	13
Indiana	13	90	51.4								36	59	23	1			7		
Iowa	6	64	53.2							10		8				13		5	
Kansas	5	34	51.1					11				8			21			2	
Kentucky	7	27	48.7						2	17		7						1	
Louisiana	3	16	54.3														6	5	
Maine	3	22	47.3			5													
Maryland	5	39	51.7									12							
Massachusetts	31	468	49.9					46		103		219	27			72		1	8
Michigan	27	316	51.2						1	39	33	137	19	8	6	62		9	2
Minnesota	8	52	50.7									35	8			7		1	1
Missouri	14	128	49.9					12		7	48	4	10	4		43			
New Hampshire	5	44	49.3							16		28							
New Jersey	24	212	49.7							82	7	107		10				5	1
New York	29	487	48.6			5		36	107	195	8	90	7	6		28	4	1	

Ohio.....	74	958	50.5			13		12	89	254	146	128	142	52		80	8	9	20
Oregon.....	6	52	47.1			12				40									
Pennsylvania.....	42	687	52.1					27	100	25	237	75	32		76	61	33	21	
Rhode Island.....	9	208	51.6					8			113	63					21	3	
Tennessee.....	6	35	50.8						15	6	2				12			3	
Texas.....	6	125	46.9		19				64	29	2	6		5					
Washington.....	6	69	47.5					7	14	48									
Wisconsin.....	14	220	51.3						35	28		41	89		23			6	
Total.....	421	5,640	50.3	3	19	375	13	82	390	1,094	345	1,689	629	270	6	434	95	120	76
Lathe operators, turret, male:																			
Alabama.....	1	(1)	(1)				(1)												
California.....	16	117	47.1			50			1	28	27	6						5	
Colorado.....	2	48	48.0							46	2								
Connecticut.....	18	164	52.1				9			11		74	14	4		82		19	1
Georgia.....	4	10	52.2									9				1			
Illinois.....	25	556	50.5			91				45	21	247	48	44		14		32	14
Indiana.....	14	120	50.7									90	14	2			5		
Iowa.....	5	36	54.6						1			2		18		11		4	
Kansas.....	3	5	55.2											4				1	
Kentucky.....	6	23	50.1						1	5		14				3			
Louisiana.....	1	(1)	(1)															(1)	
Maine.....	2	119	49.6			9						108				2			
Maryland.....	4	33	49.9							22		7						4	
Massachusetts.....	31	448	48.9			7				271		138	30	2					
Michigan.....	25	191	51.7							13	3	109	7	4		38	16	1	
Minnesota.....	4	19	49.8								18					1			
Missouri.....	11	29	52.4						1	5		2	1	20					
New Hampshire.....	4	25	48.9							14		11						3	
New Jersey.....	21	163	50.2							64	4	85		1					6
New York.....	24	241	49.2			3		4	20	98	15	76	6	11		7		1	
Ohio.....	62	436	50.6			1		13	10	113	94	93	33	5		37	4	30	3
Oregon.....	3	14	48.0							14									
Pennsylvania.....	39	574	52.2						24	113	9	171	55	6		63	58	18	27
Rhode Island.....	8	155	50.7					6				115	25					9	
Tennessee.....	4	11	51.0							4	3					4			
Texas.....	4	51	46.7		9				29	5		8							
Washington.....	5	46	47.0					9	22	15									
Wisconsin.....	13	210	53.3						17	45		34	56			18			40
Total.....	359	3,855	50.5	9	161	9	42	125	932	196	1,399	298	121	---	261	83	128	91	
Machinists, male:																			
Alabama.....	6	32	51.1					4		5		6	6	11					
California.....	13	98	44.9			77				16	1	4							
Colorado.....	2	35	48.1							19	16								
Connecticut.....	15	90	51.6				4			5		45	5	1		28		2	
Georgia.....	6	27	52.7							2		5				13			
Illinois.....	30	381	46.5		2	110				10	29	129	46	46		8			6

1 Data included in total.

TABLE C.—Average and classified full-time hours per week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—															
				40	Over 40 and under 44	44	Over 44 and under 45	45	Over 45 and under 48	48	Over 48 and under 50	50	Over 50 and under 54	54	Over 54 and under 55	55	Over 55 and under 60	60	Over 60
Machinists, male—Continued.																			
Indiana.....	16	82	50.6									71	7	1		3			
Iowa.....	6	40	53.3						2			11					3		
Kansas.....	9	53	50.3			12				17			5	13		11	3		
Kentucky.....	7	38	50.9							9						8	4		
Louisiana.....	5	31	49.9			17								4		9	1		
Maine.....	4	42	49.7			2						40							
Maryland.....	5	51	48.3			6				25		20							
Massachusetts.....	23	127	49.5			16				29		60	9	4		8			
Michigan.....	29	220	51.1			4		3		21	25	108	7	24		7	7		
Minnesota.....	8	26	51.3								15	3				8			
Missouri.....	17	82	51.4			7		4	15	3		16	37						
New Hampshire.....	5	51	51.2							3		31		17					
New Jersey.....	20	129	49.9							40		68	12	8			1		
New York.....	25	267	48.8			6			18	152	26	46	3			14	2		
Ohio.....	47	300	50.3			20		5	3	31	121	50	32	10		20	2		
Oregon.....	3	8	47.5			1				7							2		
Pennsylvania.....	36	455	52.2						6	39	8	197	53	2	31	44	55		
Rhode Island.....	10	149	50.5					4				96	49						
Tennessee.....	8	43	50.4							10	4	21				8			
Texas.....	7	52	47.8		1				14	33	1	3							
Washington.....	7	63	47.9						8	55									
Wisconsin.....	10	64	51.7						2	13		12	33				4		
Total.....	379	3,036	49.8	2	1	278	4	20	66	546	246	1,063	311	165	31	164	85	30	24
Machinists' and tool makers' helpers, male:																			
Alabama.....	4	5	54.4							1		1		2				1	
California.....	6	28	45.3			19				9									
Colorado.....	2	9	48.1							5	4								
Connecticut.....	12	58	51.4					3		2		36		2		13		2	
Georgia.....	1	(1)								(1)		(1)							
Illinois.....	17	72	49.4			20				2	5	21	11	7		3		2	
Indiana.....	15	48	51.1									35	9	1		3			

Iowa	8	18	54.1							2											4			1		
Kansas	5	11	51.0			2						3			8									1		
Kentucky	6	11	49.5								6				4									1		
Louisiana	3	6	48.0			4									1									1		
Maine	3	17	48.2			5																				
Maryland	3	31	48.9									18			13											
Massachusetts	14	81	48.2			12					38				31											
Michigan	15	90	52.5					2			11		1		21		2	22		1	16		1		3	
Minnesota	5	17	50.6									10			6										1	
Missouri	3	7	52.3								2							5								
New Hampshire	4	15	49.3								5				10											
New Jersey	16	56	49.6								18				35				3							
New York	19	57	49.7			1					19		7		15				1			9				
Ohio	19	88	50.3					2		5		14		9	12		12		5			3				
Oregon	2	6	44.0			6																				
Pennsylvania	26	143	51.7								22		11		53		13			4	24		11		3	
Rhode Island	5	47	51.1												29		16							1	1	
Tennessee	2	7	52.0								3											4				
Texas	6	48	47.4			2				21		23		2												
Washington	4	12	48.0								12															
Wisconsin	9	60	53.0							4		4			18		31								8	
Total	229	1,006	50.3	1	2	09	5	2	31	217	49	350	97	59	5	76	17	6	20							
Milling-machine operators, male:																										
Alabama	2	10	58.1					5																		3
California	15	62	46.0						1	18		8			2											
Colorado	2	26	48.1			33				14		12														
Connecticut	17	194	51.7					5		16		106		3							45			18		
Illinois	26	379	50.3	1		82				6		109		33		97		19		8			10		14	
Indiana	14	55	51.2											36		18							3			
Iowa	2	25	55.0																		6			3		
Kansas	3	3	52.7																					1		
Kentucky	5	15	51.9										6		1											
Louisiana	1	(1)	(1)																						(1)	
Maine	3	27	49.3			3									24											
Maryland	4	27	52.8								15				1							1				
Massachusetts	32	402	49.6			24				125		147		88							18			10		
Michigan	27	164	50.8							20		26		85		1							10			
Minnesota	6	22	49.5									20		2							16					
Missouri	9	35	51.8						2																	
New Hampshire	4	33	48.7							21					12											
New Jersey	20	96	49.3							41		1		52										1		
New York	28	481	48.3			3		3	71	333		12		37			6				5		1	1		
Ohio	64	576	50.3			5		2	17	193		138		98		44		5			38		2	26	8	
Oregon	4	10	47.6							9																
Pennsylvania	37	425	51.7			1				78		87		103		46					2		39	52	28	
Rhode Island	7	175	50.7					7		34				102		63								3	11	
Tennessee	4	7	51.2							3		1														
Texas	3	45	46.6					5		37																

¹ Data included in total.

Wisconsin.....	10	177	50.1					30	62		11	65			8		1	
Total.....	288	1,652	49.9		127	11	8	81	342	69	549	233	46	18	142	25	1	
Planer operators, male:																		
Alabama.....	3	6	49.4				3					1	2					
California.....	13	27	46.4		13			2	6	2	4							
Colorado.....	1	(1)	(1)							(1)								
Connecticut.....	16	190	50.8			2			8		147	5	9	15		1	3	
Georgia.....	3	3	51.0								1	2						
Illinois.....	24	171	50.1		36				5	11	52	31	27	2		4	3	
Indiana.....	12	36	50.8								27	8			1			
Iowa.....	4	10	51.7						3		3		2	1		1		
Kansas.....	5	7	54.3		1								4					
Kentucky.....	6	13	49.5					1	7		3			2		2		
Louisiana.....	1	(1)	(1)		(1)													
Maine.....	3	20	48.2		6						14							
Maryland.....	3	14	51.1						7		4						3	
Massachusetts.....	33	208	49.3		20				64		100	6		17		1	1	
Michigan.....	20	98	50.6						20	8	48	2	3	15	1	1	1	
Minnesota.....	8	12	51.3							8	1			2		1		
Missouri.....	6	25	49.1		1			1	16		2		5					
New Hampshire.....	3	14	49.7						2		12							
New Jersey.....	23	85	49.7						39	1	39	1	2			2	1	
New York.....	21	155	49.2		1		1	40	60	1	34	5		6		1	6	
Ohio.....	66	463	50.9		3		10	38	121	48	91	59	35	18	6	16	18	
Oregon.....	4	4	47.0		1				3									
Pennsylvania.....	39	230	53.6					9	19	4	76	20	14	24	16	31	17	
Rhode Island.....	7	37	51.5				2				19	13					3	
Tennessee.....	3	6	49.2						6					1				
Texas.....	3	6	47.3		1			1	2	2								
Washington.....	5	24	47.7				1	6	17									
Wisconsin.....	10	96	53.5					12	7		19	29		12		1	16	
Total.....	344	1,963	50.7		1	84	2	17	110	411	86	696	177	106	115	25	70	61
Screw-machine operators, hand, male:																		
California.....	3	4	49.0						2		2							
Connecticut.....	7	31	49.6								24	2		1				
Illinois.....	11	74	49.9		13	4			9	5	30	9	4			3	1	
Indiana.....	6	17	50.6								13	4						
Kansas.....	1	(1)	(1)										(1)					
Kentucky.....	3	7	50.6						3		2			2				
Maine.....	1	(1)	(1)								(1)							
Maryland.....	2	2	48.0						2									
Massachusetts.....	18	108	48.4		9				61		38							
Michigan.....	11	53	52.7								24	20	12		13		5	
Minnesota.....	2	3	49.5								3							
Missouri.....	3	9	52.0						3				6					
New Hampshire.....	1	(1)	(1)						(1)									

¹Data included in total.

TABLE C.—Average and classified full-time hours per week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—													
				40	Over 40 and under 44	44	Over 44 and under 45	45	Over 45 and under 48	48	Over 48 and under 50	50	Over 50 and under 54	54	Over 54 and under 55	55	Over 55 and under 60
Screw-machine operators, hand, male—Contd.																	
New Jersey.....	4	29	50.0									29					
New York.....	16	99	48.9			1		1	3	36	44	9	5				
Ohio.....	38	264	50.7					5	17	63	100	26	9			9	2
Pennsylvania.....	10	53	49.6							28	12	3	2			7	1
Rhode Island.....	7	116	50.4					2				86	26				1
Tennessee.....	2	2	48.8							1	1						
Wisconsin.....	9	58	51.6						19	2		20	9			2	
Total.....	155	966	50.2			23	4	8	39	214	189	312	66	25		21	16
Screw-machine operators, semiautomatic, male:																	
Alabama.....	1	(1)	(1)					(1)									
Connecticut.....	1	(1)	(1)									(1)					
Georgia.....	1	(1)	(1)									(1)					
Indiana.....	7	30	51.7									15	13				2
Kentucky.....	2	6	53.8							1						5	
Massachusetts.....	5	24	50.5									13	11				
Michigan.....	2	5	54.4											3		2	
New Jersey.....	5	15	49.3							5		10					
New York.....	5	13	47.7			3			3	5		5					
Ohio.....	3	37	56.0								7	3	16				
Pennsylvania.....	3	27	49.3							22		2					3
Rhode Island.....	1	(1)	(1)									(1)					
Tennessee.....	4	6	51.8							2	1					3	
Texas.....	1	(1)	(1)						(1)								
Total.....	41	171	51.5			3		1	7	32	8	51	40	3		10	7
Screw-machine operators, automatic, male:																	
Alabama.....	1	(1)	(1)					(1)									
California.....	2	4	49.1								3	1					
Colorado.....	1	(1)	(1)							(1)							
Connecticut.....	6	13	52.5									5					
Illinois.....	16	80	49.9			17				10	5	17	19	6		6	3
Indiana.....	7	49	50.1									45	1				

Iowa.....	2	15	55.4									9		3		3		
Kentucky.....	4	28	52.2					7		3				18				
Maine.....	2	8	50.6							7				1				
Maryland.....	1	(1)	(1)					(1)								(1)		
Massachusetts.....	13	57	49.4	12				6		24	10		1	4				
Michigan.....	11	79	60.6						(1)	15		17		3		9	85	
Minnesota.....	1	(1)	(1)						1						(1)			
Missouri.....	5	3	49.5					3		1			1					
New Hampshire.....	2	2	49.0					1										
New Jersey.....	4	34	50.0							34								
New York.....	13	46	48.6					32	8	5		1	2					
Ohio.....	24	202	50.6			2	3	28	113	21		8		1	1	22		
Pennsylvania.....	14	49	51.2					17	4	11		4		3	7	2	1	
Rhode Island.....	5	33	50.1			2				30						1		
Tennessee.....	2	4	53.3					1						3				
Texas.....	1	(1)	(1)					(1)										
Washington.....	1	(1)	(1)					(1)										
Wisconsin.....	8	80	51.8					5		4		8	4		7		2	
Total.....	144	762	51.4		20		5	19	127	131	230	47	87	47	9	43	88	
Toolmakers, male:																		
Alabama.....	2	2	49.5				1						1					
California.....	15	77	45.9	43				25	7	2								
Colorado.....	2	25	48.0					22	3									
Connecticut.....	17	145	51.4		4			4		98	6	1		22		10		
Georgia.....	4	10	51.8							3	7							
Illinois.....	26	366	49.9	65				5	26	153	79	24		14				
Indiana.....	14	76	50.4							65	10	1						
Iowa.....	2	15	54.4					1				12				2		
Kansas.....	4	7	54.0									7						
Kentucky.....	6	13	50.2					6		4				3				
Maine.....	4	11	48.9	2						9								
Maryland.....	4	73	49.7							2								
Massachusetts.....	31	364	50.3	10				61		206	14			12		10	19	
Michigan.....	27	144	61.8					9	8	76	6	24	1	9	7		4	
Minnesota.....	7	22	51.8						14	2				5		1		
Missouri.....	11	28	51.5					1	8	2	1	15						
New Hampshire.....	2	19	48.3						16		3							
New Jersey.....	13	88	49.5					27		59		2						
New York.....	27	367	48.4	7		2	24	267	27	27	3	13		6	1			
Ohio.....	58	463	49.9	3		4	21	123	129	88	47	4		38	2	3	1	
Oregon.....	3	4	45.0	3				1										
Pennsylvania.....	37	197	51.1				6	41	17	60	20	2	2	31	17		1	
Rhode Island.....	8	178	51.0			2				109	61						6	
Tennessee.....	8	10	50.8							6				4				
Texas.....	4	22	47.3	1						2	3							
Washington.....	6	14	47.7						5	9								
Wisconsin.....	18	110	50.7					10	20		30	43		7				
Total.....	350	2,860	50.0	1	133	4	9	83	746	233	1,000	297	106	3	151	27	26	31

