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WAGES AND HOURS OF LABOR SERIES

**WAGES AND HOURS OF LABOR
IN THE MANUFACTURE OF
SILK AND RAYON GOODS: 1931**



NOVEMBER, 1932

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WAGES AND HOURS OF LABOR IN THE MANUFACTURE OF SILK AND RAYON GOODS, 1931

In 1931 wage earners in the silk, rayon, or mixed silk and rayon goods manufacturing industry in the United States earned an average of 40.6 cents per hour. Average full-time hours per week were 50.7 and average full-time earnings per week \$20.58. These averages were computed from wage figures for 49,036 wage earners of 340 representative mills in the 13 States in which the industry is of importance in number of employees according to reports of the Census of Manufactures. The wage figures were collected by the United States Bureau of Labor Statistics from the pay rolls and other records of the mills. Studies of the industry were also made in the years 1910 to 1914, and 1919.

Trend of Hours and Earnings, 1910 to 1931

Summaries of average hours and earnings are shown in Table 1 for the industry and for each of the important occupations in the industry for each year in which studies have been made. Averages are also shown for a group designated as "other employees," which includes wage earners in all the other occupations in the industry and which had too few workers to warrant separate tabulation as an occupation.

For the years 1910 to 1914 and 1919 the averages for the industry are for wage earners in selected occupations only and are comparable one year with another. For 1914 and 1931, they are for wage earners in all occupations in the industry and are also comparable one year with the other, but should not be compared with those for selected occupations.

Index numbers of the averages, with the 1913 average taken as the base, or 100 per cent, are also given in Table 1 for the industry and for each occupation for which 1913 averages are available. These indexes furnish comparable figures for the specified years from 1910 to 1931. For selected occupations only the index for any year is the per cent that the average for the year is of the average for 1913. The index for 1931 was computed by increasing or decreasing the 1914 index for selected occupations by the per cent that the 1931 average for all occupations is in excess of or less than the 1914 average for all occupations.

There was a decrease of 7.1 per cent in average full-time hours per week for wage earners in all occupations in the industry from 1914—when the average was 54.6—to 1931. Between 1910 and 1931 aver-

age full-time hours decreased 10.2 per cent; between 1914 and 1919, 5.5 per cent; and between 1913 and 1931, 9 per cent. These decreases are shown by the index numbers, which dropped from 101.3 in 1910 and 1911 to 100.4 in 1912, to 100.0 in 1913, to 98.0 in 1914, to 92.6 in 1919, and to 91.0 in 1931. In the various occupations in the industry average full-time hours for males in 1931 ranged from 46.8 for reelers to 58.9 for doublers, and for females from 48.2 for ribbon weavers to 52.1 for smash hands.

Between 1914 and 1931, average earnings per hour more than doubled, increasing from 19.7 to 40.6 cents. The increases from year to year are shown by the indexes—rising from 86.5 in 1910 to 100.0 in 1913, to 199.0 in 1919, and to 215.8 in 1931. The ranges in average earnings per hour in 1931, by occupations, are from 19.7 cents for redrawers to 74.6 cents for loom fixers for males, and from 26.0 cents for enterers' helpers to 47.6 cents for warpers for females.

Average full-time earnings per week have not increased in the same proportion as have earnings per hour, due to the decrease in average full-time hours per week. They rose, however, from \$10.79 in 1914 to \$20.58 in 1931. For males, average full-time weekly earnings in 1931 ranged by occupations from \$10.38 for redrawers to \$38.05 for loom fixers, and for females from \$12.25 for redrawers to \$23.99 for warpers.

TABLE 1.—Average hours and earnings, with index numbers, 1910 to 1931, by occupation, sex, and year

THE INDUSTRY									
Occupation and sex	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)		
							Full-time hours per week	Earnings per hour	Full-time earnings per week
Selected occupations.....	1910	42	7,779	56.4	\$0.167	\$9.43	101.3	86.5	88.6
	1911	42	11,105	56.4	.172	9.70	101.3	89.1	91.2
	1912	51	11,762	55.9	.182	10.18	100.4	94.3	96.7
	1913	59	12,002	55.7	.193	10.64	100.0	100.0	100.0
	1914	63	18,293	54.6	.202	11.06	98.0	104.7	103.9
	1919	33	9,415	51.6	.384	19.31	92.6	199.0	186.2
All occupations.....	1914	63	22,344	54.6	.197	10.79	-----	-----	-----
	1931	340	49,036	50.7	.406	20.58	91.0	215.8	198.2
BY OCCUPATIONS									
Winders, hard silk:									
Male.....	1931	14	61	51.9	\$0.267	\$13.86	-----	-----	-----
Female.....	1910	17	559	57.3	.093	5.30	101.8	83.0	84.1
	1911	18	889	56.8	.104	5.88	100.9	92.9	93.3
	1912	18	834	56.2	.106	5.96	99.8	94.6	94.6
	1913	19	836	56.3	.112	6.30	100.0	100.0	100.0
	1914	21	1,008	54.1	.121	6.54	96.1	103.0	103.8
	1919	29	* 1,069	51.5	.269	13.85	91.5	240.2	219.8
	1931	183	5,105	50.1	.293	14.68	89.0	261.6	233.0

¹ 2 sets of averages are shown for the industry—1 for selected occupations and the other for all occupations in the industry. The averages from 1910 to 1919 for selected occupations only are comparable 1 year with another, as are those in 1914 and 1931 for all occupations 1 year with the other.

* Includes soft silk winders.

TABLE 1.—Average hours and earnings, with index numbers, 1910 to 1931, by occupation, sex, and year—Continued

BY OCCUPATIONS—Continued

Occupation and sex	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)		
							Full-time hours per week	Earnings per hour	Full-time earnings per week
Doublers:									
Male	1931	6	52	58.9	\$0.350	\$20.62			
Female	1910	13	255	57.3	.094	5.37	103.6	91.3	94.2
	1911	12	316	56.2	.099	5.56	101.6	96.2	97.5
	1912	12	302	56.2	.087	5.41	101.6	94.2	94.9
	1913	11	249	55.3	.103	5.79	100.0	100.0	100.0
	1914	13	304	54.2	.107	5.50	98.0	103.9	101.8
	1919	10	148	50.5	.225	11.36	91.3	218.4	199.3
	1931	33	372	50.3	.287	14.44	91.0	278.6	253.3
Spinners:									
Male	1910	16	327	57.5	.094	5.40	101.6	80.3	81.7
	1911	16	306	57.5	.095	5.47	101.6	81.2	82.8
	1912	14	327	57.3	.102	5.82	101.2	87.2	88.0
	1913	14	262	56.6	.117	6.61	100.0	100.0	100.0
	1914	16	300	54.7	.119	6.52	96.6	101.7	98.6
	1919	9	107	53.9	.342	18.43	95.2	292.3	278.8
	1931	109	1,794	54.2	.344	18.64	95.8	294.0	282.0
Female	1910	9	86	56.9	.091	5.15	101.1	82.7	83.1
	1911	12	369	56.5	.123	6.90	100.4	111.8	111.3
	1912	12	395	56.0	.124	6.92	99.5	112.7	111.6
	1913	11	340	56.3	.110	6.20	100.0	100.0	100.0
	1914	12	437	54.2	.138	7.50	96.3	125.5	121.0
	1919	8	372	50.3	.274	13.78	89.3	249.1	222.3
	1931	104	2,346	50.2	.289	14.51	89.2	262.7	234.0
Reelers:									
Male	1910	10	104	58.0	.091	5.27	103.0	68.9	70.9
	1911	12	133	57.1	.101	5.80	101.4	76.5	78.1
	1912	12	118	56.9	.104	5.92	101.1	78.8	79.7
	1913	11	77	56.3	.132	7.43	100.0	100.0	100.0
	1914	14	123	54.4	.132	7.22	96.6	100.0	97.2
	1919	6	20	50.4	.277	13.96	89.5	209.8	187.9
	1931	6	19	46.8	.319	14.93	83.1	241.7	200.9
Female	1910	7	82	57.2	.094	5.34	100.9	93.1	93.2
	1911	10	256	56.4	.098	5.53	99.5	97.0	96.5
	1912	10	271	56.2	.096	5.39	99.1	95.0	94.1
	1913	11	194	56.7	.101	5.73	100.0	100.0	100.0
	1914	10	196	54.3	.119	6.44	95.8	117.8	112.4
	1919	12	117	51.0	.269	13.21	89.9	256.4	230.5
	1931	31	237	49.8	.287	14.29	87.8	284.2	249.4
Laborers, dyehouse:									
Male	1910	8	1,746	55.8	.197	10.99	100.4	93.8	94.2
	1911	11	2,516	55.6	.201	11.15	100.0	95.8	95.5
	1912	12	2,739	55.6	.211	11.68	100.0	100.5	100.1
	1913	12	2,625	55.6	.210	11.67	100.0	100.0	100.0
	1914	14	3,237	56.1	.216	12.12	100.9	102.9	103.9
	1919	27	279	51.5	.546	28.12	92.6	260.0	241.0
	1931	13	464	52.0	.479	24.91	93.5	228.1	213.5
Winders, rayon:									
Male	1931	2	30	55.0	.375	20.63			
Winders, soft silk:									
Male	1931	6	22	57.3	.319	18.28			
Female	1910	24	675	56.6	.119	6.74	101.6	84.4	86.1
	1911	22	900	56.7	.126	7.14	101.8	89.4	91.2
	1912	22	891	56.0	.130	7.25	100.5	92.2	92.6
	1913	39	1,136	55.7	.141	7.83	100.0	100.0	100.0
	1914	45	1,361	54.3	.150	8.14	97.5	106.4	104.0
	1919	(¹)	(²)	(³)	(⁴)	(⁵)			
	1931	126	1,554	49.2	.340	16.73	88.3	241.1	213.7
Redrawers:									
Male	1931	13	63	52.7	.197	10.38			
Female	1931	113	1,887	50.4	.243	12.25			

