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WAGES AND HOURS OF LABOR IN THE
BUILDING AND REPAIRING OF STEAM
RAILROAD CARS: 1907 TO 1913



OCTOBER 28, 1914

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WAGES AND HOURS OF LABOR IN THE BUILDING AND REPAIRING OF STEAM RAILROAD CARS: 1907 TO 1913.

SUMMARY.

This report, based on information obtained from representative establishments, shows the full-time weekly earnings, the full-time hours of labor per week and the rates of wages (or earnings) per hour, in the principal occupations in the building and repairing of steam railroad cars in the United States.

Figures relating to full-time hours of labor per week and rates of wages (or earnings) per hour are presented for the years 1907 to 1913, inclusive. Average full-time weekly earnings are also presented for the years 1910 to 1913, inclusive. Earlier reports of this Bureau present wages and hours of labor in the industry from 1890 to 1912, inclusive.¹

Briefly summarized the average full-time weekly earnings of employees engaged in building and repairing steam railroad cars in 1913 were 5.5 per cent higher than such earnings in 1912, 6 per cent higher than in 1911, and 8.9 per cent higher than in 1910. The full-time hours of labor per week in this industry in 1913 were 0.7 per cent lower than in 1912, 0.4 per cent lower than in 1911, and 1.1 per cent lower than in 1910. Rates of wages or earnings per hour in 1913 were 6.3 per cent higher than in 1912, 6.4 per cent higher than in 1911, and 9.9 per cent higher than in 1910.

The most significant facts concerning the occupations covered by this report are summarized in the table following. The data for the years 1907 to 1911 were secured in 1911. Owing to the difficulty of finding establishments having records extending back for a period of years and also owing to the amount of work involved, data for 1907 to 1909 were secured from a smaller number of establishments, some of them, perhaps, less representative than those which have furnished data for the later years. According to the plan of the

¹ Previous reports on wages and hours of labor in the building and repairing of steam railroad have been published by the Bureau, as follows: Nineteenth Annual Report, covering 1890 to 1903; Bulletin No. 59 (July, 1905), covering 1903 and 1904; Bulletin No. 65 (July, 1906), covering 1904 and 1905; Bulletin No. 71 (July, 1907), covering 1905 and 1906; Bulletin No. 77 (July 1908), covering 1906 and 1907; and Bulletin No. 137 (December, 1913), covering 1907 to 1912, inclusive.

table, direct comparisons can be made properly between the data for two or more successive years only when the data are from identical establishments. The figures for identical establishments for successive years are grouped. The data are for one pay-roll period in each year, the period ending nearest May 15th being selected, except in a very few establishments in which conditions in May were abnormal.

The figures for rates of wages per hour and hours of labor per week for the years 1907 to the first presentation for 1912 are reproduced from Bulletin No. 137. The average full-time weekly earnings for 1910 to 1912 have been computed for this Bulletin from the data gathered for those years. The average full-time weekly earnings have not been computed for the period 1907 to 1910. It will be observed that the average full-time weekly earnings are not exactly the same as the product of the average rate of wages per hour and the average full-time hours per week. This difference is explained and illustrated on page 18.

In 1913 the average full-time weekly earnings of employees engaged in building and repairing steam railroad cars, represented by 13 occupations, varied from \$10.58 for laborers to \$19.50 for upholsterers. The average full-time hours of labor per week in 1913 varied from 54.5 to 57.2 hours in the several occupations, the average for all occupations being 56 hours. Only a very few females were found employed in this industry and in only one occupation; the number being so insignificant, data relative to them have been omitted from this report.

The table follows:

AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK, AND RATES OF WAGES PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS IN EACH OF THE PRINCIPAL OCCUPATIONS IN CAR BUILDING AND REPAIRING, 1907 TO 1913.

[The figures set opposite each group of years are for identical establishments.]

Occupation, and number of establishments.	Year.	Number of employees.	Average full-time hours per week.	Per cent of employees whose full-time hours per week were—				Average rate of wages per hour.	Per cent of employees earning each classified rate of wages per hour.					Average full-time weekly earnings.
				Under 54	54	Over 54 and under 60	60 and over.		Under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 cts. and over.	
Cabinetmakers: 16 establishments.	1907	686	54.7	8.7	60.6	22.0	8.6	\$0.3345	0.4	5.4	23.2	61.8	9.1	(1)
	1908	520	54.6	11.7	63.1	11.0	9.2	.3207	.2	4.4	31.3	62.5	1.5	(1)
	1909	573	54.6	12.6	60.6	18.5	8.4	.3149	.2	5.4	33.3	57.6	3.5	(1)
	1910	658	54.6	11.1	60.6	20.1	8.2	.3423	.....	1.8	24.9	62.8	10.6	(1)
34 establishments.	1910	1,169	54.9	14.9	38.8	33.0	13.3	.3227	.5	7.8	30.4	53.9	7.5	\$17.68
	1911	1,155	55.0	15.5	36.8	35.1	12.6	.3254	.2	4.2	32.4	53.0	10.2	17.85
34 establishments.	1911	1,161	55.0	14.9	37.3	35.4	12.5	.3247	.2	4.0	33.2	52.4	10.2	17.82
	1912	1,183	54.9	12.3	48.9	26.8	11.9	.3354	.6	.9	27.0	58.7	12.8	18.37
36 establishments.	1912	1,190	54.9	12.8	48.7	26.6	11.9	.3353	.6	1.0	26.9	58.7	12.8	18.36
	1913	1,473	54.6	15.2	54.5	20.2	10.1	.3487	.3	1.1	17.4	62.7	18.3	19.03

¹ Not computed.

AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK, AND RATES OF WAGES PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS IN EACH OF THE PRINCIPAL OCCUPATIONS IN CAR BUILDING AND REPAIRING, 1907 TO 1913—Continued.

Occupation, and number of establishments.	Year.	Number of employees.	Average full-time hours per week.	Per cent of employees whose full-time hours per week were—				Average rate of wages per hour.	Per cent of employees earning each classified rate of wages per hour.					Average full-time weekly earnings.		
				Under 54	54	Over 54 and under 60	60 and over.		Under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 cts. and over.			
Carpenters and car builders, wood: 20 establishments.	1907	4,139	55.6	6.2	55.5	18.8	19.5	\$0.3027	3.2	21.8	30.1	31.2	13.7	(1)		
	1908	2,594	55.5	12.6	49.7	21.4	16.4	.2942	1.1	22.5	28.8	43.2	4.3	(1)		
	1909	3,323	55.8	8.3	46.7	23.8	21.1	.2820	3.1	27.9	31.1	34.1	3.7	(1)		
	1910	3,649	55.6	7.8	51.1	22.1	19.0	.3182	1.5	19.1	25.0	35.7	18.8	(1)		
	55 establishments.	1910	8,156	56.3	8.4	33.8	29.3	28.4	.2955	8.0	23.5	22.4	33.6	12.6	\$16.56	
		1911	7,801	56.0	10.5	36.8	27.8	25.0	.2945	4.4	24.6	25.8	36.5	8.9	16.42	
	63 establishments.	1911	7,979	56.1	10.3	39.5	23.2	27.0	.2917	3.9	24.8	28.6	35.2	7.6	16.29	
		1912	7,543	56.4	10.5	35.8	18.9	34.8	.2851	8.0	25.1	28.1	31.3	7.6	15.98	
	65 establishments.	1912	8,288	56.7	8.7	32.6	18.9	39.8	.2854	8.3	24.5	28.0	31.6	7.4	16.10	
		1913	8,660	56.2	16.1	30.0	24.7	29.1	.3065	2.7	21.5	27.8	34.7	13.3	17.11	
	Car repairers: 16 establishments.	1907	2,332	56.7	11.4	19.0	39.3	30.3	.2467	16.0	43.9	20.1	18.4	1.6	(1)	
		1908	1,703	56.5	15.7	22.3	35.9	26.1	.2442	17.4	46.9	17.2	17.6	1.0	(1)	
1909		2,111	55.6	16.2	33.8	33.3	16.7	.2411	11.2	49.8	26.7	10.7	1.5	(1)		
1910		2,399	55.7	15.0	31.9	36.7	16.4	.2575	8.0	46.1	21.6	22.9	1.3	(1)		
48 establishments.		1910	6,877	55.9	12.7	39.4	19.7	28.3	.2436	21.8	43.8	15.2	16.4	2.7	13.58	
		1911	6,592	55.5	15.0	43.8	16.4	24.7	.2510	18.2	43.6	16.9	17.9	3.5	13.90	
58 establishments.		1911	7,539	55.9	13.0	39.6	17.3	29.9	.2578	15.1	43.2	16.5	20.7	4.5	14.39	
		1912	9,334	56.4	8.7	40.9	18.3	32.0	.2589	13.3	38.0	25.7	19.2	3.9	14.59	
59 establishments.		1912	9,395	56.5	8.7	40.6	18.8	31.9	.2589	13.4	37.9	25.6	19.2	3.9	14.60	
		1913	10,221	56.0	12.6	40.2	19.0	28.2	.2716	7.1	39.4	26.3	19.2	7.8	15.15	
Fitters: 9 establishments.		1910	1,739	57.4	3.2	24.6	48.2	24.0	.2441	42.8	18.2	16.3	14.8	8.0	13.84	
		1911	1,478	55.3	9.1	42.8	37.1	11.1	.2730	27.8	17.1	15.6	29.0	10.7	15.00	
	11 establishments.	1911	1,761	56.0	7.7	35.9	33.6	22.8	.2606	35.5	16.0	13.9	25.3	9.4	14.45	
		1912	1,700	56.6	3.8	30.6	38.7	26.9	.2501	37.2	19.6	16.5	18.0	8.7	14.03	
	12 establishments.	1912	1,782	56.8	3.6	29.2	37.0	30.2	.2503	35.6	20.5	17.7	17.7	8.3	14.08	
		1913	2,305	56.6	4.6	35.9	31.7	27.9	.2853	18.6	27.3	13.8	22.3	18.1	15.99	
	Machine woodworkers: 20 establishments.	1907	584	55.6	9.2	50.7	17.5	22.6	.2829	4.8	21.1	33.6	38.7	1.9	(1)	
		1908	473	54.9	13.3	58.1	15.9	12.7	.2879	3.8	17.3	32.6	45.7	.6	(1)	
		1909	488	55.4	11.3	49.6	21.8	17.4	.2859	4.0	21.3	28.7	43.9	2.0	(1)	
		1910	602	55.0	9.0	64.3	14.7	12.1	.2899	2.7	23.8	29.2	41.2	3.2	(1)	
		58 establishments.	1910	1,512	55.9	9.7	35.4	34.3	20.6	.2667	13.2	27.1	27.9	29.7	2.2	14.80
			1911	1,331	56.0	10.6	32.3	33.6	23.5	.2731	12.9	22.1	29.9	33.1	2.2	15.22
68 establishments.		1911	1,443	56.2	9.8	32.3	30.9	26.9	.2703	13.3	22.5	31.6	30.6	2.0	15.11	
		1912	1,268	56.1	11.1	31.6	29.5	27.8	.2790	9.0	21.8	31.8	35.2	2.3	15.56	
70 establishments.		1912	1,319	56.5	11.0	30.4	25.5	33.0	.2771	10.1	22.8	30.6	34.3	2.2	15.54	
		1913	1,507	55.8	13.2	38.4	23.5	24.9	.2928	3.5	22.7	30.0	39.3	4.5	16.26	
Machinists: 12 establishments.		1907	308	56.0	13.6	30.8	19.2	36.4	.3008	.....	16.6	38.0	39.3	6.2	(1)
		1908	259	54.2	16.6	60.6	19.7	3.1	.3150	.....	10.4	34.7	40.5	14.3	(1)
	1909	304	54.3	14.5	63.8	18.1	3.6	.3065	.....	11.5	34.9	45.7	7.9	(1)	
	1910	342	54.3	12.3	62.0	22.5	3.2	.3249	.....	5.8	33.6	40.0	15.5	(1)	
	38 establishments.	1910	860	55.3	18.4	39.4	30.3	11.9	.3072	.1	7.7	43.6	40.9	7.6	16.92	
		1911	889	54.4	23.3	42.3	25.9	8.5	.3158	.3	6.5	42.9	41.4	8.9	17.15	
	34 establishments.	1911	588	56.7	9.2	22.6	38.0	30.3	.3145	.2	14.5	29.6	44.2	11.6	17.75	
		1912	555	56.6	9.2	27.0	33.0	30.8	.3142	3.9	14.8	28.8	38.4	14.1	17.67	
	35 establishments.	1912	562	56.6	9.1	26.7	32.5	31.7	.3139	3.9	14.8	28.6	38.8	13.9	17.66	
		1913	710	56.2	10.6	30.3	43.8	15.4	.3187	3.0	9.2	30.1	42.4	15.3	17.81	

1 Not computed.

AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK, AND RATES OF WAGES PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS IN EACH OF THE PRINCIPAL OCCUPATIONS IN CAR BUILDING AND REPAIRING, 1907 TO 1913—Continued.

Occupation, and number of establishments.	Year.	Number of employees.	Average full-time hours per week.	Per cent of employees whose full-time hours per week were—				Average rate of wages per hour.	Per cent of employees earning each classified rate of wages per hour.					Average full-time weekly earnings.
				Under 54	54	Over 54 and under 60	60 and over.		Under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 cts. and over.	
Painters:														
19 establishments.	1907	1,146	55.2	16.8	44.6	21.8	16.8	\$0.3066	6.8	22.4	21.8	32.9	16.1	(1)
	1908	874	54.8	22.4	48.1	16.2	13.4	.2912	3.7	21.4	22.9	45.0	7.1	(1)
	1909	1,098	56.0	18.4	44.5	22.7	14.3	.2967	8.1	19.7	22.2	43.7	6.3	(1)
	1910	1,348	54.8	14.0	60.0	15.7	10.3	.3174	3.8	17.7	20.5	39.9	18.2	(1)
60 establishments.	1910	2,664	55.5	14.5	39.2	26.7	19.6	.2959	10.5	20.4	23.7	31.3	14.2	\$16.34
	1911	2,911	55.4	13.5	43.6	25.8	17.1	.3037	8.1	20.3	22.3	33.9	15.5	16.76
69 establishments.	1911	3,102	55.7	12.4	41.4	24.8	21.5	.3029	7.8	21.2	22.4	33.7	14.9	16.79
	1912	2,846	55.5	12.1	44.9	20.6	22.5	.3092	5.5	20.9	22.9	34.3	16.4	17.09
72 establishments.	1912	2,996	55.8	11.5	42.7	19.6	26.3	.3040	8.1	21.4	22.9	32.6	15.6	16.85
	1913	3,205	55.5	16.0	41.6	20.4	22.0	.3221	2.9	19.6	19.1	38.4	19.8	17.77
Pipe fitters:														
18 establishments.	1907	266	55.0	10.2	57.1	19.5	13.2	.3039	1.6	11.7	44.7	30.8	11.3	(1)
	1908	222	54.7	12.2	63.5	16.7	7.7	.3024	1.4	11.7	38.7	45.9	2.3	(1)
	1909	258	54.9	12.4	57.8	18.2	11.6	.2942	1.2	12.8	44.6	38.4	3.1	(1)
	1910	303	54.8	11.2	62.0	15.2	11.6	.3283	1.6	7.3	37.0	28.4	25.8	(1)
48 establishments.	1910	593	55.2	16.2	40.8	30.1	12.8	.3052	3.0	13.8	36.8	32.0	14.3	16.73
	1911	651	54.9	14.3	46.9	28.1	10.8	.3177	1.2	14.1	30.6	35.0	18.4	17.40
50 establishments.	1911	678	55.7	10.0	42.5	26.1	21.4	.3210	1.7	11.7	28.3	40.3	18.0	17.95
	1912	515	55.2	12.2	49.3	25.7	12.8	.3244	5.0	7.2	25.0	43.9	18.9	17.85
52 establishments.	1912	541	55.6	11.6	44.7	24.7	18.9	.3190	5.6	9.8	26.0	40.7	18.0	17.65
	1913	576	55.1	16.3	45.3	23.9	14.4	.3382	1.4	5.0	25.0	44.8	23.8	18.56
Riveters and buckers:														
14 establishments.	1910	1,524	56.0	4.0	16.1	71.3	8.6	.3127	19.3	16.4	16.3	28.3	19.7	\$17.51
	1911	802	55.3	21.9	29.2	35.4	13.5	.2812	16.5	30.5	16.7	24.4	11.8	15.50
16 establishments.	1911	1,160	56.7	15.6	20.5	24.5	39.4	.2734	19.2	27.8	19.8	24.7	8.5	15.44
	1912	1,220	56.8	4.3	19.7	48.6	27.5	.3056	11.9	22.4	17.9	29.9	18.4	17.27
17 establishments.	1912	1,407	57.2	3.3	17.8	42.2	36.8	.2943	16.5	23.3	17.9	26.4	15.8	16.73
	1913	1,655	57.2	4.4	18.1	43.9	33.5	.3414	6.3	16.7	21.3	26.3	29.5	19.41
Tinners:														
15 establishments.	1907	228	54.5	15.8	51.3	27.2	5.7	.3422	.4	4.4	24.6	43.4	27.2	(1)
	1908	178	54.4	20.2	51.1	24.7	3.9	.3350	1.2	4.5	24.2	57.3	12.9	(1)
	1909	280	54.5	15.4	55.7	23.9	5.0	.3228	.8	7.9	22.1	65.4	3.9	(1)
	1910	456	54.2	10.1	69.5	19.7	.7	.3724	.4	2.0	11.6	44.5	41.5	(1)
48 establishments.	1910	745	54.8	13.2	50.3	26.7	9.8	.3424	.3	7.1	23.8	41.3	27.5	18.70
	1911	745	54.9	13.3	47.1	27.8	11.8	.3439	.6	6.2	20.1	47.9	25.0	18.80
54 establishments.	1911	785	55.2	12.6	44.6	26.2	16.6	.3424	.7	5.7	21.4	48.2	23.9	18.82
	1912	632	54.7	15.3	46.2	28.0	10.4	.3403	5.4	3.5	19.1	46.7	25.3	18.59
56 establishments.	1912	635	54.9	15.3	45.0	28.2	11.5	.3394	5.4	4.3	19.2	46.0	25.2	18.53
	1913	679	54.5	19.6	45.7	28.0	6.8	.3546	1.2	4.4	15.3	47.4	31.5	19.28
Truck builders:														
14 establishments.	1907	421	55.5	21.9	39.9	15.4	22.8	.2477	19.5	40.4	20.4	17.6	2.2	(1)
	1908	276	55.2	28.6	35.9	17.0	18.5	.2493	6.8	51.1	24.6	16.3	1.2	(1)
	1909	327	55.3	18.3	43.1	22.3	16.2	.2442	9.4	51.1	22.3	16.5	.6	(1)
	1910	393	55.2	10.9	51.9	24.2	13.0	.2568	4.1	48.3	26.2	20.4	1.0	(1)
44 establishments.	1910	1,011	56.1	16.8	34.7	26.7	21.7	.2449	23.5	36.5	21.1	17.6	1.3	13.57
	1911	907	55.0	18.5	43.0	20.8	17.6	.2538	13.9	38.7	26.4	19.6	1.4	13.86
44 establishments.	1911	943	55.4	17.0	37.9	21.3	23.2	.2534	13.6	40.4	25.8	18.8	1.5	13.93
	1912	891	55.7	14.0	33.9	27.7	24.4	.2645	11.2	39.5	22.1	23.5	3.7	14.64
41 establishments.	1912	923	56.2	13.5	31.0	20.3	29.1	.2607	13.6	40.4	20.8	21.6	3.6	14.55
	1913	961	55.6	14.6	35.2	27.9	22.4	.2768	3.9	36.7	30.7	21.6	6.8	15.31

¹ Not computed.

AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK, AND RATES OF WAGES PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS IN EACH OF THE PRINCIPAL OCCUPATIONS IN CAR BUILDING AND REPAIRING, 1907 TO 1913—Concluded.

Occupation, and number of establishments.	Year.	Number of employ-ees.	Average full-time hours per week.	Per cent of employ-ees whose full-time hours per week were—				Average rate of wages per hour.	Per cent of employees earning each classified rate of wages per hour.					Average full-time weekly earnings.
				Under 54	54	Over 54 and under 60	60 and over.		Under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 cts. and over.	
Upholsterers:														
18 establishments..	1907	231	54.6	13.4	61.9	16.5	8.2	\$0.3276	0.4	7.4	27.3	58.9	6.1	(1)
	1908	179	54.4	19.0	61.5	11.8	7.8	.3170	.....	6.7	29.1	63.1	1.1	(1)
	1909	196	54.6	16.8	58.2	17.3	7.7	.3169	.5	4.6	30.6	64.3	.....	(1)
	1910	269	54.5	13.4	68.4	11.5	6.7	.3433	.4	4.1	20.8	60.2	14.5	(1)
42 establishments..	1910	477	55.1	14.0	45.3	25.6	15.1	.3232	.8	11.1	24.7	52.2	11.1	\$17.74
	1911	500	54.9	13.8	52.2	20.0	14.0	.3449	.....	2.4	25.8	44.4	27.4	18.87
46 establishments..	1911	506	54.9	17.6	48.6	19.7	14.0	.3440	.....	2.2	25.9	44.9	27.1	18.82
	1912	473	54.9	13.3	52.4	19.5	14.8	.3514	.....	1.5	22.2	45.2	31.1	19.23
46 establishments..	1912	474	54.9	13.3	52.7	19.2	14.8	.3513	.....	1.5	22.2	45.4	31.0	19.23
	1913	511	54.8	16.0	51.3	20.2	12.5	.3573	.2	2.0	17.8	46.6	33.5	19.50
Laborers:														
20 establishments..	1907	4,671	56.0	7.2	42.0	22.1	28.7	.1813	5.3	21.2	48.5	16.2	8.8	(1)
	1908	1,907	56.0	15.4	32.6	23.0	29.0	.1873	7.7	23.1	33.6	20.0	15.5	(1)
	1909	2,963	55.8	14.2	38.9	23.3	23.5	.1823	5.9	29.2	34.1	18.0	12.8	(1)
	1910	3,823	55.2	9.6	45.4	28.7	16.4	.1986	1.8	10.7	36.9	33.1	17.3	(1)
60 establishments..	1910	10,114	56.1	9.6	26.3	43.7	20.5	.1751	7.4	38.0	26.8	19.3	8.3	9.78
	1911	7,695	56.0	12.8	29.6	35.5	22.1	.1760	7.8	36.3	27.8	18.7	9.4	9.69
68 establishments..	1911	8,001	56.2	12.3	27.5	33.1	27.2	.1731	10.7	38.3	24.7	17.7	8.6	9.69
	1912	8,208	56.3	7.9	29.6	36.7	25.8	.1786	9.7	29.1	34.2	16.4	10.6	10.02
72 establishments..	1912	8,546	56.4	7.6	28.7	35.5	28.2	.1784	9.7	28.5	35.0	16.5	10.3	10.04
	1913	9,818	56.1	11.9	26.3	37.4	24.4	.1892	6.7	15.0	38.2	28.8	11.3	10.58

¹ Not computed.