1 Data included in total.

TABLE D.—Average and classified hours actually worked in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State

Occupation, sex, and State	Number of establishments	Number of employ-ees	Average hours actually worked in one week	Number of employees who during one week worked—																					
				Under 16 hrs.	16 and under 24 hrs.	24 and under 32 hrs.	32 and under 40 hrs.	40 hrs.	Over 40 and under 44 hrs.	44 hrs.	Over 44 and under 45 hrs.	45 hrs.	Over 45 and under 48 hrs.	48 hrs.	Over 48 and under 50 hrs.	50 hrs.	Over 50 and under 54 hrs.	54 hrs.	Over 54 and under 55 hrs.	55 hrs.	Over 55 and under 60 hrs.	60 hrs.	Over 60 and under 72 hrs.	72 hrs.	Over 72 hrs.
				Chippers and rough grinders, male:																					
Alabama.....	3	23	46.8				7		1	1										1					
California.....	18	123	45.8	2	3	2	5	7		8	2	6	6	39	4		24	10							
Colorado.....	3	44	51.7	1	1		1		1			3	5				1				4	1	2	6	
Connecticut.....	15	111	49.5				5		13	1	6	31	4	1	2	10	11	4		1	18	2	2	4	
Georgia.....	7	50	54.3	1		1											5	3	5		21				
Illinois.....	26	449	49.0	7	6	13	25	2	13		7	62	23	64	6	20	38	64	2	3	41	28	24	1	
Indiana.....	16	170	51.8	2	2	5	5		2		1	4	11	1	6	16	23	37	4	39	39	12	7		
Iowa.....	9	103	46.5		2	2	8	7	10	5	1	23	5	2	3	2	8	8	2	5	3				
Kansas.....	9	37	52.5			2	2									2	23				2	3	3		
Kentucky.....	6	15	54.2								1	2	1								4	1	3	3	
Louisiana.....	3	39	49.5		1	1	2			1					13	1	11		2		4	1	1	3	
Maine.....	4	44	57.2		2							2													
Maryland.....	7	43	50.2		1							4	4		11	4	6				3	2	2	1	4
Massachusetts.....	26	346	46.3	5	8	16	23	27	12	5	4	43	9	34	25	41	31	22	1	3	22	3	9		
Michigan.....	32	401	50.3	5	7	11	36	9	10	4	3	49	20	22	13	31	11	1	19	30	26	50	15		4
Minnesota.....	6	46	47.8		3		2		2			5	3		15		10					4			
Missouri.....	18	71	50.7		1		1	1	3	1	3	1	3	6	11		5	17	1	7	2	2			
New Hampshire.....	5	19	49.6				4	4			1	1		1		2	8				1				1
New Jersey.....	14	293	50.0	1	4	3	26	5	11	3	5	23	36		12	19	40	23	4	3	43	7	24	1	
New York.....	24	334	50.5	6	9	10	11	13	5	1	1	24	10	24	21	14	46	10	13	11	49	9	43		
Ohio.....	38	365	50.2	4	10	11	28	10	18	3	4	15	7	40	17	11	32	18	5	15	43	21	46		7
Oregon.....	5	26	44.0		2							1	5		3										
Pennsylvania.....	39	593	49.7	6	9	12	62	12	22	2	3	45	34	20	26	21	102	20	9	46	80	2	57		3
Rhode Island.....	8	149	48.4	1		3	19	2	7		1	8	9		5		12		1	1	3		3		
Tennessee.....	5	60	48.1	1	2	3	9	4			1	2	2	2		6	9		1	1	7	2	4		
Texas.....	5	30	48.7			2	2		5						4	4	4				1				
Washington.....	7	32	42.2		1	4	4	5		1				5	3	1					1		1		2
Wisconsin.....	12	217	50.0	4	8	5	12		12		2	5	14	24	4	2	31	1	8	1	52	5	23	1	
Total.....	367	4,233	49.4	46	82	101	302	104	156	44	49	355	219	297	205	223	534	319	72	121	488	119	344	20	30

TABLE D.—Average and classified hours actually worked in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average hours actually worked in one week	Number of employees who during one week worked—																					
				Under 16 hrs.	16 and under 24 hrs.	24 and under 32 hrs.	32 and under 40 hrs.	40 hrs.	Over 40 and under 44 hrs.	44 hrs.	Over 44 and under 45 hrs.	45 hrs.	Over 45 and under 48 hrs.	48 hrs.	Over 48 and under 50 hrs.	50 hrs.	Over 50 and under 54 hrs.	54 hrs.	Over 54 and under 55 hrs.	55 hrs.	Over 55 and under 60 hrs.	60 hrs.	Over 60 and under 72 hrs.	72 hrs.	Over 72 hrs.
				Laborers, male:																					
Alabama.....	4	64	48.7			3	16		2	1	1		2	2	2	3	12			13			7		
California.....	18	295	48.6	3	4	4	22	5	19	15	3	2	20	24	28	4	78	9	9	4	29	1	9	1	2
Colorado.....	3	55	48.6	2	8		1		1	1		6	4			4	4			6	8	8			2
Connecticut.....	16	481	48.5	2	8	14	23	8	54	5	16	59	42	3	7	74	41	13	4	23	32	21	21	3	8
Georgia.....	8	157	52.1	1		2	5	4	4	2	6	2	20	4	7	10	24	8	1	3	31		23		
Illinois.....	28	1,067	49.2	16	15	22	46	6	28	5	14	184	43	91	30	89	157	66	35	30	88	16	82		4
Indiana.....	16	965	48.3	49	25	32	66	8	30	8	9	16	44	10	28	67	115	84	23	8	109	9	100	6	19
Iowa.....	9	247	49.3	5	8	11	14	24	8	1	1	15	16	1	8	9	16	27	2	6	16	6	49	1	3
Kansas.....	9	63	51.4	3	3		2					4	2	5			1	26			2	8	3		4
Kentucky.....	6	57	46.7	5	2		1		2		1	9	3		1	5	13			1	5	2	7		4
Louisiana.....	4	106	49.7	2	4	4	4	3	3		1	2	2	1	9	12	7	4	11		26	6	5		
Maine.....	1	(1)	(1)	(1)		(1)							(1)		(1)		(1)	(1)		(1)		(1)			
Maryland.....	7	91	52.6		1	1	4	4	4			3	5	2	1	3	16	18	2		5	9	11		2
Massachusetts.....	26	493	45.7	6	10	15	22	60	91	15	1	41	23	27	27	21	51	23	5	3	19	8	20		5
Michigan.....	33	1,147	50.4	36	24	47	63	18	43	5	10	51	73	16	59	58	155	48	19	43	143	47	144	9	36
Minnesota.....	6	114	45.5	1	5	3	6	13	10	2	2	17	10	1	9	2	18			1	5		8		
Missouri.....	15	189	48.7	3	6	8	12		4	2	20	8	12	2	7	1	12	15	3	3	28	2	18		1
New Hampshire.....	6	17	44.0				6				1	3				1	1	5							
New Jersey.....	14	723	49.1	28	24	39	57	52	24	1	11	29	31	8	23	20	59	49	12	13	91	6	109	4	33
New York.....	27	1,000	53.2	21	18	27	53	18	21	5	2	50	37	52	33	23	117	43	12	18	144	35	200	7	58
Ohio.....	44	1,356	52.3	28	31	36	53	25	53	6	14	42	41	63	121	74	119	71	21	34	151	81	219	9	64
Oregon.....	5	38	46.0	1	1	2	1		1	7		1	5	4	6	3	2				2				2
Pennsylvania.....	38	1,350	50.7	13	15	24	112	22	165	12	1	84	64	43	31	72	146	58	25	54	160	34	157	17	41
Rhode Island.....	9	230	53.8	3	1	3	13	2	11	1	2	16	7	2		7	33	22	3	7	47	9	24	1	16
Tennessee.....	7	100	42.9	3	6	8	4	13	4		1	4		12	1	21	13	3		6	7	1	2		
Texas.....	5	86	47.1		2	6	9	1	3			2	19	1	4	12	7	2	1	2	9	2	4		
Washington.....	7	62	43.4	1	3	5	9	1	6			1	6	0	6	1	5	2			4	1	2		
Wisconsin.....	13	514	53.5	4	2	12	24	2	16	5	10	15	16	24	18	11	52	30	11	44	92	20	94		12
Total.....	384	10,980	50.2	237	226	328	649	289	607	100	126	666	547	406	466	608	1266	646	200	296	1268	332	1344	58	315

TABLE D.—Average and classified hours actually worked in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average hours actually worked in one week	Number of employees who during one week worked—																					
				Under 16 hrs.	16 and under 24 hrs.	24 and under 32 hrs.	32 and under 40 hrs.	40 hrs.	Over 40 and under 44 hrs.	44 hrs.	Over 44 and under 45 hrs.	45 hrs.	Over 45 and under 48 hrs.	48 hrs.	Over 48 and under 50 hrs.	50 hrs.	Over 50 and under 54 hrs.	54 hrs.	Over 54 and under 55 hrs.	55 hrs.	Over 55 and under 60 hrs.	60 hrs.	Over 60 and under 72 hrs.	72 hrs.	Over 72 hrs.
Molders, hand, floor, male—Contd.																									
New Jersey.....	16	246	46.8	3	6	6	14	13	9	1	1	32	9	10	23	49	22	24	6	2	14		2		
New York.....	27	370	45.7	2	12	11	26	28	5	8	2	43	29	79	30	19	24	30	3	1	10	3	5		
Ohio.....	40	657	46.0	11	9	30	39	63	15	9	4	40	22	129	99	29	36	47	8	14	38	2	12		1
Oregon.....	5	32	44.9				3			1	6	7	1	8	4	2									
Pennsylvania.....	37	708	46.0	1	9	29	91	30	74	5	8	78	59	58	31	31	77	31	8	25	35	7	21		
Rhode Island.....	8	131	48.7	1	1	2	10		17		2	16	4		4	15	28	4	1	2	10	10	2		2
Tennessee.....	7	74	41.4	3	3	2	6	24	3		1	11		8		8				1	2		2		
Texas.....	6	55	43.0		1	7	5	8	4	1			9	5	7		4		3		1				
Washington.....	7	63	41.8	1	1	3	15	7	6	1	1		6	6	6	10									
Wisconsin.....	12	308	45.9	3	3	14	27	1	33	1	12	6	44	12	40	11	65	2	1	3	15		14		1
Total.....	385	5,453	45.6	75	89	196	451	462	338	166	120	528	357	621	370	289	480	364	59	89	217	71	104	1	6
Molders, machine, male:																									
Alabama.....	1	(1)	(1)															(1)							
California.....	2	20	47.3				1			8	2		1	2	2		2						2		
Colorado.....	2	22	49.2				2		2		1		2				4	1	5						
Connecticut.....	8	118	48.2		1	5	6	4	1	5	15	15	1	7	23	2	4			1	28				
Georgia.....	3	18	49.0						1		3	5	1	3	5	1	4								
Illinois.....	17	337	45.0	5	7	11	21	9	14		9	93	9	69	6	51	48	28	2		5				
Indiana.....	11	244	46.4	6	7	5	13	9	14	6	1	15	15	3	1	89	13	24	9	1	11		2		
Iowa.....	6	89	45.5	5	2	3	13	3	8			2	2	2	3	1	7				9	1	6		
Kansas.....	5	17	51.3				2				1	2						8			1	3			
Kentucky.....	2	16	45.5	1		1						6							1		3		1		
Louisiana.....	2	8	56.2																		2				
Maine.....	1	(1)	(1)															(1)							
Maryland.....	4	39	49.1			2	1	1	2			2	1				19	11							
Massachusetts.....	23	284	43.7	4	7	16	43	41	49	6	2	15	2	22	7	2	12	15	5		20		16		
Michigan.....	25	566	46.2	15	9	33	47	9	33	9	19	55	64	25	29	32	44	23	5	17	64	15	17	1	1
Minnesota.....	4	34	39.6	2		3	9	2	3			5	6			1									
Missouri.....	9	44	45.4		1		1	1	1	1	5	9		5	14	3	2		1						
New Hampshire.....	2	10	50.5															5		1					

New Jersey	14	180	45.2	2	2	18	11	4	10	3	4	44	5	3	13	18	19	7	1	1	7	7	1	4		
New York	20	434	49.3	7	9	22	19	20	17	5	4	41	19	16	25	8	38	22	15	9	73	73	47	1		
Ohio	26	427	45.2	7	8	13	47	69	8	7	2	11	6	79	36	18	37	53	5	6	11	1	3	1		
Oregon	1	(¹)	(¹)										(¹)													
Pennsylvania	29	413	45.3	1	6	3	55	31	71	2	2	50	32	37	23	5	35	29	2	7	16	1	5			
Rhode Island	8	176	49.2	3	2	2	11	1	22			2	16		3	5	44	31		1	32	1	1			
Tennessee	2	7	49.7				1	1	1						1	1							2			
Texas	2	12	40.6				3	3	2	1										3	1					
Washington	3	11	40.2				5	3	3			1														
Wisconsin	11	255	47.7	2	8	6	23	3	40	4	3	11	15		15	7	22	1	3	35	51	2	4			
Total	240	3,854	46.5	60	70	147	335	213	301	52	52	393	218	265	186	264	357	294	57	82	338	39	113	2	6	
Molders' helpers, floor, male:																										
Alabama	3	12	50.4				1						1		1		2									
California	13	75	49.3		1				4	5	2		6	11	8		24			1			1		1	
Colorado	3	40	52.5		3		1						2	1	2		2			1	3	10		10	1	
Connecticut	11	83	45.1	1	1	1	10	1	15	1	3	11	10			14	4	1		3	5	1	1		1	
Georgia	4	23	42.5	3		2	2										11		1		3					
Illinois	12	76	50.6	1	1	1	6		5				3	3	18	2	5	4	5		2	12	4	2	2	
Indiana	14	103	43.8	7	4	5	11	2	7			3	8	2	1	2	7	9	20	1		12	2	2	2	
Iowa	4	30	46.6				1	2	5	2			2		1	1	4		2				3			
Kansas	2	3	64.5																1				1		1	
Kentucky	5	9	44.9	1			1	2													3			1		
Louisiana	1	(¹)	(¹)												(¹)		(¹)	(¹)	(¹)	(¹)	(¹)	(¹)				
Maine	3	26	40.4	1		5	2		1	6	1	3	1			1	3		1				1			
Maryland	3	18	40.8	1		3	1		3				2	4		2	1	1		2						
Massachusetts	15	79	46.5		3	2	3	17	4			1	15	2	2	1	2	3	12		3	2	4		3	
Michigan	26	196	51.5	3	8	3	9	6	10			2	7	8	11	4	21	26	9	2	11	19	6	14	18	
Minnesota	5	32	41.2	2	1	1	4	1	3				11	5									2	2		
Missouri	9	88	49.5	4	1	3	1		1	3			4	10	1	2	33	6	2	1	7		2			
New Hampshire	3	9	44.1				4			1			1					1				1				
New Jersey	14	169	51.0	3	3	1	10	3	9		1	3	2	2	11	18	32	10	10	3	24	2	21	1		
New York	20	143	52.5	2		1	5	1	5	1		9	6	11	9	8	10	13	2	3	34	2	17	3	1	
Ohio	20	195	49.3	7	8	2	11	8	2		1	15	8	20	6	2	12	31	1	2	15	14	28		2	
Oregon	4	24	45.9				2			4			2	12			2				1		1			
Pennsylvania	32	294	47.8	8	4	14	32	4	20	1	3	22	23	11	15	17	29	5	5	18	49	6	11	1	1	
Rhode Island	5	37	51.7				7		1				1		1	2	9	1	2	2	3	1	7			
Tennessee	4	19	47.3				5						3	4		2					3	1	2			
Texas	4	17	50.6							1			1		8				3		1		1			
Washington	6	30	38.7	1	1	3	8	3		1	3	2	2		3	3			1		1					
Wisconsin	6	84	47.8		2	3	6		6				13	7	5	2	32		1		2		4			
Total	251	1,919	48.5	40	41	54	145	52	101	23	22	126	118	110	81	111	256	125	34	51	203	51	137	8	30	
Pattern makers, male:																										
Alabama	3	10	45.5				3								3	3	1									
California	10	32	44.6			1	2			21	1		3			1	2					1				
Colorado	3	20	40.2		3			3		1					9	2					1					
Connecticut	5	12	45.7	1							1		4			2				1	1	1				
Georgia	6	12	49.1						2			1			1	3				1	3					

¹ Data included in total.