*Included with "winders, hard silk."

WAGES AND HOURS OF LABOR

TABLE 1.—Average hours and earnings, with index numbers, 1910 to 1931, by occupation, sex, and year—Continued

BY OCCUPATIONS—Continued

Occupation and sex	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)		
							Full-time hours per week	Earnings per hour	Full-time earnings per week
Warpers:									
Male	1910	7	51	56.6	\$0.317	\$17.88	102.4	81.7	83.3
	1911	7	50	56.6	.314	17.69	102.4	80.9	82.1
	1912	13	79	55.9	.318	17.72	101.1	82.0	82.6
	1913	14	152	55.3	.388	21.46	100.0	100.0	100.0
	1914	22	175	54.7	.359	19.65	98.9	92.5	91.6
	1919	8	71	60.7	.568	28.29	91.7	143.8	131.8
	1931	166	993	51.1	.648	33.11	92.4	167.0	154.3
Female	1910	17	290	56.3	.179	10.08	101.1	87.3	88.6
	1911	19	508	56.7	.186	10.50	101.8	90.7	92.3
	1912	26	666	55.9	.190	10.60	100.4	92.7	93.1
	1913	33	849	55.7	.205	11.38	100.0	100.0	100.0
	1914	39	1,084	54.1	.203	10.99	97.1	99.0	96.6
	1919	23	536	51.9	.354	18.37	93.2	172.7	161.4
	1931	164	1,974	50.4	.476	23.99	90.5	232.2	210.8
Quillers:									
Male	1931	62	299	54.2	.250	13.55	-----	-----	-----
Female	1910	23	340	56.2	.107	6.04	101.6	93.0	94.7
	1911	23	538	56.2	.111	6.24	101.6	96.5	97.8
	1912	23	528	55.4	.111	6.16	100.2	96.5	96.6
	1913	41	735	55.3	.115	6.38	100.0	100.0	100.0
	1914	46	980	54.1	.121	6.53	97.8	105.2	102.4
	1919	26	460	51.3	.237	12.16	92.8	206.1	190.6
	1931	238	1,934	50.0	.265	13.25	90.4	230.4	207.7
Coners:									
Male	1931	7	161	52.1	.323	16.83	-----	-----	-----
Female	1931	18	528	50.4	.278	14.01	-----	-----	-----
Enterers:									
Male	1931	20	41	51.7	.414	21.40	-----	-----	-----
Female	1931	73	376	50.8	.387	19.66	-----	-----	-----
Enterer's helpers:									
Male	1931	15	30	51.5	.246	12.67	-----	-----	-----
Female	1931	39	154	50.8	.260	13.21	-----	-----	-----
Twisters-in, hand:									
Male	1910	17	85	56.7	.256	14.49	101.4	89.2	90.5
	1911	21	166	56.4	.259	14.60	100.9	90.2	91.2
	1912	28	192	55.8	.274	15.23	99.8	95.5	95.1
	1913	36	275	55.9	.287	16.01	100.0	100.0	100.0
	1914	43	357	54.5	.295	16.08	97.5	102.8	100.4
	1919	24	165	51.5	.486	25.03	92.1	169.3	156.3
	1931	145	407	49.7	.634	31.51	88.9	220.9	196.8
Female	1910	9	92	55.7	.137	7.63	101.4	66.8	67.9
	1911	9	99	55.6	.139	7.74	101.1	67.8	68.9
	1912	11	76	56.6	.192	10.82	102.9	93.7	96.3
	1913	12	67	55.0	.205	11.24	100.0	100.0	100.0
	1914	17	91	53.2	.183	9.78	96.7	89.3	87.0
	1919	13	111	51.6	.329	16.98	93.8	160.5	151.1
	1931	61	228	50.6	.423	21.66	92.0	203.8	192.7
Twisters-in, machine:									
Male	1931	94	198	50.7	.615	31.18	-----	-----	-----
Female	1931	40	97	51.5	.440	22.66	-----	-----	-----
Loom fixers:									
Male	1910	22	138	56.5	.289	16.28	101.3	90.0	91.0
	1911	22	144	56.5	.293	16.56	101.3	91.3	92.6
	1912	29	230	56.1	.307	17.20	100.5	95.6	96.1
	1913	41	329	55.8	.321	17.89	100.0	100.0	100.0
	1914	47	398	54.3	.330	17.92	97.3	102.8	100.2
	1919	27	279	51.5	.546	28.12	92.3	170.1	157.2
	1931	234	1,518	51.0	.746	38.05	91.4	232.4	212.7
Bobbin boys	1931	88	460	51.4	.222	11.41	-----	-----	-----

TABLE 1.—Average hours and earnings, with index numbers, 1910 to 1931, by occupation, sex, and year—Continued