Wages and hours of labor vary in different establishments; hence, the inclusion or exclusion of an establishment in a group, if it differs considerably from the average, may raise or lower the average for the group. In the above table it is seen that data for carpenters and car builders, for instance, are reported for 63 identical establishments for 1911 and 1912, and 65 identical establishments for 1912 and 1913. This does not necessarily mean, however, that all of the 63 establishments in the former period are included in the 65 establishments in the latter period. Some of them may have dropped out and others secured to take their places; hence, if the average earnings of employees in the establishments which were dropped out

vary materially from the average of those secured to replace them, the average earnings for the latter period would be increased or decreased accordingly. In this occupation it is seen that the average full-time weekly earnings decreased from \$16.29 in 1911 to \$15.98 in 1912 in the 63 establishments, and increased from \$16.10 in 1912 to \$17.11 in 1913 in the 65 establishments reported. Since the two groups of establishments do not show exactly the same earnings for 1912, being \$15.98 in 63 establishments and \$16.10 in 65, it would not be a correct comparison to state that the earnings increased from \$16.29 in 1911 to \$17.11 in 1913. The movement from one year to another is indicated with the greater degree of certainty by the figures for identical establishments. The difference between \$16.29 and \$15.98 represents the decrease from 1911 to 1912, and the difference between \$16.10 and \$17.11 represents the increase from 1912 to 1913 as nearly as can be determined from the data available. In the table the comparable data for identical establishments are grouped together.

Owing to the change in the number of establishments from year to year and the consequent change in the yearly averages it is difficult to determine from the actual data the extent of the changes during the period. To aid in the determination of the extent of such changes relative (or index) numbers have been computed from the averages in the preceding table for full-time hours per week, rates of wages per hour, and full-time weekly earnings for each occupation, for the years 1910 to 1913, inclusive. These relative numbers are simply percentages in which the figures for 1913 are taken as the base or 100 per cent. The relative for each year is the per cent that the average in that year is of the average for 1913, as determined by the method explained on page 20. Thus for example, in the table below, the full-time weekly earnings of cabinetmakers in 1910 were 92.7 per cent of the full-time weekly earnings in 1913.

It will be observed that the general tendency of the several occupations is toward a reduction of working hours and an increase in rates of wages per hour and of earnings per full week. No data are available to show the amount of work afforded employees each year or the variation from year to year. The relative full-time hours per week indicate the change in the hours of labor of employees working full time, and do not reflect in any way the greater or less amount of full-time work afforded. This point is further discussed on page 17.

RELATIVE FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS IN THE PRINCIPAL OCCUPATIONS IN CAR BUILDING AND REPAIRING, 1910 TO 1913.

(1913=100.0)

Year.	Cabinetmakers.			Carpenters and car builders.			Car repairers.			Fitters.		
	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time weekly earnings.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time weekly earnings.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time weekly earnings.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time weekly earnings.
1910..	100.5	92.3	92.7	100.9	95.6	96.7	100.7	92.1	92.9	103.1	81.7	83.7
1911..	100.7	93.1	93.6	100.4	95.3	95.9	100.0	94.9	95.0	99.3	91.4	90.7
1912..	100.5	96.2	96.5	100.9	93.1	94.1	100.9	95.3	96.4	100.4	87.7	88.1
1913..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Laborers.			Machine woodworkers.			Machinists.			Painters.		
1910..	100.5	90.9	92.6	101.2	89.5	90.2	102.6	95.9	98.3	101.1	90.1	90.8
1911..	100.4	91.4	91.8	101.4	91.7	92.8	100.9	98.6	99.6	100.9	92.5	93.2
1912..	100.5	94.3	94.9	101.3	94.6	95.6	100.7	98.5	99.2	100.5	94.4	94.8
1913..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Pipe fitters.			Riveters and buckers.			Tinners.			Truck builders.		
1910..	102.4	89.7	91.9	101.1	85.8	87.1	101.5	95.9	96.8	102.6	87.1	88.5
1911..	101.8	93.3	95.6	99.8	77.1	77.1	101.7	96.3	97.3	100.5	90.2	90.4
1912..	100.9	94.3	95.1	100.0	86.2	86.2	100.7	95.7	96.1	101.1	94.2	95.0
1913..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Upholsterers.											
1910..	100.5	90.2	90.7									
1911..	100.2	96.2	96.5									
1912..	100.2	98.3	98.6									
1913..	100.0	100.0	100.0									

A like table of relative numbers is next shown for the industry as a whole, as determined by a combination of the data for the several occupations covered. Data were obtained for the principal occupations of the industry, but not for all occupations. The method of computing this table is explained on page 22.

RELATIVE FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS IN CAR BUILDING AND REPAIRING, 1910 TO 1913.

(1913=100.0)

Years.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time weekly earnings.
1910.....	101.1	91.0	91.8
1911.....	100.4	94.0	94.3
1912.....	100.7	94.1	94.8
1913.....	100.0	100.0	100.0

From the table it is seen that the relative (or index) number for full-time hours per week in the industry decreased from 101.1 in 1910 to 100.4 in 1911, increased to 100.7 in 1912, and decreased to 100 in 1913. The relative or index number for rate of wages per hour increased from 91 in 1910 to 100 in 1913, or, in other words, the relative rate of wages per hour in 1910 was 91 per cent of the relative rate in 1913. The increase in full-time weekly earnings was nearly the same as the increase in wages per hour, it being from an index of 91.8 in 1910 to 100 in 1913.

CHANGE OF BASE.

In examining the relative or index numbers for the several occupations and for the industry as a whole in the tables above, it will be observed that they have been computed with 1913 taken as a base, or 100 per cent. In the preceding reports of the Bureau relating to this industry, relative numbers for rates of wages per hour and for hours of labor per week for the several occupations were presented back to 1890 and the base or 100 per cent was not the average rate of wages per hour, or the average full-time hours per week in any one year, but the average rate of wages per hour and the average full-time hours per week for the 10-year period, 1890-1899. The table of such relative numbers for the years 1890 to 1912 appears in the appendix on page 56.

There are several reasons for changing the base to the most recent year. The primary reason for the change is that as the scope of the inquiry has been enlarged in recent years it has seemed necessary, in order to represent the industry adequately, to include additional occupations. As no data were available for these occupations for 1890 to 1899, no relatives or index numbers could be computed for them with such period as a base. By using the last year as a base, however, it is possible to compute relatives for such additional occupations.

Again, relative or index numbers are most frequently used to compare the present year with different preceding years, and generally with the few years immediately preceding. Probably comparison between 1913 and 1912 will be made more often than between any other two years, and a comparison of any relative number with 100 conveys a clearer idea than a comparison with any other number. For example, the ratio 91.8 : 100 is more clearly grasped than the equal ratio 132.6 : 144.4.

A third reason for a change of base from 1890-1899 to 1913 is that imperfections, if any (due, for example, to a small number of establishments), in the index in earlier years are continued when additions are made from year to year to an old series of index numbers. The data for 1913 are the most comprehensive and satisfactory that have

been gathered in any year and the data back to 1910 are more satisfactory than in the earlier years. This reason for the change of base is further explained on page 19.

For this Bulletin relative numbers have been computed back to the year 1910 on the basis of 1913 equals 100 per cent. They were not computed for earlier years because data were available only from a considerably smaller number of establishments, and further because of the large amount of work involved. The relative numbers for the several occupations were computed in both from the old and the new series by the same process, which is explained on page 20. The relative numbers for the occupations differ, of course, in the new and the old series because of the change of the base; but the ratio existing between any two years is the same in both series. The relative numbers for the industry as a whole have likewise been recomputed with 1913 as the base.

CHANGE IN METHOD OF COMPUTING THE INDUSTRY RELATIVES.

In addition to making a change of the base year, a change has also been made in the method of computing the industry relatives; and, because of this change, the relatives for the industry as a whole here presented not only differ from the relatives computed by the old method but show a slightly different ratio of change from year to year. Heretofore, the relative numbers for an industry were averages of the relative numbers of the several occupations. For each year, for example, the relative rate of wages per hour of each occupation was multiplied (weighted) by the number of employees in that occupation. The products thus computed for the several occupations were added, and the sum of the products for all occupations divided by the total number of employees in all occupations.

In computing the relative numbers from 1910 to 1913 for the industry as a whole, as presented in this Bulletin, a combination was made, not of the relative numbers for the several occupations, but of the actual hours and wages of the several occupations. For each year the average hours and wages were computed for all employees in all occupations and the average for each preceding year was compared with the average for 1913 to determine the index. It was deemed necessary to make this change in method because by computing the industry relative by averaging the occupation relatives a change in the industry is not always accurately reflected by the relative thus computed. This reason is more fully explained on page 22.

In addition to the relative numbers shown for the several occupations and for the industry, three tables are here presented showing the per cent of increase or decrease in full-time hours of labor per week, rates of wages per hour, and full-time weekly earnings in 1913, as compared with each preceding year back to 1910. The figures of

these tables are computed from the relative numbers shown on page 11, and simply reverse the method of comparison. Each of the three tables also shows the increase or decrease in 1912 as compared with 1911, and in 1911 as compared with 1910. Referring to the first line of the first table below it is seen that the full-time hours of labor of cabinetmakers in 1913 were 0.5 per cent lower than in 1910, 0.7 per cent lower than in 1911, and 0.5 per cent lower than in 1912. Further, it is seen that the full-time hours of labor in this occupation were 0.2 per cent lower in 1912 than in 1911, and 0.2 per cent higher in 1911 than in 1910. The other figures of the table are read in like manner.

PER CENT OF INCREASE OR DECREASE IN **FULL-TIME HOURS PER WEEK**, 1913 COMPARED WITH EACH OF THE 3 YEARS PRECEDING, 1912 COMPARED WITH 1911, AND 1911 COMPARED WITH 1910.

Occupation.	Per cent higher (+) or lower (-) in 1913 than in—			Per cent higher (+) or lower (-) in—	
	1910	1911	1912	1912 than in 1911	1911 than in 1910
Cabinetmakers.....	-0.5	-0.7	-0.5	-0.2	+0.2
Carpenters and car builders.....	-.9	-.4	-.9	+ .5	-.5
Car repairers.....	-.7	(¹)	-.9	+ .9	-.7
Fitters.....	-3.0	+ .7	-.4	+1.1	-3.7
Laborers.....	-.5	-.4	-.5	+ .1	-.1
Machine woodworkers.....	-1.2	-1.4	-1.3	-.1	+ .2
Machinists.....	-2.5	-.9	-.7	-.2	-1.7
Painters.....	-1.1	-.8	-.5	-.4	-.2
Pipe fitters.....	-2.3	-1.8	-.9	-.9	-.6
Riveters and buckers.....	-1.1	+ .2	(¹)	+ .2	-1.3
Tinners.....	-1.5	-1.7	-.7	-1.0	+ .2
Truck builders.....	-2.5	-.5	-1.1	+ .6	-2.0
Upholsters.....	-.5	-.2	-.2	(¹)	-.3
The industry.....	-1.1	-.4	-.7	+ .3	-.7

¹ No change.

PER CENT OF INCREASE OR DECREASE IN **RATES OF WAGES PER HOUR**, 1913 COMPARED WITH EACH OF THE 3 YEARS PRECEDING, 1912 COMPARED WITH 1911, AND 1911 COMPARED WITH 1910.

Occupation.	Per cent higher (+) or lower (-) in 1913 than in—			Per cent higher (+) or lower (-) in—	
	1910	1911	1912	1912 than in 1911	1911 than in 1910
Cabinetmakers.....	+ 8.3	+ 7.4	+ 4.0	+ 3.3	+ 0.9
Carpenters and car builders.....	+ 4.6	+ 4.9	+ 7.4	- 2.3	-.3
Car repairers.....	+ 8.6	+ 5.4	+ 4.9	+ .4	+ 3.0
Fitters.....	+22.4	+ 9.4	+14.0	- 4.0	+11.9
Laborers.....	+10.0	+ 9.4	+ 6.0	+ 3.2	+ .6
Machine woodworkers.....	+11.7	+ 9.1	+ 5.7	+ 3.2	+ 2.5
Machinists.....	+ 4.3	+ 1.4	+ 1.5	-.1	+ 2.8
Painters.....	+11.0	+ 8.1	+ 5.9	+ 2.1	+ 2.7
Pipe fitters.....	+11.5	+ 7.2	+ 6.0	+ 1.1	+ 4.0
Riveters and buckers.....	+16.6	+29.7	+16.0	+11.8	-10.1
Tinners.....	+ 4.3	+ 3.8	+ 4.5	-.6	+ .4
Truck builders.....	+14.8	+10.9	+ 6.2	+ 4.4	+ 3.6
Upholsters.....	+10.9	+ 4.0	+ 1.7	+ 2.2	+ 6.7
The industry.....	+ 9.9	+ 6.4	+ 6.3	+ .1	+ 3.3

PER CENT OF INCREASE OR DECREASE IN FULL-TIME WEEKLY EARNINGS, 1913 COMPARED WITH EACH OF THE 3 YEARS PRECEDING, 1912 COMPARED WITH 1911, AND 1911 COMPARED WITH 1910.

Occupation.	Per cent higher (+) or lower (-) in 1913 than in—			Per cent higher (+) or lower (-) in—	
	1910	1911	1912	1912 than in 1911	1911 than in 1910
Cabinetmakers.....	+ 7.9	+ 6.8	+ 3.6	+ 3.1	+ 1.0
Carpenters and car builders.....	+ 3.4	+ 4.3	+ 6.3	- 1.9	- 2.8
Car repairers.....	+ 7.6	+ 5.3	+ 3.7	+ 1.5	+ 2.3
Fitters.....	+19.5	+10.3	+13.5	- 2.9	+ 8.4
Laborers.....	+ 8.0	+ 8.9	+ 5.4	+ 3.4	- .9
Machine woodworkers.....	+10.9	+ 7.8	+ 4.6	+ 3.0	+ 2.9
Machinists.....	+ 1.7	+ .4	+ 5.8	- .4	+ 1.3
Painters.....	+10.1	+ 7.3	+ 5.5	+ 1.7	+ 2.6
Pipe fitters.....	+ 8.8	+ 4.6	+ 5.2	- .5	+ 4.0
Riveters and buckers.....	+14.8	+29.7	+16.0	+11.8	-11.5
Tinners.....	+ 3.3	+ 2.8	+ 4.1	- 1.2	+ .5
Truck builders.....	+13.0	+10.6	+ 5.3	+ 5.1	+ 2.1
Upholsterers.....	+10.3	+ 3.6	+ 1.4	+ 2.2	+ 6.4
The industry.....	+ 8.9	+ 6.0	+ 5.5	+ .5	+ 2.7

In addition to the text tables already presented, five general tables are given, namely:

Table I.—Average and classified rates of wages per hour in the United States, by years, 1907 to 1913.

Table II.—Average and classified rates of wages per hour in each year, by States, 1912 and 1913.

Table III.—Average and classified full-time hours of work per week in the United States, by years, 1907 to 1913.

Table IV.—Average and classified full-time hours of work per week in each year, by States, 1912 and 1913.

Table V.—Average full-time hours per week and average weekly earnings, by States, 1912 and 1913.

In Tables I and III, in addition to actual data, percentages computed therefrom are given. The data from these two tables are summarized in the text table on pages 6 to 9.

When data for a State are available in sufficient amount to warrant presentation, such data are presented by States in Tables II and IV. In Tables II and IV the data for 1912 and 1913 are for identical establishments, hence the figures for these years are directly comparable.

A brief description of the occupations named in this report was published in Bulletin 137 of the Bureau of Labor Statistics, and the reader is referred to that volume for such information.

EXPLANATION OF SCOPE AND METHOD.

This report includes information obtained from establishments engaged in building and repairing steam railroad cars, both passenger and freight, and both wood and steel.

All information was secured from pay rolls of the various establishments by the agents of the Bureau. The number of establishments for which data were secured varied considerably during the period included in this report, as follows:

1907 to 1910.....	22 identical establishments.
1910 to 1911.....	61 identical establishments.
1911 to 1912.....	70 identical establishments.
1912 to 1913.....	73 identical establishments.

The data for 1907 to 1911 were secured in 1911 and the number of establishments included for the full period for 1907 to 1910, inclusive, was limited, owing to the difficulty of finding establishments that had preserved complete records for those years and also owing to the large amount of work involved. Data were not secured from a greater number of establishments in more recent years, because of the limited funds available for the purpose.

The establishments also vary from year to year as certain establishments go out of business or cease to be representative and new establishments must be substituted in the wage study. Occasionally occupations are dispensed with in a shop or new occupations are introduced and sometimes data are not available for all occupations desired from an establishment. Data for a group of establishments in any year will not be precisely the same as for another group of establishments in the same year, even though nearly all of the establishments may be common to both groups. In using the actual figures in this report comparison from year to year should be made only between data coming from identical establishments. In the tables the data from identical establishments are grouped together. Data from an establishment are not included in the report unless the information for at least two years is available.

In selecting establishments from which to secure data the Bureau undertook to represent all States in which steam railroad car building and repairing is of material importance, the measure of importance being the number of employees. A few States having a considerable number of employees in the industry are not represented, because the employees are so scattered in small repair shops as to make it impracticable to get data from them. The table which follows shows by States the number of employees in car building and repairing as reported by the United States Census Office for 1910, the total number on the pay roll in the establishments for which the Bureau secured data for 1913, and the number in the selected occupations for whom data for 1913 are shown.

TOTAL NUMBER OF EMPLOYEES IN CAR BUILDING AND REPAIRING AND NUMBER OF EMPLOYEES IN ESTABLISHMENTS FOR WHICH DATA ARE SHOWN FOR 1913.

State.	Number of employees reported by United States Census Office, 1910.	Establishments for which data are shown by Bureau of Labor Statistics for 1913.		
		Number of establishments.	Number of employees—	
			On pay roll.	For whom data are shown.
Pennsylvania.....	54,411	8	12,574	6,880
Illinois.....	34,076	5	16,622	7,957
Ohio.....	23,010	9	5,453	3,287
New York.....	18,841	2	1,808	1,208
Indiana.....	16,968	7	4,710	2,796
Missouri.....	11,786	7	4,722	2,813
Texas.....	9,782	4	1,826	1,293
Michigan.....	9,503	2	2,477	994
California.....	9,488	2	1,725	1,379
Wisconsin.....	9,189	2	3,678	2,567
Minnesota.....	8,320	3	2,161	1,615
Kansas.....	8,213	2	1,435	1,135
Virginia.....	7,669	3	2,150	1,408
Iowa.....	7,501			
New Jersey.....	6,768	2	844	613
Tennessee.....	6,670	6	2,800	1,744
Georgia.....	6,413			
Alabama.....	6,388	4	2,015	1,560
Maryland.....	6,096			
West Virginia.....	5,975			
Massachusetts.....	5,778	2	1,810	1,257
Kentucky.....	5,741	3	2,531	1,775
Other States ¹	46,674			
Total.....	325,260	73	71,341	42,281

¹ Includes States having less than 5,000 employees in 1910.

According to the census of 1910 more than 77.7 per cent of the total number of employees in the industry are found in the States in which the establishments furnishing information to the Bureau of Labor Statistics are located. The number of employees in the establishments from which the Bureau obtained 1913 data was equal to 21.9 per cent of the total in the industry in 1910, and the number of such employees for which the Bureau presents detailed information for 1913 was equal to 13.0 per cent of the total in the industry in 1910.

The pay-roll period taken each year was the one nearest May 15, except in a very few establishments where abnormal conditions made it desirable to take a pay roll for some other time of the year.

The full-time hours of labor per week shown in the tables of the report are the regular full-time hours of work of the occupation under normal conditions in the establishment. The working time is the hours on duty including intervals of waiting for work. The full-time hours per week and the relatives based thereon do not in any way indicate the extent of unemployment. Employees may work overtime, or broken time, or be laid off, or a temporary reduction may be

made in working hours, without such change affecting the full-time hours per week as presented in this Bulletin.

The rates of wages per hour appearing in the tables include the wages of time workers and the earnings of pieceworkers. All time rates by the day or week have been reduced to rates per hour, and the earnings of pieceworkers or of persons working at both time and piece rates have been reduced to rates per hour by dividing the earnings by the hours worked. The time workers and pieceworkers of each occupation are combined in one group.

The full-time weekly earnings are the earnings per week of employees working full time and the earnings on broken time reduced to equivalent earnings for a full week. In considering changes in full-time earnings per week, notice should also be taken of changes in full-time hours of labor per week. A reduction in the hours of a pieceworker may reduce his earnings in a week and leave his earnings per hour unchanged, while a reduction of hours for a week worker will, if his weekly rate remains the same, increase his rate per hour.

The averages of full-time hours per week, rates of wages per hour, and full-time weekly earnings are computed by adding the data for the individual employees and dividing the total by the number of employees.

It will be observed that the average full-time weekly earnings is not, in some instances, exactly the same as the result that would be obtained by multiplying the average rate per hour by the average hours per week owing to the fact that hourly rates for individual employees are based on varying hours per week, thus each rate is weighted and affects the average according to the hours worked. A hypothetical illustration shows the difference.

Employees.	Full-time hours per week.	Rate of wages per week.	Rate of wages per hour.
1.....	48	\$15.00	\$0.3125
1.....	54	14.00	.2593
1.....	54	16.00	.2963
1.....	60	12.00	.2000
Total (4).....	216	57.00	1.0681
Average.....	54	14.25	.2670

The product of \$0.2670 multiplied by 54 is \$14.42, while the average earnings per week is \$14.25.