TABLE D.—Average and classified hours actually worked in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average hours actually worked in one week	Number of employees who during one week worked—																						
				Under 16 hrs.	16 and under 24 hrs.	24 and under 32 hrs.	32 and under 40 hrs.	40 hrs.	Over 40 and under 44 hrs.	44 hrs.	Over 44 and under 45 hrs.	45 hrs.	Over 45 and under 48 hrs.	48 hrs.	Over 48 and under 50 hrs.	50 hrs.	Over 50 and under 54 hrs.	54 hrs.	Over 54 and under 55 hrs.	55 hrs.	Over 55 and under 60 hrs.	60 hrs.	Over 60 and under 72 hrs.	72 hrs.	Over 72 hrs.	
				Pattern makers, male—Con.																						
Illinois.....	22	149	47.5	2	3	3	5	3	7	5		9	7	1	36	30	15	16		2	5					
Indiana.....	9	54	48.2						4	4	4	13	3		3	9	3	8		2			1			
Iowa.....	6	17	49.3			1	1										6			4	1					
Kansas.....	6	8	55.7									1	3							1	4		1			
Kentucky.....	1	(1)	(1)																			(1)	1			
Louisiana.....	1	(1)	(1)																			(1)				
Maine.....	1	(1)	(1)													(1)	(1)					(1)				
Maryland.....	6	24	46.6			1	1			4												1				
Massachusetts.....	8	124	47.0	1		1	9	2	4	2	1	52	9	9	12	14	4			1	5	2	4		1	
Michigan.....	21	151	50.2	2		4	6		7	1	3	11	7	7	18	28	4	5	1	25	6	3	9			4
Minnesota.....	2	6	48.1						1						4	1										
Missouri.....	10	33	46.4			1	1	1	2		2	12					2	6								
New Hampshire.....	3	4	54.8														2	1				1				
New Jersey.....	11	102	48.0		3	1	6		6			6	8	8	14	38	14		1			3	2			
New York.....	11	103	50.2			4	3	2	3	4	3	8	14	14	1	8	6	8	1	5	6	3	8			2
Ohio.....	12	70	55.9		2	4	3					2	4	2	9	1	7	2	3	2	19		15			2
Oregon.....	3	7	45.1							5																
Pennsylvania.....	14	110	50.3				4	1	6	1		28	3	2	3	6	18	14	4	4	4	12	1	5		
Rhode Island.....	1	(1)	(1)				(1)								(1)	(1)					(1)					
Tennessee.....	2	6	45.3		1										4	(1)	1									
Texas.....	4	6	35.8	1		1	1		1				1		1											
Washington.....	4	16	45.3					2	1	3				8												
Wisconsin.....	4	35	50.9						3			3			1	12	10				2	3		1		
Total.....	191	1,127	48.9	8	12	18	43	14	50	51	17	147	53	69	115	162	97	65	14	47	77	13	46			

TABLE D.—Average and classified hours actually worked in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average hours actually worked in one week	Number of employees who during one week worked—																						
				Under 16 hrs.	16 and under 24 hrs.	24 and under 32 hrs.	32 and under 40 hrs.	40 hrs.	Over 40 and under 44 hrs.	44 hrs.	Over 44 and under 45 hrs.	45 hrs.	Over 45 and under 48 hrs.	48 hrs.	Over 48 and under 50 hrs.	50 hrs.	Over 50 and under 54 hrs.	54 hrs.	Over 54 and under 55 hrs.	55 hrs.	Over 55 and under 60 hrs.	60 hrs.	Over 60 and under 72 hrs.	72 hrs.	Over 72 hrs.	
Boring-mill operators, male—Con.																										
Michigan	19	90	52.0	2	1	2	4		3			1	3	5	4	14	5	3	12	15	6	9			1	
Minnesota	7	27	48.3			1	1		1				5	2	11	2				2	1	1				
Missouri	10	38	51.1	2				1					2	10	2	3		6		3	1	2			2	
New Hampshire	2	4	50.5											2			1									
New Jersey	23	94	52.2				1		2		1	5	7	7	11	25	8		1	2	6	5	12		1	
New York	27	167	49.8		1	2	5		10	1	3	6	13	35	14	14	20	7	4	8	12	2	8		2	
Ohio	71	473	51.8	4	5	8	8	6	17	5	1	11	41	44	27	45	66	18	11	18	50	18	65	2	3	
Oregon	3	12	53.0										2	1						1					1	
Pennsylvania	39	400	54.0	3	1	4	9	2	9	3		9	8	24	17	61	51	25	3	26	46	15	76		8	
Rhode Island	7	48	50.5	1		1	1		5			1	2		2	10	15			1	2	5			1	
Tennessee	4	15	48.5			1						1		9	2							1				
Texas	4	5	47.9				1							2			2									
Washington	5	27	45.2				3	1	1	2	1	4	9	5	1											
Wisconsin	14	163	54.5			2	3	3	10		1	2	9	2	23	38		1	3	8	15	1	36	1	5	
Total	372	2,333	51.6	19	17	42	60	24	80	75	16	73	126	196	157	286	284	79	43	117	222	84	297	6	30	
Drill-press operators, male:																										
Alabama	4	15	49.2				1	1				9					1						2		1	
California	20	97	45.2		1	3	4	7	5	40	1	3	5	4	4	3	6	2			6	1	2			
Colorado	2	35	51.8	1	2				1				4	3	1		5	3	3		8	1	5		1	
Connecticut	19	189	51.2	1	2	4	3	1	8	1	6	3	5	12	15	36	15	10	4	25	19	7	11		1	
Georgia	6	20	50.4										1	2		3					1		3			
Illinois	32	924	49.6	7	14	13	23	7	17	141	7	19	30	33	35	219	123	37	8	24	94	19	51	1	2	
Indiana	15	211	48.5	7	6	2	12	2	8	2	2	2	6	8	8	52	48	5	3	1	16	10	11			
Iowa	6	86	47.3	1	1	1	3		4	1		23	11	3	3	22	3		2	1	1	1	5			
Kansas	6	22	50.0		3								1	1	1	3		6		1	1	1	4			
Kentucky	8	43	49.5	1			3		4	1			1	8	1	10	2			2	3	7	7			
Louisiana	2	9	61.4																		2	5	2			
Maine	3	29	52.9						1	2						15	3		1		2	5	5			
Maryland	5	41	51.4				1		4	1			1	3	2	9	7	2		1	4	5	1			
Massachusetts	37	466	49.2	7	2	6	20	1	18	23	7	36	23	71	32	93	25	10	8	15	23	5	46			

Michigan.....	27	288	49.9	8	2	5	7	1	21	2	1	6	7	11	12	69	17	7	1	24	19	5	17	1	
Minnesota.....	8	47	46.5		2		3		4		2	12	1	11	13	1				3	4	1	2	1	
Missouri.....	15	77	50.4		1	2	2		1	1			4		5	7	14	21							
New Hampshire.....	4	30	45.5	2				1	1			1		18											
New Jersey.....	23	261	51.3	3	3	3	6	3	7	3	4	8	9	13	16	59	16	7	2	2	17	6	38	6	
New York.....	29	417	47.3	6	7	15	16		9	8	5	13	42	154	22	29	31	17		6	17	12	8		
Ohio.....	76	760	50.5	8	5	9	27	10	29	10	3	16	46	64	57	100	101	19	11	21	58	24	57	3	
Oregon.....	6	27	44.3		1	2	1		1	4															
Pennsylvania.....	46	709	50.9	5	6	15	31	2	33	5	3	35	32	73	64	112	53	8	6	37	67	36	76	1	
Rhode Island.....	9	114	48.9	1		2	10		3	2			4		9	47					2	3	2		
Tennessee.....	5	22	48.0	1			1	2	1						11	2	2				5		2		
Texas.....	7	74	45.3	3	1	2	3		1		1		18	9	3	4	5	2					1		
Washington.....	5	47	43.2	1	3		3	2	2		1	11	13	6	3	2									
Wisconsin.....	15	278	51.6	1	1	5	9		10	12			8	19	3	10	42	68	2	7	10	27	2	39	
Total.....	440	5,291	49.6	59	63	90	190	51	215	248	44	207	285	528	324	1017	573	159	51	175	430	161	397	5	2
Fitters and bench hands, male:																									
Alabama.....	2	13	30.8				1					4			1	2		3					2		
California.....	20	204	45.8	1	1	3	3	5	10	98	4	4	10	25	5	5	12	4		1	7	4	2		
Colorado.....	2	41	52.6			1	1		2					9	1	16	16				2		7		
Connecticut.....	19	659	51.8	7	8	8	19	5	13	6	16	12	10	58	17	53	44	49	24	172	43	6	49	2	8
Georgia.....	2	4	50.1													3	1								
Illinois.....	29	788	50.5	4	7	16	18	5	24	105	2	11	30	33	42	104	148	17	5	38	79	10	89	1	
Indiana.....	13	163	51.3	1		2	5	3	3	4	1	1	6	5	5	39	41	4	1	8	21	1	11	1	
Iowa.....	4	19	49.9									3	1		4	5	1			2			1		
Kansas.....	3	16	55.2													1		11		1		2	1		
Kentucky.....	9	57	45.6	1	6		3	1	1	4			6	12	1	4			1	8	8				
Louisiana.....	1	(1)	(1)			(1)	(1)	(1)	(1)																
Maine.....	2	17	44.6	1	1				1			1				9	1			1					
Maryland.....	1	(1)	(1)						(1)					(1)											
Massachusetts.....	27	356	48.9		8	5	13	3	16	14	6	38	15	50	16	49	36	24	1	13	29	6	14		
Michigan.....	23	283	49.5	3	2	2	16		13		4	9	8	27	23	64	47	4	4	25	12	3	16	1	
Minnesota.....	4	17	45.6						5				3		4								1		
Missouri.....	10	80	51.4				2	3	1	1					6	6					7				
New Hampshire.....	3	35	49.3						1					19		17									
New Jersey.....	24	545	51.3	12	4	6	11		13		6	22	25	54	22	165	31	8	2	3	70	14	67		10
New York.....	27	936	49.0	5	14	24	32	2	24	9	5	34	103	262	54	98	65	47	12	10	56	16	68	2	4
Ohio.....	61	1,786	51.1	15	18	21	63	8	49	7	8	39	92	326	167	144	219	42	27	68	228	32	203		10
Oregon.....	3	19	45.5		1				2				1	6		4									
Pennsylvania.....	43	899	51.9		8	16	33	3	56	3	7	62	51	102	25	105	95	18	1	5	46	1	97	9	32
Rhode Island.....	8	340	49.3	7	7	3	15	1	15	1	1	10	6		15	123	75	1	9	1	22		26	1	
Tennessee.....	3	11	50.6						1						7	7							1		
Texas.....	5	34	47.9		1	1	1					6	8		7	3	4				3				
Washington.....	6	62	46.1		1	1	2	1	4	1		1	21	23	4	1									
Wisconsin.....	13	324	52.4	3	3	6	3		7	1			6	9		23	99	1	9	54	61		22		2
Total.....	367	7,715	50.5	60	90	117	243	49	261	259	62	280	406	1072	427	1007	945	265	101	452	773	105	678	14	69

¹Data included in total.

TABLE D.—Average and classified hours actually worked in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued.

120 WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

Occupation, sex, and State	Number of establishments	Number of employees	Average hours actually worked in one week	Number of employees who during one week worked—																					
				Under 16 hrs.	16 and under 24 hrs.	24 and under 32 hrs.	32 and under 40 hrs.	40 hrs.	Over 40 and under 44 hrs.	44 hrs.	Over 44 and under 45 hrs.	45 hrs.	Over 45 and under 48 hrs.	48 hrs.	Over 48 and under 50 hrs.	50 hrs.	Over 50 and under 54 hrs.	54 hrs.	Over 54 and under 55 hrs.	55 hrs.	Over 55 and under 60 hrs.	60 hrs.	Over 60 and under 72 hrs.	72 hrs.	Over 72 hrs.
				Grinding-machine operators, male:																					
Alabama	1	(1)	(1)														(1)								
California	12	69	46.4	1	3	1	5	2	3	11	1		3	8	16	2	2		1		4	1	5		
Colorado	2	21	51.4	1									1	2	2		4	3			4	2	1		
Connecticut	18	184	52.1		1	1	1	1	6			6	8	8	15	52	20	5	7	25	11	1	10		5
Illinois	23	453	50.8	6	4	6	9	2	9	25	6	8	21	6	20	99	91	21	9	30	31	22	25	2	5
Indiana	14	47	51.6				3	1		1	2	1	1	1		12	9		2	4	5	1	5		1
Iowa	2	51	48.9							1	1		18	1	4	4		1	2	4	1	1	1		
Kansas	1	(1)	(1)			(1)									(1)					7					
Kentucky	5	20	52.3				1	1					1	3		1	1		7	2	1	1			
Louisiana	1	(1)	(1)												(1)										
Maine	3	23	49.6	1						1		1	1	1	1	8	4		1		2		2		
Maryland	3	31	53.0				2	1		4		3	3	3		5	1	1		3	1	6			1
Massachusetts	30	235	52.2				4	3	7	15	3	8	8	20	12	41	25	5	6	15	29	5	28		1
Michigan	25	403	48.4	6	9	18	38	30	2	10	30	17	9	32	38	35	8	18	4	48	9	35	4	3	
Minnesota	4	19	43.1		2		3				1	7		4	1					1					
Missouri	9	26	52.0				1	2	1		1		1	1		2	10		1	1	3	2			
New Hampshire	2	21	49.5										1	12		2	3	3							
New Jersey	14	76	47.5			7	9	3	3			8	3	2	5	14	4	4			5	1	9	2	1
New York	21	222	48.1		3	2	12	13	3	1	1	2	26	103	11	11	13	5		10	3	6			
Ohio	63	429	51.1	3	3	4	12	2	14	2	9	9	32	30	56	55	67	14	11	10	42	14	36	3	1
Oregon	1	(1)	(1)										(1)							(1)					
Pennsylvania	32	225	50.9	1		4	12	11	2	4	4	13	46	8	31	18	2	3	7	29	7	21	1	1	
Rhode Island	7	179	49.9		2	4	6	1	6	1	1	4	5	5	85	18	3	1	2	5	23	1			
Tennessee	3	8	54.9									2	2							1		1		1	
Texas	1	(1)	(1)	(1)				(1)				(1)		(1)					(1)		(1)		(1)		
Washington	3	14	45.0				2					2	6		1										
Wisconsin	13	111	51.1			1	7	3	8			1	3	7		4	18	25		2	10	6	3	13	
Total	313	2,888	50.2	20	27	51	130	22	115	66	41	111	166	267	198	483	346	85	64	119	243	98	209	13	14