BY OCCUPATIONS—Continued

Occupation and sex	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)		
							Full-time hours per week	Earnings per hour	Full-time earnings per week
Weavers, broad silk:									
Male									
	1910	14	1,008	56.9	\$0.213	\$12.12	101.6	84.2	85.7
	1911	13	1,462	56.9	.214	12.18	101.6	84.6	86.1
	1912	13	1,441	56.3	.221	12.45	100.5	87.4	88.0
	1913	28	2,107	56.0	.253	14.15	100.0	100.0	100.0
	1914	33	2,419	54.5	.247	13.31	97.3	97.6	94.1
	1919	24	1,409	51.7	.473	24.45	92.3	187.0	172.8
	1931	224	9,796	51.2	.499	25.55	91.4	197.2	180.6
Female									
	1910	14	1,190	56.7	.141	8.02	101.1	71.2	72.5
	1911	11	1,378	57.2	.181	10.32	101.6	91.4	93.3
	1912	19	1,626	56.1	.173	9.69	100.0	87.4	87.6
	1913	28	2,217	56.1	.198	11.06	100.0	100.0	100.0
	1914	33	2,886	54.2	.189	10.58	96.6	95.5	95.7
	1919	24	2,189	52.0	.398	20.70	92.7	201.0	187.2
	1931	203	5,904	49.6	.422	20.93	88.4	213.1	189.2
Weavers, ribbon:									
Male									
	1910	8	353	55.3	.237	13.11	100.7	82.0	83.1
	1911	8	426	55.2	.246	13.56	100.5	85.2	85.9
	1912	12	720	54.9	.277	15.21	100.0	95.8	96.8
	1913	16	997	54.9	.289	15.78	100.0	100.0	100.0
	1914	17	1,116	53.9	.302	16.05	98.2	104.5	101.7
	1919	7	323	50.2	.468	25.00	91.4	172.3	158.4
	1931	15	332	47.3	.568	26.39	86.2	193.1	167.2
Female									
	1910	10	591	55.6	.226	12.53	100.7	92.6	93.1
	1911	10	683	55.5	.229	12.70	100.5	93.9	94.4
	1912	11	638	55.1	.231	12.71	99.8	94.7	94.4
	1913	15	777	55.2	.244	13.46	100.0	100.0	100.0
	1914	15	904	54.6	.242	13.14	98.9	99.2	97.6
	1919	6	293	50.4	.433	21.82	91.3	177.5	162.1
	1931	12	272	48.2	.444	21.40	87.3	182.0	159.0
Smash hands:									
Male									
	1931	29	116	51.5	.536	27.60	-----	-----	-----
Female									
	1931	9	16	52.1	.409	21.31	-----	-----	-----
Pickers, cloth:									
Male									
	1931	21	64	52.0	.260	13.52	-----	-----	-----
Female									
	1910	19	394	56.7	.124	7.09	101.3	82.1	83.9
	1911	17	503	56.8	.150	8.55	101.4	99.3	101.2
	1912	25	570	55.9	.134	7.50	99.8	88.7	88.8
	1913	36	659	56.0	.151	8.45	100.0	100.0	100.0
	1914	40	898	54.3	.163	8.86	97.0	107.9	104.9
	1919	24	335	51.7	.298	15.41	92.3	197.4	182.4
	1931	183	1,062	49.8	.270	13.45	88.9	178.8	159.2
Inspectors, cloth:									
Male									
	1931	68	160	51.1	.538	27.49	-----	-----	-----
Female									
	1931	57	208	50.6	.327	16.55	-----	-----	-----
Packers:									
Male									
	1931	36	81	49.8	.355	17.68	-----	-----	-----
Female									
	1931	23	70	49.5	.263	13.02	-----	-----	-----
Other employees:									
Male									
	1914	61	2,191	55.2	.212	11.66	-----	-----	-----
	1919	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	-----	-----	-----
	1931	282	4,724	51.5	.434	22.35	-----	-----	-----
Female									
	1914	52	1,860	53.5	.132	7.09	-----	-----	-----
	1919	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	-----	-----	-----
	1931	208	2,455	50.0	.276	13.80	-----	-----	-----

⁴Not reported.

Average Hours and Earnings, 1931, by Sex and State

In Table 2 are shown average hours and earnings for all of the wage earners that were included in the study of the industry in each State in 1931. The averages are for each sex separately and also for both sexes combined, or the industry, in each State. Averages are shown for South Carolina, Alabama, and Georgia as a group, to avoid showing figures for one plant alone.

For males in the various States, average full-time hours per week ranged from 47.5 for the State with the lowest to 56.8 for the one with the highest average, and for all States covered in the report averaged 51.5 per week. Averages for females ranged from 46.9 to 56.1 and for all States included in the report were 50 hours per week or 1.5 hours per week less than for males. Averages for both sexes combined, or the industry, ranged by States from 47.2 to 56.4 per week.

Average earnings per hour of males ranged by States from 21.8 to 59.7 cents and for all States averaged 48.5 cents. Averages of females ranged from 18.1 to 41.8 cents and for all States averaged 33.5 cents, or 15 cents per hour less than for males. Averages of both sexes combined, or the industry, ranged from 19.6 to 50 cents per hour.

For males, average full-time earnings per week ranged by States from \$12.38 to \$28.36 and for all States averaged \$24.98. Averages of females ranged from \$10.15 to \$20.77 and for all States averaged \$16.75, or \$8.23 less than for males. Averages for both sexes, or the industry, ranged by States from \$11.05 to \$24.75. The greatest difference between the averages for males and for females in any State was \$9.81 and the smallest difference was \$2.23 per week.

TABLE 2.—Average hours and earnings, 1931, by sex and State

Sex and State	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
MALES					
Connecticut.....	13	1,546	51.0	\$0.522	\$26.62
Maryland.....	3	132	56.0	.310	17.36
Massachusetts.....	12	734	50.2	.459	23.04
New Jersey.....	97	3,331	47.5	.697	28.36
New York.....	37	1,780	51.3	.602	25.75
North Carolina.....	10	1,378	55.3	.419	24.97
Pennsylvania.....	131	10,349	52.2	.474	24.74
Rhode Island.....	20	1,403	50.3	.653	27.82
South Carolina, Alabama, and Georgia.....	5	447	55.1	.294	16.20
Tennessee.....	6	311	56.8	.218	12.38
Virginia.....	6	474	53.8	.323	17.38
Total.....	340	21,885	51.5	.485	24.98
FEMALES					
Connecticut.....	13	1,429	49.3	.385	18.98
Maryland.....	3	381	50.0	.220	11.50
Massachusetts.....	12	776	47.6	.278	13.23
New Jersey.....	97	3,764	46.9	.410	19.23
New York.....	37	3,047	48.7	.335	16.31
North Carolina.....	10	809	55.2	.314	17.33
Pennsylvania.....	131	14,250	50.5	.324	16.36
Rhode Island.....	20	1,170	49.7	.418	20.77
South Carolina, Alabama, and Georgia.....	5	428	55.6	.240	13.34
Tennessee.....	6	511	56.1	.181	10.15
Virginia.....	6	586	54.1	.265	14.34
Total.....	340	27,151	50.0	.335	16.75

TABLE 2.—Average hours and earnings, 1931, by sex and State—Continued

Sex and State	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
MALES AND FEMALES					
Connecticut.....	13	2,975	50.2	\$0.459	\$23.04
Maryland.....	3	513	51.5	.253	13.03
Massachusetts.....	12	1,510	48.9	.367	17.95
New Jersey.....	97	7,095	47.2	.500	23.60
New York.....	37	4,823	49.7	.400	19.88
North Carolina.....	10	2,187	55.2	.382	21.09
Pennsylvania.....	131	24,618	51.2	.392	20.07
Rhode Island.....	20	2,573	50.0	.495	24.75
South Carolina, Alabama, and Georgia.....	5	875	55.4	.268	14.85
Tennessee.....	6	822	56.4	.196	11.05
Virginia.....	6	1,060	54.0	.292	15.77
Total.....	340	49,036	50.7	.406	20.58

Average and Classified Earnings per Hour, 1913 to 1931, by Occupation

Table 3 shows average and classified earnings per hour for the wage earners of each sex in nine of the representative occupations in the industry, for each of the specified years from 1913 to 1931 in which studies have been made by the bureau. Thus the variations in the trend and spread of average earnings per hour of wage earners in all occupations in the industry are illustrated.

Average and classified earnings are shown for males only in 1, and for both males and females in 8, of the 9 occupations. The figures are for 14,610 males, or 67 per cent of the males, and for 21,766 females, or 80 per cent of the females, in all occupations in the mills included in the 1931 study, while the 36,376 males and females combined form 74 per cent of the wage earners included in the study.

The showing of the wage earners in the nine occupations by classified earnings groups is graphic in effect since it shows that the groups with the highest earnings in 1913 and 1914 ended at or near where those with the lower earnings in 1919 and 1931 began. This is illustrated by the figures for winders, hard silk, female. In 1913 and 1914 less than 1 per cent of these workers earned as much as an average of 20 and under 25 cents per hour, and none earned as much as 25 cents per hour. In 1919, 89 per cent, and in 1931, 90 per cent earned an average of 20 cents or more per hour.