CHANGE OF BASE YEAR.

The change of the basis of comparison in computing the relative (or index) numbers from the average of 1890–1899 to 1913 is in part explained on page 12.

One of the reasons for the change of the base from 1890–1899 to the last year is that as the relative (or index) number for each succeeding year was computed from and added to the series of old relative numbers the result of any defect in the data for the earlier years was perpetuated. The data for the period 1890–1899 were obtained mostly in 1901 from old pay rolls, and because of their age and imperfections it was sometimes difficult to classify the employees into the several occupations. For the 10-year period 1890–1899 data were obtained from only 49 establishments, while data were obtained for 1912 and 1913 from 73 establishments. The number of establishments varied in the intervening years. While the average of 49 establishments possibly might have been a fairly acceptable base, the average of 73 establishments canvassed becomes more nearly representative of the industry, and thus a more satisfactory base. Data are available for 70 establishments for 1911 and 1912 and from 61 establishments for 1910 and 1911. Were the relative numbers for the occupations recomputed back to 1890 with 1913 as the base, the possible defectiveness of the relative number of earlier years would still exist, but the defectiveness in such early years would not impair the accuracy of the relatives for the later years.

With either period as the base, the relative numbers would show with the same degree of accuracy the trend from one year to the next. With 1890–1899 as the base, however, any fault in the relative number for the early years is continued, and the relative for 1913 as an abstract number will be at fault as compared with the base. But with the last year as the base, the relative number for recent years, as an abstract number, is as nearly correct as can be determined, and is not affected by any fault of the relative number of the earlier years. In one series the relative number if beginning in fault, continues in fault even though the basic data of later years be entirely satisfactory. In the other series with the larger volume of data for 1913 as the base, any weakness of earlier years does not appear except in such years.

To illustrate the change in the relatives produced by the change of base, relative full-time hours of labor and relative rates of wages per hour of "carpenters and car builders, wood," for the years 1910 to 1913 are given in the table following, computed with 1913 as the base, and with the average 1890–1899 as the base, so that the relative numbers computed on the two bases may be compared.

RELATIVE FULL-TIME HOURS PER WEEK AND RATES OF WAGES PER HOUR OF CARPENTERS AND CAR BUILDERS COMPUTED ON TWO BASES, AVERAGE 1890-1899=100, AND 1913=100.

Year.	Relative full-time hours per week.		Relative rate of wages per hour.	
	Relative, average 1890-1899 equals 100.	Relative, 1913 equals 100.	Relative, average 1890-1899 equals 100.	Relative, 1913 equals 100.
1910.....	96.9	100.9	130.9	95.6
1911.....	96.4	100.4	130.5	95.3
1912.....	96.9	100.9	127.6	93.1
1913.....	96.0	100.0	137.0	100.0

The first column of relative numbers indicates that the hours per week in 1910 were 96.9 per cent of the average hours in the period 1890 to 1899; that they decreased to 96.4 in 1911, increased to 96.9 in 1912, and decreased again to 96 in 1913. The second column shows a decrease in full-time hours per week from a relative of 100.9 in 1910 to 100.4 in 1911, an increase to 100.9 in 1912, and a reduction to 100 in 1913. The first series of relative wages per hour shows an increase from relative 130.9 in 1910 to relative 137.0 in 1913; the difference between 130.9 and 137.0 is 6.1, and 6.1 is 4.7 per cent of 130.9. Hence the relative numbers show an increase of 4.7 per cent between 1910 and 1913. The second series shows an increase from 95.6 in 1910 to 100.0 in 1913; the difference between 95.6 and 100.0 is 4.4, which difference, 4.4, is 4.6 per cent of 95.6. Hence the increase between 1910 and 1913, as shown by this series of relative numbers, is 4.6 per cent. The relative numbers are expressed in decimals to one decimal place and thus are not exact. Had common fractions been used rather than decimals, the two series of relative numbers would have shown the same increase between 1910 and 1913. The difference of 0.1 in the percentages of increase is due to the gain and loss in the terminal decimals.

METHOD OF COMPUTING RELATIVE NUMBERS.

Relative or index numbers for the several occupations and for the industry as a whole are presented on page 11. The method of computing such relative or index numbers for an occupation can best be explained by an illustration. The rates of wages per hour of laborers is taken as an example.

	Number of identical establishments.	Year.			
		1910	1911	1912	1913
Rates of wages per hour.....	60	\$0.1751	\$0.1760		
	68		.1731	\$0.1786	
	72			.1784	\$0.1892
Relative rates of wages per hour computed therefrom.....		90.9	91.4	94.3	100.0
Rates of wages per hour in identical establishments covering the full four years.....	57	\$0.1720	\$0.1747	\$0.1800	\$0.1909
Relative rates of wages per hour computed therefrom.....		90.1	91.5	94.3	100.0

The average for 1913 is taken as the base (100), then, \$0.1784 divided by \$0.1892 equals 94.3, the relative for 1912. The ratio of 1911 to 1912 is \$0.1731 to \$0.1786. The relative just determined, 94.3, multiplied by \$0.1731, divided by \$0.1786 equals 91.4, the relative for 1911. The ratio of 1910 to 1911 is \$0.1751 to \$0.1760. The relative for 1911, 91.4 multiplied by \$0.1751, divided by \$0.1760 equals 90.9, the relative for 1910.

The method of computing relative numbers over a period of years, as illustrated above, is used because of the changes in the number of establishments. Any method of computing a series of relative numbers should take into account changes in establishments from year to year, as changes naturally occur, some establishments discontinuing operations or ceasing to be representative, and new establishments entering the field. The method explained above, bringing in the new establishments, has been followed in computing the relatives in this report; otherwise no use could have been made in the index of the data from the additional establishments obtained for the later years.

Of the 60 establishments reporting data for laborers for 1910-11, 3 dropped out later and only 57 reported for the entire period. The average rates of wages per hour for the 57 establishments reporting for the entire period are shown also in the above table, with relatives computed therefrom. As might be expected, these relatives differ from the relatives based on the greater number of establishments. Presumptively they are not as nearly representative as are the relatives based on the greater number of establishments, but they are given here as an illustration of the difference shown by relatives based on different amounts of data.

Data concerning rates of wages and hours of labor for the period 1907 to 1910, being available from a preceding Bulletin, are here reproduced, but as before stated, owing to the small number of establishments in that period, and limited funds, it has not been deemed advisable to compute relative numbers therefor, and average full-time weekly earnings have not been computed for that period.

A word of caution is given as to the use of relative numbers. The per cent of increase or decrease from one year to another is not the difference between the relative numbers for the years. Thus, in the table above, the relative rate of wages per hour increased from 90.9 in 1910 to 100 in 1913, an increase in the relative of 9.1 over the relative 90.9 making an increase of 10 per cent.

CHANGE IN METHOD OF COMPUTING RELATIVE NUMBERS FOR THE INDUSTRY.

While the base for the computation of the relative numbers for the several occupations has been changed from the average of 1890-1899 to 1913, the method of computation has remained the same. The relative numbers for the industry as a whole, however, have been computed for this Bulletin not only with a change of base but in a different manner than for preceding Bulletins and hence may be expected to show some variations in results. The change is referred to on page 13. The relative numbers for the industry here presented, covering 1910 to 1913, are computed directly from the average hours of labor, rates of wages per hour, and weekly earnings of all employees in all occupations combined into one group. In other words, the relatives for the industry as a whole have been computed for this report in the same manner as the relatives for each occupation. It was deemed necessary to make this change because, by this method, the changes in the industry are more accurately reflected by the relative thus computed than by computing the industry relative from the relatives of the several occupations.

The following table for a hypothetical industry illustrates how a change in the industry as a whole may not be reflected by a combination of the relatives of the occupations.

Actual wages.

Occupation.	1912			1913		
	Em- ployees.	Rate of wages per day.	Aggre- gate.	Em- ployees.	Rate of wages per day.	Aggre- gate.
Occupation A.....	20	\$1.20	\$24.00	30	\$1.33 $\frac{1}{3}$	\$40.00
Occupation B.....	20	3.60	72.00	10	4.00	40.00
Total.....	40		96.00	40		80.00
Average.....			2.40			2.00
Relative.....			120.0			100.0

Relative wages.

Occupation A.....	20	90	1,800	30	100	3,000
Occupation B.....	20	90	1,800	10	100	1,000
Total.....	40		3,600	40		4,000
Average.....			90.0			100.0

In this hypothetical table it is assumed that there were two occupations, A and B. Each occupation received an advance of wages in 1913, but there was a change in the number of employees in the two occupations, a larger proportion of less-skilled employees being employed.

The average rate of wages of both occupations combined in 1912 was \$2.40 and in 1913 it was \$2. Taking 1913 as the base, the relative for the industry for 1912 would be 120. On the other hand, computing the relative for each occupation, combining the relatives, and making the average thereof, the relative for 1912 is 90 as against 100 for 1913. Computed from occupation relatives the relative rate of wages for the industry appears to increase from 90 to 100, while the relative for the industry, as a whole, computed from the average rates, because of the change in number of employees in the occupation, actually decreased from 120 to 100. The general tendency of many industries is toward an increase in the proportion of unskilled or low skilled employees to highly-skilled employees, because of specialization and the increasing efficiency of machinery.

Even though it were possible to cover the same number of establishments each year, it would not be possible to cover identical establishments for a considerable number of years, as firms go out of business or for some reason it becomes impossible to get acceptable data from some firms. The desire of the Bureau is to enlarge the scope of the study from time to time by covering a larger number of establishments. In computing the relative from year to year, it is necessary, therefore, to use the method described on page 21, grouping the data for identical establishments in groups of two or more years as available. This method is necessary whether the industry relative be computed from the actual average wages and hours of all occupations or an average of the relatives of all occupations. In the necessary use of the method described, a material statistical error may result if the industry relative is computed from the relatives of the occupations instead of the average for the industry. If the establishments should remain identical through a period of a few years and wages and hours in a later year return to the same wages and hours as in a preceding year, industry relatives computed from actual averages will be the same for the same averages occurring in the different years. If, however, the industry relative be computed from the relatives of the several occupations, like averages will not be represented by like relatives.

The subject is illustrated in the table below, showing a hypothetical industry of three occupations, A, B, and C, of one employee each.

Occupation. (1)	Employees. (2)	1911		1912		1913	
		Rate of wages per day. (3)	Relative wage, as compared with 1912. (4)	Rate of wages per day. (5)	Relative wage, as compared with 1913. (6)	Rate of wages per day. (7)	Relative wage. (8)
Occupation A.....	1	\$1.00	100.00	\$1.00	100.00	\$1.00	100.00
Occupation B.....	1	2.00	89.09	2.50	125.00	2.00	100.00
Occupation C.....	1	3.00	66.67	4.50	133.33	3.00	100.00
Total.....	3	6.00	236.67	8.00	375.00	6.00	300.00
Average.....	1	2.00	82.22	2.66 $\frac{2}{3}$	125.00	2.00	100.00
Relative computed from occupation relatives by method described. 1913 equals 100.....			102.78		125.00		100.00
Relative average rate 1911, (\$2) compared with average rate 1912 (\$2.66 $\frac{2}{3}$).....			75.00				
Relative computed from average rate of all occupations. 1913 equals 100.....			100.00		133.33		100.00

In this table column 7 shows the wages of each employee in 1913, and the average wages, \$2. Columns 3 and 5 show the detailed wages and average wages in 1911 and 1912, respectively. Column 8 shows the relative wages with 1913 as the base (100). Column 6 shows the relative wage of each occupation as compared with 1913 and the average of such relatives, namely, 125. Column 4 shows the relatives for 1911 as compared with 1912 and the average of such relatives based on 1912, namely, 82.22. Below the line of the average is the relative for the industry as computed from the averages of the several occupation relatives by the method explained on page 20, with 1913 equal to 100. The relative for 1912 is 125 as compared with 1913. Computing 82.22 per cent of 125 produces the relative 102.78, the relative for 1911 on the basis of 1913 equal to 100. Thus, the relatives for the industry computed from the relatives of the occupations, beginning with 1913 as 100 and working back to 1911, are: 1913 equals 100; 1912 equals 125; 1911 equals 102.78. The actual average wages, however, are: \$2, \$2.66 $\frac{2}{3}$, and \$2. Thus, the same average wage for the industry is not represented by the same relative. Comparing \$2.66 $\frac{2}{3}$, the average rate for 1912, with \$2, the average rate for 1913, the relative is found to be 133.33. Comparing the average rate for 1911 (\$2) with the average rate for 1912 (\$2.66 $\frac{2}{3}$), the relative is 75, and 75 per cent of 133.33, the relative for 1912, is 100, the relative for 1911 on the basis of 1913 equal to 100, as computed by the described method from the average wages of the industry.

Thus, the illustration shows that the industry relative computed from the average wages for the industry by the described method in identical establishments gives like industry relatives for like industry averages, but that if the industry relative be computed from the

relatives of the several occupations, the industry relative may not be the same for the same average wages for the industry in another year.

The industry relatives given in this Bulletin have been computed from the actual average full-time hours per week, rates of wages per hour, and full-time weekly earnings for all employees reported for the industry in the same manner as for each separate occupation. While this method always produces like relatives to represent like actual wages and hours when applied to the data for two groups of establishments, both having one and the same average for any year, it must not be understood that the like relatives will appear for the same concrete numbers when the relatives are computed from data where different groups of establishments show different averages for one and the same year.

Thus, on page 21, it is shown that the relative rate per hour in 1910 as computed through successive pairs of comparable data is 90.9, although \$0.1751, the average rate for 1910 in 60 establishments, is 92.5 per cent of \$0.1892, the average rate shown for 1913 in 72 establishments.

TABLE I.—AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR IN THE UNITED STATES, BY YEARS, 1907 TO 1913.

[The figures set opposite each group of years are for identical establishments.]

Occupation, and number of establishments.	Year.	Number of employ-ees.	Average full-time hours per week.	Average rate of wages per hour.	Employees earning each classified rate of wages per hour.														
					10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 and under 50 cts.	50 and under 60 cts.	60 cts. and over.				
Cabinetmakers:																			
16 establishments.	1907	683	54.7	80.3345					1	2	37	159	424	62	1				
	1908	520	54.6	.3207						1	23	163	325	8					
	1909	573	54.6	.3149						1	31	191	330	20					
	1910	658	54.5	.3423							12	164	413	65	3	1			
34 establishments.	1910	1,169	54.9	.3227						2	47	385	608	112	7				
	1911	1,155	55.0	.3254						2	49	374	612	111	7				
34 establishments.	1911	1,169	55.0	.3247			1	1	3	91	355	630	80	6	2				
	1912	1,183	54.9	.3354			1	3	2	11	319	695	147	5					
33 establishments.	1912	1,190	54.9	.3353			1	3	2	12	320	699	148	5					
	1913	1,473	54.6	.3487				2	4	16	257	924	257	13					
Carpenters and car builders, wood:																			
20 establishments.	1907	4,130	55.6	.3027	1	7	12	17	94	901	1,245	1,292	494	76					
	1908	2,594	55.5	.2942		1		7	24	584	747	1,120	103	9					
	1909	3,323	55.8	.2820	4	10	16	26	51	928	1,035	1,134	115	8					
	1910	3,649	55.6	.3182	2	5	11	2	28	696	914	1,302	580	102	2				
53 establishments.	1910	8,156	56.3	.2955	2	14	113	396	122	1,918	1,824	2,742	889	129	7				
	1911	7,801	56.0	.2945	4	12	57	130	134	1,916	2,010	2,849	624	53	12				
63 establishments.	1911	7,979	56.1	.2917	3	12	48	119	124	1,975	2,279	2,812	548	49	10				
	1912	7,543	56.4	.2851	4	16	72	413	88	1,892	2,117	2,338	539	41	3				
65 establishments.	1912	8,288	56.7	.2854	4	17	75	449	151	2,034	2,321	2,618	571	45	3				
	1913	8,660	56.2	.3065	2	7	29	130	72	1,860	2,408	3,007	987	135	23				
Car repairers:																			
16 establishments.	1907	2,332	56.7	.2467		1	40	74	260	1,023	460	429	32	4					
	1908	1,703	56.5	.2442			48	34	215	738	293	299	15	1					
	1909	2,111	55.6	.2411		1	48	55	133	1,052	564	225	32	1					
	1910	2,399	55.7	.2575		2	25	33	132	1,105	519	550	32	1					
48 establishments.	1910	6,877	55.9	.2436	6	79	379	1,038	3,013	1,011	1,129	171	16	2					
	1911	6,592	55.5	.2510		7	43	258	888	2,871	1,113	1,181	213	17	1				
53 establishments.	1911	7,539	55.9	.2578		2	29	155	950	3,260	1,245	1,561	313	21	3				
	1912	9,334	56.4	.2589		9	17	173	1,038	3,545	2,395	1,792	336	27	2				
59 establishments.	1912	9,395	56.5	.2589		9	17	188	1,042	3,558	2,408	1,808	336	27	2				
	1913	10,221	56.0	.2716	1	3	26	166	532	4,030	2,692	1,965	719	64	23				
Fitters:																			
9 establishments.	1910	1,739	57.4	.2441	25	46	161	314	198	316	283	257	136	3					
	1911	1,478	55.3	.2730	1	10	103	177	118	253	230	428	153	5					
11 establishments.	1911	1,761	56.0	.2606	1	14	131	335	145	281	245	445	156	5	3				
	1912	1,700	56.6	.2501	2	100	81	282	166	334	280	306	147	2					
12 establishments.	1912	1,782	56.8	.2503	2	100	81	284	169	366	315	316	147	2					
	1913	2,305	56.6	.2853		6	89	183	150	630	317	513	402	15					
Laborers:																			
20 establishments.	1907	4,671	56.0	.1813	36	208	990	2,267	174	586	307	74	27	2					
	1908	1,907	56.0	.1873	20	128	441	640	104	277	224	71	2						
	1909	2,963	55.8	.1823	16	161	864	1,010	115	419	281	92	5						
	1910	3,823	55.2	.1986	8	60	410	1,411	838	430	353	291	21	1					
60 establishments.	1910	10,114	56.1	.1751	124	627	3,848	2,713	1,144	812	469	352	24	1					
	1911	7,695	56.0	.1760	88	515	2,790	2,141	731	707	503	207	13						
68 establishments.	1911	8,001	56.2	.1731	88	787	3,065	1,979	751	661	483	198	9						
	1912	8,208	56.3	.1786	100	699	2,386	2,810	637	706	485	333	32						
72 establishments.	1912	8,546	56.4	.1784	101	730	2,432	2,991	676	738	490	356	32						
	1913	9,818	56.1	.1892	64	592	1,472	3,752	987	1,837	600	415	99						

TABLE I.—AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR IN THE UNITED STATES, BY YEARS, 1907 TO 1913—Continued.

NUMBER—Concluded.

Occupation, and number of establishments.	Year.	Number of employ-ees.	Average full-time hours per week.	Average rate of wages per hour.	Employees earning each classified rate of wages per hour.										
					10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 and under 50 cts.	50 and under 60 cts.	60 cts. and over.
Tinners—Continued. 48 establishments.	1910	745	54.8	\$0.3424					2	53	177	308	201	4	
	1911	745	54.9	.3439				1	4	46	150	357	185	1	1
54 establishments.	1911	785	55.2	.3424				1	5	45	168	378	186	1	1
	1912	632	54.7	.3403		2	1	29	2	22	121	295	155	3	2
56 establishments.	1912	635	54.9	.3394		2	1	29	2	27	122	292	155	3	2
	1913	679	54.5	.3546		1	2	3	30	104	322	206	8		
Truck builders: 14 establishments.	1907	421	55.5	.2477		2	4	19	57	170	86	74	7	2	
	1908	276	55.2	.2493				12	7	141	68	45	1	1	1
	1909	327	55.3	.2442			4	22	5	167	73	54		1	1
	1910	393	55.2	.2568				11	5	190	103	80	4		
44 establishments.	1910	1,011	56.1	.2449		2	61	70	105	309	213	178	12	1	
	1911	907	55.0	.2538			28	62	36	351	239	178	13		
44 establishments.	1911	943	55.4	.2534			31	62	35	381	243	177	14		
	1912	891	55.7	.2645			9	40	51	352	197	209	33		
41 establishments.	1912	923	56.2	.2607			9	41	76	373	192	199	33		
	1913	961	55.6	.2768	1		4	8	26	353	295	208	59	4	3
Upholsterers: 18 establishments.	1907	231	54.6	.3276					1	17	63	136	9	2	3
	1908	179	54.4	.3170						12	52	113	2		
	1909	196	54.6	.3169					1	9	60	126			
	1910	269	54.5	.3433					1	11	56	162	39		
42 establishments.	1910	477	55.1	.3232				1	3	53	118	249	52	1	
	1911	500	54.9	.3449						12	129	222	136		1
46 establishments.	1911	506	54.9	.3440						11	131	227	136		1
	1912	473	54.9	.3514						7	105	214	146	1	
46 establishments.	1912	474	54.9	.3513						7	105	215	146	1	
	1913	511	54.8	.3573				1		10	91	238	170	1	

PER CENT.

Cabinetmakers: 16 establishments.	1907	686	54.7	\$0.3345				0.1	0.3	5.4	23.2	61.8	9.0	0.1		
	1908	520	54.6	.3207					2	4.4	31.3	62.5	1.5			
	1909	573	54.6	.3149					2	5.4	33.3	57.6	3.5			
	1910	658	54.6	.3423						1.8	24.9	62.8	9.9	5	0.2	
34 establishments.	1910	1,169	54.9	.3227			0.1	1	3	7.8	30.4	53.9	6.8	5	2	
	1911	1,155	55.0	.3254					2	4.2	32.4	59.0	9.6	6		
34 establishments.	1911	1,161	55.0	.3247					2	4.0	33.2	52.4	9.6	6		
	1912	1,183	54.9	.3354			1	3	2	9	27.0	58.7	12.4	4		
36 establishments.	1912	1,190	54.9	.3353			1	3	2	1.0	26.9	58.7	12.4	4		
	1913	1,473	54.6	.3487				1	2	1.1	17.4	62.7	17.4	9		
Carpenters and car builders, wood: 20 establishments.	1907	4,139	55.6	.3027	(1)		3	4	2.3	21.8	30.1	31.2	11.9	1.8		
	1908	2,594	55.5	.2942	(1)			2	9	22.5	28.8	43.2	4.0	3		
	1909	3,323	55.8	.2820	0.1		3	5	7	1.5	27.9	31.1	34.1	3.5	2	
	1910	3,649	55.6	.3182	1		1	3	2	8	19.1	25.0	35.7	15.9	2.8	1
55 establishments.	1910	8,156	56.3	.2955	(1)		2	1.4	4.9	1.5	23.5	22.4	33.6	10.9	1.6	1
	1911	7,801	56.0	.2945	1		2	1.7	1.7	1.7	24.6	25.8	36.5	8.0	7	2
63 establishments.	1911	7,979	56.1	.2917	(1)		2	6	1.5	1.6	24.8	28.6	35.2	6.9	6	1
	1912	7,543	56.4	.2851	1		2	1.0	5.5	1.2	25.1	28.1	31.3	7.1	5	(1)
65 establishments.	1912	8,288	56.7	.2854	(1)		2	9	5.4	1.8	24.5	28.0	31.6	6.9	5	(1)
	1913	8,660	56.2	.3065	(1)		1	3	1.5	1.8	21.5	27.8	34.7	11.4	1.6	3

1 Less than one-tenth of 1 per cent.

TABLE I.—AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR IN THE UNITED STATES, BY YEARS, 1907 TO 1913—Continued.