Laborers, male:

Alabama	5	58	52.4				1			1		1	13	2			1	13	14		1			7		1
California	17	180	46.0	2	4	6	9	6		45		3	1	11	1	19	12	6	15	17		1		8		1
Colorado	2	68	49.0		5		5		3					1	27	4		77	15	15			9		6	
Connecticut	19	360	54.2	2	4		3	2		10		4	5	7	16	15		77	33	16	11	32	48	9	52	14
Georgia	7	68	49.5	1	2		3			5			1					4	30	11			4	2	2	
Illinois	28	1,313	50.1	17	26	21	38	6	34	182	11	20	28	46	62	248	220	33	18	53	132	19	7	110	5	14
Indiana	16	330	49.5	10	7	7	14	9	6	1		1	4	10	10	81	84	9	1	3	29	7	1	29		3
Iowa	6	167	47.5	1	5	3	4	4	2	1			34	19	3	7	45	11	1	1	19	7	9	1	1	
Kansas	8	75	49.3	6	2		5		4				1	1		1	1	2	32	3		1	3	1	5	
Kentucky	7	50	45.5	3	3		3	1					1	2	4	9	9	7	8	3	2	2	2	1	1	
Louisiana	3	55	54.5	1			1		3					1	2	3	4	8	7		1	2	2	2	1	
Maine	3	39	45.1	1	1	1	2	2	2	8				1		2	13	2	1		2	2	1	2		
Maryland	4	40	48.1		1		5	3	3	2						5	5	2	7	7	1	1	10			
Massachusetts	85	619	50.6	1	3	8	17	6	37	5		28	20	44	30	189	49	46	7	21	54	5	36		8	
Michigan	31	480	50.5	5	6	10	20	1	17			13	24	11	38	19	70	66	18	6	46	74	5	28	1	
Minnesota	8	88	44.6	5	4	1	3	1	6				18	1		32	4	3	1	2	4	1	2	2		
Missouri	12	103	52.0	2	1	1	4		1				2	1	20	3	7	6	27		9	9	2	16		
New Hampshire	5	29	48.9			1	6			1					8	3	3	3			3	3	1	3		
New Jersey	26	406	50.5	6	5	3	10	1	16	2	7	5	9	16	56	21	112	39	27	5	2	19	5	37	7	
New York	30	737	48.8	11	11	16	41	5	18	5	10	84	224	29	40	73	24	12	19	49	49	48	53	5	5	
Ohio	82	1,205	51.3	14	17	14	37	9	35	12		5	25	67	99	84	148	209	26	15	53	166	48	111	1	10
Oregon	4	7	43.4			1	1								4		1									
Pennsylvania	48	1,337	51.5	13	16	17	39	5	44	6	7	94	40	61	37	283	184	47	26	74	211	34	101		28	
Rhode Island	10	212	53.4	5	3	1	4	1	6			2	4	4	5	5	57	34	1	11	2	14	8	44	2	
Tennessee	7	89	47.2	4	3		4	3	2				4	5	27	6	4	5	5	2	3		6	6	2	
Texas	7	74	48.6			2	9		5			2	13	3		7	5	5	7		12		4	4		
Washington	5	32	48.6			1	3		3				1	13	3	1	2	1		1	1	1	1	1	1	
Wisconsin	15	285	52.6	2		4	4	2	7		1	1	10	14	3	9	27	83	1	3	36	49	6	20		
Total	452	8,506	50.5	112	129	124	293	65	278	254	69	309	360	732	391	1,444	1,179	348	123	371	937	177	686	15	110	

Lathe operators, engine, male:

Alabama	3	29	50.0			1			2	1	1	6	2		2		2	8		1			3		
California	20	248	45.7	5	4	1	11	13	8	100		4	10	17	10	8	25	7	3		14				1
Colorado	2	28	50.7		3	1								2			10			1			6		
Connecticut	18	336	51.3	2	1	2	11	2	5	3	10	7	6	27	20	69	88	15	14	61	11	16	4	1	
Georgia	5	38	49.6				1								4	6					2				
Illinois	30	613	50.7	8	6	9	20	6	22	55	5	9	12	1	3	49	85	20	9	10	48	13	67	9	7
Indiana	13	90	52.5		1	1	2		3			2		3	3	21	18			13	15	3	7		
Iowa	6	54	47.0	1	1	1	3	2	3			10	3	8	1	15	1	2		5	2	1	2		
Kansas	5	34	46.0		5					5		2				5	1	2		1	1	1	1		
Kentucky	7	37	43.7				1	1	1							4									
Louisiana	3	16	49.1	1			1	3	1	4			1	3	8					1					
Maine	3	22	48.2			2						1	2									3			
Maryland	5	30	49.0	1	1		2	2	1	2		1	1	2	6					9					
Massachusetts	31	468	50.3	1	4	3	17	13	26	24	1	4	22	10	43	20	111	38	10	7	21	1	2	57	2
Michigan	27	316	49.7	8	5	2	10		12	1		2	10	10	18	25	90	30	6	11	24	23	3	17	2
Minnesota	8	42	45.3		2	1			6	1		6	2			17	3	1		2	4	1	1		
Missouri	14	128	49.7	3	3		2		3	3	1	1	12	33	5	2	9	6		1	30	1	1	7	
New Hampshire	8	44	48.5		1	1			2					10		24		1	2	1					

¹ Data included in total.

TABLE D.—Average and classified hours actually worked in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average hours actually worked in one week	Number of employees who during one week worked—																					
				Under 16 hrs.	16 and under 24 hrs.	24 and under 32 hrs.	32 and under 40 hrs.	40 hrs.	Over 40 and under 44 hrs.	44 hrs.	Over 44 and under 45 hrs.	45 hrs.	Over 45 and under 48 hrs.	48 hrs.	Over 48 and under 50 hrs.	50 hrs.	Over 50 and under 54 hrs.	54 hrs.	Over 54 and under 55 hrs.	55 hrs.	Over 55 and under 60 hrs.	60 hrs.	Over 60 and under 72 hrs.	72 hrs.	Over 72 hrs.
				Lathe operators, engine, male—Con.																					
New Jersey.....	24	212	51.2	6	2	2	3	1	8	2	3	11	8	13	12	55	12	1	1	26	8	31		7	
New York.....	29	487	50.3	5	6	7	15	2	19	8	9	38	37	84	28	39	38	13	9	18	48	3	55	6	
Ohio.....	74	953	50.5	13	10	14	27	14	40	12	8	24	58	105	75	92	136	46	20	36	107	29	85	2	
Oregon.....	6	52	47.6		1	1	1			4	1		3	27	5						3		1		
Pennsylvania.....	42	687	52.1	7	3	7	24	4	26	4	2	16	24	56	29	116	82	32	8	44	96	26	74	7	
Rhode Island.....	9	208	49.7	1	1	6	11	2	7	1	1	1	7	1	6	73	50	3	2	1	11	19	5		
Tennessee.....	6	35	50.4			2	1	1	1	1			3	10	3	1			2	3	4		3	1	
Texas.....	6	125	47.1		1	1	9	1	17		1	1	35	24	9	4	3	5		1	13				
Washington.....	6	69	46.1		2		5	2					12	16	20	1				1	1	1			
Wisconsin.....	14	220	51.9	1		3	5	1	8				3	17	6	3	40	75	1	2	7	17	3	27	1
Total.....	421	5,640	50.2	67	63	68	182	70	224	240	54	187	286	533	329	936	673	210	92	265	490	137	483	11	40
Lathe operators, turret, male:																									
Alabama.....	1	(¹)	(¹)				(¹)					(¹)	(¹)												
California.....	18	117	45.8	1	1	5	6	6	3	35	3	2	10	8	7	4	12			1	8			5	
Colorado.....	2	48	51.6						5				16	2			4	8			6		6		
Connecticut.....	18	164	51.7			3	6	1	4		7	1	1	10	13	23	25	5	5	33	5	17	5		
Georgia.....	4	10	50.7																						
Illinois.....	25	556	50.4	4	3	6	25	4	12	33	2	7	14	30	36	162	81	12	4	22	40	23	31	1	4
Indiana.....	14	120	47.6	5	1	2	12	1	7	2	2	3	8		8	30	15	2		5	7		9	1	
Iowa.....	5	36	45.5	1	1	1	4		2	1			9	1		1	1	1			1	3			
Kansas.....	3	5	43.0		1	1																			
Kentucky.....	6	23	50.1			2				1						7				3	1		2		
Louisiana.....	1	(¹)	(¹)																			(¹)			
Maine.....	2	119	48.5	1	2	2	3		3	6		1	1		1	81	10			3	3		2		
Maryland.....	4	33	49.9	2			3		1			1	1		1	5	5	3			5	4	1		
Massachusetts.....	31	448	51.1	3	2	10	12	2	12	7	4	29	23	72	26	60	36	18	3	2	57	38	42		
Michigan.....	25	191	46.7	9	6	4	11	1	5	1	4	25	4	7	13	43	10	3	4	13	17	1	9	1	
Minnesota.....	4	19	41.0	2		1	4					6								1	1				
Missouri.....	11	29	52.0			2				1					3	3							3		
New Hampshire.....	4	25	48.2						2					14		9		9	1		4				

New Jersey	21	168	50.1	8	6	3	4	8	1	8	14	12	30	8	3	1	21	12	20	1							
New York	24	241	48.5	8	3	8	4	7	5	8	19	62	15	46	9	16	2	4	12	13							
Ohio	62	436	50.5	6	4	8	16	4	15	2	14	15	39	74	62	36	11	6	9	33							
Oregon	3	14	40.9	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Pennsylvania	39	574	50.6	8	10	12	26	2	31	2	3	14	25	57	14	90	66	14	7	31							
Rhode Island	8	155	49.7	2	1	5	2	3	3	1	2	1	3	5	100	20	4	6	2	2							
Tennessee	4	11	47.4	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1							
Texas	4	51	47.0	1	3	4	4	11	1	1	10	3	1	4	2	11	11	1	1	1							
Washington	5	46	44.9	1	1	1	2	2	1	11	18	7	2	2	2	2	2	2	2	1							
Wisconsin	13	210	53.6	1	3	1	1	18	2	1	23	8	33	37	3	3	8	18	4	46							
Total	350	3,855	49.9	50	47	77	151	24	148	96	37	149	192	360	230	792	388	111	37	139	339	169	283	2	25		
Machinists, male:																											
Alabama	6	32	53.2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
California	13	98	46.0	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Colorado	2	35	49.0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Connecticut	15	90	53.0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Georgia	6	27	43.8	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Illinois	30	381	49.6	2	6	6	9	7	11	51	1	16	17	4	28	55	27	3	14	41	7	19	2	6	1	1	
Indiana	16	82	50.3	1	1	1	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Iowa	6	40	49.3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Kansas	9	53	50.4	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Kentucky	7	38	48.2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Louisiana	5	31	46.8	2	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Maine	4	42	47.0	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Maryland	5	51	48.9	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Massachusetts	23	127	49.6	1	2	1	3	1	6	14	2	2	6	13	10	23	10	3	2	7	16	1	1	1	1	1	
Michigan	29	220	50.1	3	1	2	5	3	8	5	9	8	9	30	53	21	9	5	6	31	1	11	1	1	1	1	
Minnesota	8	26	49.8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Missouri	17	82	50.0	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
New Hampshire	5	51	50.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
New Jersey	20	129	51.4	1	1	3	8	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
New York	25	267	50.7	3	2	3	8	1	11	6	4	3	24	78	28	10	17	9	3	8	18	10	17	1	6	6	
Ohio	47	300	51.1	4	4	4	4	5	15	8	5	5	21	15	56	24	48	15	4	3	24	3	34	1	3	3	
Oregon	3	8	50.0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Pennsylvania	36	455	52.3	2	2	3	15	1	7	1	5	36	16	30	13	102	35	9	17	20	64	16	57	2	2		
Rhode Island	10	149	49.2	1	3	1	6	1	5	1	1	5	4	10	60	4	5	4	2	2	4	4	1	1	1	1	
Tennessee	8	43	48.0	2	2	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Texas	7	52	45.5	1	3	2	3	5	1	2	1	10	8	7	2	2	2	1	1	2	2	2	2	2	2	2	
Washington	7	63	47.5	1	2	3	3	1	1	1	1	6	33	1	7	7	1	1	1	1	1	1	1	1	1	1	
Wisconsin	10	64	55.5	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Total	379	3,036	50.2	26	32	37	104	28	92	165	41	117	152	276	230	499	359	129	56	92	275	49	241	5	31		
Machinists' and toolmakers' helpers, male:																											
Alabama	4	5	51.7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
California	6	28	46.2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Colorado	2	9	53.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Connecticut	12	58	53.0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

1 Data included in total.

Colorado	2	26	53.7		1				3				2	3	2		4	2		1		6		2
Connecticut	17	194	51.4		3	2	5		7	1		5	4	7	12	10	26	15	12	7	42	22	10	2
Illinois	26	379	51.1	1	5	4	9	2	15	20	3	5	14	7	29	68	83	10	3	28	27	12	33	3
Indiana	14	65	51.6		1		1							1		10	9		2	2	7	3	4	
Iowa	2	26	48.5																			1	1	
Kansas	3	3	53.2																			1	1	
Kentucky	5	15	52.6					1	1						5		1				2	1	4	
Louisiana	1	(1)	(1)																			(1)		
Maine	3	27	50.0		2					3					3		9	3						
Maryland	4	27	51.5				4		2			2	4	4	1		4	1	1	5	7	2	3	1
Massachusetts	32	402	50.4	1	6	10	12	3	10	21	5	28	19	38	23	51	69	7	1	6	8	26	10	46
Michigan	27	164	49.8		2		8		9	9	7	13	5	10	12	46	10				18	18	3	5
Minnesota	6	22	47.4	1			1		1	1		8	1		6	1							2	1
Missouri	9	35	51.3						2	3		1	1	7	8		3	10			3		2	
New Hampshire	4	33	48.3						2	2	1	1			10	18						1		
New Jersey	20	96	50.6	2	1		3		2			3	5	15	19	28	16	15	2	6	14	5	7	1
New York	28	481	49.5	1	3	5	18	1	20	9	4	11	64	202	19	20	20	12	21	18	20	18	38	2
Ohio	64	576	51.2	4	8	8	16	3	8	6	4	11	66	65	65	55	63	12	21	18	96	22	53	2
Oregon	4	10	49.0				2		1	1				4	4									
Pennsylvania	37	425	52.0	2	2	5	15		10	1	10	11	27	48	24	42	42	18	9	23	77	19	34	1
Rhode Island	7	175	49.5	1		3	4		9	1		5	3		4	80	56		1		2	4	1	
Tennessee	4	7	55.8						1	1				2	2									2
Texas	3	45	48.3		1		3		6		1		12	2	6				1		10		1	
Washington	4	33	44.6		2		2		1			8	11	4	4			2					1	
Wisconsin	15	112	52.1			3	6	3	5		2	2	10			19	19	1	3	10	6	1	19	1
Total	358	3,440	50.6	13	38	43	117	16	115	91	45	121	230	438	238	472	407	97	61	150	334	110	275	2
Pattern makers, male:																								
Alabama	1	(1)	(1)											(1)										
California	14	68	45.3	1	2	2	2	1	1	33			2	11			1	1		1	8		2	
Colorado	1	(1)	(1)											(1)										
Connecticut	15	100	52.5		2				3				1	9	10	23	12	9	2	4	7	1	17	
Georgia	2	9	47.5						3							6								
Illinois	15	115	45.5	1		2	13	18	3	14	1	2	3	2	11	18	22	2			1		2	
Indiana	9	47	48.1		1	2	1	2	1	2		3	4	2	3	23	2				3		1	
Iowa	2	3	50.0													3								
Kansas	1	(1)	(1)									(1)												
Kentucky	8	14	48.5						1	2				2	2	4				2				
Louisiana	2	9	53.5						1	3							3				1		4	
Maine	3	14	50.0										2											
Maryland	1	(1)	(1)									(1)				(1)	8							
Massachusetts	33	174	49.1	1		4			10	16		5	4	26	14	62	3		1	3	7	6	9	
Michigan	14	39	49.2		2	1		1	2			2	2	1	2	6	5				6	2	3	
Minnesota	5	21	46.0		1	1				2		3			13						1		1	
Missouri	3	5	56.9													1	1					2	1	
New Hampshire	4	6	50.5								1	1				4					1			
New Jersey	17	66	49.2			2	1	1	1	2	1	7	25	5	5	16	1				2	5		
New York	26	173	47.8		1	5	7		6	6	2	6	52	17	19	29	31	3			15	8		
Ohio	48	230	48.4	7	4	2	8		6	2	2	1	26	23	38	37	31	8	4	11		13		