TABLE 3.—Average and classified earnings per hour in 9 specified occupations, 1913 to 1931, by occupation, sex, and year

Occupation and sex	Year	Number of establishments	Number of wage earners	Average earnings per hour	Per cent of wage earners whose earnings per hour were—																	
					Under 10 cents	10 and under 12 cents	12 and under 14 cents	14 and under 16 cents	16 and under 18 cents	18 and under 20 cents	20 and under 25 cents	25 and under 30 cents	30 and under 35 cents	35 and under 40 cents	40 and under 45 cents	45 and under 50 cents	50 and under 60 cents	60 and under 70 cents	70 and under 80 cents	80 and under 90 cents	90 cents and under \$1	\$1 and over
Winders, hard silk:																						
Male.....	1931	14	61	\$0.267		2	2	2	8	5	21	26	16		16	2						
Female.....	1913	19	836	.112		36	26	26	9	2	(1)											
	1914	21	1,008	.121	18	28	34	13	5	1	(1)											
	1919	29	1,069	.269			1	1	4	6	27	31	21	7	3							
	1931	183	5,105	.293	(1)	(1)	1	2	3	3	19	26	24	14	4	2	1	(1)	(1)	(1)		
Spinners:																						
Male.....	1913	14	262	.117	34	22	16	13	13	2	1											
	1914	16	300	.119	36	19	17	10	14	1	3		(1)									
	1919	9	107	.342			2	4	7	8	12	19	6	3	20		11	9				
	1931	109	1,794	.344		(1)	1	1	1	1	12	14	24	17	15	9	4	1	(1)			
Female.....	1913	11	340	.110	35	32	26	3	3	1												
	1914	12	437	.138	28	12	12	15	11	11		1	(1)									
	1919	8	372	.274			(1)	3	5	7	22	27	30	5	2		1					
	1931	104	2,346	.289	(1)	(1)	(1)	4	2	3	20	27	23	12	5	2	(1)	(1)	(1)	(1)		
Winders, soft silk:																						
Male.....	1931	6	22	.319				5	14	5	5	5	23	27	14	5						
Female.....	1913	39	1,136	.141	11	15	23	25	12	8	5	1										
	1914	45	1,361	.150	10	8	18	24	22	7	7	2	(1)									
	1919	(1)	(1)	(1)																		
	1931	126	1,554	.340	(1)	(1)	1	1	2	3	7	15	22	20	17	7	3	1	(1)			
Redrawers:																						
Male.....	1931	13	63	.197	2		18	5	8	5	46	13	3									
Female.....	1931	113	1,887	.243	(1)	(1)	3	6	7	9	33	22	14	4	1	(1)	(1)					
Warpers:																						
Male.....	1913	14	152	.388					1		5	7	88									
	1914	22	175	.359					3		3	13	81									
	1919	8	71	.558							3	1	4	6	18		18	39	10			
	1931	166	993	.648			(1)	1	(1)	1	1	3	4	6	6	7	17	15	11	9		
Female.....	1913	33	849	.205	1	5	7	10	10	15	25	22	7	4								
	1914	39	1,084	.203	8	7	7	9	9	9	24	20	8									
	1919	23	536	.354			(1)	(1)	1	1	9	17	22	18	24	1	6	1		(1)		
	1931	164	1,974	.476	(1)		(1)	(1)	1	1	3	5	8	12	15	13	21	12	6	2		

WAGES AND HOURS OF LABOR

Table 4 shows the number and per cent of wage earners of each sex and of both sexes combined at each classified group of average earnings per hour. The figures in this table include all wage earners in the 340 mills covered by the 1931 study of the industry.

The largest number of males in any one group is 2,095, or 10 per cent of the total, at 50 and under 55 cents; of females, 2,623, or 10 per cent, at 30 and under 32½ cents; and of males and females combined, 3,771, or 8 per cent, at 30 and under 32½ cents. Approximately 8 per cent of the males earned 55 and under 60 cents, while 9 per cent of the females and 7 per cent of the males and females combined earned 25 and under 27½ cents per hour.

TABLE 4.—Number and per cent of wage earners, by sex, earning each classified amount per hour, 1931

Classified earnings per hour	Number			Per cent		
	Males	Females	Total	Males	Females	Total
1 and under 2 cents.....	1	2	3	(1)	(1)	(1)
2 and under 3 cents.....	2	3	5	(1)	(1)	(1)
3 and under 4 cents.....	5	3	8	(1)	(1)	(1)
4 and under 5 cents.....	6	9	15	(1)	(1)	(1)
5 and under 6 cents.....	10	11	21	(1)	(1)	(1)
6 and under 7 cents.....	8	21	29	(1)	(1)	(1)
7 and under 8 cents.....	10	26	36	(1)	(1)	(1)
8 and under 9 cents.....	17	45	62	(1)	(1)	(1)
9 and under 10 cents.....	22	38	60	(1)	(1)	(1)
10 and under 11 cents.....	50	70	120	(1)	(1)	(1)
11 and under 12 cents.....	42	74	116	(1)	(1)	(1)
12 and under 13 cents.....	60	214	274	(1)	1	1
13 and under 14 cents.....	59	151	210	(1)	1	(1)
14 and under 15 cents.....	76	320	396	(1)	1	1
15 and under 16 cents.....	120	288	408	1	1	1
16 and under 17 cents.....	143	465	608	1	2	1
17 and under 18 cents.....	164	415	579	1	2	1
18 and under 19 cents.....	212	782	994	1	3	2
19 and under 20 cents.....	194	421	615	1	2	1
20 and under 21 cents.....	358	954	1,312	2	4	3
21 and under 22 cents.....	178	564	742	1	2	2
22 and under 23 cents.....	328	954	1,282	1	4	3
23 and under 24 cents.....	183	771	954	1	3	2
24 and under 25 cents.....	253	993	1,246	1	4	3
25 and under 27½ cents.....	826	2,555	3,381	4	9	7
27½ and under 30 cents.....	622	2,170	2,792	3	8	6
30 and under 32½ cents.....	1,148	2,623	3,771	5	10	8
32½ and under 35 cents.....	810	1,832	2,642	4	7	5
35 and under 37½ cents.....	1,008	1,971	2,978	5	7	6
37½ and under 40 cents.....	932	1,347	2,279	4	5	5
40 and under 42½ cents.....	1,323	1,399	2,722	6	5	6
42½ and under 45 cents.....	924	946	1,870	4	3	4
45 and under 47½ cents.....	1,163	876	2,039	5	3	4
47½ and under 50 cents.....	952	640	1,592	4	2	3
50 and under 55 cents.....	2,095	1,176	3,271	10	4	7
55 and under 60 cents.....	1,686	781	2,467	8	3	5
60 and under 65 cents.....	1,450	546	1,996	7	2	4
65 and under 70 cents.....	1,092	283	1,375	5	1	3
70 and under 75 cents.....	918	129	1,047	4	(1)	2
75 and under 80 cents.....	787	131	918	4	(1)	2
80 and under 85 cents.....	476	59	535	2	(1)	1
85 and under 90 cents.....	292	26	318	1	(1)	1
90 and under 95 cents.....	309	20	329	1	(1)	1
95 cents and under \$1.....	116	13	129	1	(1)	(1)
\$1 and under \$1.10.....	294	25	319	1	(1)	1
\$1.10 and under \$1.20.....	94	3	97	(1)	(1)	(1)
\$1.20 and under \$1.30.....	44	3	48	(1)	(1)	(1)
\$1.30 and under \$1.40.....	14	3	17	(1)	(1)	(1)
\$1.40 and under \$1.50.....	5	5	10	(1)	(1)	(1)
\$1.50 and under \$1.60.....	1	1	2	(1)	(1)	(1)
\$1.70 and under \$1.80.....	1	1	2	(1)	(1)	(1)
\$1.80 and under \$1.90.....	1	1	2	(1)	(1)	(1)
\$2.50 and under \$2.75.....	1	1	2	(1)	(1)	(1)
Total.....	21,885	27,151	49,036	100	100	100

¹ Less than 1 per cent.

Full-Time Hours Per Week and Per Day, 1910 to 1931

Full-time hours per week are the regular or customary hours of operation when a mill is working its recognized standard hours as established by a regular time of beginning and of quitting work on each day of the week, not including the regular time off duty for meals nor any overtime, and not deducting any time lost on any day for any cause.

Table 5 shows for each specified year for each of nine representative occupations in the industry the per cent of wage earners in each classified group of full-time hours per week.

The full-time hours per week for the 559 winders, hard silk, female, that were included in the 1910 study averaged 57.3 and the hours of 40 per cent of this number were over 54 and under 57; of 48 per cent, 57 and under 60; and of 13 per cent, 60 per week. Those included in the study in 1912 averaged 56.2 per week and the full-time hours of 22 per cent of them were 54 per week as compared with none in the occupation at 54 or less in 1910 or 1911. The average for the 5,105 included in the 1931 study was 50.1 per week, when the full-time hours of only 6 per cent of them were more than 54 per week.