PER CENT—Continued.

Occupation, and number of establishments.	Year.	Number of employ-ees.	Average full-time hours per week.	Average rate of wages per hour.	Employees earning each classified rate of wages per hour.											
					10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 and under 50 cts.	50 and under 60 cts.	60 cts. and over.	
Car repairers: 10 establishments.	1907	2,332	56.7	\$0.2467	....	(1)	1.7	3.2	11.1	43.9	20.1	18.4	1.4	2	....
	1908	1,705	55.5	.2442	....	....	2.8	2.0	12.6	46.9	17.2	17.6	.9	1	....
	1909	2,111	55.6	.2411	....	(1)	2.3	2.6	6.3	49.8	26.7	10.7	1.5	(1)	....
	1910	2,399	55.7	.2575	....	.1	1.0	1.4	5.5	46.1	21.6	22.9	1.3	(1)	....
48 establishments.	1910	6,877	55.9	.2436	....	.1	1.1	5.5	15.1	43.8	15.2	16.4	2.5	2	(1)
	1911	6,592	55.5	.2510	....	.1	.7	3.9	13.5	43.6	16.9	17.9	3.2	3	(1)
58 establishments.	1911	7,539	55.9	.2578	....	(1)	.4	2.1	12.6	43.2	16.5	20.7	4.2	3	(1)
	1912	9,334	56.4	.2589	....	.1	.2	1.9	11.1	38.0	25.7	19.2	3.6	3	(1)
59 establishments.	1912	9,395	56.5	.2589	(1)	.1	.2	2.0	11.1	37.9	25.6	19.2	3.6	3	(1)
	1913	10,221	56.0	.2716	....	(1)	.3	1.6	5.2	39.4	26.3	19.2	7.0	6	0.2
Fitters: 9 establishments.	1910	1,739	57.4	.2441	1.4	2.6	9.3	18.1	11.4	18.2	16.3	14.8	7.8	2	....
	1911	1,478	55.3	.2730	.1	.7	7.0	12.0	8.0	17.1	15.6	29.0	10.4	3	....
11 establishments.	1911	1,761	56.0	.2606	.1	.8	7.4	19.0	8.2	16.0	13.9	25.3	8.9	3	.2	
	1912	1,700	56.6	.2501	.1	5.9	4.8	16.6	9.8	19.6	16.5	18.0	8.6	1	....
12 establishments.	1912	1,782	56.8	.2503	.1	5.6	4.5	15.9	9.5	20.5	17.7	17.7	8.2	1	....
	1913	2,305	56.6	.2853	....	3	3.9	7.9	6.5	27.3	13.8	22.3	17.4	7	....
Laborers: 20 establishments.	1907	4,671	56.0	.1813	0.8	4.5	21.2	48.5	3.7	12.5	6.6	1.6	0.6	(1)	....
	1908	1,907	56.0	.1873	1.0	6.7	23.1	33.6	5.5	14.5	11.7	3.7	.1	....	....
	1909	2,963	55.8	.1823	.5	5.4	29.2	34.1	3.9	14.1	9.5	3.1	.2	....	....
	1910	3,823	55.2	.1986	.2	1.6	10.7	36.9	21.9	11.2	9.2	7.6	.5	(1)	....
60 establishments.	1910	10,114	56.1	.1751	1.2	6.2	38.0	26.8	11.3	8.0	4.6	3.5	.2	(1)	....
	1911	7,695	56.0	.1760	1.1	6.7	36.3	27.8	9.5	9.2	6.5	2.7	.2	....	....
68 establishments.	1911	8,001	56.2	.1731	1.1	9.6	38.3	24.7	9.4	8.3	6.0	2.5	.1	....	....
	1912	8,208	56.3	.1786	1.2	8.5	29.1	34.2	7.8	8.6	5.9	4.3	.4	....	....
72 establishments.	1912	8,546	56.4	.1784	1.2	8.5	28.5	35.0	7.9	8.6	5.7	4.2	.4	....	....
	1913	9,818	56.1	.1892	.7	6.0	15.0	38.2	10.1	18.7	6.1	4.2	1.0	....	....
Machine woodwork- ers: 20 establishments.	1907	584	55.6	.2829	....	....	.5	1.4	2.9	21.1	33.6	38.7	1.9	....	....
	1908	473	54.9	.2879	....	....	.4	1.3	2.1	17.3	32.6	45.7	.6	....	....
	1909	488	55.4	.2859	....	....	....	2.0	2.0	21.3	28.7	43.9	1.8	0.2	....
	1910	602	55.0	.2899	....	....	....	.7	2.0	23.8	29.2	41.2	3.2	....	....
58 establishments.	1910	1,512	55.9	.2667	....	....	1.0	6.0	6.2	27.1	27.9	29.7	2.2	....	....
	1911	1,331	56.0	.2731	....	....	.5	7.7	4.7	22.1	29.9	33.1	2.1	1	....
68 establishments.	1911	1,443	56.2	.2703	....	....	.4	8.0	4.9	22.5	31.6	30.6	1.9	1	....
	1912	1,268	56.1	.2790	....	....	.6	4.1	4.3	21.8	31.8	35.2	2.1	1	.1
70 establishments.	1912	1,319	56.5	.2771	....	.1	.6	4.2	5.2	22.8	30.6	34.3	2.0	1	.1
	1913	1,507	55.8	.2928	....	.1	.2	.9	2.3	22.7	30.0	39.3	4.1	3	.1
Machinists: 12 establishments.	1907	308	56.0	.3008	....	....	....	....	....	16.6	38.0	39.3	6.2	....	....
	1908	259	54.2	.3150	....	....	....	....	....	10.4	34.7	40.5	14.3	....	....
	1909	304	54.3	.3065	....	....	....	....	....	11.5	34.9	45.7	7.9	....	....
	1910	342	54.3	.3249	....	....	....	....	....	5.8	33.6	45.0	14.9	.6	....
38 establishments.	1910	860	55.3	.3072	....	....	....	....	.1	7.7	43.6	40.9	7.3	3	....
	1911	889	54.4	.3158	....	....	....	....	.3	6.5	42.9	41.4	8.1	3	....
34 establishments.	1911	588	56.7	.3145	....	....	....	....	.2	14.5	29.6	44.2	10.9	7	....
	1912	555	56.6	.3142	2.5	1.4	14.8	28.8	38.4	13.9	2
35 establishments.	1912	562	56.6	.3139	2.5	1.4	14.8	28.6	38.8	13.7	2
	1913	710	56.2	.3187	2.4	.6	9.2	30.1	42.4	14.5	.7	.1
Painters: 19 establishments.	1907	1,146	55.2	.3066	.1	3	.3	1.0	5.1	22.4	21.8	32.9	12.7	3.2	.2	
	1908	874	54.8	.2912	....	....	....	....	3.7	21.4	22.9	45.0	7.1	....	....
	1909	1,098	56.0	.2967	.1	16	7.3	19.7	22.2	43.7	6.2	1
	1910	1,348	54.8	.3174	....	.1	.1	.1	3.5	17.7	20.5	39.9	16.9	1.0	.3

¹ Less than one-tenth of 1 per cent.

TABLE I.—AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR IN THE UNITED STATES, BY YEARS, 1907 TO 1913—Continued.

Occupation, and number of establishments.	Year.	Number of employ-ees.	Average full-time hours per week.	Average rate of wages per hour.	Employees earning each classified rate of wages per hour.											
					10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 and under 50 cts.	50 and under 60 cts.	60 and over.	
Painters—Continued. 60 establishments.	1910	2,664	55.5	\$0.2959	...	0.2	1.5	4.0	4.8	20.4	23.7	31.3	13.2	0.8	0.2	
	1911	2,911	55.4	.3037	0.1	.1	.5	1.9	5.5	20.3	22.3	33.9	14.5	1.0	....
69 establishments.	1911	3,102	55.7	.3029	.1	.1	.6	1.8	5.2	21.2	22.4	33.7	13.9	1.0	....
	1912	2,846	55.5	.3092	....	....	....	2.2	2.7	20.9	22.9	34.3	14.2	2.2	....
72 establishments.	1912	2,996	55.8	.3040	....	.1	.6	2.3	5.1	21.4	22.3	32.6	13.5	2.1	....
	1913	3,205	55.5	.3221	.1	(1)	.3	.8	1.7	19.6	19.1	38.4	16.9	2.8	.1	
Pipe fitters: 18 establishments.	1907	266	55.0	.3039	....	....	....	.8	.8	11.7	44.7	30.8	11.3	....	....
	1908	222	54.7	.3024	....	....	....	.9	.5	11.7	38.7	45.9	2.3	....	....
	1909	258	54.9	.2942	....	....	....	.8	.4	12.8	44.6	38.4	3.1	....	....
	1910	303	54.8	.3283	....	....	....	.3	1.3	7.9	37.0	28.4	25.1	.7	....
48 establishments.	1910	593	55.2	.3052	....	....	.3	.5	2.2	13.8	36.8	32.0	13.8	.5	....
	1911	651	54.9	.3177	....	....	....	.9	.3	14.1	30.6	35.6	18.1	.3	....
50 establishments.	1911	678	55.7	.3210	....	.1	.3	.3	1.0	11.7	28.3	40.3	17.7	.3	....
	1912	515	55.2	.3244	....	....	.2	2.9	1.9	7.2	25.0	43.9	18.1	.6	.2
52 establishments.	1912	541	55.6	.3190	....	....	.2	2.8	2.6	9.8	26.1	40.7	17.2	.6	.2
	1913	576	55.1	.3382	....	.2	....	1.2	....	5.0	25.0	44.8	23.3	.5	....
Riveters and buckers: 14 establishments.	1910	1,524	56.0	.3127	....	1.0	2.1	10.4	5.8	16.4	16.3	28.3	11.0	5.8	2.9
	1911	802	55.3	.2812	.4	....	1.7	8.0	6.4	30.5	16.7	24.4	9.7	1.6	.5
16 establishments.	1911	1,160	56.7	.2734	.3	.2	2.2	8.7	7.8	27.8	19.8	24.7	7.0	1.2	.3	
	1912	1,220	56.8	.3066	.2	.5	1.7	4.8	4.7	22.4	17.9	29.4	16.8	1.6	....
17 establishments.	1912	1,407	57.2	.2943	.2	.5	1.7	4.5	9.6	23.3	17.9	26.4	14.4	1.4	....
	1913	1,655	57.2	.3414	.1	.2	.7	2.9	2.4	16.7	21.3	26.3	19.0	7.8	2.7	
Tinners: 15 establishments.	1907	228	54.5	.3422	....	....	....	....	.4	4.4	24.6	43.4	27.2	....	....
	1908	178	54.4	.3350	....	....	.6	....	....	4.5	24.2	57.3	12.9	....	....
	1909	280	54.5	.3228	....	....	....	.4	.4	7.9	22.1	65.4	3.9	....	....
	1910	456	54.2	.3724	....	....	....	....	.4	2.0	11.6	44.5	40.6	.9	....
48 establishments.	1910	745	54.8	.3424	....	....	....	....	.3	7.1	23.8	41.3	27.0	.5	....
	1911	745	54.9	.3439	....	....	....	.1	.5	6.2	20.1	47.9	24.8	.1	.1
54 establishments.	1911	785	55.2	.3424	....	....	....	.1	.6	5.7	21.4	48.2	23.7	.1	.1
	1912	632	54.7	.3403	....	.3	.2	4.6	.3	3.5	19.1	46.7	24.5	.5	.3
56 establishments.	1912	635	54.9	.3394	....	.3	.2	4.6	.3	4.3	19.2	46.0	24.4	.5	.3
	1913	679	54.5	.3546	....	.1	.3	.4	.4	4.4	15.3	47.4	30.3	1.2	....
Truck builders: 14 establishments.	1907	421	55.5	.2477	....	.5	1.0	4.5	13.5	40.4	20.4	17.6	1.7	.5	....
	1908	276	55.2	.2493	....	....	....	4.3	2.5	51.1	24.6	16.3	.4	.4	.4
	1909	327	55.3	.2442	....	....	1.2	6.7	1.5	51.1	22.3	16.5	....	.3	.3
	1910	393	55.2	.2568	....	....	....	2.8	1.3	48.3	26.2	20.4	1.0	....	....
44 establishments.	1910	1,011	56.1	.2449	....	.2	6.0	6.9	10.4	36.5	21.1	17.6	1.2	.1	....
	1911	907	55.0	.2538	....	....	3.1	6.8	4.0	38.7	26.4	19.6	1.4	....	....
44 establishments.	1911	943	55.4	.2534	....	....	3.3	6.6	3.7	40.4	25.8	18.8	1.5	....	....
	1912	891	55.7	.2645	....	....	1.0	4.5	5.7	39.5	22.1	23.5	3.7	....	....
41 establishments.	1912	923	56.2	.2607	....	....	1.0	4.4	8.2	40.4	20.8	21.6	3.6	....	....
	1913	961	55.6	.2768	.1	....	.4	.8	2.7	36.7	30.7	21.6	6.1	.4	.3
Upholsterers: 18 establishments.	1907	231	54.6	.3276	....	....	....	....	.4	7.4	27.3	58.9	3.9	.9	1.3
	1908	179	54.4	.3170	....	....	....	....	....	6.7	29.1	63.1	1.1	....	....
	1909	196	54.6	.3169	....	....	....	....	....	5.4	30.6	64.3	....	....	....
	1910	269	54.5	.3433	....	....	....	....	....	4.1	20.8	60.2	14.5	....	....
42 establishments.	1910	477	55.1	.3232	....	....	....	.2	.6	11.1	24.7	52.2	10.9	.2	....
	1911	500	54.9	.3449	....	....	....	....	....	2.4	25.8	44.4	27.2	....	.2
46 establishments.	1911	506	54.9	.3440	....	....	....	....	....	2.2	25.9	44.9	26.9	....	.2
	1912	473	54.9	.3514	....	....	....	....	....	1.5	22.2	45.2	30.9	.2	....
46 establishments.	1912	474	54.9	.3513	....	....	....	....	....	1.5	22.2	45.4	30.8	.2	....
	1913	511	54.6	.3573	....	....	....	.2	....	2.0	17.8	46.6	33.3	.2	....

¹ Less than one-tenth of 1 per cent.

TABLE II.—AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR IN EACH YEAR, BY STATES, 1912 AND 1913.

CABINETMAKERS.

[The figures for 1912 and 1913 are for identical establishments, hence all figures for 1913 are directly comparable with those for 1912.]

Year and State.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Number of employees earning each classified rate of wages per hour.										
					10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 and under 50 cts.	50 and under 60 cts.	60 cts. and over.
1912.															
California.....	2	38	54.0	\$0.3737									29	9	
Illinois.....	4	443	54.0	.3438						2	47	355	39		
Indiana.....	6	41	54.5	.3212						1	16	22	2		
Massachusetts.....	2	74	53.3	.2934							52	22			
Minnesota.....	2	19	56.9	.2905							15	4			
Missouri.....	4	55	58.5	.2820			1	3	2	4	14	31			
Ohio.....	3	122	55.1	.3313						5	37	62	17	1	
Pennsylvania.....	2	129	55.2	.3882							10	64	55		
Other States.....	11	269	55.9	.3199							129	110	26	4	
Total.....	36	1,190	54.9	.3353			1	3	2	12	320	699	148	5	
1913.															
California.....	2	36	54.0	.3714									28	8	
Illinois.....	4	714	53.9	.3579						5	43	544	122		
Indiana.....	6	39	53.4	.3396					1	2	11	16	8	1	
Massachusetts.....	2	80	53.3	.3082							31	49			
Minnesota.....	2	22	57.2	.2937							17	5			
Missouri.....	4	51	56.8	.3063			1	2	2	7	39				
Ohio.....	3	122	55.2	.3350						6	30	64	21	1	
Pennsylvania.....	2	129	55.2	.3937			1			1	14	42	69	3	
Other States.....	11	280	55.9	.3324				1	1	104	137	29	8		
Total.....	36	1,473	54.6	.3487				2	4	16	257	924	257	13	

CARPENTERS AND CAR BUILDERS.

1912.															
Year and State.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 and under 50 cts.	50 and under 60 cts.	60 cts. and over.
Alabama.....	2	23	54.0	\$0.3320								4	19		
California.....	2	426	54.0	.3205								59	339	28	
Illinois.....	4	1,202	54.7	.3097		5	9	19	27	253	248	447	179	15	
Indiana.....	6	357	54.4	.3213					4	54	85	157	56		1
Kansas.....	2	318	51.5	.2902						125	82	91	20		
Kentucky.....	3	380	58.6	.2834						43	273	64			
Massachusetts.....	2	261	53.3	.2856						10	179	72			
Michigan.....	2	689	58.9	.2817			2	30	52	118	215	254	14	4	
Minnesota.....	3	327	58.1	.2539						181	146				
Missouri.....	7	1,100	58.8	.2451	2	9	47	376	14	129	198	299	20	6	
New Jersey.....	2	138	54.2	.3007			1	3	6	12	57	49	10		
New York.....	2	388	56.6	.2964	2	2	11	10	14	73	108	122	44	2	
Ohio.....	7	351	53.6	.3465					2	39	78	131	96	4	1
Pennsylvania.....	6	411	58.4	.2836				1	12	143	139	91	24	1	
Tennessee.....	6	417	57.8	.2727		1	5	10	20	44	234	95	8		
Texas.....	4	403	55.6	.3144						2	84	317			
Virginia.....	3	206	56.1	.3752						10	39	71	72	13	1
Wisconsin.....	2	891	60.0	.2256						798	93				
Total.....	65	8,288	56.7	.2854	4	17	75	449	151	2,034	2,321	2,618	571	45	3
1913.															
Alabama.....	2	22	54.0	.3418								22			
California.....	2	460	54.0	.3197							73	356	31		
Illinois.....	4	1,622	55.3	.3175		5	6	13	18	286	390	648	210	42	4
Indiana.....	6	384	55.1	.3492					4	50	73	151	87	9	10
Kansas.....	2	438	51.4	.2961						2	305	81	48	2	
Kentucky.....	3	446	59.0	.2771						74	253	115	4		

TABLE II.—AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR IN EACH YEAR, BY STATES, 1912 AND 1913—Continued.

CARPENTERS AND CAR BUILDERS—Concluded.

Year and State.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Number of employees earning each classified rate of wages per hour.										
					10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 and under 50 cts.	50 and under 60 cts.	60 cts. and over.
1913—Concluded.															
Massachusetts.....	2	239	53.3	\$0.3016						8	92	138	1		
Michigan.....	2	314	58.1	.3085				1	4	59	61	169	20		
Minnesota.....	3	380	58.0	.2654						163	205	12			
Missouri.....	7	839	57.2	.2846	2	2	22	103	24	143	215	283	35	8	
New Jersey.....	2	211	54.2	.3206						8	103	58	42		
New York.....	2	362	55.1	.3610				1	5	25	55	154	91	25	
Ohio.....	7	379	53.3	.3356				6	6	41	92	150	70	13	
Pennsylvania.....	6	778	56.9	.3407			1		6	112	221	140	294	3	
Tennessee.....	6	284	57.3	.2995				5	4	19	100	145	6	5	
Texas.....	4	393	55.8	.3184				1	1	13	54	321	3		
Virginia.....	3	167	54.0	.3983						2	27	63	45	28	
Wisconsin.....	2	942	60.0	.2347						852	89	1			
Total.....	65	8,660	56.2	.3065	2	7	29	130	72	1,860	2,408	3,007	987	135	23

CAR REPAIRERS.

1912.															
Alabama.....	4	1,185	54.0	\$0.2389		7	3	37			572	544	22		
California.....	2	221	54.0	.2511							23	193	5		
Illinois.....	4	574	53.5	.2841				2	46	143	151	190	43		
Indiana.....	5	567	53.8	.2578			4	7	28	298	116	89	23	2	
Kansas.....	2	165	50.4	.2466				4	64	22	36	38	1		
	3	577	58.4	.2407					11	273	270	22	1		
Kentucky.....															
Minnesota.....	3	609	59.4	.2158						606	3				
Missouri.....	5	302	56.9	.2396			2	36	42	127	38	48	10		
New Jersey.....	2	54	56.8	.1953						51	2		1		
Ohio.....	7	759	56.3	.2981				52	83	105	154	270	55	10	
Pennsylvania.....	6	1,600	58.7	.3071	1	4	14	175	170	297	812	125	1	1	
Tennessee.....	4	609	56.9	.2315				7	1	421	153	27			
Texas.....	4	404	57.3	.2333				19	25	209	124	27			
Virginia.....	3	565	55.3	.3135				1	5	105	162	233	44	14	
Wisconsin.....	2	827	60.0	.1991						502	323	2			
Other States.....	3	376	53.4	.2532	1	4	9	10	159	165	24	4			
Total.....	59	9,395	56.5	.2589		9	17	188	1,042	3,558	2,408	1,808	336	27	2
1913.															
Alabama.....	4	1,013	54.0	.2512		2	1		33	451	448	78			
California.....	2	327	54.0	.2511						46	272	9			
Illinois.....	4	693	53.5	.2918	1	1	2	3	12	205	175	229	65		
Indiana.....	5	629	53.6	.2761			3	9	31	286	129	113	36	14	
Kansas.....	2	237	50.3	.2684					4	116	37	69	11		
Kentucky.....	3	683	58.0	.2454					8	356	291	28			
Minnesota.....	3	689	59.3	.2230						686	3				
Missouri.....	5	248	58.0	.2487			5	38	19	77	67	31	11		
New Jersey.....	2	103	55.7	.2075						91	3	2	6	1	
Ohio.....	7	888	55.6	.3281			1	25	118	122	110	261	211	28	
Pennsylvania.....	6	1,748	57.3	.3112			7	14	154	278	239	798	255	2	
Tennessee.....	4	637	56.8	.2446				15	13	303	272	34			
Texas.....	4	373	57.4	.2349			3	49	40	147	91	42		1	
Virginia.....	3	581	54.0	.3388					2	37	192	216	114	18	
Wisconsin.....	2	863	60.0	.2070						1	860	2			
Other States.....	3	509	51.9	.2764			4	13	6	57	362	51	15	1	
Total.....	59	10,221	56.0	.2716	1	3	26	166	532	4,030	2,692	1,965	719	64	23

TABLE II.—AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR IN EACH YEAR, BY STATES, 1912 AND 1913—Continued.