1 Data included in total.

TABLE D.—Average and classified hours actually worked in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average hours actually worked in one week	Number of employees who during one week worked—																					
				Under 16 hrs.	16 and under 24 hrs.	24 and under 32 hrs.	32 and under 40 hrs.	40 hrs.	Over 40 and under 44 hrs.	44 hrs.	Over 44 and under 45 hrs.	45 hrs.	Over 45 and under 48 hrs.	48 hrs.	Over 48 and under 50 hrs.	50 hrs.	Over 50 and under 54 hrs.	54 hrs.	Over 54 and under 55 hrs.	55 hrs.	Over 55 and under 60 hrs.	60 hrs.	Over 60 and under 72 hrs.	72 hrs.	Over 72 hrs.
				Pattern makers, male—Continued.																					
Oregon.....	2	4	44.2					1		1	1			1											
Pennsylvania.....	32	283	51.8	2	3	2	8	2	13	3	2	18	7	9	13	46	28	8	12	34	24	1	48		
Rhode Island.....	8	48	47.9	1			4		2			1	1		1	32	5				1				
Tennessee.....	8	16	43.6	1			1	4		1			1	3	2	1	1								
Texas.....	1	(¹)	(¹)						(¹)							(¹)									
Washington.....	3	15	44.8	1						1			7	6											
Wisconsin.....	10	177	52.5			1	1		10			5	13	3		6	98	1	3	3	18	1	14		
Total.....	288	1,652	49.3	16	16	17	52	29	64	79	15	48	129	142	135	325	231	35	24	74	99	8	114		
Planer operators, male:																									
Alabama.....	3	6	49.6										3				1	1		1					
California.....	13	27	46.3	1								9	2	3	3	2	2	3			1			1	
Colorado.....	1	(¹)	(¹)																				(¹)		
Connecticut.....	16	190	53.6			3	1		5	1	5	2	2	7	6	23	23	19	10	41	23	2	13		4
Georgia.....	3	3	50.8												1										
Illinois.....	24	171	51.3		2		2	2	5	9		2	10	2	15	44	28	5	2	1	21	7	14		
Indiana.....	12	36	51.5			2	1							1	2	11	6			3	5	1	4		
Iowa.....	4	10	41.5	1			2		1			3		1		1				1					
Kansas.....	5	7	53.4				1					1						4							1
Kentucky.....	6	13	49.6		1				1					6		2					1		2		
Louisiana.....	1	(¹)	(¹)					(¹)																	
Maine.....	3	20	51.1							5			2		1	5	3				1		3		
Maryland.....	3	14	46.6	1		2	1								1	3					7	4	2		
Massachusetts.....	33	208	49.9	1	1	2	5	7	12	7	2	12	6	20	10	54	16	13	4	7	9	2	17		1
Michigan.....	20	98	50.4	2	2	3	1		4			1	4	8	29	3	2	1	13	5	1	9			1
Minnesota.....	8	12	48.9		1							2		2		2				3			1		1
Missouri.....	6	25	51.0					1					2	12	1	2		1					4		
New Hampshire.....	2	14	50.0										1		1	9				1	1	8			
New Jersey.....	23	85	51.8	1	2	1			2		1	3	4	2	6	23	9	1		1	8	6	15		
New York.....	21	155	49.8		2	2	7		9	4		1	21	37	8	15	8	2	4	3	12	5	15		
Ohio.....	66	463	51.5	5	7	9	11	2	16	3	6	3	26	29	34	60	61	32	14	10	66	11	57	1	

Oregon.....	3	4	47.6									1	3																											
Pennsylvania.....	89	280	53.7	2		1	15		11	2	1	9	4	13	8	29	15	6	3	14	22	26	44	1	4															
Rhode Island.....	7	87	50.5		2		1									12	11				2	3	3																	
Tennessee.....	3	6	48.8											5																										
Texas.....	6	6	47.2											1	2																									
Washington.....	3	24	45.1			1	1		1			2	5	8		1	1																							
Wisconsin.....	5	96	53.2			1	2		1			1	7		2	21	18		1	3	8																			
Wisconsin.....	10	96	53.2			1	2		1			1	7		2	21	18		1	3	8																			
Total.....	344	1,963	51.3	14	22	29	51	15	70	40	19	48	101	159	110	344	216	86	89	102	189	66	230	2	11															
Screw-machine operators, hand, male:																																								
California.....	3	4	47.8									1		2		1																								
Connecticut.....	7	31	48.0	1			1		2		2	1	1	1	1	15	4			1	2																			
Illinois.....	11	74	49.7	1	1	1	2		2	3	1	1	5	4	10	15	11	2		3	5	3	2	1																
Indiana.....	6	17	46.6		1		2		1				1		2	6	3																							
Kansas.....	1	(1)	(1)		(1)											(1)																								
Kentucky.....	3	7	50.2				1								2																									
Maine.....	1	(1)	(1)													(1)																								
Maryland.....	2	2	43.2						1	1																														
Massachusetts.....	18	108	49.9	1	1	2	5		1	0	1	13	4	12	5	10	14	1	2	5	10	2	9																	
Michigan.....	11	83	49.2	2	1	1	2	3	6	1	4	1	3	2	14	11	10	2	3		12	1	5																	
Minnesota.....	2	3	42.8				1		1						1																									
Missouri.....	3	9	46.1			2							1	3				3																						
New Hampshire.....	1	(1)	(1)													(1)																								
New Jersey.....	4	29	55.0				1		1	1		4	5	18	39	12	2				4	1	5																	
New York.....	16	99	48.4	1	1	2	1		5	1		4	5	18	39	5	8				1	7	1																	
Ohio.....	38	264	49.5	6	2	6	9	3	6	2	2	3	28	32	44	21	27	7	2	3	23	24	12	2																
Pennsylvania.....	10	53	49.6		1		14		3		1	1	1	9		1	3	1	1	4	2	10	1																	
Rhode Island.....	7	115	48.9			2	5		6	2		6	3		1	65	16		4		2	1																		
Tennessee.....	2	2	60.0												1																									
Wisconsin.....	9	58	51.8	1					3	1	2	3	5		11	15		3	1	2																				
Total.....	155	966	49.4	13	9	16	43	6	38	20	12	34	56	90	118	177	113	16	17	18	63	39	60	5	3															
Screw-machine operators, semi-automatic, male:																																								
Alabama.....	1	(1)	(1)									(1)																												
Connecticut.....	1	(1)	(1)																																					
Georgia.....	1	(1)	(1)																																					
Indiana.....	7	30	46.5	1		2	4	1	1				2	1	1	6	7	1																						
Kentucky.....	2	6	54.1												1	1					2	1																		
Massachusetts.....	5	24	48.0				2									5	11																							
Michigan.....	2	5	56.2																																					
New Jersey.....	6	15	52.5			1									1	5	1																							
New York.....	6	13	49.9				1	1	1	2	1				1	1	1																							
Ohio.....	3	37	53.6	1								1	2		3	3	15		1																					
Pennsylvania.....	3	27	46.9			3	2		3				1	18																										
Rhode Island.....	1	(1)	(1)													(1)																								

¹ Data included in total.

TABLE D.—Average and classified hours actually worked in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average hours actually worked in one week	Number of employees who during one week worked—																					
				Under 16 hrs.	16 and under 24 hrs.	24 and under 32 hrs.	32 and under 40 hrs.	40 hrs.	Over 40 and under 44 hrs.	44 hrs.	Over 44 and under 45 hrs.	45 hrs.	Over 45 and under 48 hrs.	48 hrs.	Over 48 and under 50 hrs.	50 hrs.	Over 50 and under 54 hrs.	54 hrs.	Over 54 and under 55 hrs.	55 hrs.	Over 55 and under 60 hrs.	60 hrs.	Over 60 and under 72 hrs.	72 hrs.	Over 72 hrs.
Screw-machine operators, semi-automatic, male—Continued.																									
Tennessee	4	6	52.3										2	1				1		1					
Texas	1	(1)	(1)				(1)								(1)										
Total	41	171	49.9	2	1	5	10	2	7	3	1	8	6	18	8	23	37	3	1	9	10	1	16		
Screw-machine operators, automatic, male:																									
Alabama	1	(1)	(1)									(1)													
California	2	4	45.6				1			1						2									
Colorado	1	(1)	(1)										(1)	(1)				(1)							
Connecticut	6	13	51.1				(1)						1	1	3			1		5					
Illinois	16	80	50.1	1	1		4		1	1			2	9	17	4	16	3	2	3	4	7	2		
Indiana	7	49	50.9				3		1			2	2	1	1	18	13	1		2			5		
Iowa	2	15	50.3				2	1				3		1		2	2			1		2	2		1
Kentucky	4	23	52.5				1	1		1			5			3	1	2		3	1	5			
Maine	2	8	61.8									1				4	1			1		1			
Maryland	1	(1)	(1)							(1)									(1)				(1)	(1)	(1)
Massachusetts	13	57	50.8			1	1			6		5		4	2	14	7		2	4	2	7			
Michigan	11	79	52.4		2	1	5		1		1	2	6	11	4	8	2	1	1	1	11	9	13		
Minnesota	1	(1)	(1)									(1)							(1)				(1)		
Missouri	3	5	50.0										1	2				1	1						
New Hampshire	2	2	49.0														1								
New Jersey	4	34	53.3									1			1	21	2					7			
New York	13	46	52.8									5	11	3	4	4	4	1			4	5	6		
Ohio	24	202	50.2	2	2	1	3	1	6		6	15	6	12	67	6	18		11	4	22	17	3		
Pennsylvania	14	49	51.2				6	1	1			1	11	2	4	7				3	4	9			
Rhode Island	5	33	49.3				1		1			2	1		1	24						1	1		
Tennessee	2	4	55.0											1						1	2				
Texas	1	(1)	(1)														(1)				(1)				

Washington.....	1	(1)	(1)					(1)																														
Wisconsin.....	8	30	50.0			1	1	4					3	3	1	1	1	5										5	3									
Total.....	144	762	51.1	3	5	4	31	4	24	10	8	37	29	71	100	119	84	11	17	31	62	43	66	2	1													
Toolmakers, male:																																						
Alabama.....	2	2	45.5				1																															
California.....	15	77	48.4			1	1		3	2	20	1	3	4	9	2	1	6	1																			
Colorado.....	2	25	53.5				3								1	1	1	1	1																			
Connecticut.....	17	145	52.4			1	1		1	2		2	3	6	5	14	27	16	2	7	16	18	9	1														
Georgia.....	4	10	51.8														3	2																				
Illinois.....	26	386	49.6			4	5	3	6	4	11	50	2	5	7	6	24	72	81	16	5	16	34	2														
Indiana.....	14	76	51.3			1	1	1	1	1					3	3	25	9	8			4	9	1														
Iowa.....	2	15	47.2			1									8		1						2															
Kansas.....	4	7	48.4				1							2				1	3																			
Kentucky.....	6	13	47.4					1			2	1	1		2	1	4					1																
Maine.....	4	11	55.4								1				1		4																					
Maryland.....	4	73	52.0			1	1		12	2	2				6	20	1	1	2			1	1															
Massachusetts.....	31	364	51.1			4	3	6	12	2	9	13	1	16	16	32	75	25	1	12	35	15	7															
Michigan.....	27	144	51.6			1	1	3	3		4			5	7	6	13	20	2	3	4	11	2															
Minnesota.....	7	22	46.8				1	1			1			8		4	1	1	1	1	1																	
Missouri.....	11	28	50.6				1									5																						
New Hampshire.....	2	19	50.0																																			
New Jersey.....	13	88	50.1				1	2						5	3	17	9	11	1																			
New York.....	27	367	46.6			2	10	9	16		16	0	2	7	60	27	11	9	7		1	14	3															
Ohio.....	58	463	51.2			3	2	4	16		19	4	3	5	29	52	58	74	9	15	16	59	9															
Oregon.....	3	4	48.1															2																				
Pennsylvania.....	37	197	51.5			3	1		3	2	8			7	14	25	5	30	26	2	4	22	16	5														
Rhode Island.....	8	178	50.9				1	1	1	5		2		4	1	2	8	89	47		1																	
Tennessee.....	3	10	50.6								1					6																						
Texas.....	4	22	46.8												7	2	4																					
Washington.....	6	14	47.2					1							7	6																						
Wisconsin.....	13	110	53.0					1	2		3						6																					
Total.....	350	2,850	50.4	20	31	33	67	14	88	109	14	86	171	371	209	459	384	74	51	124	250	45	239	11														

¹ Data included in total.

TABLE E.—Average and classified actual earnings in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State

FOUNDRIES

Occupation, sex, and State	Number of establishments	Number of employees	Average actual earnings in one week	Number of employees whose earnings in one week were—																		
				Under \$5	\$5 and under \$10	\$10 and under \$15	\$15 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 \$85	\$85 and under \$90	\$90 and over
				Chippers and rough grinders, male:																		
Alabama.....	3	23	\$14.87		1	8	14															
California.....	18	123	28.76	2		4	2	22	43	28	17	3	1	1								
Colorado.....	3	44	25.11		1	1	5	15	12	6	3	1										
Connecticut.....	15	111	25.53			1	15	38	36	14	4	2	1									
Georgia.....	7	50	12.74	1	1	36	12															
Illinois.....	26	449	29.16	4	4	15	32	77	106	116	49	23	17	4	2							
Indiana.....	16	170	26.35	4	5	4	11	70	37	17	16	7	3									
Iowa.....	9	103	24.29		2	4	38	19	15	8	11	5	1									
Kansas.....	9	37	19.23		1	3	17	15	1													
Kentucky.....	6	15	22.13			1	3	9		2												
Louisiana.....	3	39	16.98		2	3	27	7														
Maine.....	4	44	24.78		2		1	28	7	5	2	1										
Maryland.....	7	43	22.01		1	1	16	8	13	4												
Massachusetts.....	26	346	24.78	5	6	11	27	151	68	43	23	9	2		1							
Michigan.....	32	401	28.71	4	6	12	56	65	89	66	54	24	13	6	4	1	1					
Minnesota.....	6	46	24.38		2	2	3	22	7	6	4											
Missouri.....	15	71	24.58		1	3	9	22	28	5	2	1										
New Hampshire.....	5	19	23.80				4	8	5	2												
New Jersey.....	14	293	28.84		4	3	16	77	63	74	38	9	7	2								
New York.....	24	334	30.18	2	13	4	13	59	92	54	39	35	17	3		3						
Ohio.....	38	365	24.88	3	8	18	50	123	88	39	21	12	2	1								
Oregon.....	5	26	24.58		1	1	1	8	15													
Pennsylvania.....	39	593	26.84	3	8	22	63	146	173	102	51	15	5	4			1					
Rhode Island.....	8	149	25.08		1	8	14	56	42	16	11	1										
Tennessee.....	5	60	13.71	3	5	31	18	3														
Texas.....	5	30	16.97		2	9	11	5	3													
Washington.....	7	32	27.69			1	3	6	10	6	6											
Wisconsin.....	12	217	31.18	1	9	2	9	42	40	47	30	11	11	10	3		1	1				
Total.....	367	4,233	26.59	28	86	208	490	1,099	993	660	381	159	80	31	10	4	3	1				
Core makers, male:																						
Alabama.....	3	11	30.69				1	3		3	3	1										
California.....	18	140	40.99					2	4	13	16	89	15			1						