TABLE 5.—Average and classified full-time hours per week in 9 specified occupations, 1910 to 1931, by occupation, sex, and year

Occupation and sex	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Per cent of wage earners whose full-time hours per week were—															
					Under 40	40	Over 40, under 44	44	Over 44, under 48	48	Over 48, under 51	51, under 54	54	Over 54, under 57	57, under 60	60	Over 60			
Winders, hard silk:	Male.....	1931	14	61	51.9				25		2	18	10			13	30	3		
		Female....	1910	17	559	57.3											40	48	13	
			1911	18	889	56.8											54	41	5	
			1912	18	834	56.2											22	37	37	5
			1913	19	836	56.3								2			5	48	39	6
	1914	21	1,008	54.1								3			73	24				
	1919	29	1,069	51.5								3			34	1				
	1931	183	5,105	50.1	1	(*)	(*)	5	(*)	6	70	6	6		6	5	1			
	Spinners:	Male.....	1910	16	327	57.5											37	45	19	
			1911	16	396	57.5											35	44	20	
1912			14	327	57.3											10	25	51	14	
1913			14	262	56.6											8	48	30	14	
1914			16	300	54.7											75	16	3	6	
1919		9	107	53.9											52					
1931		109	1,794	54.2				4	1	3	36	32	1	4	6	28	4	22	3	
Female....		1910	9	86	56.9												45	48	7	
		1911	12	369	56.5												63	36	1	
		1912	12	395	56.0											25	39	34	3	
	1913	11	340	56.3											5	52	39	4		
	1914	12	437	54.2											84	16				
1919	8	372	50.3											7	7	1				
1931	104	2,346	50.2		1	(*)	4	1	8	92	69	2	7	6		6	2	(*)		
Winders, soft silk:	Male.....	1931	6	22	57.3											32	5	27		
		Female....	1910	24	675	56.6											2	43	51	4
			1911	22	900	56.7												50	47	2
			1912	22	891	56.0												26	32	41
			1913	39	1,136	55.7											3	9	58	31
	1914	45	1,361	54.3											3	35	42			
	1919	(*)	(*)	(*)																
	1931	126	1,554	49.2	2	(*)		17	6	10	27	25	5	7	1					

* Includes "winders, soft silk."
 † 50 hours.
 ‡ Over 50 and under 54.

§ Less than 1 per cent.
 ¶ Included with "winders, hard silk."

for day work for each of the 340 mills included in the 1931 study, and for night work for each of the 163 mills that also operated a night shift.

Full-time hours per week of the wage earners for day work in the 340 mills ranged from 40 for the mill with the shortest to 66¼ for the mill with the longest hours per week, and for night work ranged from 44 in two mills to 72 in one mill.

The hours per day for day work, Monday to Friday, ranged from 8 to 11¼, and on Saturday in the 319 mills in which there was work on that day from 3¼ to 10. Twenty-one mills were operated on the 5-day week basis, there being no work on Saturday.

The hours per night for night work on Monday to Friday ranged in the 163 mills from 8 to 13. There was no night work on Saturday in 141 of these mills, while in the 21 mills that had night work on Saturday and 1 that had night work Sunday the hours ranged from 3¼ to 12. The night force of each of the mills that had both day and night shifts was less than the day force and usually limited to certain departments or occupations.

The full-time hours per week of the day shifts of 103, or 30 per cent of the 340 mills, were 50; of 50, or 15 per cent, were 44; of 42, or 12 per cent, were 55; of 30, or 9 per cent, were 54; and of 24 mills, or 7 per cent, were 48 per week. The hours of 74, or 45 per cent, of the 163 mills that operated night shifts were 55 per week.

TABLE 6.—Number of establishments in each State with specified number of full-time hours per week and per day, 1931

DAY WORK

Full-time hours per week	Full-time hours per day			Number of establishments in—										Total establishments		
	Monday to Thursday	Friday	Saturday	Connecticut	Maryland	Massachusetts	New Jersey	New York	North Carolina	Pennsylvania	Rhode Island	South Carolina, Alabama, and Georgia	Tennessee		Virginia	
40 hours.....	8	8	0					1								1
	8	8	4				41			1						43
	8¾	9	0				1	1								2
44 hours.....	8¾	8¾	0				1									1
	9	9	0				1									1
	9	9	0				4									4
45 hours.....	8	8	5				2			2						4
	9	9	0				5									5
46 hours.....	8	8	6							1						1
	8½	8½	5				1									1
47½ hours.....	9½	9½	0				1									1
	8	8	8					1				3				4
	8¾	8¾	5									1				1
	8¾	8¾	4¾			3	1									4
48 hours.....	8¾	8¾	4¾													1
	8¾	8¾	4¾	1						1						1
	9¾	9¾	0	1		8		1		1						11
	9¾	9¾	0								1					1
	9¾	9¾	0								2					2
49 hours.....	8½	8½	6½				1									1
	9	9	4					1								1
49½ hours.....	9	9	4½	2			4	12								18
49¾ hours.....	9	9	4¾							1						1
	9	9	5	4	3		14	8		64				1		94
	9½	9½	4½							2						2
50 hours.....	9½	9½	4					1								1
	9½	9½	4					2								2
	9¼	9¼	3¾							1						1
	10	10	0	1			1			1						3

¹ 8 hours Monday.

TABLE 6.—Number of establishments in each State with specified number of full-time hours per week and per day, 1931—Continued

DAY WORK—Continued

Full-time hours per week	Full-time hours per day			Number of establishments in —										Total establishments		
	Monday to Thursday	Friday	Saturday	Connecticut	Maryland	Massachusetts	New Jersey	New York	North Carolina	Pennsylvania	Rhode Island	South Carolina, Alabama, and Georgia	Tennessee		Virginia	
50¼ hours.....	9¾	9¼	4½					1							1	
51 hours.....	9	9	6						1	1					3	
51¼ hours.....	9¼	9¼	4¾	1						2					5	
52 hours.....	9½	9½	5							4					1	
52½ hours.....	9½½	9½½	4½½							1	1				3	
52¾ hours.....	9½	9½	5				2			13	1		1		17	
53 hours.....	9¾	9¾	4							2					2	
53¼ hours.....	9½	9½	5½							1	1				3	
53½ hours.....	9¾	9¾	4¾	1											1	
53¾ hours.....	9¾	9¾	5							5	2				7	
54 hours.....	9	9	9				1			2	2				5	
	9¾	9¾	5¼					1		8					9	
	9½	9½	5							1	1				3	
	9¾	9¾	4¾				1	1		2	2				6	
	9½	9½	4¾							1	5	2			12	
54½ hours.....	10	10	4				5			5	2				12	
54¾ hours.....	10	10	4½					1							2	
55 hours.....	10	10	5	2				9	2	10	5	4	4	1	5	42
55¼ hours.....	10	10	5½								1					1
56¼ hours.....	10¼	10¼	5			1										1
57 hours.....	10½	10½	5													1
57½ hours.....	10½	10½	4½													2
57¾ hours.....	10½	10½	5									1				2
58 hours.....	10½	10½	5½							1			1			2
60 hours.....	11	11	10					2								2
66¼ hours.....	11¼	11¼	10				1			1						1
Total.....				13	3	12	97	37	10	131	20	5	6	6	340	

NIGHT WORK

44 hours.....	8	8	4					1								1
	8¾	8¾	0					1								1
45 hours.....	8	8	5							1						1
	9	9	0													2
46 hours.....	8	8	6							1						1
46¾ hours.....	9¼	9¼	0					1								1
48 hours.....	8¾	8¾	4¾			1										1
	9	9	4½	1												1
49½ hours.....	10	9½	0					1								1
	8½	9½	7½							1						1
50 hours.....	9	9	5	1	2											3
	10	10	0	1		1		6		8	2	1				19
51 hours.....	9	9	6							1						1
52 hours.....	9¾	9¾	3¼			1										1
	9½	9½	5	1												1
52½ hours.....	10½	10½	0							3	1					4
	9	9	9							2						2
54 hours.....	10½	10½	0							1						1
	10	10	5													3
55 hours.....	11	11	0	3				4	7	46	5	2	3	2		71
56 hours.....	10	10	6							1						1
56¼ hours.....	10¼	10¼	5¼			1										1
	11¼	11¼	0							1						1
57½ hours.....	11½	11½	0					1		6						10
58¼ hours.....	11¾	11¾	0							2			1	2		2
60 hours.....	12	12	0	1		2	3	2	1	12	1			1		23
61¾ hours.....	12½	12½	0					1								1
63 hours.....	11	11	8	1												1
65 hours.....	13	13	0	1			1			2						4
66 hours.....	11	11	11							1						1
72 hours.....	12	12	12							1						1
Total.....				10	2	8	6	16	8	92	9	4	5	3		163

¹ Sunday.