FITTERS.

Year and State.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Number of employees earning each classified rate of wages per hour.										
					10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 and under 50 cts.	50 and under 60 cts.	60 cts. and over.
1912.															
Illinois.....	2	712	55.3	\$0.2903	8	21	89	41	108	111	214	118	2		
Indiana.....	2	166	55.7	.2582	2	2	21	10	3	26	61	34	7		
Missouri.....	2	219	59.9	.1647		89	32	35	23	35	2	3			
Ohio.....	2	130	53.0	.2684				16	21	31	16	33	13		
Pennsylvania.....	2	451	58.3	.2222		4	127	72	129	89	22	8			
Other States.....	2	104	59.8	.2432		1	3	7	9	37	36	10	1		
Total.....	12	1,782	56.8	.2503	2	100	81	284	169	366	315	316	147	2	
1913.															
Illinois.....	2	999	54.9	.3443				14	40	161	82	332	366	4	
Indiana.....	2	248	57.4	.2814			18	32	14	26	44	89	19	6	
Missouri.....	2	320	59.9	.1907		4	65	118	35	61	32	4	1		
Ohio.....	2	183	52.6	.2571			1	1	33	77	28	24	15	4	
Pennsylvania.....	2	440	58.4	.2434		2	5	15	24	237	113	43	1		
Other States.....	2	115	59.8	.2500				3	4	68	18	21		1	
Total.....	12	2,305	56.6	.2853		6	89	183	150	630	317	513	402	15	

LABORERS.

1912.														
Alabama.....	4	390	54.0	\$0.1329		310	76	4						
California.....	2	111	54.0	.2414						67	27	17		
Illinois.....	5	1,015	55.8	.1780	3	13	330	211	299	92	57	10		
Indiana.....	7	595	54.5	.1679			237	281	30	39	15	1		
Kansas.....	2	154	51.2	.1642			75	66	6	6		1		
Kentucky.....	3	289	58.4	.1500	16	4	173	95						
Massachusetts.....	2	177	53.2	.1916			32	86	14	19	20	2	4	
Michigan.....	2	316	58.4	.1833			1	217	48	37	10	3		
Minnesota.....	3	257	57.8	.1752			5	176	52	24				
Missouri.....	7	747	58.9	.1564		19	413	284	16	15				
New York.....	2	350	55.7	.2015			79	137	26	47	12	44	5	
Ohio.....	9	652	54.2	.1874		1	115	298	68	116	26	28		
Pennsylvania.....	8	1,956	57.4	.2072		190	466	411	104	237	299	226	23	
Tennessee.....	6	474	58.9	.1384	34	173	250	14	1	2				
Texas.....	4	396	55.4	.1672	1	2	92	301						
Virginia.....	3	375	55.2	.1662	47	16	90	173	3	8	15	23		
Wisconsin.....	2	180	60.0	.1639			8	171	1					
Other States.....	1	112	54.0	.1933				66	7	29	9	1		
Total.....	72	8,546	56.4	.1784	101	730	2,432	2,991	676	738	490	356	32	
1913.														
Alabama.....	4	366	54.0	.1330		292	72	1	1					
California.....	2	83	54.0	.2077						81	2			
Illinois.....	5	1,486	55.8	.1943			4	572	220	628	48	14		
Indiana.....	7	806	55.4	.1897	7	2	104	267	186	156	55	28	1	
Kansas.....	2	186	51.3	.1670			92	34	46	13	1			
Kentucky.....	3	344	58.5	.1504	15	5	223	94	5	2				
Massachusetts.....	2	209	53.2	.1850			31	116	20	15	19	8		
Michigan.....	2	266	57.6	.2008			1	19	124	113	8	1		
Minnesota.....	3	240	58.0	.1775			3	175	42	20				
Missouri.....	7	544	58.2	.1623	1	14	177	304	18	26	2	2		
New York.....	2	337	53.7	.2117				188	33	59	15	32	10	
Ohio.....	9	970	54.1	.2016		1	8	299	144	417	68	31	2	

TABLE II.—AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR IN EACH YEAR, BY STATES, 1912 AND 1913—Continued.

LABORERS—Concluded.

Year and State.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Number of employees earning each classified rate of wages per hour.											
					10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 and under 50 cts.	50 and under 60 cts.	60 cts. and over.	
1913—Concluded.																
Pennsylvania.....	8	2,346	57.3	\$0.2165	1	14	367	908	120	255	315	280	86			
Tennessee.....	6	485	59.1	.1410	25	207	217	18	7	6	5					
Texas.....	4	329	55.7	.1666		2	85	238	3	1						
Virginia.....	3	447	54.0	.1729	15	55	85	223	9	15	36	9				
Wisconsin.....	2	221	60.0	.1665			3	214	4							
Other States.....	1	153	54.0	.2071				82	5	30	26	10				
Total.....	72	9,818	56.1	.1892	64	592	1,472	3,752	987	1,837	600	415	99			

MACHINE WOODWORKERS.

1912.															
Alabama.....	4	55	54.0	\$0.2921						2	32	21			
California.....	2	48	54.0	.3294							9	36	3		
Illinois.....	5	157	54.1	.3006			2	2	15	24	13	95	6		
Indiana.....	6	92	54.0	.2853						25	27	38	2		
Kansas.....	2	40	51.8	.2713						7	31	2			
Kentucky.....	3	55	58.0	.2776						8	35	12			
Massachusetts.....	2	49	53.3	.2877						1	38	10			
Michigan.....	2	70	61.8	.2421				2	11	29	18	10			
Minnesota.....	3	43	58.5	.2474						24	18	1			
Missouri.....	7	155	58.8	.2223			5	32	25	45	37	11			
New York.....	2	44	56.5	.3100				3	2	8	6	16	9		
Ohio.....	8	119	54.3	.2863				1	3	20	40	55			
Pennsylvania.....	8	120	58.3	.2866				12	8	19	22	56	3		
Tennessee.....	6	91	58.3	.2727		1	1	3	4	17	32	33			
Texas.....	4	29	56.7	.2981						7	4	18			
Virginia.....	3	48	55.3	.3451							14	28	4	1	1
Wisconsin.....	2	90	60.0	.2378						65	25				
Other States.....	1	14	50.0	.3127							3	11			
Total.....	70	1,319	56.5	.2771		1	8	55	68	301	404	453	27	1	1
1913.															
Alabama.....	4	56	54.0	.2990						4	13	39			
California.....	2	54	54.0	.3393							13	36	5		
Illinois.....	5	335	54.4	.2966				1		80	95	155	4		
Indiana.....	6	103	55.0	.3226						20	15	54	14		
Kansas.....	2	42	51.7	.3027							20	22			
Kentucky.....	3	60	57.7	.2842						6	32	22			
Massachusetts.....	2	49	53.3	.3031							20	29			
Michigan.....	2	38	58.7	.2487					1	25	6	6			
Minnesota.....	3	50	58.4	.2507						30	19	1			
Missouri.....	7	124	58.1	.2446			1	10	28	30	45	10			
New York.....	2	44	53.9	.3183					2	7	10	21	4		
Ohio.....	8	133	54.4	.2993						29	38	55	11		
Pennsylvania.....	8	146	57.8	.3038				1	3	33	37	57	15		
Tennessee.....	6	80	58.1	.2795		1	2	1	1	16	27	32			
Texas.....	4	33	56.0	.2965						7	4	22			
Virginia.....	3	50	54.0	.3677							15	20	9	5	1
Wisconsin.....	2	96	60.0	.2473						55	40	1			
Other States.....	1	14	50.0	.3128							3	11			
Total.....	70	1,507	55.8	.2928		1	3	13	35	342	452	593	62	5	1

TABLE II.—AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR IN EACH YEAR, BY STATES, 1912 AND 1913—Continued.

MACHINISTS.

Year and State.	Number of establishments.	Number of employ-ees.	Average full-time hours per week.	Average rate of wages per hour.	Number of employees earning each classified rate of wages per hour.												
					10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 and under 50 cts.	50 and under 60 cts.	60 cts. and over.		
1912.																	
Illinois.....	5	87	55.8	\$0.3146						4	37	44	2				
Indiana.....	3	48	55.7	.3180					1	1	9	36	1				
Massachusetts.....	2	44	53.3	.3142						1	17	26					
Missouri.....	4	85	59.5	.2715						24	49	12					
New York.....	2	26	55.2	.3146						4	10	10	1	1			
Ohio.....	4	23	54.5	.2713						8	8	7					
Pennsylvania.....	3	140	58.0	.3148			14	7		32	23	18	46				
Other States.....	12	109	55.9	.3520						9	8	65	27				
Total.....	35	562	56.6	.3139			14	8		83	161	218	77	1			
1913.																	
Illinois.....	5	170	55.1	.3311						5	61	82	21		1		
Indiana.....	3	86	57.4	.3201						1	22	63					
Massachusetts.....	2	51	53.4	.3125							17	34					
Missouri.....	4	93	58.6	.2748				1		15	49	25	3				
New York.....	2	27	52.2	.3096						4	7	15		1			
Ohio.....	4	37	54.8	.2783						7	18	11	1				
Pennsylvania.....	3	148	57.7	.3152			17	3		28	28	29	41	2			
Other States.....	12	98	55.6	.3636						5	12	42	37	2			
Total.....	35	710	56.2	.3187			17	4		65	214	301	103	5	1		

PAINTERS.

1912.															
Alabama.....	4	70	54.0	\$0.2409						44	14	12			
California.....	2	117	54.0	.3359							12	93	12		
Illinois.....	5	782	53.9	.3273		2	4	19		125	107	370	146	9	
Indiana.....	7	136	54.0	.3155			1	8		26	26	57	18		
Kansas.....	2	73	51.9	.3866						1	9	10	17	25	11
Kentucky.....	3	126	58.9	.2413						84	36	6			
Massachusetts.....	2	170	53.2	.2693				1	8	38	90	33			
Michigan.....	2	164	59.1	.2179				8	76	44	23	12	1		
Minnesota.....	3	100	57.6	.2592					1	40	51	8			
Missouri.....	7	243	58.7	.2513		1	11	46	4	55	39	83	3	1	
New York.....	2	86	54.4	.4002						2	1	32	51		
Ohio.....	9	180	54.5	.3290			2	8	8	34	31	35	47	15	
Pennsylvania.....	8	268	57.7	.3390			1		1	14	86	104	56	6	
Tennessee.....	6	120	58.2	.2556		1	1	2	27	22	39	28			
Texas.....	4	69	55.3	.3088						7	16	45	1		
Virginia.....	3	81	55.5	.4380						6	3	12	39	21	
Wisconsin.....	2	168	60.0	.2521					1	89	70	8			
Other States.....	1	43	50.0	.3324						2	14	22	5		
Total.....	72	2,996	55.8	.3040		2	17	70	15	4	641	668	977	404	63
1913.															
Alabama.....	4	76	54.0	.2528						43	13	20			
California.....	2	149	54.0	.3397							16	116	17		
Illinois.....	5	885	54.1	.3477					1	85	129	423	225	22	
Indiana.....	7	169	54.8	.3296			1		10	23	31	65	36	3	
Kansas.....	2	79	51.9	.3650					1	8	16	25	20	9	
Kentucky.....	3	150	59.1	.2502						106	25	19			
Massachusetts.....	2	178	53.2	.2855					5	50	44	77	2		
Michigan.....	2	79	58.1	.2841					17	14	21	17	10		
Minnesota.....	3	100	57.7	.2653						41	45	14			
Missouri.....	7	197	57.4	.2658		4		3	14	6	43	51	75	1	
New York.....	2	99	50.9	.4321					1		2	1	17	76	2

TABLES II.—AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR IN EACH YEAR, BY STATES, 1912 AND 1913—Continued.

PAINTERS—Concluded.

Year.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Number of employees earning each classified rate of wages per hour.												
					10 and under	12 and under	14 and under	16 and under	18 and under	20 and under	25 and under	30 and under	40 and under	50 and under	60 and under	60 cts. and over.	
					10 cts.	12 cts.	14 cts.	16 cts.	18 cts.	20 cts.	25 cts.	30 cts.	40 cts.	50 cts.	60 cts.		
1913—Concluded.																	
Ohio.....	9	193	54.5	\$0.3248				1	7	50	26	63	33	13			
Pennsylvania.....	8	346	57.6	.3410		1	4		3	33	54	137	70	14			
Tennessee.....	6	121	58.4	.2681			2	9	1	35	33	41					
Texas.....	4	76	55.8	.3095				1	2	5	18	48	2				
Virginia.....	3	86	54.0	.4265				1	8	7	11	33	22	4			
Wisconsin.....	2	181	60.0	.2656				1	81	51	48						
Other States.....	1	41	50.0	.4009						2	2	15	18	4			
Total.....	72	8,205	55.5	.3221	4	1	10	26	55	629	613	1,231	543	89	4		

PIPE FITTERS.

1912.														
California.....	2	68	54.0	\$0.3206							14	52	2	
Illinois.....	5	108	54.6	.3861						5	19	18	66	
Indiana.....	7	28	54.3	.3245				1	2		6	11	6	
Kentucky.....	3	28	58.1	.3166							2	26		
Massachusetts.....	2	23	53.1	.3005						2	5	16		
Missouri.....	7	60	58.2	.2314				12	5	14	24	5		
New York.....	2	25	55.7	.3178						2	11	9	3	
Ohio.....	4	34	54.8	.3573			1	2	1	3	16	6	3	1
Pennsylvania.....	4	54	57.4	.3298					2	2	11	31	8	
Other States.....	16	113	55.6	.2872					4	25	46	36	2	
Total.....	52	541	55.6	.3190		1	15	14	53	141	220	93	3	1
1913.														
California.....	2	75	54.0	.3199							9	65	1	
Illinois.....	5	123	55.7	.3991						2	26	12	82	1
Indiana.....	7	36	54.0	.3399						4	9	11	12	
Kentucky.....	3	31	58.5	.3225							1	30		
Massachusetts.....	2	24	53.2	.3204							4	20		
Missouri.....	7	66	57.8	.2657		1		7		18	21	19		
New York.....	2	21	53.8	.3576							6	8	6	1
Ohio.....	4	41	54.8	.3588							5	22	13	1
Pennsylvania.....	4	55	56.3	.3295						3	19	24	9	
Other States.....	16	104	54.6	.3215						2	44	47	11	
Total.....	52	576	55.1	.3382		1		7		29	144	258	134	3

RIVETERS AND BUCKERS.

1912.														
Illinois.....	3	344	55.6	\$0.3428		1		3	18	41	80	89	97	15
Indiana.....	2	132	55.7	.3028			8	7	8	17	29	38	20	4
Missouri.....	2	126	59.9	.1934	2	4	10	39	6	59	6			
Ohio.....	2	71	52.3	.2494			3	5	12	32	3	8	8	
Pennsylvania.....	2	512	57.7	.3177				4	10	112	95	215	76	
Tennessee.....	2	52	59.6	.2526	1	1	3	4	7	13	8	14	1	
Other States.....	4	170	59.5	.2253				2	74	54	31	7	1	1
Total.....	17	1,407	57.2	.2943	3	7	24	64	135	328	252	371	208	20

TABLE II.—AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR IN EACH YEAR, BY STATES, 1912 AND 1913—Continued.

RIVETERS AND BUCKERS—Concluded.

Year and State.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Number of employees earning each classified rate of wages per hour.										
					10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 and under 50 cts.	50 and under 60 cts.	60 cts. and over.
1913.															
Illinois.....	3	412	55.4	\$0.4058		1		5	5	47	63	78	105	69	39
Indiana.....	2	177	57.7	.3680		1	4	3	6	9	10	58	84	2	
Missouri.....	2	126	59.8	.2244	1			21	12	61	23	6			
Ohio.....	2	131	53.2	.2941					2	50	33	27	16	3	
Pennsylvania.....	2	580	57.7	.3299		1	4	19	13	67	125	224	103	24	
Tennessee.....	2	44	59.7	.2991			1		1	10	14	3	1		
Other States.....	4	185	59.4	.3321						33	84	29	3	30	6
Total.....	17	1,655	57.2	.3414	1	3	11	48	39	277	352	436	314	129	45

TINNERS.

1912.															
Illinois.....	5	204	54.0	\$0.3837				2		3	20	66	112	1	
Indiana.....	5	33	53.8	.3507				2			7	17	5	2	
Massachusetts.....	2	28	53.3	.2828						2	20	6			
Missouri.....	7	64	58.8	.2349		2	1	25		5	10	21			
Ohio.....	5	59	54.9	.3407						6	9	35	8		1
Pennsylvania.....	6	79	55.9	.3700					1	1	8	47	21		
Tennessee.....	6	27	57.9	.3184							2	25			
Other States.....	20	141	53.9	.3178					1	10	46	75	9		
Total.....	56	635	54.9	.3394		2	1	29	2	27	122	292	155	3	2
1913.															
Illinois.....	5	250	54.0	.3896						5	23	78	143	1	
Indiana.....	5	36	54.3	.3370					3	2	12	11	3	5	
Massachusetts.....	2	27	53.3	.3028							4	23			
Missouri.....	7	46	57.2	.2942		1	2	3		5	8	27			
Ohio.....	5	54	54.8	.3401						4	7	35	7	1	
Pennsylvania.....	6	91	56.0	.3739						8	6	36	40	1	
Tennessee.....	6	28	57.8	.3317						1	1	26			
Other States.....	20	147	53.3	.3256						5	43	86	13		
Total.....	56	679	54.5	.3546		1	2	3	3	30	104	322	206	8	

TRUCK BUILDERS.

1912.															
California.....	2	63	54.0	\$0.2853						1	44	18			
Illinois.....	3	101	54.9	.3110		1	2	12		13	16	44	13		
Indiana.....	5	60	53.7	.2771		2	5	2		25	10	4	12		
Kansas.....	2	73	55.2	.2801						37	6	30			
Massachusetts.....	2	45	53.1	.2476						37	7	1			
Michigan.....	2	72	61.9	.2229			1	25		32	9	5			
Minnesota.....	2	59	56.4	.2284						53	6				
Missouri.....	6	103	58.4	.2110		3	25	24		19	32				
New York.....	2	38	56.1	.2377			3	4		14	15	1	1		
Ohio.....	5	107	53.9	.3059				3	3	20	20	56	5		
Pennsylvania.....	3	71	57.9	.2942		2			1	25	13	28	2		
Texas.....	3	43	54.4	.2386						33	1	9			
Other States.....	4	88	58.8	.2141		1	2	5		64	13	3			
Total.....	41	923	56.2	.2670			9	41	76	373	192	199	33		

TABLE II.—AVERAGE AND CLASSIFIED RATES OF WAGES PER HOUR IN EACH YEAR, BY STATES, 1912 AND 1913—Concluded.

TRUCK BUILDERS—Concluded.

Year and State.	Number of establishments.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Number of employees earning each classified rate of wages per hour.										
					10 and under 12 cts.	12 and under 14 cts.	14 and under 16 cts.	16 and under 18 cts.	18 and under 20 cts.	20 and under 25 cts.	25 and under 30 cts.	30 and under 40 cts.	40 and under 50 cts.	50 and under 60 cts.	60 cts. and over.
1913.															
California.....	2	83	54.0	\$.2843								66	17		
Illinois.....	3	107	54.8	.3202					2	19	25	41	17	3	
Indiana.....	5	65	54.9	.3148	1			2	5	5	23	14	11	1	3
Kansas.....	2	80	55.5	.2808							45	5	16	14	
Massachusetts.....	2	50	53.3	.2624							9	36	5		
Michigan.....	2	35	57.9	.2842						7	19	9			
Minnesota.....	2	69	56.6	.2301						63	5	1			
Missouri.....	6	129	56.3	.2324				5	16	62	45	1			
New York.....	2	42	54.0	.2645					1	13	22	5	1		
Ohio.....	5	109	54.2	.3164				1	1	27	16	50	14		
Pennsylvania.....	3	51	57.5	.3246						3	19	27	2		
Texas.....	3	44	54.4	.2556						28	2	14			
Other States.....	4	97	58.8	.2249		4			1	72	12	8			
Total.....	41	961	55.6	.2768	1	4	8	26	353	295	208	59	4	3	

UPHOLSTERERS.

1912.															
California.....	2	48	54.0	\$.3363								3	38	7	
Illinois.....	4	144	53.6	.3988						2	8	40	94		
Missouri.....	6	24	58.2	.3027						1	7	16			
Ohio.....	4	41	54.7	.3781						1	2	21	17		
Pennsylvania.....	2	26	55.6	.4060							1	7	18		
Other States.....	28	191	55.7	.3122						3	84	93	10	1	
Total.....	46	474	54.9	.3513						7	105	215	146	1	
1913.															
California.....	2	50	54.0	.3415								2	42	6	
Illinois.....	4	161	53.9	.4057						1	5	48	107		
Missouri.....	6	30	56.3	.2982				1			9	20			
Ohio.....	4	47	54.8	.3706						1	4	23	19		
Pennsylvania.....	2	22	55.5	.4102								7	15		
Other States.....	28	201	55.4	.3225						8	71	98	23	1	
Total.....	46	511	54.8	.3573				1		10	91	238	170	1	

TABLE III.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN THE UNITED STATES, BY YEARS, 1907 TO 1913.