Colorado.....	3	22	37.88					2	3	11	6																												
Connecticut.....	16	114	34.92				3	5	12	38	41	7	6	1	1																								
Georgia.....	7	33	20.94			5	12	7	7	2	2																												
Illinois.....	27	331	35.28	1	1	3	17	31	36	49	78	74	31	5	1	3	1																						
Indiana.....	16	177	34.50	1	1	6	3	10	25	54	31	20	17	9																									
Iowa.....	9	88	35.00					6	16	24	20	8		8	4																								
Kansas.....	8	19	29.25				3	2	3	6	4	1																											
Kentucky.....	7	12	30.42					2	3	7	7																												
Louisiana.....	3	9	37.39			1	1			1	1	1	4																										
Maine.....	4	13	21.78					7	3	3																													
Maryland.....	6	43	29.78			1	4	11	9	3	8	6	1																										
Massachusetts.....	26	169	37.06	1		2	5	14	14	10	65	36	8	4	5	2	2																						
Michigan.....	35	344	33.38	1	11	7	13	37	59	57	70	49	23	10	4	1	2																						
Minnesota.....	6	41	28.28			1		14	2	5	8	4																											
Missouri.....	15	66	34.93			1	2	6	3	10	6	9	2	20	1																								
New Hampshire.....	5	8	28.88					2	3	2	1																												
New Jersey.....	15	128	39.91	1		4	10	10	10	11	25	22	26	9	5	3	2																						
New York.....	27	282	35.26	2	6	9	16	25	35	44	46	35	30	20	8	2	2																						
Ohio.....	44	393	38.18	4	2	6	8	21	38	42	74	87	80	24	2	2	3																						
Oregon.....	5	15	32.22				1	2	2	2	6	2																											
Pennsylvania.....	38	522	33.52		2	8	18	42	104	109	135	71	23	4	2	4																							
Rhode Island.....	9	87	33.45	1	1		5	8	15	19	15	10	11	1	1																								
Tennessee.....	7	34	26.10		1	2	5	6	8	9	1	1	1																										
Texas.....	6	23	24.52			3	5	5	2	3	5	3																											
Washington.....	7	24	35.46						1	9	3	3	6																										
Wisconsin.....	13	222	35.32		2	4	9	14	31	55	41	35	11	18																									
Total.....	387	3,370	34.95	12	29	58	156	285	452	586	719	570	319	115	33	19	13	3	1																				
Core makers, female:																																							
Georgia.....	1	(1)	(1)		(1)																																		
Illinois.....	4	24	18.49		2	8	5	5		4																													
Indiana.....	2	22	22.88	1	1	4	2	4	4	3	2	1																											
Kentucky.....	2	3	19.92				2	1																															
Massachusetts.....	1	(1)	(1)			(1)	(1)																																
Michigan.....	10	70	17.11	8	10	16	16	14	7	4																													
New Jersey.....	3	35	20.89		3	7	10	6	3	1	2	3																											
New York.....	5	51	21.43	1		11	10	14	8	4		3																											
Ohio.....	1	(1)	(1)			(1)	(1)	(1)																															
Pennsylvania.....	2	17	13.45		4	8	2	3																															
Rhode Island.....	3	10	20.77			1	3	4		2																													
Wisconsin.....	4	36	20.73		1	6	9	11	8			1																											
Total.....	38	280	19.51	5	21	63	62	65	34	18	4	8																											
Laborers, male:																																							
Alabama.....	4	64	14.45			9	21	34																															
California.....	18	295	28.45	1	3	5	24	51	32	91	26	8	3		1																								
Colorado.....	3	55	20.62	2	8		8	18	14	5																													
Connecticut.....	16	481	24.31	1	10	15	66	173	154	31	18	10	2	1																									
Georgia.....	8	157	13.63	1	7	96	58																																

¹ Data included in total.

Wisconsin.....	11	255	36.20	1	1	9	7	17	40	41	46	44	22	16	8	1	1	1	1	1
Total.....	249	3,854	34.12	26	46	83	169	357	641	755	710	516	286	156	60	23	11	7	8	2
Molders' helpers, floor, male:																				
Alabama.....	3	12	17.87			1	8	8												
California.....	13	75	28.64		1	1	12	28	21	6	1	2	2			1				
Colorado.....	3	40	24.94		3		5	13	10	5	4									
Connecticut.....	11	83	22.08		2	1	19	44	12	5										
Georgia.....	4	23	11.69	3		2	15	2	1											
Illinois.....	12	76	28.44	1		2	4	11	28	20	7	3								
Indiana.....	14	103	22.54	7	8	5	17	20	22	5	12	1	1	1						
Iowa.....	4	30	19.24			3	17	6	2	2										
Kansas.....	2	3	21.95				1	2												
Kentucky.....	5	9	17.39	1	1	2	1	3	1											
Louisiana.....	1	(1)	(1)					(1)												
Maine.....	3	26	16.76	1	4	2	11	8												
Maryland.....	3	18	17.88	1	1	3	8	3	2											
Massachusetts.....	15	79	23.85		3	4	17	23	20	6	12	4		1						
Michigan.....	28	196	25.56	2	5	6	19	62	52	33	12	2	3							
Minnesota.....	5	32	17.91	1	3	6	12	8		1	1									
Missouri.....	9	88	25.10	4	1		9	14	47	11		2								
New Hampshire.....	3	9	20.48			1	2	5	1											
New Jersey.....	14	169	27.37	2	3	6	18	47	45	18	13	8	3	5				1		
New York.....	20	143	31.26	1	1		8	27	20	39	28	13	4	2						
Ohio.....	20	195	21.69	6	7	9	43	78	28	23	1									
Oregon.....	4	24	24.09			2	1	13	6		1									
Pennsylvania.....	32	294	24.11		6	16	37	97	90	22	14	11								
Rhode Island.....	5	37	23.56			2	10	9	10	6										
Tennessee.....	4	19	15.21		4	3	11	1												
Texas.....	4	17	20.92			1	7	5	4											
Washington.....	6	30	22.61		2	3	6	6	6	6	1									
Wisconsin.....	6	84	24.77		1	3	5	31	36	7		1								
Total.....	251	1,919	24.36	30	53	98	299	566	470	230	101	43	18	11		1	1			
Pattern makers, male:																				
Alabama.....	3	10	34.93						3	2	3	2								
California.....	10	82	48.78						3	2	2	2	8	6	10					
Colorado.....	3	20	39.55	1		1	1	1		2	2	5	7	1	1					
Connecticut.....	5	12	32.10		1				3	3	6	1								
Georgia.....	6	12	39.38						1	6	8	3								
Illinois.....	22	149	37.91	1	1	1	2	1	22	20	33	45	15	1	1					
Indiana.....	9	54	46.39						2	2	3	3	24	6	3		1			
Iowa.....	6	17	35.99				1		2	3	2	2	3							
Kansas.....	6	8	46.72									4			1				1	
Kentucky.....	1	(1)	(1)						(1)											
Louisiana.....	1	(1)	(1)						(1)	(1)	(1)									
Maine.....	1	(1)	(1)						(1)	(1)	(1)									
Maryland.....	6	24	37.09						4	4	9	(1)	1	1	3					1
Massachusetts.....	3	124	34.35			1	1	6	23	39	39	8	3	1	3					

1 Data included in total.

TABLE E.—Average and classified actual earnings in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

FOUNDRIES—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average actual earnings in one week	Number of employees whose earnings in one week were—																	
				Under \$5	\$5 and under \$10	\$10 and under \$15	\$15 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 \$85	\$85 and under \$90	$90 and over
Pattern makers, male—Continued																					
Michigan.....	21	151	\$45.29		1	1		4	10	15	24	26	28	10	5	10	9	4	1	1	2
Minnesota.....	2	6	34.34						2	1	2	1									
Missouri.....	10	33	46.02						2		2	10	5	14							
New Hampshire.....	3	4	39.25							1	2										
New Jersey.....	11	102	41.49				3	1	2	11	20	15	44	6							
New York.....	11	103	41.14					5	4	7	29	31	15	3	8		1				
Ohio.....	12	70	45.86				2		2	2	9	15	17	16	2	4	1				
Oregon.....	3	7	42.15								2	4	1								
Pennsylvania.....	14	110	38.54				1	12	25	10	13	11	16	8	10	4					
Rhode Island.....	1	(1)	(1)					(1)	(1)	(1)	(1)										
Tennessee.....	2	6	42.42				1				1		1	3							
Texas.....	4	6	31.63		1			1		1		1	1								
Washington.....	4	16	46.55						2	2	2	2	7	4	1						
Wisconsin.....	6	35	38.83					1	2	5	13	7	6	1							
Total.....	191	1,127	40.69	3	3	4	12	33	110	135	230	220	204	87	45	19	12	4	3	1	2

MACHINE SHOPS

Assemblers, male:																					
Alabama.....	1	(1)	(1)																		
California.....	11	124	\$34.88		1	(1)	(1)	(1)	(1)	10	28	67	9	1	3						
Colorado.....	1	(1)	(1)					(1)	(1)	(1)	24	19	13	18	15	6	6	2		1	1
Connecticut.....	12	138	39.45			2	3	15	4	13	24	19	13	18	15	6	6	2			
Georgia.....	3	13	19.16			1	7	4		1	1										
Illinois.....	22	888	34.69		3	4	10	27	66	135	144	349	83	33	19	7	4	2	2		
Indiana.....	14	391	28.76		3	7	11	37	137	76	51	34	22	11	2						
Iowa.....	6	101	27.46			1		3	21	46	25	4	1								
Kansas.....	4	59	18.61			5	6	23	20	5											
Kentucky.....	7	47	20.94		1	1	4	16	10	14	1										
Louisiana.....	1	(1)	(1)				(1)	(1)	(1)	(1)	(1)										
Maine.....	4	40	28.21		1		2	14	14	12	4	1	1	3	2						

TABLE E.—Average and classified actual earnings in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average actual earnings in one week	Number of employees whose earnings in one week were—																		
				Under \$5	\$5 and under \$10	\$10 and under \$15	\$15 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 \$85	\$85 and under \$90	\$90 and over
Drill-press operators, male:																						
Alabama.....	4	15	\$23.43		1		5	3	3	1		1	1									
California.....	20	97	31.20			3	4	5	37	25	12	6	5									
Colorado.....	2	38	32.62		2	1	4	3	8	7	5	2	1									
Connecticut.....	19	189	32.61	1		4	5	19	43	51	29	19	9									
Georgia.....	6	20	18.07		1	6	6	4	3													
Illinois.....	32	924	34.96	2	7	13	24	72	167	181	193	136	69	42	13	2	1	2				
Indiana.....	15	211	24.81	3	10	1	31	65	59	27	7	5	1	1								
Iowa.....	6	86	27.92	1		2	1	17	31	31	2	1										
Kansas.....	6	22	21.55		3			8	2	2	1											
Kentucky.....	8	43	22.56	1		1	11	17	11	2												
Louisiana.....	2	9	22.76			1				1												
Maine.....	3	29	28.15				5	6	11	5	1	2	1									
Maryland.....	5	41	34.75				1	7	9	7	9	1	2	3	1							
Massachusetts.....	37	466	30.12	2	6	6	34	76	123	109	51	31	16	10	3							
Michigan.....	27	238	29.83	1	1	7	12	47	74	36	29	20	4	3	1	3						
Minnesota.....	8	47	26.69				7	13	12	10	3	1										
Missouri.....	15	77	25.89		2	2	10	22	12	24	3	1	1									
New Hampshire.....	4	30	28.68	1	1		1	7	2	8	10											
New Jersey.....	23	261	35.71	1	2	2	7	27	40	55	41	32	26	18	4	5		1				
New York.....	29	417	30.89	1	8	7	17	46	111	115	65	24	10	7	6							
Ohio.....	76	780	31.63	4	4	6	30	92	208	185	118	61	28	12	5	6				1		
Oregon.....	6	27	26.00			2	4	3	7	7	2	1										
Pennsylvania.....	46	709	30.29	1	12	18	36	116	187	139	103	66	16	14	5	3	2			1		
Rhode Island.....	9	114	30.09	1		1	10	13	33	25	20	4	7									
Tennessee.....	5	22	24.31		1		7	5	5	5	2	2										
Texas.....	5	74	22.09	1	4	3	21	27	5	6	5	1	1									
Washington.....	7	47	29.26		3	1	1	5	9	18	9			1								
Wisconsin.....	15	278	33.38		1	2	5	25	70	71	57	24	12	6	3	1	1					
Total.....	440	5,291	31.17	21	70	89	308	750	1,282	1,148	780	431	209	124	46	21	7	3	2			

TABLE E—Average and classified actual earnings in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average actual earnings in one week	Number of employees whose earnings in one week were—																	
				Under \$5	\$5 and under \$10	\$10 and under \$15	\$15 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 \$85	\$85 and under \$90	$90 and over
Lathe operators, turret, male—Con.																					
Iowa.....	5	36	\$28.89		1	2	1	4	14	8	2	3	1								
Kansas.....	3	5	18.31		1	1	1		2	2											
Kentucky.....	6	23	28.05				3	10	4		1	1									
Louisiana.....	1	(1)							(1)	4											
Maine.....	2	119	24.83	1	1				38	5	1										
Maryland.....	4	33	37.39	1	1	4	12	42	3	4	6	7		3	2					1	
Massachusetts.....	31	448	35.53	1	2	4		38	71	109	80	57	39	25	8	4					
Michigan.....	25	191	31.29	5	3	7	10	13	39	52	31	22	7	4	2						
Minnesota.....	4	19	27.58		2			2	6	6	3										
Missouri.....	11	29	29.93			2	2	3	4	7	4					1					
New Hampshire.....	4	25	32.34					6	4	7	7										
New Jersey.....	21	163	39.58	1	2	6	1	7	9	26	31	30	19	13	14	2	1	1			
New York.....	24	241	34.17		3	4	7	22	31	57	69	26	10	6	1	4	1				
Ohio.....	62	436	35.50	2	4	2	10	37	62	101	104	48	28	20	12	5				1	
Oregon.....	3	14	29.80			1	2	2	1	2	6										
Pennsylvania.....	39	574	34.10	2	7	7	17	40	112	144	119	51	32	23	12	4	1	3			
Rhode Island.....	8	155	30.45			2		25	56	31	27	9	3								
Tennessee.....	4	11	31.47					1	1	3	5		1	2							
Texas.....	4	51	32.81					7	6	11	10	1		8							
Washington.....	5	46	33.84		1	1		1	7	8	25	1	2	2							
Wisconsin.....	13	210	37.85		1	2	2	14	31	32	41	35	30	9	9	3	1				
Total.....	359	3,855	34.92	17	35	52	114	327	626	807	808	504	262	161	83	41	8	7	2	1	
Machinists, male:																					
Alabama.....	6	32	36.41						2	9	9	9		1		1	1				
California.....	13	98	41.01		1				1	5	42	25	16	1	3	3	1				
Colorado.....	2	35	36.21						2	6	14	5	3								
Connecticut.....	15	90	39.97	1		3		1	5	28	25	11	4	6	5	5	1			1	
Georgia.....	6	27	29.61		3	1			9	7	5	1	1								
Illinois.....	30	381	40.98		2	2	6	6	22	46	109	80	49	21	18	14	6				
Indiana.....	16	82	33.55					12	8	26	20	11	2								
Iowa.....	6	40	31.14		1	1		1	12	16	8	2									
Kansas.....	9	53	39.44	1				2	7	9	8	17	5	1	1						
Kentucky.....	7	38	30.91		1		1	3	9	11	13										
Louisiana.....	5	31	37.40			2		2	6	3	3	6	4	3	2						