Changes in Full-time Hours Since January 1, 1929

Only 11 of the 340 mills included in the 1931 study reported changes in the regular full-time hours per week since January 1, 1929. Table 7 shows the hours per week and per day before and after the changes were made for the 11 mills.

TABLE 7.—Hours per week and per day of mills before and after change between January 1, 1929, and period of 1931 study

Day or night work	Number of mills	Hours before change			Hours after change		
		Per week	Monday to Friday	Saturday	Per week	Monday to Friday	Saturday
Day work.....	1	44	8	4	49½	9	4½
Do.....	1	48	(1)	(1)	55	10	5
Do.....	1	54	(1)	(1)	44	8	4
Do.....	1	44	8	4	50	9	5
Do.....	1	49½	(1)	(1)	40	8	0
Do.....	1	60	(1)	(1)	55	10	5
Night work.....	1	50	10	0	56	10	6
Day work.....	1	55	10	5	54	10	4
Do.....	1	50	9	5	51¼	9¼	5
Do.....	1	50	(1)	(1)	46	8	6
Night work.....	1	50	(1)	(1)	45	8	5
Do.....	1	55	11	0	50	10	0

¹ Not available.

Changes in Wage Rates Since January 1, 1929

The 1931 report includes wage figures for 340 mills. Table 8 shows that between January 1, 1929, and the period of the 1931 study, 189 mills made changes in the wage rates of all or a specified number of their wage earners. All changes were decreases except in one mill (near end of table) in which rates of winders were increased 2 cents per hour.

The year in which changes were made was not reported for 25 mills. One change only was made in the rates in 140 mills; two changes were made in 20 mills and three in 3 mills; while in 1 mill there were seven changes in rates.

TABLE 8.—Changes in wage rates in 189 mills in the silk and rayon industry between January 1, 1929, and period of 1931 study

Number of mills	Number of mills making changes in—			Wage earners affected	Per cent or amount of decrease
	1929	1930	1931		
1			1	All.....	35 per cent.
1			1	do.....	33½ per cent.
1	(1)	(1)	(1)	do.....	30 per cent.
2		2		do.....	25 per cent.
3		2	1	do.....	20 per cent.
1	(1)	(1)	(1)	do.....	Do.
1	(1)	(1)	(1)	do.....	Do.
2		1	1	do.....	15 per cent.
1			1	do.....	12½ per cent.
1		1		do.....	12 per cent.
1	(1)	(1)	(1)	do.....	11 per cent.
53		29	24	do.....	10 per cent.
4	(1)	(1)	(1)	do.....	Do.

¹ Not reported.

TABLE 8.—Changes in wage rates in 189 mills in the silk and rayon industry between January 1, 1929, and period of 1931 study—Continued

Number of mills	Number of mills making changes in—			Wage earners affected	Per cent or amount of decrease
	1929	1930	1931		
1		1		All.....	9 per cent.
4		2	2	do.....	8 per cent.
1	(1)	(1)		do.....	Do.
1	1		(1)	do.....	7½ per cent.
2		1	1	do.....	6 per cent.
3		1	3	do.....	5 per cent.
1		1		do.....	4 per cent.
1		1		do.....	5 to 15 per cent.
1		1		do.....	5 to 10 per cent.
1	(1)	(1)	(1)	do.....	Do.
1	(1)	(1)	(1)	do.....	5 to 8 per cent.
2		2		do.....	15 per cent.
		2		do.....	10 per cent.
1		1		do.....	15 per cent.
		1		do.....	10 per cent.
4		4		do.....	Do.
		4		do.....	Do.
1		1		do.....	5 per cent.
		1		do.....	10 per cent.
1		1		do.....	6 per cent.
		1		do.....	Do.
1		1		do.....	Do.
1		1		do.....	7 per cent.
1	(1)	(1)	4	do.....	Do.
1	(1)	(1)	(1)	do.....	\$2 per week.
4		3	1	do.....	\$1 per week.
2		2		do.....	5 cents per hour.
1		1		do.....	3 cents per hour.
1		1		do.....	2 cents per hour.
1		1		do.....	Do.
1	(1)	(1)	(1)	Weavers.....	50 per cent.
1			1	Weavers, warpers, and winders.....	23 per cent.
1	(1)	(1)	(1)	Piece workers.....	20 per cent.
1	(1)	(1)	(1)	Weavers and warpers.....	Do.
1	(1)	(1)	(1)	Weavers.....	Do.
1	(1)	(1)	(1)	do.....	Do.
1	(1)	(1)	(1)	do.....	Do.
1		1		do.....	15 to 20 per cent.
1		1		Weavers, warpers, and quillers.....	15 per cent.
1		1		Loom fixers, weavers, warpers, beamers, and winders.....	11 per cent.
1		1		Weavers.....	Do.
1		1		Weavers and warpers.....	10 to 12 per cent.
1	(1)	(1)	(1)	All except 10 per cent.....	10 per cent.
1			1	do.....	Do.
9		9		All except 5 per cent.....	Do.
1		1		Weavers, warpers, winders, quillers, and pickers.....	Do.
1	(1)	(1)	(1)	Piece workers.....	Do.
1	(1)	(1)	(1)	Weavers.....	Do.
3			3	do.....	Do.
1		1		Warpers, weavers, and winders.....	Do.
1		1		Winders.....	Do.
1		1		Weavers.....	7 per cent.
1		1		do.....	5 per cent.
		1		do.....	35 per cent.
		1		Warpers.....	30 per cent.
1	(1)	(1)	(1)	Winders and twisters.....	20 per cent.
		1		Quillers.....	10 per cent.
		1		Loom fixers and pickers.....	5 per cent.
1		1		Night workers.....	30 per cent.
		1		Day workers.....	15 per cent.
1	(1)	(1)	(1)	Weavers and warpers.....	30 per cent.
		1		All others.....	10 per cent.
1		1		Loom fixers.....	25 per cent.
1		1		Weavers.....	20 per cent.
1		1		do.....	Do.
1		1		All others.....	10 per cent.
		1		Night workers.....	20 per cent.
		1		Day workers.....	10 per cent.
2		2		Night workers.....	Do.
		2		Day workers.....	Do.

¹ Not reported.

² First reduction.

³ Second reduction.

⁴ Third reduction.

TABLE 8.—Changes in wage rates in 189 mills in the silk and rayon industry between January 1, 1929, and period of 1931 study—Continued