[The figures set opposite each group of years are for identical establishments.]

Occupation, and number of establishments.	Year.	Number of employ-ees.	Average full-time hours per week.	Employees whose full-time hours per week were—						
				Under 54	54	Over 54 and under 57	57 and under 60	60	Over 60	
Cabinetmakers:										
16 establishments	1907	686	54.7	60	416	146	5	59	.....
	1908	520	54.6	61	354	52	5	48	.....
	1909	573	54.6	72	347	98	8	48	.....
	1910	658	54.6	73	399	125	7	54	.....
34 establishments	1910	1,169	54.9	174	453	341	45	156	.....
	1911	1,155	55.0	179	425	356	50	145	.....
34 establishments	1911	1,161	55.0	173	433	356	54	145	.....
	1912	1,183	54.9	146	579	261	56	141	.....
36 establishments	1912	1,190	54.9	152	579	261	56	142	.....
	1913	1,473	54.6	224	803	243	54	149	.....
Carpenters and car builders, wood:										
20 establishments	1907	4,139	55.6	257	2,297	562	214	791	18	
	1908	2,594	55.5	327	1,289	300	254	407	17	
	1909	3,323	55.8	277	1,551	469	323	699	4	
	1910	3,649	55.6	284	1,866	561	246	674	18	
55 establishments	1910	8,156	56.3	689	2,756	1,321	1,072	2,300	18	
	1911	7,801	56.0	818	2,871	1,113	1,050	1,931	18	
63 establishments	1911	7,979	56.1	818	3,152	888	964	2,139	18	
	1912	7,543	56.4	793	2,699	576	852	2,623	.....
65 establishments	1912	8,288	56.7	725	2,699	716	852	3,296	.....
	1913	8,660	56.2	1,398	2,602	927	1,209	2,524	.....
Car repairers:										
16 establishments	1907	2,332	56.7	265	443	683	234	670	37	
	1908	1,703	56.5	267	379	338	274	414	31	
	1909	2,111	55.6	341	714	486	217	345	8	
	1910	2,399	55.7	359	766	633	248	382	11	
48 establishments	1910	6,877	55.9	872	2,709	733	616	1,930	17	
	1911	6,592	55.5	992	2,890	607	476	1,610	17	
58 establishments	1911	7,539	55.9	982	2,989	748	561	2,242	17	
	1912	9,334	56.4	814	3,819	878	834	2,884	105	
59 establishments	1912	9,395	56.5	814	3,819	928	834	2,884	116	
	1913	10,221	56.0	1,286	4,107	1,125	819	2,833	51	
Fitters:										
9 establishments	1910	1,739	57.4	56	428	660	177	174	244	
	1911	1,478	55.3	135	632	394	153	164	.....
11 establishments	1911	1,761	56.0	135	632	394	198	402	.....
	1912	1,700	56.6	64	521	427	231	457	.....
12 establishments	1912	1,782	56.8	64	521	427	231	539	.....
	1913	2,305	56.6	105	827	320	411	642	.....
Laborers:										
20 establishments	1907	4,671	56.0	336	1,960	939	94	1,342	.....
	1908	1,907	56.0	293	622	369	71	547	5	
	1909	2,963	55.8	421	1,154	533	158	997	.....
	1910	3,823	55.2	366	1,736	985	109	622	5	
60 establishments	1910	10,114	56.1	966	2,657	3,134	1,281	1,903	173	
	1911	7,095	56.0	986	2,275	1,512	1,221	1,696	5	
68 establishments	1911	8,001	56.2	986	2,197	1,486	1,159	2,168	5	
	1912	8,208	56.3	647	2,430	1,945	1,064	2,119	3	
72 establishments	1912	8,546	56.4	647	2,455	1,968	1,064	2,409	3	
	1913	9,818	56.1	1,165	2,585	2,319	1,358	2,391	.....

TABLE III.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN THE UNITED STATES, BY YEARS, 1907 TO 1913—Continued.

NUMBER—Continued.

Occupation, and number of establishments.	Year.	Number of employees.	Average full-time hours per week.	Employees whose full-time hours per week were—					
				Under 54	54	Over 54 and under 57	57 and under 60	60	Over 60
Machine woodworkers:									
20 establishments.....	1907	584	55.6	54	296	88	14	132	
	1908	473	54.9	63	273	59	16	60	
	1909	488	55.4	55	242	75	31	85	
	1910	602	55.0	54	387	66	22	73	
58 establishments.....	1910	1,512	55.9	146	536	301	217	312	
	1911	1,331	56.0	141	430	256	191	313	
68 establishments.....	1911	1,443	56.2	142	466	256	191	388	
	1912	1,268	56.1	141	401	210	164	352	
70 establishments.....	1912	1,319	56.5	145	401	173	164	420	16
	1913	1,507	55.8	199	578	195	160	375	
Machinists:									
12 establishments.....	1907	308	56.0	42	95	59		112	
	1908	259	54.2	43	157	51		8	
	1909	304	54.3	44	194	55		1	
	1910	342	54.3	42	212	77		1	
38 establishments.....	1910	860	55.3	158	339	187	74	71	31
	1911	899	54.4	207	376	152	78	76	
34 establishments.....	1911	588	56.7	54	133	145	78	178	
	1912	555	56.6	51	150	116	67	171	
35 establishments.....	1912	562	56.6	51	150	116	67	178	
	1913	710	56.2	75	215	112	199	109	
Painters:									
19 establishments.....	1907	1,146	55.2	192	511	218	32	193	
	1908	874	54.8	196	420	116	25	117	
	1909	1,098	56.0	202	489	176	74	157	
	1910	1,348	54.8	189	809	176	35	139	
60 establishments.....	1910	2,064	55.5	385	1,045	462	251	521	
	1911	2,911	55.4	394	1,270	462	288	497	
69 establishments.....	1911	3,102	55.7	385	1,283	483	284	667	
	1912	2,846	55.5	344	1,278	392	193	637	2
72 establishments.....	1912	2,996	55.8	344	1,278	394	193	785	2
	1913	3,295	55.5	513	1,334	387	267	704	
Pipe fitters:									
18 establishments.....	1907	266	55.0	27	152	45	7	35	
	1908	222	54.7	27	141	30	7	17	
	1909	258	54.9	32	149	40	7	30	
	1910	303	54.8	34	188	39	7	35	
48 establishments.....	1910	593	55.2	96	242	107	72	74	2
	1911	651	54.9	93	305	124	59	70	
50 establishments.....	1911	678	55.7	68	288	124	53	145	
	1912	515	55.2	63	254	77	55	65	1
52 establishments.....	1912	541	55.6	63	242	77	57	101	1
	1913	576	55.1	94	261	82	56	83	
Riveters and buckers:									
14 establishments.....	1910	1,524	56.0	61	245	933	154	131	
	1911	802	55.3	176	234	126	158	108	
16 establishments.....	1911	1,160	56.7	181	238	126	158	457	
	1912	1,220	56.8	52	240	457	136	335	
17 establishments.....	1912	1,407	57.2	46	250	457	136	518	
	1913	1,655	57.2	73	300	421	306	555	
Tinners:									
15 establishments.....	1907	228	54.8	36	117	61	1	13	
	1908	178	54.4	36	91	41	3	7	
	1909	280	54.5	43	156	62	5	14	
	1910	456	54.2	46	317	83	7	3	

TABLE III.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN THE UNITED STATES, BY YEARS, 1907 TO 1913—Continued.

NUMBER—Concluded.

Occupation, and number of establishments.	Year.	Number of employees.	Average full-time hours per week.	Employees whose full-time hours per week were—					
				Under 54	54	Over 54 and under 57	57 and under 60	60	Over 60
Tinners—Concluded.									
48 establishments.....	1910	745	54.8	98	375	158	41	73	
	1911	745	54.9	99	351	168	39	88	
54 establishments.....	1911	785	55.2	99	350	168	38	130	
	1912	632	54.7	97	292	143	34	66	
56 establishments.....	1912	635	54.9	97	286	143	36	73	
	1913	679	54.5	133	310	143	47	46	
Truck builders:									
14 establishments.....	1907	421	55.5	92	168	59	6	96	
	1908	276	55.2	79	99	42	5	51	
	1909	327	55.3	60	141	60	13	53	
	1910	393	55.2	43	204	77	18	51	
44 establishments.....	1910	1,011	56.1	170	351	180	90	163	57
	1911	907	55.0	168	390	126	63	160	
44 establishments.....	1911	943	55.4	166	357	130	71	219	
	1912	891	55.7	125	302	194	53	217	
41 establishments.....	1912	923	56.2	125	286	190	53	243	26
	1913	961	55.6	140	338	193	75	215	
Upholsterers:									
18 establishments.....	1907	231	54.6	31	143	36	2	19	
	1908	179	54.4	34	110	20	1	14	
	1909	196	54.6	33	114	30	4	15	
	1910	269	54.5	36	184	27	4	18	
42 establishments.....	1910	477	55.1	67	216	92	30	72	
	1911	500	54.9	69	261	77	23	70	
46 establishments.....	1911	506	54.9	89	246	77	23	71	
	1912	473	54.9	63	248	70	22	70	
46 establishments.....	1912	474	54.9	63	250	69	22	70	
	1913	511	54.8	82	262	80	23	64	

PER CENT.

Cabinetmakers:									
16 establishments.....	1907	686	54.7	8.7	60.6	21.3	0.7	8.6	
	1908	520	54.6	11.7	68.1	10.0	1.0	9.2	
	1909	573	54.6	12.6	60.6	17.1	1.4	8.4	
	1910	658	54.6	11.1	60.6	19.0	1.1	8.2	
34 establishments.....	1910	1,169	54.9	14.9	38.8	29.2	3.8	13.3	
	1911	1,155	55.0	15.5	36.8	30.8	4.3	12.6	
34 establishments.....	1911	1,161	55.0	14.9	37.3	30.7	4.7	12.5	
	1912	1,183	54.9	12.3	48.9	22.1	4.7	11.9	
36 establishments.....	1912	1,190	54.9	12.8	48.7	21.9	4.7	11.9	
	1913	1,473	54.6	15.2	54.5	16.5	3.7	10.1	
Carpenters and car builders, wood:									
20 establishments.....	1907	4,139	55.6	6.2	55.5	13.6	5.2	19.1	0.4
	1908	2,594	55.5	12.6	49.7	11.6	9.8	15.7	.7
	1909	3,323	55.8	8.3	46.7	14.1	9.7	21.0	.1
	1910	3,649	55.6	7.8	51.1	15.4	6.7	18.5	.5
55 establishments.....	1910	8,156	56.3	8.4	33.8	16.2	13.1	28.2	.2
	1911	7,801	56.0	10.5	36.8	14.3	13.5	24.8	.2
63 establishments.....	1911	7,979	56.1	10.3	39.5	11.1	12.1	26.8	.2
	1912	7,543	56.4	10.5	35.8	7.6	11.3	34.8	
65 establishments.....	1912	8,288	56.7	8.7	32.6	8.6	10.3	39.8	
	1913	8,060	56.2	16.1	30.0	10.7	14.0	29.1	

TABLE III.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN THE UNITED STATES, BY YEARS, 1907 TO 1913—Continued.

PER CENT—Continued.

Occupation, and number of establishments.	Year.	Number of employees.	Average full-time hours per week.	Employees whose full-time hours per week were—					
				Under 54	54	Over 54 and under 57	57 and under 60	60	Over 60
Car repairers:									
16 establishments.....	1907	2,332	56.7	11.4	19.0	29.3	10.0	28.7	1.6
	1908	1,703	56.5	15.7	22.3	19.8	16.1	24.3	1.8
	1909	2,111	55.6	16.2	33.8	23.0	10.3	16.3	.4
	1910	2,399	55.7	15.0	31.9	26.4	10.3	15.9	.5
48 establishments.....	1910	6,877	55.9	12.7	39.4	10.7	9.0	28.1	.2
	1911	6,592	55.5	15.0	43.8	9.2	7.2	24.4	.3
58 establishments.....	1911	7,539	55.9	13.0	39.6	9.9	7.4	29.7	.2
	1912	9,334	56.4	8.7	40.9	9.4	8.9	30.9	1.1
59 establishments.....	1912	9,395	56.5	8.7	40.6	9.9	8.9	30.7	1.2
	1913	10,221	56.0	12.6	40.2	11.0	8.0	27.7	.5
Fitters:									
9 establishments.....	1910	1,739	57.4	3.2	24.6	38.0	10.2	10.0	14.0
	1911	1,478	55.3	9.1	42.8	26.7	10.4	11.1	.....
11 establishments.....	1911	1,761	56.0	7.7	35.9	22.4	11.2	22.8	.....
	1912	1,700	56.6	3.8	30.6	25.1	13.6	26.9	.....
12 establishments.....	1912	1,782	56.8	3.6	29.2	24.0	13.0	30.2	.....
	1913	2,305	56.6	4.6	35.9	13.9	17.8	27.9	.....
Laborers:									
20 establishments.....	1907	4,671	56.0	7.2	42.0	20.1	2.0	28.7	.....
	1908	1,907	56.0	15.4	32.6	19.3	3.7	28.7	.3
	1909	2,963	55.8	14.2	38.9	18.0	5.3	23.5	.....
	1910	3,823	55.2	9.6	45.4	25.8	2.9	16.3	.1
60 establishments.....	1910	10,114	56.1	9.6	26.3	31.0	12.7	18.8	1.7
	1911	7,695	56.0	12.8	29.6	19.6	15.9	22.0	.1
68 establishments.....	1911	8,001	56.2	12.3	27.5	18.6	14.5	27.1	.1
	1912	8,208	56.3	7.9	29.6	23.7	13.0	25.8	(¹)
72 establishments.....	1912	8,546	56.4	7.6	28.7	23.0	12.5	28.2	(¹)
	1913	9,818	56.1	11.9	26.3	23.6	13.8	24.4	.....
Machine woodworkers:									
20 establishments.....	1907	584	55.6	9.2	50.7	15.1	2.4	22.6	.....
	1908	473	54.9	13.3	58.1	12.5	3.4	12.7	.....
	1909	488	55.4	11.3	49.6	15.4	6.4	17.4	.....
	1910	602	55.0	9.0	64.3	11.0	3.7	12.1	.....
58 establishments.....	1910	1,512	55.9	9.7	35.4	19.9	14.4	20.6	.....
	1911	1,331	56.0	10.6	32.3	19.2	14.4	23.5	.....
68 establishments.....	1911	1,443	56.2	9.8	32.3	17.7	13.2	26.9	.....
	1912	1,268	56.1	11.1	31.6	16.6	12.9	27.8	.....
70 establishments.....	1912	1,319	56.5	11.0	30.4	13.1	12.4	31.8	1.2
	1913	1,507	55.8	13.2	38.4	12.9	10.6	24.9	.....
Machinists:									
12 establishments.....	1907	308	56.0	13.6	30.8	19.2	.....	36.4	.....
	1908	259	54.2	16.6	60.6	19.7	.....	3.1	.....
	1909	304	54.3	14.5	63.8	18.1	.....	3.6	.....
	1910	342	54.3	12.3	62.0	22.5	.....	3.2	.....
38 establishments.....	1910	860	55.3	18.4	39.4	21.7	8.6	8.3	3.6
	1911	889	54.4	23.3	42.3	17.1	8.8	8.5	.....
34 establishments.....	1911	588	56.7	9.2	22.6	24.7	13.3	30.3	.....
	1912	555	56.6	9.2	27.0	20.9	12.1	30.8	.....
35 establishments.....	1912	562	56.6	9.1	26.7	20.6	11.9	31.7	.....
	1913	710	56.2	10.6	30.3	15.8	28.0	15.4	.....
Painters:									
19 establishments.....	1907	1,146	55.2	16.8	44.6	19.0	2.8	16.8	.....
	1908	874	54.8	22.4	48.1	13.3	2.9	13.4	.....
	1909	1,098	56.0	18.4	44.5	16.0	6.7	14.3	.....
	1910	1,348	54.8	14.0	60.0	13.1	2.6	10.3	.....

¹ Less than one-tenth of 1 per cent.

TABLE III.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN THE UNITED STATES, BY YEARS, 1907 TO 1913—Concluded.

PER CENT—Concluded.

Occupation, and number of establishments.	Year.	Number of employ-ees.	Average full-time hours per week.	Employees whose full-time hours per week were—					
				Under 54	54	Over 54 and under 57	57 and under 60	60	Over 60
Painters—Concluded.									
60 establishments.....	1910	2,664	55.5	14.5	39.2	17.3	9.4	19.6	.....
	1911	2,911	55.4	13.5	43.6	15.9	9.9	17.1	.....
69 establishments.....	1911	3,102	55.7	12.4	41.4	15.6	9.2	21.5	.....
	1912	2,846	55.5	12.1	44.9	13.8	6.8	22.4	0.1
72 establishments.....	1912	2,996	55.8	11.5	42.7	13.2	6.4	26.2	.1
	1913	3,205	55.5	16.0	41.6	12.1	8.3	22.0	.....
Pipe fitters:									
18 establishments.....	1907	266	55.0	10.2	57.1	16.9	2.6	13.2	.....
	1908	222	54.7	12.2	63.5	13.5	3.2	7.7	.....
	1909	258	54.9	12.4	57.8	15.5	2.7	11.6	.....
	1910	303	54.8	11.2	62.0	12.9	2.3	11.6	.....
48 establishments.....	1910	593	55.2	16.2	40.8	18.0	12.1	12.5	.3
	1911	651	54.9	14.3	46.9	19.0	9.1	10.8	.....
50 establishments.....	1911	678	55.7	10.0	42.5	18.3	7.8	21.4	.....
	1912	515	55.2	12.2	49.3	15.0	10.7	12.6	.2
52 establishments.....	1912	541	55.6	11.6	44.7	14.2	10.5	18.7	.2
	1913	576	55.1	16.3	45.3	14.2	9.7	14.4	.....
Riveters and buckers:									
14 establishments.....	1910	1,524	56.0	4.0	16.1	61.2	10.1	8.6	.....
	1911	802	55.3	21.9	29.2	15.7	19.7	13.5	.....
16 establishments.....	1911	1,160	56.7	15.6	20.5	10.9	13.6	39.4	.....
	1912	1,220	56.8	4.3	19.7	37.5	11.1	27.5	.....
17 establishments.....	1912	1,407	57.2	3.3	17.8	32.5	9.7	36.8	.....
	1913	1,655	57.2	4.4	18.1	25.4	18.5	33.5	.....
Tinners:									
15 establishments.....	1907	228	54.5	15.8	51.3	26.8	.4	5.7	.....
	1908	178	54.4	20.2	51.1	23.0	1.7	3.9	.....
	1909	280	54.5	15.4	55.7	22.1	1.8	5.0	.....
	1910	456	54.2	10.1	69.5	18.2	1.5	.7	.....
48 establishments.....	1910	745	54.8	13.2	50.3	21.2	5.5	9.8	.....
	1911	745	54.9	13.3	47.1	22.6	5.2	11.8	.....
54 establishments.....	1911	785	55.2	12.6	44.6	21.4	4.8	16.6	.....
	1912	632	54.7	15.3	46.2	22.6	5.4	10.4	.....
56 establishments.....	1912	635	54.9	15.3	45.0	22.5	5.7	11.5	.....
	1913	679	54.5	19.6	45.7	21.1	6.9	6.8	.....
Truck builders:									
14 establishments.....	1907	421	55.5	21.9	39.9	14.0	1.4	22.8	.....
	1908	276	55.2	28.6	35.9	15.2	1.8	18.5	.....
	1909	327	55.3	18.3	43.1	18.3	4.0	16.2	.....
	1910	393	55.2	10.9	51.9	19.6	4.6	13.0	.....
44 establishments.....	1910	1,011	56.1	16.8	34.7	17.8	8.9	16.1	5.6
	1911	907	55.0	13.5	43.0	13.9	6.9	17.6	.....
44 establishments.....	1911	943	55.4	17.6	37.9	13.8	7.5	23.2	.....
	1912	891	55.7	14.0	33.9	21.8	5.9	24.4	.....
41 establishments.....	1912	923	56.2	13.5	31.0	20.6	5.7	26.3	2.8
	1913	961	55.6	14.6	35.2	20.1	7.8	22.4	.....
Upholsterers:									
18 establishments.....	1907	231	54.6	13.4	61.9	15.6	.9	8.2	.....
	1908	179	54.4	19.0	61.5	11.2	.6	7.8	.....
	1909	196	54.6	16.8	58.2	15.3	2.0	7.7	.....
	1910	269	54.5	13.4	68.4	10.0	1.5	6.7	.....
42 establishments.....	1910	477	55.1	14.0	45.3	19.3	6.3	15.1	.....
	1911	500	54.9	13.8	52.2	15.4	4.6	14.0	.....
46 establishments.....	1911	506	54.9	17.6	48.6	15.2	4.5	14.0	.....
	1912	473	54.9	13.3	52.4	14.8	4.7	14.8	.....
46 establishments.....	1912	474	54.9	13.3	52.7	14.6	4.6	14.8	.....
	1913	511	54.8	16.0	51.3	15.7	4.5	12.5	.....

TABLE IV.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN EACH YEAR, BY STATES, 1912 AND 1913.

CABINETMAKERS.

[The figures for 1912 and 1913 are for identical establishments, hence all figures for 1913 are directly comparable with those for 1912.]

Year and State.	Number of establishments.	Number of employees.	Average full-time hours per week.	Number of employees whose full-time hours per week were—				
				Under 54	54	Over 54 and under 57	57 and under 60	60	Over 60
1912.								
California.....	2	38	54.0		38			
Illinois.....	4	443	54.0	19	424			
Indiana.....	6	41	54.5	6	3	32		
Massachusetts.....	2	74	53.3	55	19			
Minnesota.....	2	19	56.9			13	6	
Missouri.....	4	55	58.5		7		41	7
Ohio.....	3	122	53.1		26	96		
Pennsylvania.....	2	129	55.2			120	9	
Other States.....	11	269	55.9	72	62			135
Total.....	36	1,190	54.9	152	579	261	56	142
1913.								
California.....	2	36	54.0		36			
Illinois.....	4	714	53.9	60	654			
Indiana.....	6	39	53.4	16	3	14	6	
Massachusetts.....	2	80	53.3	55	25			
Minnesota.....	2	22	57.2			13	9	
Missouri.....	4	51	56.8		22		29	
Ohio.....	3	122	55.2		25	97		
Pennsylvania.....	2	129	55.2			119	10	
Other States.....	11	280	55.9	93	38			149
Total.....	36	1,473	54.6	224	803	243	54	149

CARPENTERS AND CAR BUILDERS.