TABLE E.—Average and classified actual earnings in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average actual earnings in one week	Number of employees whose earnings in one week were—																		
				Under \$5	\$5 and under \$10	\$10 and under \$15	\$15 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 \$85	\$85 and under \$90	\$90 and over
Planer operators, male—Continued.																						
Pennsylvania	39	230	\$41.91		2		8	10	18	27	39	42	23	23	20	7	6	4		1		
Rhode Island	7	37	34.04			2	1		3	16	9	2	3			1						
Tennessee	3	6	34.40						1	3	2											
Texas	3	6	34.24						1	2	3											
Washington	5	24	35.04			1		1		5	15	2										
Wisconsin	10	96	41.02			1	1	4	9	18	15	11	14	9	10	3	1					
Total	344	1,963	38.72	2	11	20	30	76	197	399	469	275	195	125	89	33	22	9	6	2	2	1
Screw-machine operators, hand, male:																						
California	3	4	28.09					1	2		1											
Connecticut	7	31	31.88		1	1	2	4	5	6	2	7	3									
Illinois	11	74	35.55		1	2	3	4	11	8	23	13	3	3	2	1						
Indiana	6	17	30.07			1	1	3	1	6	5											
Kansas	1	(¹)	(¹)		(¹)					(¹)												
Kentucky	3	7	29.17					3		4												
Maine	1	(¹)	(¹)							(¹)												
Maryland	2	2	30.94				1				1											
Massachusetts	18	108	34.07		1	1	4	11	15	31	19	12	9	1	3	1						
Michigan	11	83	38.69		1	1		8	13	16	7	8	14	7	4	2			1	1		
Minnesota	2	3	29.42						3													
Missouri	3	9	26.87				4			3	2											
New Hampshire	1	(¹)	(¹)						(¹)	(¹)	(¹)											
New Jersey	4	29	38.24				3	5	1	5	1	2	5	3	1	3						
New York	16	90	32.56		1		4	4	28	31	19	7	3	1	1							
Ohio	38	264	33.85		1	5	3	9	17	41	71	65	29	26	5	2						
Pennsylvania	10	53	33.14			1	1	5	14	13	9	5	2	2	1							
Rhode Island	7	115	28.66			1	7	21	36	38	7	4		1								
Tennessee	2	2	31.20					1			1											
Wisconsin	9	58	33.87		1		1	4	13	16	9	9	3		2							
Total	155	966	33.42	2	12	11	40	91	184	251	162	97	68	23	16	7			1	1		

Screw-machine operators, semiauto-																	
matic, male:																	
Alabama.....	1	(1)	(1)					(1)									
Connecticut.....	1	(1)	(1)							(1)							
Georgia.....	1	(1)	(1)														
Indiana.....	7	80	24.71	1		2	2	10	8	6	1						
Kentucky.....	2	6	26.02				1	1	2	2							
Massachusetts.....	5	24	30.73				1	3	6	8	6						
Michigan.....	2	5	29.57					2	1	2	2						
New Jersey.....	5	15	40.45					1	2		6	2	2	1		1	
New York.....	5	13	35.12				1	3	2	2	1			2			
Ohio.....	3	37	36.64		1			4	6	5	3	5	6	5	1		
Pennsylvania.....	3	27	34.05				2	3	4	7	8	1			1		1
Rhode Island.....	1	(1)	(1)						(1)								
Tennessee.....	4	6	29.79						4	1	1						
Texas.....	1	(1)	(1)			(1)		(1)	(1)	(1)							
Total.....	41	171	32.16	1	1	3	9	29	37	32	29	8	10	6	3	1	1
Screw-machine operators, automatic, male:																	
Alabama.....	1	(1)	(1)							(1)							
California.....	2	4	28.91						3	1							
Colorado.....	1	(1)	(1)			(1)	(1)	(1)			(1)	(1)					
Connecticut.....	6	13	31.89					2	3	3	4	1					
Illinois.....	16	80	40.54		1		1	1	9	12	19	12	7	10	3	4	1
Indiana.....	7	49	32.56				2	6	12	8	12	3	4				
Iowa.....	2	15	29.17				1	4	6	3		2					
Kentucky.....	4	23	22.78			3	8	3	1	7	1						
Maine.....	2	8	32.78					1	2								
Maryland.....	1	(1)	(1)							(1)	(1)	3					
Massachusetts.....	13	57	37.58			1	3	11	14	5	9	6	2	6		(1)	(1)
Michigan.....	11	79	43.72		1	3	2	2	6	7	10	8	13	8	11	2	3
Minnesota.....	1	(1)	(1)							(1)			(1)	(1)			
Missouri.....	3	6	25.48					3	2								
New Hampshire.....	2	2	28.44						1	1							
New Jersey.....	4	34	41.83					1	11	4	4	3	8	1		2	
New York.....	13	46	40.10			1	1	4	8	14	4	5	4	4	4	1	
Ohio.....	24	202	41.56	1	1		3	4	8	39	38	37	24	16	9	9	2
Pennsylvania.....	14	49	36.42				2	2	8	14	10	8	1	1	1	1	
Rhode Island.....	5	33	37.16						1	9	11	7	1		2		
Tennessee.....	2	4	30.58						1	3							
Texas.....	1	(1)	(1)						(1)		(1)			(1)			
Washington.....	1	(1)	(1)						(1)								
Wisconsin.....	8	30	37.13				1	1	2	11	5	6	2		1		1
Total.....	144	762	38.73	1	3	6	24	40	83	153	138	108	79	64	38	19	9

1 Data included in total.

TABLE E.—Average and classified actual earnings in one week in 8 specified occupations in foundries and 17 in machine shops, 1929, by sex and State—Continued

MACHINE SHOPS—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average actual earnings in one week	Number of employees whose earnings in one week were—																							
				Under \$5	\$5 and under \$10	\$10 and under \$15	\$15 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 \$85	\$85 and under \$90	\$90 and over					
				Toolmakers, male:																							
Alabama.....	2	2	\$34.18						1					1													
California.....	15	77	47.60				1	1					2	19	22	7	8	5	3	4	1				1	3	
Colorado.....	2	25	40.72				2	1						6	6	5	2	1	1								
Connecticut.....	17	145	42.43			2	1							11	47	32	17	19	10	2	1						
Georgia.....	4	10	37.17						1					3	3	1	2										
Illinois.....	26	366	38.85		4	2	3	12	35	50	96	104	23	21	8	4	3				1						
Indiana.....	14	76	38.92		1	1	1		2	10	28	18	8	5	2												
Iowa.....	2	15	32.27		1				4	6		4															
Kansas.....	4	7	31.40					1	2	1				2		1											
Kentucky.....	6	13	36.42								2	7		2	1												
Maine.....	4	11	37.64						4					1	2	1											
Maryland.....	4	73	41.96		1	1			3	13	17	6	13	11	8												
Massachusetts.....	31	364	37.61	1	3	3	5	5	34	107	86	63	16	18	13	3	2	2	3	1	1						
Michigan.....	27	144	42.71				1	2	7	20	29	35	21	12	5	9	2									1	
Minnesota.....	7	22	32.51			1			6	7	6			1													
Missouri.....	11	28	34.41				1	3	3	2	11	7	1														
New Hampshire.....	2	19	38.88						1	5	7	2	1	1	1	1											
New Jersey.....	13	88	39.93				1	1	4	7	26	34	10	4													
New York.....	27	367	38.54		2	3	10	7	11	40	117	132	33	8	2	1	1	1									
Ohio.....	58	463	40.18	1	2	2	2	10	28	70	131	95	53	48	9	6	4	1	1								
Oregon.....	3	4	41.10						1		2	1															
Pennsylvania.....	37	197	38.79		2	2		3	17	38	64	30	16	11	8	4							2				
Rhode Island.....	8	178	34.95				1	3	31	66	45	14	11	6			1										
Tennessee.....	3	10	40.45						1	5	2			2													
Texas.....	4	22	39.90						1	4	6	7		1	1												
Washington.....	6	14	39.19						1		9	3	1														
Wisconsin.....	13	110	40.20					2	5	14	41	23	13	7	3	1				1							
Total.....	350	2,850	39.23	2	16	19	28	53	204	480	811	646	259	185	76	35	19	6	5	2	3	1					

APPENDIX

DESCRIPTION OF FOUNDRY AND MACHINE-SHOP OCCUPATIONS

FOUNDRY

Chippers and rough grinders cut or chip projecting points, fins, or lugs from castings, using hand hammer and cold chisel or pneumatic chisel, and smooth the rough surface by means of a rough grinding machine.

Core makers make cores of sand and a liquid binder and possibly other substances, using a mold or core box to shape the cores. Cores are used to make hollows in castings.

Crane operators use power cranes for moving heavy stock, machinery, castings, ladles, molds, etc., about the foundry.

Cupola tenders are usually responsible for the charging and tend the cupola in which pig iron, scrap, or steel is melted, tap or open the cupola, and run the molten metal into ladles.

Laborers are unskilled employees who, in general, do work requiring little experience wherever needed. They include the following occupations: Annealing firemen, annealers' helpers, assorters (separate castings), breakers (sprues), casting breakers, casting cutters, casting wheelers or carriers, chain carriers, chainmen, chargers, cleaners, churners, core carriers, core cleaners, core handlers, core makers' helpers, core oven firemen, core oven men, core pasters, core pilers, core wire cutters, cupola helpers, cupola laborers, dumpers, gagers, flaggers, flask carriers, flask cleaners, flask men, furnace helpers, iron carriers, knockers-off, ladle cleaners, ladle pushers, metal carriers, mill tenders (tumbler), molders' laborers, oven tenders' helpers, packers (heat treating), pattern carriers, pattern cleaners, picklers, pourers, rattler runners, rollers, sackers (castings), sand-blast helpers, sand cleaners, sand cutters (hand), sand cutters' helpers (machine), sandmen, sand mill operators, sand mixers, sand shovelers, sand wheelers, sand testers, scrap breakers, shakers, shifters, slag breakers, stockers, truckers, tumblers, unloaders, washers, wire cutters, and yardmen.

Molders make the molds for castings and often pour molten metal from ladles into the molds. The molds are hollow impressions made in sand or loam by packing such sand around patterns and cores. The molder then removes the pattern and the sand retains its hollow shape without the support of the pattern. The molds are made in boxes or flasks. Cores are placed in the molds by the molders when hollow castings are to be made. Figures are shown in this report for three classes of molders, namely:

Molders, hand, bench, work at a bench making small-sized molds by hand.

WAGES AND HOURS—FOUNDRIES AND MACHINE SHOPS

Molders, hand, floor, make by hand on the floor of the foundry molds that are too large to be made at a bench and are not readily adaptable to machine molding.

Molders, machine, use machines in making molds.

Molders' helpers, floor, assist floor molders (hand) in making molds.

Pattern makers make wood or metal patterns, which are models for making castings.

Rough carpenters make wooden flasks for molds and do general rough repair work or assist pattern makers.

Sand blasters use a sand-blast apparatus to clean the sand and scale from the surface of castings.

Other employees include all other skilled or semiskilled workers not properly included in any occupation above, such as acetylene welders, air-compressor operators, all-round men, annealers, apprentices, assistant foremen, blacksmiths, blacksmiths' helpers, boss core makers, boss chippers, bricklayers, brick masons, casting inspectors, casting markers, core setters, crane operators (hand), cupola liners, electric-furnace operators, electricians, electric welders, enamelers, engineers (derrick), furnace firemen, furnace tenders (coke, oil, or electric), handy men, handy men's helpers, inspectors, iron pourers, ladle liners and repair men, machine molders' helpers, machine repair men, machinists, maintenance men, melters, melters' helpers, messenger boys, metal men, millwrights, molders' learners, oilers, order men, oven men, packers and craters, painters, pattern chasers, pattern keepers, pattern repair men, pattern shellackers, pattern storage men, pattern tenders, polishers, press operators, pyrometer men, repair men, sand cutters (machine), sand-slinger operators, sand screeners, saw filers, scale clerks, shippers, sorters, and packers, sprue cutters, stock keepers, stopper setters, straightening-press operators, straw bosses, sweepers, tool repair men, tractor drivers, varnishers, water testers, weighmen, welders, and welders' helpers.

MACHINE SHOP

Assemblers bring together the various small parts, pieces, or units of which a machine or engine consists and fasten them together with bolts and nuts, screws, rivets, etc., thereby forming larger units or a complete final unit. The distinction between assemblers and fitters is that the assemblers do little or no filing, scraping, or other fitting.

Blacksmiths are skilled workers who make light and medium-sized forgings, dress tools, and do general anvil work, using forge, anvil, and hammer. Often they are required to harden hand and machine tool bits by heating in the forge and quenching in oil, water, or other liquid.

Blacksmiths' helpers are persons of some degree of skill who assist blacksmiths and tool dressers in their work.

Boring-mill operators operate vertical machines known as boring mills, horizontal boring machines, nonautomatic bullards, and hole-hog machines.

Crane operators run overhead traveling cranes, boom power cranes, or locomotive cranes to move heavy stock, machinery, or products.

Drill-press operators operate radial, multiple, spindle, gang, or automatic drill presses.

Fitters and bench hands.—*Fitters* do necessary chipping, filing, scraping, reaming, and fitting of machine parts to give them proper relation to each other and allow for correct mechanical adjustment in connection with fitting such parts together. *Bench hands* work at a bench performing similar work on parts to make them of proper shape and measurement, but do not usually assemble the parts. The group includes workers who perform both fitting and assembling.

Grinding-machine operators operate the many designs of grinding machines which are usually known by the particular sort of grinding which they are designed to do, as surface, external, internal, rough, plain, tool, universal, cutter, etc. The group includes lapping-machine operators.

Hammersmiths set up dies and operate steam or Bradley hammers to make forgings and are capable of shaping the forgings without the aid of dies. The group includes drop forgers and trip hammermen.

Helpers, not otherwise specified, are certain workers who exercise some degree of skill in assisting workers engaged in the more highly skilled occupations, such as assemblers' helpers, babbitters' helpers, boiler makers' helpers, bricklayers' helpers, buffers' helpers, carpenters' helpers, chain makers' helpers, coppersmiths' helpers, drill-press operators' helpers, electricians' helpers, enamellers' helpers, erectors' helpers, fitters' helpers, flanger helpers, gear-cutter operators' helpers, inspectors' helpers, ironworkers' helpers, layout men's helpers, machine-tool operators' helpers, millwrights' helpers, pattern makers' helpers, pipe fitters' helpers, planer-operators' helpers, plumbers' helpers, riggers' helpers, roll turners' helpers, sheet-metal workers' helpers, steamfitters' helpers, and tinner's helpers.

Laborers are unskilled employees who in general do work requiring little experience wherever needed about the machine shop and yard. They include the following occupations: Carriers, casting cleaners, chippers (chip pullers), furnace-tenders' helpers, heat-treaters' helpers, loaders, machine rubbers, machine-shop and maintenance labor, oil extractors, packers for case hardening, painters' helpers, pattern tenders' helpers, picklers, plating-room and receiving labor, roustabouts, sand blasters, scrap wheelers, shipping labor, stock men, stock keepers' helpers, stock pilers, stock-room and storeroom labor, sweepers, testers' helpers, tool-crib and tool-room helpers, truckers (not electric), tumbler operators, warehouse labor, wheelers, window washers, yard labor, and any other general or common labor.

Lathe operators, engine, operate lead screw, low swing, cam and tool (engine) lathes, including roll-turning lathes.

Lathe operators, turret, are operators of chucking lathes and all other turret lathes, such as monitors, Gisholts, Jones and Lamson (J. & L.), American, Libbys, etc.

Machinists are persons who (a) repair or adjust one or more kinds of machines used in a machine shop; (b) set one or more kinds of automatic or semiautomatic machines without operating them; (c) set up and operate most of the kinds of machines usually found in machine shops. Each of these three groups may also do bench work or fitting. A man may have been qualified as an all-round machinist, but if he was actually employed as a machine operator during the pay period taken he is so classified in this study, while if required to operate various tools he is classified as a "machinist." In highly specialized shops few employees were found who could be properly

classed as machinists. A man who both set up and operated one machine only, or a man who operated one or even several machines but did not also set them up, was classed as a machine operator. Includes machine tool repair men, machine setters and those actually working as all-round machinists.