Number of mills	Number of mills making changes in—			Wage earners affected	Per cent or amount of decrease
	1929	1930	1931		
1	1	1	1	Night workers.....	20 per cent.
				Day workers.....	10 per cent.
1	1	1	1	Night workers.....	Do.
				Day workers.....	Do.
1	1	1	1	Piece workers.....	20 per cent.
				Loom fixers.....	5 per cent.
1	1	1	1	Warpers.....	15 per cent.
				Winders.....	12½ per cent.
1	1	1	1	Weavers.....	Do.
				Time workers.....	10 per cent.
1	1	1	1	Weavers.....	11 per cent.
				Warpers.....	10 per cent.
1	1	1	1	Warpers and weavers.....	10 per cent.
				Winders.....	5 per cent.
1	1	1	1	do.....	7 per cent.
				Warpers.....	10 per cent.
1	1	1	1	do.....	Do.
				Doublers, quillers, and winders.....	Do.
1	1	1	1	Weavers.....	Do.
				do.....	12 per cent.
1	1	1	1	do.....	10 per cent.
				Spinners.....	10 per cent.
1	1	1	1	Loom fixers.....	7 per cent.
				Throwing department.....	10 per cent.
1	1	1	1	Weaving department.....	Do.
				All.....	Do.
1	1	1	1	do.....	Do.
				do.....	Do.
1	1	1	1	Warpers.....	8 per cent.
				Winders.....	7 per cent.
1	1	1	1	Weavers.....	10 per cent.
				Loom fixers.....	7 per cent.
1	1	1	1	Warpers and weavers.....	10 per cent.
				Time workers.....	5 per cent.
1	1	1	1	Maintenance department.....	3¼ per cent.
				Weave room help.....	3¾ per cent.
1	1	1	1	Warpers.....	10 per cent.
				Loom fixers.....	5 per cent.
1	1	1	1	Weavers.....	¼ cent per yard.
				All except mechanics.....	\$1.50 per week.
1	1	1	1	All females.....	\$2 per week.
				do.....	½ cent per yard.
1	1	1	1	do.....	1 cent per yard.
				do.....	20 cents per 1,000 picks.
1	1	1	1	do.....	15 and 20 cents per 1,000 picks.
				Winders.....	\$1 per week.
1	1	1	1	Weavers and warpers.....	1 cent per yard.
				do.....	½ cent per yard.
1	1	1	1	Winders, fillers and doublers.....	\$2 per week.
				All receiving \$17 or over per week.....	\$1.50 per week.
1	1	1	1	All receiving less than \$17 per week.....	\$1 per week.
				All receiving over \$20 per week.....	Do.
1	1	1	1	All receiving \$20 or less per week.....	50 cents per week.
				All piece workers.....	19 per cent.
1	1	1	1	Crepe weavers.....	2 cents per yard.
				Chiffon weavers.....	1 cent per yard.
1	1	1	1	Weavers.....	2 cents per yard.
				Winders.....	2 cents per pound.
1	1	1	1	Weavers.....	2 cents per yard.
				Quillers.....	\$2 per week.
1	1	1	1	Twisters.....	10 per cent.
				Weavers.....	3 cents per yard.
1	1	1	1	Loom fixers.....	\$5 per week.
				Warpers.....	2 cents per yard.
1	1	1	1	Weavers.....	1 and 2 cents per yard.
				do.....	½ cent per yard.
1	1	1	1	Warpers.....	1 cent per yard.
				Winders.....	8 per cent.
1	1	1	1	All time workers.....	1 cent per hour.
				Weavers.....	1 cent per yard.
1	1	1	1	do.....	Do.
				Winders.....	\$1 per week.
1	1	1	1	Weavers.....	½ cent per yard.
				Warpers.....	1 cent per 1,000 ends.

1 Not reported.
 † First reduction.
 ‡ Second reduction.

‡ Third reduction.
 § Fourth reduction.
 ¶ Fifth reduction.

§ Sixth reduction.
 ¶ Seventh reduction.

TABLE 8.—Changes in wage rates in 189 mills in the silk and rayon industry between January 1, 1929, and period of 1931 study—Continued

Number of mills	Number of mills making changes in—			Wage earners affected	Per cent or amount of decrease
	1929	1930	1931		
1			1	Weavers.....	½ cent per yard.
				Warpers.....	½ cent per 1,000 ends.
				Winders.....	(?).
1	1			Weavers.....	1 cent per 100 yards.
				All other except loom fixers.....	20 and 25 cents per 1,000 picks.
					10 per cent.
1	1	1		Weavers.....	15 cents per 1,000 picks.
				do.....	20 cents per 1,000 picks.
				Winders.....	\$2 per week.
				5 B spinners.....	\$3.50 per week.
				Redrawers.....	\$1.50 per week.
1			1	Spinners.....	7½ and 12¼ cents per hour.
				Sweepers.....	\$5 per month.
				Helper.....	\$2 per month.
				Twisters.....	\$2 per week.
		1		Winders and quillers.....	\$1 per week.
				Weavers.....	½ cent per yard.
1				Quillers.....	\$1 per week.
				Quillers, helper.....	50 cents per week.
		1		Weavers.....	½ cent per yard.
				Winders.....	¼ cent per skein.
				Weavers.....	1¼ cents per yard.
				Winders, warpers, and quillers.....	3 cents per hour.
1			1	Pickers.....	2 cents per hour.
				Twisters-in.....	\$5 per week.
				Loom fixers.....	\$7.50 per week.

* First reduction.

† Second reduction.

‡ Increase of 2 cents per hour.

Overtime and Sunday and Holiday Work, 1931

Overtime is any time worked in excess of the regular full time per day or per week, regardless of the rate paid for such time. Work on Sunday and holidays is extra time only when worked by employees whose regular hours per day and week do not provide for work on those days.

In reply to inquiries concerning overtime and Sunday and holiday work, 225 of the 340 mills covered in the 1931 study reported overtime as having been worked during the pay period taken and 42 reported extra work on Sunday and holidays. Only 9 of the 225 mills in which there was overtime, and only 7 of the 42 in which there was extra work on Sunday and holidays, paid a higher rate for such work than for regular working time. In 216 mills in which there was overtime and in 35 in which there was extra work on Sunday and holidays the rate for such work was the same as for regular working time.

Table 9 shows the number of mills in which an extra rate was paid for overtime, or for extra work on Sunday and holidays, the number of times the regular rate that was paid for such work, and the wage earners entitled to the extra rate.

TABLE 9.—Employees entitled to extra pay, and times regular rate paid for overtime and for work on Sunday and holidays, 1931

Employees entitled	Number of establishments	Times regular rate for—	
		Overtime	Work on Sunday and holidays
All employees.....	2	1½	(1)
Loom fixers, warpers, and twisters.....	1	1½	(1)
Twisters-in.....	1	1½	1¼
Do.....	1	1½	2
Time workers.....	1	1½	2½
Do.....	1	1½	2½
Dyehouse workers.....	1	1½	2½
Time workers.....	1	1½	(2)
All except foreman.....	1	1	1¼
Mechanics and winders.....	1	1	1½

¹No Sunday work.

²Holidays only; no Sunday work.

³And Saturdays.

Bonus Systems

A bonus system is a plan whereby the earnings at basic time or piece rates of all or of a part of the wage earners of a mill would be increased under certain conditions. Example: A mill had a plan which provided for the payment of a bonus of \$3 per week to each dyehouse laborer for attendance of 90 per cent or more of full time. The full-time hours of operation of the mill were 48 per week. A dyehouse laborer in the mill whose rate was 40 cents per hour worked 43.5 hours or 0.3 hour more than 90 per cent of full time. His earnings in the week were \$17.40 at his basic rate plus \$3 for attendance or \$20.40.

Fifty-five of the 340 mills included in the 1931 study reported bonus systems in operation. The basis of the bonus, the wage earners entitled to the bonus payments, and the amount of and conditions necessary to get the bonus are shown for each of the 55 mills in Table 10.

The basis of the bonus in 8 mills was attendance; in 7, attendance and efficiency; in 3, attendance and production; in 25, efficiency; in 1, efficiency and production; in 6, production; in 1, production and time saving; in 3, service; and in 1, time saving.

TABLE 10.—Bonus systems in operation in 55 mills, 1931

Number of establishments	Bonus based on—	Employees entitled to bonus	Amount of or per cent of earnings paid as bonus	Necessary to get bonus
1	Attendance.....	Dyehouselaborers.	\$3 per week.....	Attendance of 90 per cent or more of full time.
1	do.....	Quillers.....	\$1 per week.....	Full-time attendance.
1	do.....	Winders.....	do.....	Do.
1	do.....	Spinners, night.....	10 per cent of earnings at basic rates.	Do.
1	do.....	Weavers.....	do.....	Do.
1	do.....	Winders, doublers, spinners, reelers, quillers, warpers, twisters-in, and pickers.	50 cents per week.....	Do.