1912.								
Alabama.....	2	23	54.0		23			
California.....	2	426	54.0		426			
Illinois.....	4	1,202	54.7	110	791		301	
Indiana.....	6	357	54.4	56		301		
Kansas.....	2	318	51.5	269				49
Kentucky.....	3	380	58.6		87			293
Massachusetts.....	2	261	53.3	195	66			
Michigan.....	2	689	58.9		125			564
Minnesota.....	3	327	58.1			105	216	6
Missouri.....	7	1,100	58.8		187		170	743
New Jersey.....	2	138	54.2		133			5
New York.....	2	388	56.6		219			169
Ohio.....	7	351	53.6	95	77	179		
Pennsylvania.....	6	411	58.4			131		280
Tennessee.....	6	417	57.8		125		165	127
Texas.....	4	403	55.6		307			96
Virginia.....	3	206	56.1		133			73
Wisconsin.....	2	891	60.0					891
Total.....	65	8,288	56.7	725	2,699	716	852	3,296
1913.								
Alabama.....	2	22	54.0		22			
California.....	2	460	54.0		460			
Illinois.....	4	1,622	55.3	479	644		499	
Indiana.....	6	384	55.1	63		207	114	
Kansas.....	2	438	51.4	377				61
Kentucky.....	3	416	59.0		73			373

TABLE IV.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN EACH YEAR, BY STATES, 1912 AND 1913—Continued.

CARPENTERS AND CAR BUILDERS—Concluded.

Year and State.	Number of establishments.	Number of employ-ees.	Average full-time hours per week.	Number of employees whose full-time hours per week were—					
				Under 54	54	Over 54 and under 57	57 and under 60	60	Over 60
1913—Concluded.									
Massachusetts.....	2	239	53.3	170	69				
Michigan.....	2	314	58.1		97				217
Minnesota.....	3	380	58.0			124	251		5
Missouri.....	7	839	57.2		350		226		263
New Jersey.....	2	211	54.2		204		7		
New York.....	2	362	55.1	178					184
Ohio.....	7	379	53.3	131	66	182			
Pennsylvania.....	6	778	56.9		62	414			302
Tennessee.....	6	284	57.3		110		112		62
Texas.....	4	393	55.8		278				115
Virginia.....	3	167	54.0		167				
Wisconsin.....	2	942	60.0						942
Total.....	65	8,660	56.2	1,398	2,602	927	1,209	2,524	

CAR REPAIRERS.

1912.									
Alabama.....	4	1,185	54.0		1,185				
California.....	2	221	54.0		221				
Illinois.....	4	574	53.5	293	281				
Indiana.....	5	567	53.8	80	274	213			
Kansas.....	2	165	50.4	158					7
Kentucky.....	3	577	58.4		154				423
Minnesota.....	3	609	59.4			39	232	338	
Missouri.....	5	303	56.9		130		158	15	
New Jersey.....	2	54	56.8		29			25	
Ohio.....	7	759	56.3	62	474	163			60
Pennsylvania.....	6	1,600	58.7			513	266	765	56
Tennessee.....	4	609	56.9		286		178	145	
Texas.....	4	404	57.3		193			221	
Virginia.....	3	565	55.3		447			118	
Wisconsin.....	2	827	60.0					827	
Other States.....	3	376	53.4	221	155				
Total.....	59	9,395	56.5	814	3,819	928	834	2,884	116
1913.									
Alabama.....	4	1,013	54.0		1,013				
California.....	2	327	54.0		327				
Illinois.....	4	693	53.5	355	338				
Indiana.....	5	629	53.6	116	304	209			
Kansas.....	2	237	50.3	229					8
Kentucky.....	3	683	58.0		230				453
Minnesota.....	3	689	59.3			51	273	365	
Missouri.....	5	248	58.0		53		187	8	
New Jersey.....	2	103	55.7		73			30	
Ohio.....	7	888	55.6	82	546	209			51
Pennsylvania.....	6	1,748	57.3		167	656	193	732	
Tennessee.....	4	637	56.8		310		166	161	
Texas.....	4	373	57.4		160			213	
Virginia.....	3	581	54.0		581				
Wisconsin.....	2	863	60.0					863	
Other States.....	3	509	51.9	504	5				
Total.....	59	10,221	56.0	1,286	4,107	1,125	819	2,833	51

TABLE IV.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN EACH YEAR, BY STATES, 1912 AND 1913—Continued.

FITTERS.

Year and State.	Number of establishments.	Number of employes.	Average full-time hours per week.	Number of employees whose full-time hours per week were—					
				Under 54	54	Over 54 and under 57	57 and under 60	60	Over 60
1912.									
Illinois.....	2	712	55.3		521		191		
Indiana.....	2	166	55.7			166			
Missouri.....	2	219	59.9				18	201	
Ohio.....	2	130	53.0	64		66			
Pennsylvania.....	2	451	58.3			195		256	
Other States.....	2	104	59.8				22	82	
Total.....	12	1,782	56.8	64	521	427	231	539	
1913.									
Illinois.....	2	999	54.9		827		172		
Indiana.....	2	248	57.4			62	186		
Missouri.....	2	320	59.9				35	285	
Ohio.....	2	183	52.6	105		78			
Pennsylvania.....	2	440	58.4			180		260	
Other States.....	2	115	59.8				18	97	
Total.....	12	2,305	56.6	105	827	320	411	642	

LABORERS.

1912.									
Alabama.....	4	390	54.0		390				
California.....	2	111	54.0		111				
Illinois.....	5	1,015	55.8	211	366		438		
Indiana.....	7	595	54.5	59	116	420			
Kansas.....	2	154	51.2	135				19	
Kentucky.....	3	289	58.4		77			212	
Massachusetts.....	2	177	53.2	145	32				
Michigan.....	2	316	58.4		84			232	
Minnesota.....	3	257	57.8			116	101	40	
Missouri.....	7	747	58.9		105		193	449	
New York.....	2	350	55.7		253			97	
Ohio.....	9	652	54.2	97	157	398			
Pennsylvania.....	8	1,956	57.4			1,034	132	787	3
Tennessee.....	6	474	58.9		51		200	223	
Texas.....	4	396	55.4		304			92	
Virginia.....	3	375	55.2		297			78	
Wisconsin.....	2	180	60.0					180	
Other States.....	1	112	54.0		112				
Total.....	72	8,546	56.4	647	2,455	1,968	1,064	2,409	3
1913.									
Alabama.....	4	366	54.0		366				
California.....	2	83	54.0		83				
Illinois.....	5	1,486	55.8	359	523		604		
Indiana.....	7	806	55.4	63	155	331	257		
Kansas.....	2	186	51.3	162				24	
Kentucky.....	3	344	58.5		88			256	
Massachusetts.....	2	209	53.2	177	32				
Michigan.....	2	266	57.6		106			160	
Minnesota.....	3	240	58.0			93	106	41	
Missouri.....	7	544	58.2		136		150	258	
New York.....	2	337	53.7	213				124	
Ohio.....	9	970	54.1	191	169	610			
Pennsylvania.....	8	2,346	57.3		42	1,285	78	941	
Tennessee.....	6	485	59.1		49		163	273	
Texas.....	4	329	55.7		236			93	
Virginia.....	3	447	54.0		447				
Wisconsin.....	2	221	60.0					221	
Other States.....	1	153	54.0		153				
Total.....	72	9,818	56.1	1,165	2,585	2,319	1,358	2,391	

TABLE IV.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN EACH YEAR, BY STATES, 1912 AND 1913—Continued.

MACHINE WOODWORKERS.

Year and State.	Number of establishments.	Number of employ-ees.	Average full-time hours per week.	Number of employees whose full-time hours per week were—					
				Under 54	54	Over 54 and under 57	57 and under 60	60	Over 60
1912.									
Alabama.....	4	55	54.0		55				
California.....	2	48	54.0		48				
Illinois.....	5	157	54.1	31	85		41		
Indiana.....	6	92	54.0	17	16	59			
Kansas.....	2	40	51.8	33				7	
Kentucky.....	3	55	58.0		18			37	
Massachusetts.....	2	49	53.3	34	15				
Michigan.....	2	70	61.8		6			48	16
Minnesota.....	3	43	58.5			11	22	10	
Missouri.....	7	155	58.8		19		69	67	
New York.....	2	44	56.5		26			18	
Ohio.....	8	119	54.3	16	36	67			
Pennsylvania.....	8	120	58.3			36	11	73	
Tennessee.....	6	91	58.3		23		21	47	
Texas.....	4	29	56.7		16			13	
Virginia.....	3	48	55.3		38			10	
Wisconsin.....	2	90	60.0					90	
Other States.....	1	14	50.0	14					
Total.....	70	1,319	56.5	145	401	173	164	420	16
1913.									
Alabama.....	4	56	54.0		56				
California.....	2	54	54.0		54				
Illinois.....	5	335	54.4	59	240		36		
Indiana.....	6	103	55.0	14	16	46	27		
Kansas.....	2	42	51.7	35				7	
Kentucky.....	3	60	57.7		23			37	
Massachusetts.....	2	49	53.3	34	15				
Michigan.....	2	38	58.7		8			30	
Minnesota.....	3	50	58.4			14	23	13	
Missouri.....	7	124	58.1		31		45	48	
New York.....	2	44	53.9	27				17	
Ohio.....	8	133	54.4	16	33	84			
Pennsylvania.....	8	146	57.8		8	51	10	77	
Tennessee.....	6	80	58.1		22		19	39	
Texas.....	4	33	56.0		22			11	
Virginia.....	3	50	54.0		50				
Wisconsin.....	2	96	60.0					96	
Other States.....	1	14	50.0	14					
Total.....	70	1,507	55.8	199	578	195	160	375	

MACHINISTS.

1912.								
Illinois.....	5	87	55.8	15	38		34	
Indiana.....	3	48	55.7			48		
Massachusetts.....	2	44	53.3	30	14			
Missouri.....	4	85	59.5		4		17	64
New York.....	2	26	55.2		21			5
Ohio.....	4	23	54.5	2	8	13		
Pennsylvania.....	3	140	58.0			55	1	84
Other States.....	12	109	55.9	4	65		15	25
Total.....	35	562	56.6	51	150	116	67	178

TABLE IV.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN EACH YEAR, BY STATES, 1912 AND 1913—Continued.

MACHINISTS—Concluded.

Year and State.	Number of establishments.	Number of employ-ees.	Average full-time hours per week.	Number of employees whose full-time hours per week were—					
				Under 54	54	Over 54 and under 57	57 and under 60	60	Over 60
1913.									
Illinois.....	5	170	55.1	18	112		40		
Indiana.....	3	86	57.4			21	65		
Massachusetts.....	2	51	53.4	29	22				
Missouri.....	4	93	58.6		7		86		
New York.....	2	27	52.2	21					6
Ohio.....	4	37	54.8	2	9	26			
Pennsylvania.....	3	148	57.7		2	65			81
Other States.....	12	98	55.6	5	63		8		22
Total.....	35	710	56.2	75	215	112	199	109	

PAINTERS.

1912.									
Alabama.....	4	70	54.0		70				
California.....	2	117	54.0		117				
Illinois.....	5	782	53.9	47	700		35		
Indiana.....	7	136	54.0	34	7	95			14
Kansas.....	2	73	51.9	59					
Kentucky.....	3	126	58.9		23				103
Massachusetts.....	2	170	53.2	142	28				
Michigan.....	2	164	59.1		24				140
Minnesota.....	3	100	57.6			51	34		15
Missouri.....	7	243	58.7		38		77		128
New York.....	2	86	54.4		30				6
Ohio.....	9	180	54.5	19	43	118			
Pennsylvania.....	8	268	57.7			130	25		111
Tennessee.....	6	120	58.2		33		22		65
Texas.....	4	69	55.3		54				15
Virginia.....	3	81	55.5		61				20
Wisconsin.....	2	168	60.0						168
Other States.....	1	43	50.0	43					
Total.....	72	2,996	55.8	344	1,278	394	193	785	2
1913.									
Alabama.....	4	76	54.0		76				
California.....	2	149	54.0		149				
Illinois.....	5	885	54.1	113	726		46		
Indiana.....	7	169	54.8	41	11	59	58		
Kansas.....	2	79	51.9	64					15
Kentucky.....	3	150	59.1		22				128
Massachusetts.....	2	178	53.2	149	29				
Michigan.....	2	79	58.1		25				54
Minnesota.....	3	100	57.7			47	39		14
Missouri.....	7	197	57.4		72		76		49
New York.....	2	99	50.9	90					9
Ohio.....	9	193	54.5	15	54	124			
Pennsylvania.....	8	346	57.6		1	157	30		158
Tennessee.....	6	121	58.4		30		18		73
Texas.....	4	76	55.8		53				23
Virginia.....	3	86	54.0		86				
Wisconsin.....	2	181	60.0						181
Other States.....	1	41	50.0	41					
Total.....	72	3,205	55.5	513	1,334	387	267	704	

TABLE IV.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN EACH YEAR, BY STATES, 1912 AND 1913—Continued.

PIPE FITTERS.

Year and State.	Number of establishments.	Number of employ-ees.	Average full-time hours per week.	Number of employees whose full-time hours per week were—					
				Under 54	54	Over 54 and under 57	57 and under 60	60	Over 60
1912.									
California.....	2	68	54.0		68				
Illinois.....	5	108	54.6	8	86		14		
Indiana.....	7	28	54.3	5	4	19			
Kentucky.....	3	28	58.1		9			19	
Massachusetts.....	2	23	53.1	21	2				
Missouri.....	7	60	58.2		12		34	14	
New York.....	2	25	55.7		18			7	
Ohio.....	4	34	54.8		14	20			
Pennsylvania.....	4	54	57.4			30	4	19	1
Other States.....	16	113	55.6	29	29	8	5	42	
Total.....	52	541	55.6	63	242	77	57	101	1
1913.									
California.....	2	75	54.0		75				
Illinois.....	5	123	54.3	21	90		12		
Indiana.....	7	36	54.0	11	5	13	7		
Kentucky.....	3	31	58.5		8			23	
Massachusetts.....	2	24	53.2	20	4				
Missouri.....	7	66	57.8		20		28	18	
New York.....	2	21	53.8	13				8	
Ohio.....	4	41	54.8		16	25			
Pennsylvania.....	4	55	56.3		5	34	3	13	
Other States.....	16	104	54.6	29	38	10	6	21	
Total.....	52	576	55.1	94	261	82	56	83	

RIVETERS AND BUCKERS.

1912.									
Illinois.....	3	344	55.6		237		107		
Indiana.....	2	132	55.7			132			
Missouri.....	2	126	59.9				10	116	
Ohio.....	2	71	52.3	46		25			
Pennsylvania.....	2	512	57.7			300		212	
Tennessee.....	2	52	59.6				19	33	
Other States.....	4	170	59.5		13			157	
Total.....	17	1,407	57.2	46	250	457	136	518	
1913.									
Illinois.....	3	412	55.4	14	283		115		
Indiana.....	2	177	57.7			21	156		
Missouri.....	2	126	59.8				21	105	
Ohio.....	2	131	53.2	59		72			
Pennsylvania.....	2	580	57.7			328		252	
Tennessee.....	2	44	59.7				14	30	
Other States.....	4	185	59.4		17			168	
Total.....	17	1,655	57.2	73	300	421	306	555	

TABLE IV.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN EACH YEAR, BY STATES, 1912 AND 1913—Continued.

TINNERS.

Year and State.	Number of establishments.	Number of employ-ees.	Average full-time hours per week.	Number of employees whose full-time hours per week were—				
				Under 54	54	Over 54 and under 57	57 and under 60	60
1912.								
Illinois.....	5	204	54.0	30	170		4	
Indiana.....	5	33	53.8	10		23		
Massachusetts.....	2	28	53.3	20	8			
Missouri.....	7	64	58.8		9		25	30
Ohio.....	5	59	54.9	1	16	42		
Pennsylvania.....	6	79	55.9			63	4	12
Tennessee.....	6	27	57.9		9		3	15
Other States.....	20	141	53.9	36	74	15		16
Total.....	56	635	54.9	97	286	143	36	73
1913.								
Illinois.....	5	250	54.0	51	190		9	
Indiana.....	5	36	54.3	11		17	8	
Massachusetts.....	2	27	53.3	20	7			
Missouri.....	7	46	57.2		18		23	5
Ohio.....	5	54	54.8	1	16	37		
Pennsylvania.....	6	91	56.0			72	4	15
Tennessee.....	6	28	57.8		10		3	15
Other States.....	20	147	53.3	50	69	17		11
Total.....	56	679	54.5	133	310	143	47	46

TRUCK BUILDERS.

1912.								
California.....	2	63	54.0		63			
Illinois.....	3	101	54.9	13	67		21	
Indiana.....	5	60	53.7	18		42		
Kansas.....	2	73	55.2	35				38
Massachusetts.....	2	45	53.1	39	6			
Michigan.....	2	72	61.9		20			26
Minnesota.....	2	59	56.4			51	8	
Missouri.....	6	103	58.4		24		16	63
New York.....	2	38	56.1		25			13
Ohio.....	5	107	53.9	20	24	63		
Pennsylvania.....	3	71	57.9			34		37
Texas.....	3	43	54.4		40			3
Other States.....	4	88	58.8		17		8	63
Total.....	41	923	56.2	125	286	190	53	243
1913.								
California.....	2	83	54.0		83			
Illinois.....	3	107	54.8	19	68		20	
Indiana.....	5	65	54.9	12		36	17	
Kansas.....	2	80	55.5	36				44
Massachusetts.....	2	50	53.3	33	17			
Michigan.....	2	35	57.9		12			23
Minnesota.....	2	69	56.6			56	13	
Missouri.....	6	129	56.3		76		19	34
New York.....	2	42	54.0	25				17
Ohio.....	5	109	54.2	15	22	72		
Pennsylvania.....	3	51	57.5			29		22
Texas.....	3	44	54.4		41			3
Other States.....	4	97	58.8		19		6	72
Total.....	41	961	55.6	140	338	193	75	215

TABLE IV.—AVERAGE AND CLASSIFIED FULL-TIME HOURS OF WORK PER WEEK IN EACH YEAR, BY STATES, 1912 AND 1913—Concluded.

UPHOLSTERERS.

Year and State.	Number of establishments.	Number of employ-ees.	Average full-time hours per week.	Number of employees whose full-time hours per week were—					
				Under 54	54	Over 54 and under 57	57 and under 60	60	Over 60
1912.									
California.....	2	48	54.0		48				
Illinois.....	4	144	53.6	9	135				
Missouri.....	6	24	58.2		5		13	6	
Ohio.....	4	41	54.7	2	10	29			
Pennsylvania.....	2	26	55.6		21		5		
Other States.....	25	191	55.7	52	52	19	4	64	
Total.....	46	474	54.9	63	250	69	22	70	
1913.									
California.....	2	50	54.0		50				
Illinois.....	4	161	53.9	20	141				
Missouri.....	6	30	56.3		16		14		
Ohio.....	4	47	54.8	2	10	35			
Pennsylvania.....	2	22	55.5		18		4		
Other States.....	28	201	55.4	60	45	27	5	64	
Total.....	46	511	54.8	82	262	80	23	64	

TABLE V.—AVERAGE FULL-TIME HOURS OF WORK PER WEEK AND AVERAGE FULL-TIME WEEKLY EARNINGS, BY STATES, 1912 AND 1913.

CABINETMAKERS.

Occupation and State.	Number of establishments.	1912			1913		
		Number of employees.	Average full-time hours per week.	Average full-time weekly earnings.	Number of employees.	Average full-time hours per week.	Average full-time weekly earnings.
California.....	2	38	54.0	\$20.18	36	54.0	\$20.05
Illinois.....	4	443	54.0	18.55	714	53.9	19.29
Indiana.....	6	41	54.5	17.52	39	53.4	18.02
Massachusetts.....	2	74	53.3	15.63	80	53.3	16.43
Minnesota.....	2	19	56.9	16.55	22	57.2	16.80
Missouri.....	4	55	58.5	16.48	51	56.8	17.40
Ohio.....	3	122	55.1	18.25	122	55.2	18.49
Pennsylvania.....	2	129	55.2	21.43	129	55.2	21.76
Other States.....	11	269	55.9	17.76	280	55.9	18.58
Total.....	36	1,190	54.9	18.36	1,473	54.6	19.03

CARPENTERS AND CAR BUILDERS.

Alabama.....	2	23	54.0	\$17.93	22	54.0	\$18.46
California.....	2	426	54.0	17.31	460	54.0	17.26
Illinois.....	4	1,202	54.7	16.91	1,622	55.3	17.48
Indiana.....	6	357	54.4	17.46	384	55.1	19.13
Kansas.....	2	318	51.5	14.02	438	51.4	15.18
Kentucky.....	3	380	58.6	16.55	446	59.0	16.34
Massachusetts.....	2	261	53.3	15.21	239	53.3	16.07
Michigan.....	2	689	58.9	16.58	314	58.1	17.91
Minnesota.....	3	327	58.1	14.71	380	58.0	15.38
Missouri.....	7	1,100	58.8	14.38	839	57.2	16.20
New Jersey.....	2	138	54.2	16.30	211	54.2	17.36
New York.....	2	388	56.6	16.69	362	55.1	19.91
Ohio.....	7	351	53.6	18.57	379	53.3	17.86
Pennsylvania.....	6	411	58.4	16.52	778	56.9	19.24
Tennessee.....	6	417	57.8	15.74	284	57.3	17.12
Texas.....	4	403	55.6	17.43	393	55.8	17.73
Virginia.....	3	206	56.1	21.04	167	54.0	21.51
Wisconsin.....	2	891	60.0	13.53	942	60.0	14.08
Total.....	65	8,288	56.7	16.10	8,660	56.2	17.11

CAR REPAIRERS.