Machinists' and tool makers' helpers are persons with some degree of skill who assist machinists and toolmakers in their work.

Milling-machine operators operate plain, universal, horizontal, vertical, cam, hand, automatic, keyway, and thread mills, profilers, and any other milling machines not specified.

Packers and craters wrap, pack, and crate materials for shipment. They do not as a rule make the boxes or crates used in the process, but often assemble the parts of the box or crate about the article or object to be shipped.

Pattern makers make wood or metal patterns. These models are sent to a foundry where they are used as forms to shape the castings.

Planner operators operate all types of planers, except milling planers (milling-machine operators) and shapers (other precision-machine operators).

Polishers and buffers use grinding wheels to polish metals that are to be plated and buffing wheels to buff the plated parts.

Screw-machine operators, hand, operate hand screw machines and are required to set the tools, chuck the work, and attend each operation, stopping the machine when the operation is completed.

Screw-machine operators, semiautomatic, usually chuck each individual piece of stock and start the machine. The cutting tools and other mechanism are usually properly adjusted by a machine setter. Several of these machines may be run simultaneously by the same operator. Once started the machine completes an operation and stops automatically.

Screw-machine operators, automatic, operate full automatic screw machines, which ordinarily use bar stock and machine a large number of small pieces without attention, and automatic lathes which ordinarily perform multiple operations on individual pieces of stock. These machines, like the semiautomatic screw machines, are adjusted by a machine setter.

Sheet-metal machine operators run various sheet-metal machines such as bending, breaking, crimping, flanging, rolling machines, square and round shears, and punch presses.

Toolmakers are skilled workers who make and repair cutting tools such as reamers, milling cutters, twist drills, boring tools, facers, also dies, jigs, gauges, and other things of like nature. In shops where the operations in the tool room are not specialized the toolmakers operate various machines. In specialized shops some operations are performed by machine operators who are not classified as toolmakers but rather as milling-machine operators, lathe operators, etc.

Other precision-machine operators are skilled workers who operate broachers, bolt cutters, burring and centering machines, gear cutters and gear generators, hobbers, keyseaters, pointing machines, shapers, slotters, special and single purpose lathes (except roll turners) such as facing, pulley, speed, spinning, and wristing lathes, tapping machines, threaders, trimming machines, and other precision machines not elsewhere specified.

DESCRIPTION OF FOUNDRY AND MACHINE-SHOP OCCUPATIONS

Other skilled occupations.—This group includes all skilled workers not covered in other occupations. They are all put in this one class because no one occupation includes a sufficient number to warrant a separate tabulation. The more important occupations in this group are as follows: Air-hammer men, annealers, armature winders, babbitters, balancers, boilermakers, box makers, bricklayers, burnishers, carpenters, calkers, chain makers, cleaners and fillers of sinker heads (textile), coil winders, cold trimmers, coppersmiths, die setters, dippers, electricians, etchers, flask makers (metal), forging-press operators, furnace tenders, galvanizers, glazers, heaters, heat treaters, inspectors, iron workers, japaners, lacquerers, layout men, letterers, machine adjusters (other than machine tool), masons, millwright, needle-bar fillers (textile), nipple-machine operators, painters (except casting), pipe fitter, platers, plumbers, pumpmen, riggers, riveters, saw filers, sawyers, set-up men (other than machine tool), sheet-metal hand workers, solderers, sprayers, stencilers, straighteners, strippers, swaging-machine operators, template makers (wood), testers, tanners, tinmiths, transferrers, varnishers, welders, woodworkers, and *working* foremen whose positions require skill as well as judgment.

Other employees include apprentices and other workers whose duties require little or no skill, as well as all others who are not provided for elsewhere, such as beltmen, boltheaders, brakemen, casting painters, cold-saw operators, conveyer operators, crane followers, or hitchers, electric truckers, elevator operators, errand boys, expeditors, greasers, hookers-on, hydraulic-press operators, learners, markers, messenger boys (shop), oilers, order pickers, pressmen (air), pressmen (hydraulic), pattern shellackers, pattern storemen, pipe cutters, power-saw men, rivet buckers, rivet heaters, rivet passers, shipping clerks, sorters, stock keepers, stock tracers, tool chasers, tool-crib tenders, truckers (electric), weighmen, water testers, and *working* foremen whose positions require judgment rather than skill.

LIST OF BULLETINS OF THE BUREAU OF LABOR STATISTICS

The following is a list of all 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.*

Conciliation 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. 255. Joint industrial councils in Great Britain. [1919.]
- No. 283. History of the Shipbuilding Labor Adjustment Board, 1917 to 1919.
- No. 287. 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 (credit unions) 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.
- No. 520. Social and economic character of unemployment in Philadelphia, April, 1920.

Foreign Labor Laws.

- *No. 142. Administration of labor laws and factory inspection in certain European countries. [1914.]
- No. 494. Labor legislation of Uruguay. [1929.]
- No. 510. Labor legislation of Argentina. [1930.]

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] 1923.

Occupational Accidents and Hygiene.

- No. 104. Lead poisoning in potteries, tile works, and porcelain enameled sanitary ware factories. [1912.]
- No. 120. Hygiene of painters' trade. [1913.]
- *No. 127. Danger to workers from dust 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.]
- *No. 201. Report of the committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions. [1916.]
- *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 stonemasons. [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. 281. 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. Occupational hazard and diagnostic signs: A guide to impairments to be looked for in hazardous occupations. [1922.]
- 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. 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. [1926.]
- No. 488. Deaths from lead poisoning, 1925-1927.
- No. 490. Statistics of industrial accidents in the United States to the end of 1927.
- No. 507. Causes of death by occupation. [1929.]

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 movement in Germany. [1924.]
- 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. [1926.]

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. [1926.]
- No. 406. Laws relating to payment of wages. [1926.]
- No. 486. Labor legislation of 1928.
- No. 517. Decisions of courts and opinions affecting labor, 1927-1928.

Proceedings of Annual Conventions of the Association of Governmental Labor Officials of the United States and Canada. (Name changed in 1938 to Association of Governmental Officials in India the United States and Canada.)

- No. 266. Seventh, Seattle, Wash., July 13-15, 1920.
- No. 307. Eighth, New Orleans, La., May 9-9, 1921.
- No. 323. Ninth, Harrisburg, Pa., May 23-26, 1922.
- *No. 352. Tenth, Richmond, Va., May 1-4, 1923.
- *No. 389. Eleventh, Chicago, Ill., May 19-22, 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 21-24, 1928.
- No. 509. Sixteenth, Toronto, Canada, June 4-7, 1929.

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

- No. 210. Third, Columbus, Ohio, April 25-28, 1916.
- No. 246. Fourth, Boston, Mass., August 21-25, 1917.
- No. 264. Fifth, Madison, Wis., September 24-27, 1918.
- *No. 273. Sixth, Toronto, Canada, September 23-25, 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 25-28, 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.
- No. 511. Sixteenth, Buffalo, N. Y., October 8-11, 1929.

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 25, 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. 326. 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 merchant blast furnaces. [1928.]
- No. 475. Productivity of labor in newspaper printing. [1929.]

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.]
- No. 357. Cost of living in the United States. [1924.]
- No. 369. The use of cost-of-living figures in wage adjustments. [1925.]
- No. 495. Retail prices, 1899 to 1927.

Safety Codes.

- *No. 331. Code of lighting: Factories, mills, and other work places.
- No. 336. Safety code for the protection of industrial workers in foundries.
- No. 350. Specifications of laboratory tests for approval of electric headlighting devices for motor vehicles.
- *No. 351. Safety code for the construction, care, and use of ladders.
- No. 375. Safety code for laundry machinery and operations.

Codes—Continued.

- No. 382. Code of lighting school buildings.
- No. 410. Safety code for paper and pulp mills.
- No. 430. Safety code for power presses and foot and hand presses.
- No. 433. Safety codes for the prevention of dust explosions.
- No. 436. Safety code for the use, care, and protection of abrasive wheels.
- No. 447. Safety code for rubber mills and calenders.
- No. 451. Safety code for forging and hot-metal stamping.
- No. 463. Safety code for mechanical power-transmission apparatus—first revision.
- No. 509. Textile safety code.
- No. 512. Code for identification of gas-mask canisters.
- No. 519. Safety code for woodworking plants, as revised 1930.

Vocational and Workers' Education.

- *No. 159. Short-unit courses for wage earners, and a factory school experiment. [1915.]
- *No. 162. Vocational education survey of Richmond, Va. [1915.]
- *No. 199. Vocational education survey of Minneapolis, Minn. [1917.]
- No. 271. Adult working-class education in Great Britain and the United States. [1920.]
- No. 459. Apprenticeship in building construction. [1928.]

Wages and Hours of Labor.

- *No. 146. Wages and regularity of employment and standardization of piece rates in the dress and waist industry of New York City. [1914.]
- *No. 147. Wages and regularity of employment in the cloak, suit, and skirt industry. [1914.]
- No. 161. Wages and hours of labor in the clothing and cigar industries, 1911 to 1913.
- No. 163. Wages and hours of labor in the building and repairing of steam railroad cars, 1907 to 1913.
- *No. 190. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914.
- No. 204. Street-railway employment in the United States. [1917.]
- No. 225. Wages and hours of labor in the lumber, millwork, and furniture industries, 1915.
- No. 265. Industrial survey in selected industries in the United States, 1919.
- No. 297. Wages and hours of labor in the petroleum industry, 1920.
- No. 356. Productivity costs in the common-brick industry. [1924.]
- No. 358. Wages and hours of labor in the automobile-tire industry, 1923.
- No. 360. Time and labor costs in manufacturing 100 pairs of shoes, 1923.
- *No. 365. Wages and hours of labor in the paper and pulp industry, 1923.
- No. 394. Wages and hours of labor in metalliferous mines, 1924.
- No. 407. Labor costs 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. 416. Hours and earnings in anthracite and bituminous coal mining, 1922 and 1924.
- *p. 471. Wages and hours of labor in foundries and machine shops, 1927.
- No. 472. Wages and hours of labor in the slaughtering and meat-packing industry, 1927.
- No. 476. Union scales of wages and hours of labor 1927. [Supplement to Bulletin 457.]
- No. 484. Wages and hours of labor of common street laborers, 1928.
- No. 487. Wages and hours of labor in woolen and worsted goods manufacturing, 1910 to 1928.
- No. 492. Wages and hours of labor in cotton-goods manufacturing, 1910 to 1928.
- No. 497. Wages and hours of labor in the lumber industry in the United States, 1928.
- No. 498. Wages and hours of labor in the boot and shoe industry, 1910 to 1928.
- No. 499. History of wages in the United States from colonial times to 1928.
- No. 502. Wages and hours of labor in the motor-vehicles industry, 1928.
- No. 503. Wages and hours of labor in the men's clothing industry, 1911 to 1928.
- No. 504. Wages and hours of labor in the hostery and underwear industries, 1907 to 1928.
- No. 513. Wages and hours of labor in the iron and steel industry, 1929.
- No. 514. Pennsylvania Railroad wage data. From Report of Joint Fact Finding Committee in wage negotiations in 1927.
- No. 515. Union scales of wages, May 15, 1929.
- No. 516. Hours and earnings in bituminous coal mining, 1929.

Welfare Work.

- *No. 123. Employer's welfare work. [1913.]
- No. 222. Welfare work in British munitions factories. [1917.]
- *No. 250. Welfare work for employees in industrial establishments in the United States. [1919.]
- No. 458. Health and recreation activities in industrial establishments, 1926.

Wholesale Prices.

- No. 284. Index number of wholesale prices in the United States and foreign countries. [1921.]
- No. 453. Revised index numbers of wholesale prices, 1923 to July, 1927.
- No. 521. Wholesale prices, 1929.

Women and Children in Industry.

- No. 116. Hours, earnings, and duration of employment of wage-earning women selected in the District of Columbia. [1913.]
- *No. 117. Prohibition of night work of young persons. [1913.]
- *No. 118. Ten-hour maximum working-day for women and young persons. [1913.]
- No. 119. Working hours of women in the pea canneries of Wisconsin. [1913.]
- *No. 120. Employment of women in power laundries in Milwaukee. [1913.]
- *No. 122. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories. [1914.]
- *No. 167. Minimum-wage legislation in the United States and foreign countries. [1915.]
- *No. 175. Summary of the report on conditions of women and child wage earners in the United States. [1915.]
- *No. 176. Effect of minimum-wage determinations in Oregon. [1915.]
- *No. 180. The boot and shoe industry in Massachusetts as a vocation for women. [1915.]
- *No. 182. Unemployment among women in department and other retail stores of Boston, Mass. [1916.]
- No. 193. Dressmaking as a trade for women in Massachusetts. [1916.]
- No. 215. Industrial experience of trade-school girls in Massachusetts. [1917.]
- *No. 217. Effect of workmen's compensation laws in diminishing the necessity of industrial employment of women and children. [1918.]
- *No. 223. Employment of women and juveniles in Great Britain during the war. [1917.]
- No. 253. Women in the lead industries. [1919.]

Workmen's Insurance and Compensation (including laws relating thereto).

- *No. 101. Care of tuberculous wage earners in Germany. [1912.]
- *No. 102. British national insurance act, 1911.
- No. 103. Sickness and accident insurance law in Switzerland. [1912.]
- No. 107. Law relating to insurance of salaried employees in Germany. [1913.]
- *No. 155. Compensation for accidents to employees of the United States. [1914.]
- *No. 212. Proceedings of the conference of social insurance called by the International Association of Industrial Accident Boards and Commissions, Washington, D. C., December 5-9, 1916.
- *No. 243. Workmen's compensation legislation in the United States and foreign countries, 1917 and 1918.
- No. 301. Comparison of workmen's compensation insurance and administration. [1922.]
- No. 312. National health insurance in Great Britain, 1911 to 1921.
- No. 379. Comparison of workmen's compensation laws of the United States as of January 1, 1925.
- No. 477. Public-service retirement systems, United States and Europe. [1929.]
- No. 496. Workmen's compensation legislation of the United States and Canada as of January, 1929. (With text of legislation enacted in 1927 and 1928.)

Miscellaneous series.

- *No. 174. Subject index of the publications of the United States Bureau of Labor Statistics up to May 1, 1915.
- No. 208. Profit sharing in the United States. [1916.]
- No. 242. Food situation in central Europe, 1917.
- No. 254. International labor legislation and the society of nations. [1919.]
- No. 268. Historical survey of international action affecting labor. [1920.]
- No. 282. Mutual relief associations among Government employees in Washington, D. C. [1921.]
- No. 299. Personal research agencies: A guide to organized research in employment management, industrial relations, training, and working conditions. [1921.]
- No. 319. The Bureau of Labor Statistics: Its history, activities, and organization. [1922.]
- No. 326. Methods of procuring and computing statistical information of the Bureau of Labor Statistics. [1923.]
- No. 342. International Seamen's Union of America: A study of its history and problems. [1923.]
- No. 346. Humanity in government. [1923.]
- No. 372. Convict labor in 1923.
- No. 356. Cost of American almshouses. [1925.]
- No. 398. Growth of legal-aid work in the United States. [1925.]
- No. 401. Family allowances in foreign countries. [1926.]
- No. 461. Labor organization in Chile. [1928.]
- No. 462. Park recreation areas in the United States. [1928.]
- No. 465. Beneficial activities of American trade-unions. [1928.]
- No. 479. Activities and functions of a State department of labor. [1928.]
- No. 483. Conditions in the shoe industry in Haverhill, Mass., 1928.
- No. 490. Care of aged persons in United States. [1929.]
- No. 491. Handbook of labor statistics, 1929 edition.
- No. 505. Directory of homes for the aged in the United States. [1929.]
- No. 506. Handbook of American trade-unions: 1929 edition.
- No. 518. Personnel research agencies, 1930 edition.

2003-04
CHECKED