Alabama.....	4	1,185	54.0	\$12.90	1,013	54.0	\$13.57
California.....	2	221	54.0	13.56	327	54.0	13.56
Illinois.....	4	574	53.5	15.20	693	53.5	15.62
Indiana.....	5	567	53.8	13.87	629	53.6	14.75
Kansas.....	2	165	50.4	12.44	237	50.3	13.51
Kentucky.....	3	577	58.4	14.06	683	58.0	14.26
Minnesota.....	3	609	59.4	12.80	689	59.3	13.22
Missouri.....	5	303	56.9	13.69	248	58.0	14.43
New Jersey.....	2	54	56.8	11.09	103	55.7	11.54
Ohio.....	7	759	56.3	16.73	888	55.6	18.17
Pennsylvania.....	6	1,600	58.7	17.95	1,748	57.3	17.81
Tennessee.....	4	609	56.9	13.12	637	56.3	13.82
Texas.....	4	404	57.3	13.32	373	57.4	13.42
Virginia.....	3	565	55.3	17.35	581	54.0	18.35
Wisconsin.....	2	827	60.0	11.95	863	60.0	12.42
Other States.....	3	376	53.4	13.52	509	51.9	14.35
Total.....	59	9,395	56.5	14.60	10,221	56.0	15.15

TABLE V.—AVERAGE FULL-TIME HOURS OF WORK PER WEEK AND AVERAGE FULL-TIME WEEKLY EARNINGS, BY STATES, 1912 AND 1913—Continued.

FITTERS.

Occupation and State.	Number of establishments.	1912			1913		
		Number of employees.	Average full-time hours per week.	Average full-time weekly earnings.	Number of employees.	Average full-time hours per week.	Average full-time weekly earnings.
Illinois.....	2	712	55.3	\$15.94	999	54.9	\$18.78
Indiana.....	2	166	55.7	14.39	248	57.4	16.21
Missouri.....	2	219	59.9	9.86	320	59.9	11.41
Ohio.....	2	130	53.0	14.34	183	52.6	13.44
Pennsylvania.....	2	451	58.3	12.92	440	58.4	14.20
Other States.....	2	104	59.8	14.55	115	59.8	14.96
Total.....	12	1,782	56.8	14.08	2,305	56.6	15.99

LABORERS.

Alabama.....	4	390	54.0	\$7.18	366	54.0	\$7.18
California.....	2	111	54.0	13.03	83	54.0	11.22
Illinois.....	5	1,015	55.8	9.88	1,486	55.8	10.81
Indiana.....	7	595	54.5	9.15	806	55.4	10.51
Kansas.....	2	154	51.2	8.41	186	51.3	8.56
Kentucky.....	3	289	58.4	8.74	344	58.5	8.77
Massachusetts.....	2	177	53.2	10.19	209	53.2	9.83
Michigan.....	2	316	58.4	10.72	266	57.6	11.58
Minnesota.....	3	257	57.8	10.12	240	58.0	10.30
Missouri.....	7	747	58.9	9.21	544	58.2	9.45
New York.....	2	350	55.7	11.14	337	53.7	11.23
Ohio.....	9	652	54.2	10.15	970	54.1	10.91
Pennsylvania.....	8	1,956	57.4	11.84	2,346	57.3	12.33
Tennessee.....	6	474	58.9	8.17	485	59.1	8.34
Texas.....	4	396	55.4	9.24	329	55.7	9.25
Virginia.....	3	375	55.2	9.12	447	54.0	9.34
Wisconsin.....	2	180	60.0	9.83	221	60.0	9.99
Other States.....	1	112	54.0	10.44	153	54.0	11.19
Total.....	72	8,546	56.4	10.04	9,818	56.1	10.58

MACHINE WOODWORKERS.

Alabama.....	4	55	54.0	\$15.77	56	54.0	\$16.15
California.....	2	48	54.0	17.79	54	54.0	18.16
Illinois.....	5	157	54.1	16.12	335	54.4	16.09
Indiana.....	6	92	54.0	15.43	103	55.0	17.73
Kansas.....	2	40	51.8	14.05	42	51.7	15.60
Kentucky.....	3	55	58.0	16.11	60	57.7	16.41
Massachusetts.....	2	49	53.3	15.34	49	53.3	16.15
Michigan.....	2	70	61.8	14.89	38	58.7	14.53
Minnesota.....	3	43	58.5	14.44	50	58.4	14.63
Missouri.....	7	155	58.8	13.04	124	58.1	14.11
New York.....	2	44	56.5	17.29	44	53.9	16.86
Ohio.....	8	119	54.3	15.52	133	54.4	16.26
Pennsylvania.....	8	120	58.3	16.59	146	57.8	17.49
Tennessee.....	6	91	58.3	15.85	80	58.1	16.19
Texas.....	4	29	56.7	16.81	33	56.0	16.53
Virginia.....	3	48	55.3	19.06	50	54.0	19.86
Wisconsin.....	2	90	60.0	14.27	96	60.0	14.84
Other States.....	1	14	50.0	15.64	14	50.0	15.64
Total.....	70	1,319	56.5	15.54	1,507	55.8	16.26

TABLE V.—AVERAGE FULL-TIME HOURS OF WORK PER WEEK AND AVERAGE FULL-TIME WEEKLY EARNINGS, BY STATES, 1912 AND 1913—Continued.

MACHINISTS.

Occupation and State.	Number of establishments.	1912			1913		
		Number of employees.	Average full-time hours per week.	Average full-time weekly earnings.	Number of employees.	Average full-time hours per week.	Average full-time weekly earnings.
Illinois.....	5	87	55.8	\$17.47	170	55.1	\$18.18
Indiana.....	3	48	55.7	17.71	86	57.4	18.39
Massachusetts.....	2	44	53.3	16.75	51	53.4	16.68
Missouri.....	4	85	59.5	16.13	93	58.6	16.07
New York.....	2	26	55.2	17.28	27	52.2	16.08
Ohio.....	4	23	54.5	14.77	37	54.8	15.25
Pennsylvania.....	3	140	58.0	18.03	148	57.7	17.96
Other States.....	12	109	55.9	19.59	98	55.6	20.09
Total.....	35	562	56.6	17.66	710	56.2	17.81

PAINTERS.

Alabama.....	4	70	54.0	\$13.01	76	54.0	\$13.65
California.....	2	117	54.0	18.14	149	54.0	18.34
Illinois.....	5	782	53.9	17.64	885	54.1	18.83
Indiana.....	7	136	54.0	17.00	169	54.8	18.02
Kansas.....	2	73	51.9	19.82	79	51.9	18.77
Kentucky.....	3	126	58.9	14.16	150	59.1	14.74
Massachusetts.....	2	170	53.2	14.32	178	53.2	15.17
Michigan.....	2	164	59.1	12.79	79	58.1	16.34
Minnesota.....	3	100	57.6	14.92	100	57.7	15.31
Missouri.....	7	243	58.7	14.74	197	57.4	15.21
New York.....	2	86	54.4	21.74	99	50.9	21.92
Ohio.....	9	180	54.5	17.92	193	54.5	17.68
Pennsylvania.....	8	268	57.7	19.48	346	57.6	19.61
Tennessee.....	6	120	58.2	14.79	121	58.4	15.56
Texas.....	4	69	55.3	17.10	76	55.8	17.25
Virginia.....	3	81	55.5	24.36	86	54.0	23.03
Wisconsin.....	2	168	60.0	15.12	181	60.0	15.93
Other States.....	1	43	50.0	16.62	41	50.0	20.05
Total.....	72	2,996	55.8	16.85	3,205	55.5	17.77

PIPE FITTERS.

California.....	2	68	54.0	\$17.31	75	54.0	\$17.27
Illinois.....	5	108	54.6	20.99	123	54.3	21.63
Indiana.....	7	28	54.3	17.63	36	54.0	18.37
Kentucky.....	3	28	58.1	18.42	31	58.5	19.45
Massachusetts.....	2	23	53.1	15.95	24	53.2	17.03
Missouri.....	7	60	58.2	13.48	66	57.8	15.38
New York.....	2	25	55.7	17.66	21	53.8	19.20
Ohio.....	4	34	54.8	19.57	41	54.8	19.64
Pennsylvania.....	4	54	57.4	18.92	55	56.3	18.54
Other States.....	16	113	55.6	15.87	104	54.6	17.49
Total.....	52	541	55.6	17.65	576	55.1	18.56

RIVETERS AND BUCKERS.

Illinois.....	3	344	55.6	\$18.90	412	55.4	\$22.25
Indiana.....	2	132	55.7	16.87	177	57.7	21.23
Missouri.....	2	126	59.9	11.59	126	59.8	13.41
Ohio.....	2	71	52.3	13.04	131	53.2	15.58
Pennsylvania.....	2	512	57.7	18.30	580	57.7	19.01
Tennessee.....	2	52	59.6	15.06	44	59.7	17.84
Other States.....	4	170	59.5	13.39	185	59.4	19.71
Total.....	17	1,407	57.2	16.73	1,655	57.2	19.41

TABLE V.—AVERAGE FULL-TIME HOURS OF WORK PER WEEK AND AVERAGE FULL-TIME WEEKLY EARNINGS, BY STATES, 1912 AND 1913—Concluded.

TINNERS.

Occupation and State.	Number of establishments.	1912			1913		
		Number of employees.	Average full-time hours per week.	Average full-time weekly earnings.	Number of employees.	Average full-time hours per week.	Average full-time weekly earnings.
Illinois.....	5	204	54.0	\$20.69	250	54.0	\$21.03
Indiana.....	5	33	53.8	18.72	36	54.3	18.08
Massachusetts.....	2	28	53.3	15.06	27	53.3	16.12
Missouri.....	7	64	58.8	13.71	46	57.2	16.68
Ohio.....	5	59	54.9	18.70	54	51.8	18.64
Pennsylvania.....	6	79	55.9	20.62	91	56.0	20.82
Tennessee.....	6	27	57.9	18.38	28	57.8	19.08
Other States.....	20	141	53.9	17.04	147	53.3	17.31
Total.....	56	635	54.9	18.53	679	54.5	19.28

TRUCK BUILDERS.

California.....	2	63	54.0	\$15.40	83	54.0	\$15.35
Illinois.....	3	101	54.9	16.97	107	51.8	17.80
Indiana.....	5	60	53.7	14.76	65	54.9	17.11
Kansas.....	2	73	55.2	15.16	80	55.5	15.57
Massachusetts.....	2	45	53.1	13.16	50	53.3	13.99
Michigan.....	2	72	61.9	13.71	35	57.9	16.38
Minnesota.....	2	59	56.4	12.89	69	56.6	13.03
Missouri.....	6	103	58.4	12.33	129	56.3	13.07
New York.....	2	38	56.1	13.29	42	54.0	14.29
Ohio.....	5	107	53.9	16.57	109	54.2	17.16
Pennsylvania.....	3	71	57.9	17.03	51	57.5	18.74
Texas.....	3	43	54.4	13.01	44	54.4	13.93
Other States.....	4	88	58.8	12.51	97	58.8	13.14
Total.....	41	923	56.2	14.55	961	55.6	15.31

UPHOLSTERERS.

California.....	2	48	54.0	\$18.16	50	54.0	\$18.44
Illinois.....	1	144	53.6	21.40	161	53.9	21.87
Missouri.....	6	24	58.2	17.63	30	56.3	16.80
Ohio.....	1	41	54.7	20.69	47	54.8	20.31
Pennsylvania.....	2	26	55.6	22.53	22	55.5	22.76
Other States.....	28	191	55.7	17.29	201	55.4	17.74
Total.....	46	474	54.9	19.23	511	54.8	19.50

APPENDIX.

In order that the summary figures in regard to rates of wages and hours of labor in the steam railroad car building and repairing industry covered in this Bulletin, heretofore published for the years 1890 to 1912, may be available for reference, the following table is reproduced from Bulletin No. 137:

RELATIVE FULL-TIME HOURS PER WEEK AND RATES OF WAGES PER HOUR IN THE PRINCIPAL OCCUPATIONS IN CAR BUILDING AND REPAIRING, 1890 TO 1912.

[Data are included from 49 establishments, 1890-1903; 52 establishments, 1903, 1904; 46 establishments, 1904, 1905; 46 establishments, 1905, 1906; 47 establishments, 1906, 1907; 22 establishments, 1907-1910; 61 establishments, 1910, 1911; and 70 establishments, 1911, 1912.]

Year.	Blacksmiths.		Boiler makers.		Brass finishers.		Cabinetmakers.		Carpenters and car builders, wood. ¹	
	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.
Average, 1890-1899	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1890	101.9	102.3	103.7	100.4	100.2	105.8	100.1	107.6	101.2	101.6
1891	100.8	101.0	100.9	101.8	99.2	105.1	99.8	107.3	100.4	101.4
1892	101.5	101.6	103.3	100.8	100.3	104.2	99.9	102.3	101.3	102.9
1893	101.1	101.8	102.6	101.3	100.4	107.0	100.3	105.4	100.5	104.6
1894	96.6	101.1	94.8	99.1	99.8	87.9	99.9	86.5	97.9	96.9
1895	98.1	102.2	97.2	98.7	99.6	93.8	100.1	91.8	99.0	98.4
1896	98.8	96.1	97.2	99.1	99.3	98.5	100.0	97.9	98.9	97.5
1897	98.1	99.4	97.4	98.7	99.6	99.1	99.9	87.2	98.6	98.2
1898	101.1	97.0	101.5	99.4	100.5	98.2	99.9	99.3	101.2	97.8
1899	101.8	97.5	101.4	100.5	100.5	100.3	100.0	104.7	101.0	100.8
1900	101.9	97.9	101.8	101.9	100.5	105.5	100.2	106.9	101.3	100.6
1901	100.9	99.2	100.2	102.7	100.3	101.0	99.4	112.7	100.6	102.3
1902	100.7	100.4	99.8	105.5	100.4	112.0	99.6	122.5	100.7	105.9
1903	99.9	104.4	98.5	113.4	94.0	120.6	93.4	130.4	99.0	109.7
1904	98.4	111.5	98.5	118.3	93.3	130.6	91.9	132.3	97.5	113.4
1905	97.8	107.8	97.4	120.7	92.8	113.7	92.0	120.1	97.3	115.5
1906	97.0	110.9	96.9	121.5	92.8	117.7	92.0	122.9	96.9	119.0
1907	96.3	119.4	96.5	128.9	93.0	122.4	92.0	128.2	97.0	124.5
1908	(²)	(²)	(²)	(²)	(²)	(²)	91.8	122.9	96.8	121.0
1909							91.8	120.7	97.3	116.0
1910							91.8	131.2	96.9	130.9
1911							93.4	132.3	96.4	130.5
1912							93.2	136.7	96.9	127.6

¹ Reported as carpenters, 1890 to 1906.

² Report on this occupation discontinued.

RELATIVE FULL-TIME HOURS PER WEEK AND RATES OF WAGES PER HOUR IN THE PRINCIPAL OCCUPATIONS IN CAR BUILDING AND REPAIRING, 1890 TO 1912—Continued.

Year.	Car repairers.		Coppersmiths.		Fitters.		Laborers.		Machine wood-workers.	
	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.
Average, 1890-1899.			100.0	100.0			100.0	100.0	100.0	100.0
1890.			105.6	101.4			101.2	99.7	100.8	102.9
1891.			104.1	101.3			101.3	99.2	100.7	106.0
1892.			103.7	100.6			101.0	100.7	101.2	100.4
1893.			101.7	102.9			100.3	112.3	101.2	102.5
1894.			93.4	99.8			97.5	99.9	98.9	97.3
1895.			96.6	101.4			99.8	97.2	99.3	96.4
1896.			95.5	99.2			99.6	98.1	99.3	99.1
1897.			95.7	97.4			99.1	98.5	98.8	95.4
1898.			102.1	96.2			100.2	97.2	99.8	99.1
1899.			101.7	99.5			100.0	97.5	100.1	100.9
1900.			103.0	99.4			100.2	100.5	100.6	101.7
1901.			101.6	99.0			100.6	100.3	99.6	100.8
1902.			102.8	100.4			100.3	103.1	99.7	106.0
1903.			102.3	102.5			102.4	104.4	96.1	113.7
1904.			101.9	107.5			100.9	106.3	94.0	115.9
1905.			99.6	110.3			100.0	107.8	94.2	115.4
1906.			(1)	(1)			99.7	109.4	93.7	118.1
1907.	² 100.0	² 100.0					99.9	111.9	94.0	122.9
1908.	² 99.7	² 99.0					99.9	115.6	92.8	125.1
1909.	² 98.1	² 97.7					99.5	112.5	93.6	124.2
1910.	² 98.3	² 104.3			³ 100.0	³ 100.0	98.4	122.6	92.0	125.9
1911.	² 97.6	² 107.5			³ 96.3	³ 111.8	98.2	123.2	93.1	128.9
1912.	² 98.5	² 108.0			³ 97.3	³ 107.3	98.4	127.1	92.9	133.1

Year.	Machinists.		Molders, brass.		Molders, iron.		Painters.		Pattern makers.	
	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.
Average, 1890-1899.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1890.	102.0	100.5	101.0	105.6	100.4	105.1	101.3	102.5	101.6	101.8
1891.	100.7	100.1	101.4	106.9	100.8	103.7	101.1	102.4	100.9	102.5
1892.	102.2	100.3	101.4	98.9	100.8	104.5	101.3	101.6	101.6	101.2
1893.	101.3	100.8	101.1	101.0	100.7	108.5	101.4	103.1	101.7	103.4
1894.	95.9	100.7	94.5	104.4	96.4	99.2	98.2	97.8	98.9	100.9
1895.	99.4	99.9	101.2	93.8	100.7	99.1	99.1	96.5	97.8	99.0
1896.	98.7	99.5	100.9	94.2	101.2	92.6	99.0	98.7	97.7	95.8
1897.	98.4	99.4	96.3	96.4	96.9	96.2	98.1	100.8	97.1	97.0
1898.	100.3	98.9	101.1	97.0	101.0	95.5	100.2	98.3	101.0	100.0
1899.	101.0	100.2	101.2	101.6	101.1	95.7	100.4	98.6	101.8	98.7
1900.	101.7	100.6	101.5	99.7	101.1	97.9	100.8	97.3	101.7	100.1
1901.	101.4	102.1	101.6	102.1	100.2	98.8	99.8	99.4	101.0	102.1
1902.	101.3	104.8	101.8	109.2	100.2	101.2	99.7	101.5	101.5	102.5
1903.	99.3	110.7	95.5	117.5	99.3	106.0	98.9	105.4	98.3	108.5
1904.	98.5	115.2	94.9	121.4	97.8	110.1	96.2	111.4	97.5	110.7
1905.	96.9	115.8	94.6	123.6	97.0	113.1	95.6	113.7	97.2	112.5
1906.	96.7	118.6	95.3	127.2	97.0	119.0	95.3	115.3	96.7	115.8
1907.	96.3	126.0	95.9	130.6	96.5	129.6	95.2	118.0	97.1	122.7
1908.	93.2	131.9	(1)	(1)	(1)	(1)	94.5	112.1	(1)	(1)
1909.	93.4	128.3					96.6	114.2		
1910.	93.4	136.0					94.5	122.2		
1911.	91.9	139.8					94.3	125.4		
1912.	91.7	139.7					94.0	128.0		

¹ Report on this occupation discontinued.

² Data for 1890 to 1906 not available; computed with 1907=100.0.

³ Data for 1890 to 1909 not available; computed with 1910=100.0.

RELATIVE FULL-TIME HOURS PER WEEK AND RATES OF WAGES PER HOUR IN
THE PRINCIPAL OCCUPATIONS IN CAR BUILDING AND REPAIRING, 1890 TO 1912—
Concluded.

Year.	Pipe fitters.		Riveters and buckers.		Tinner.		Truck builders.		Upholsters.	
	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.	Relative full-time hours per week.	Relative rate of wages per hour.
Average, 1890-1899..	100.0	100.0	.....	.....	100.0	100.0	.....	.....	100.0	100.0
1890.....	102.5	103.6	.....	.....	102.1	98.2	.....	.....	100.7	105.0
1891.....	102.7	97.0	.....	.....	101.1	97.1	.....	.....	100.9	105.3
1892.....	103.3	95.7	.....	.....	101.1	102.9	.....	.....	100.9	105.1
1893.....	102.5	101.7	.....	.....	100.6	101.4	.....	.....	101.1	107.0
1894.....	94.5	102.5	.....	.....	97.3	97.8	.....	.....	98.5	92.9
1895.....	96.7	99.5	.....	.....	98.6	99.3	.....	.....	98.7	97.0
1896.....	96.3	99.2	.....	.....	98.6	101.8	.....	.....	99.5	94.9
1897.....	96.4	99.6	.....	.....	98.2	102.3	.....	.....	99.0	96.2
1898.....	102.1	101.4	.....	.....	101.3	96.6	.....	.....	100.2	96.2
1899.....	103.0	99.9	.....	.....	101.2	102.6	.....	.....	100.6	97.2
1900.....	102.9	99.1	.....	.....	102.0	103.4	.....	.....	101.0	98.1
1901.....	101.4	101.2	.....	.....	100.7	103.4	.....	.....	100.5	100.0
1902.....	101.4	100.1	.....	.....	100.3	112.2	.....	.....	100.0	103.9
1903.....	100.5	106.5	.....	.....	97.6	119.1	.....	.....	94.9	111.8
1904.....	99.3	110.4	.....	.....	96.5	121.7	.....	.....	91.9	123.1
1905.....	99.0	108.5	.....	.....	95.9	121.8	.....	.....	92.0	113.9
1906.....	98.9	113.8	.....	.....	95.0	130.0	.....	.....	92.6	118.8
1907.....	98.5	119.9	.....	.....	94.8	138.1	¹ 100.0	¹ 100.0	92.8	126.2
1908.....	98.0	119.3	.....	.....	94.6	135.2	99.5	100.7	92.5	122.1
1909.....	98.4	116.1	.....	.....	94.8	130.3	99.7	98.6	92.8	122.1
1910.....	98.2	129.6	² 100.0	² 100.0	94.3	150.3	99.5	103.7	92.6	132.3
1911.....	97.7	134.9	² 98.8	² 89.9	94.5	151.0	98.5	107.5	92.3	141.2
1912.....	96.8	136.3	² 99.0	² 100.3	93.6	150.1	99.0	112.2	92.3	144.2

¹ Data for 1890 to 1906 not available; computed with 1907=100.0.

² Data for 1890 to 1909 not available; computed with 1910=100.0.