TABLE 10.—*Bonus systems in operation in 55 mills, 1931—Continued*

Number of establishments	Bonus based on—	Employees entitled to bonus	Amount of or per cent of earnings paid as bonus	Necessary to get bonus
1	Attendance.....	All piece workers..	5 per cent of earnings at basic rates.	Full-time attendance.
1	do.....	Piece workers in winding, spinning, redrawing, and reeling departments.	10 per cent of earnings at basic rates.	Do.
1	do.....	Weavers, warpers, and loom fixers.	5 per cent of earnings at basic rates.	Do.
1	Attendance and efficiency.	Weavers.....	10 per cent of earnings at basic rates.	Full-time attendance and efficiency of 90 per cent or more of standard.
		Loom fixers.....	5 per cent of earnings at basic rates.	Full-time attendance and efficiency of 80 per cent or more of standard.
1	do.....	Weavers.....	10 per cent of earnings at basic rates.	Full-time attendance and efficiency of less than 4 poor cuts in pay period.
		do.....	do.....	Full-time attendance.
1	Attendance and production.	do.....	do.....	Production of not more than 120 but more than 100 yards per loom per week.
	Attendance.....	Winders, warpers, quillers, and pickers.	20 per cent of earnings at basic rates.	Production of more than 120 yards per loom per week.
	Attendance and efficiency.	Weavers.....	10 per cent of earnings at basic rates.	Full-time attendance for two weeks.
2	Efficiency.....	Loom fixers.....	5 per cent of earnings at basic rates.	Full-time attendance for 1 of 2 weeks.
	Attendance.....	Weavers.....	20 per cent of earnings at basic rates.	Full-time attendance and efficiency of set standard or more.
	Attendance and efficiency.	Loom fixers.....	15 per cent of earnings at basic rates.	Efficiency by looms of set standard of quality.
1	Attendance.....	Weavers.....	5 per cent of earnings at basic rates.	Full-time attendance.
	Attendance and efficiency.	do.....	10 per cent of earnings at basic rates.	Full-time attendance and 100 per cent efficiency in quality.
	Attendance.....	Winders, coppers, redrawers, spinners, and doublers.	Males—\$2 per week and 5 per cent of earnings at basic rates; females—\$3 per week and 10 per cent of earnings at basic rates.	Full-time attendance.
1	Efficiency.....	5 B spinners.....	\$25 every 3 months.....	Efficiency of set standard or more in quality.
	Attendance.....	Quillers.....	\$3 per week.....	Full-time attendance.
1	Efficiency.....	Weavers.....	One-half cent and 1 cent per yard.	Efficiency of 100 per cent in quality.
1	Production.....	Loom fixers, night.	1 per cent of yard earnings of weavers, night.	Production by looms of satisfactory standard.
	Attendance.....	Winders.....	\$1 per week.....	Full-time attendance.
	do.....	Weavers, night.....	1 cent per yard.....	Do.
		Winders, warpers, twisters-in, pickers, inspectors, spinners, redrawers, doffers, and reelers.	5 per cent of earnings at basic rates.	Do.
1	Production.....	Loom fixers, day..	6.94 cents per 1,000 picks.	Production by looms of satisfactory standard.
	Efficiency.....	Loom fixers, night.	8.67 cents per 1,000 picks.	Do.
1	do.....	Weavers, night.....	\$1 per week.....	Efficiency of 100 per cent in quality.
1	do.....	Spinners, night.....	15 per cent of earnings at basic rates.	Efficiency of 97 per cent or more in keeping ends running.
1	do.....	1 loom fixer, 1 smash piecer, and 1 weaver in each shift.	\$5 per month.....	Efficiency of highest quality in month.
1	do.....	Redrawers and silk openers.	10 per cent of earnings at basic rates.	Efficiency of 100 per cent in quality.
1	do.....	Loom fixers.....	5 cents per 100 yards.....	Efficiency of looms satisfactory in quality.

TABLE 10.—*Bonus systems in operation in 55 mills, 1931—Continued*

Number of establishments	Bonus based on—	Employees entitled to bonus	Amount of or per cent of earnings paid as bonus	Necessary to get bonus
2	Efficiency	Overseer (20 per cent of total bonus). Each loom fixer (15 per cent of total bonus). Each smash hand (10 per cent of total bonus). Warper foreman	5 to 7 cents per 100 picks, according to quality (for entire group).	Efficiency of weavers of 70 per cent or more of standard of 100.
1	do	Weavers	0.15 to 0.45 cent per 100 picks, according to quality.	Do.
1	do	Loom fixers	10 cents for each per cent of efficiency above 80.	Efficiency of 80 per cent or more in quality.
1	do	Foremen and loom fixers.	\$1 per week	Efficiency of 88 per cent or more in quality.
1	do	Loom fixers	10 cents per hour	Efficiency of 94.9 per cent or more in quality.
1	do	Loom fixers	5 cents per hour	Efficiency of 91.9 and under 94.9 per cent in quality.
1	do	Loom fixers	\$5 per week	Efficiency by looms of 95 per cent or more in quality.
1	do	Foreladies and fixers in warping department.	\$2.50 per week	Efficiency of 92 and under 95 per cent in quality.
1	do	Weavers	10 cents per hour	Efficiency of 94.9 per cent or more in quality.
1	do	Weavers	5 cents per hour	Efficiency of 91.9 and under 94.9 per cent in quality.
1	do	Weavers	Do.	Efficiency of 100 per cent in quality.
1	do	Weavers	2 cents per yard	Do.
4	do	do	5 per cent of earnings at basic rates.	Do.
1	do	do	Three-eighths to $\frac{1}{4}$ cent per yard.	Do.
1	do	Loom fixers, loom inspectors, and foremen.	One-half cent per yard	Do.
1	do	All workers	5 per cent of earnings at basic rates.	Efficiency of 85 per cent or more in quality.
5	do	Winders, spinners, redrawers, testers, and inspectors.	5 cents for each defect found.	Efficiency in detecting defects in yarn.
1	do	Weavers	2 cents for each defect found.	Do.
1	do	Weavers	1 cent per yard	Efficiency of 100 per cent in quality.
1	do	do	do	Efficiency of set standard in quality.
1	Production	6 day weavers	\$2.50 per 2-week pay period.	The day weaver with highest production in 2-week pay period.
1	do	6 night weavers	do	The night weaver with highest production in 2-week pay period.
1	do	Blockers	30 cents for 100 pieces over average of 62 $\frac{1}{2}$.	Production of an average of over 62 $\frac{1}{2}$ pieces per day.
1	do	Sewers	30 cents for 100 pieces over average of 187 $\frac{1}{2}$.	Production of an average of over 187 $\frac{1}{2}$ pieces per day.
1	do	Weavers and loom fixers.	Not reported	Not reported.
1	do	Twisters-in, quillers, and pickers.	Varies with grade of goods.	Production over set standard of quantity.
1	do	Weavers and twisters-in.	10 per cent of earnings at basic rates.	Production of set standard or more.
1	do	Twisters-in	4 cents for each 1,000 over 30,000 ends.	Twist over 30,000 ends.
1	do	Winders	3 to 5 cents per spool	Wind more than set standard.

TABLE 10.—*Bonus systems in operation in 55 mills, 1931—Continued*

Number of establishments	Bonus based on—	Employees entitled to bonus	Amount of or per cent of earnings paid as bonus	Necessary to get bonus
1	(Production....	Certain groups of workers.	One-half of 1 per cent of earnings at basic rates for each per cent over set standard.	Production over set standard.
	(Time saving....	Time workers....	20 per cent of time served at basic rates. 10 per cent of difference between allotted time and time taken at basic rates.	Complete work in less than allotted time. Complete work in not less than 90 per cent of allotted time.
2	Service.....	All in service 1 year or more.	1 per cent of earnings at basic rates for each year of service.	Service of 1 year or more.
1do.....	All in service 2 years or more.	10 per cent of earnings at basic rates.	Service of 2 years or more.
1	Time saving....	Machinists and helpers.	All of time saved at basic rates.	Complete work in less than allotted time.

Index Numbers of Employment and of Pay Rolls, 1923 to 1931

Index numbers of employment and of pay rolls in the silk goods industry are presented in Table 11 for each month and year, January, 1923, to December, 1931. The indexes are as published by the Bureau of Labor Statistics in monthly reports on "Trend of Employment" in the United States.

During the period covered by the table, employment, by months, was highest in December, 1925, with an index of 107.9 and lowest in July, 1931, with an index of 63.6. Pay rolls were highest at 109.1 in December, 1925, and lowest at 55.6 in July, 1931.

By years, the index of 103.1 shows employment to be highest in 1925 and lowest (73.9) in 1931; pay rolls dropped from an index of 102.7 in 1925 to 64.5 in 1931.

TABLE 11.—*Index numbers of employment and of pay rolls, January, 1923, to December, 1931, by month and year*

[Average for 1926=100]

Month	Employment								
	1923	1924	1925	1926	1927	1928	1929	1930	1931
January.....	98.3	96.8	95.9	107.8	98.7	97.0	95.2	94.2	81.6
February.....	100.5	98.8	98.4	107.0	99.2	100.5	97.9	97.0	84.3
March.....	102.2	98.2	100.2	103.8	101.1	101.6	99.9	97.1	83.2
April.....	102.5	95.1	100.7	100.4	101.0	96.8	100.5	95.3	80.7
May.....	102.1	92.5	101.5	97.4	100.1	96.9	99.2	89.3	76.9
June.....	100.5	90.5	102.5	95.2	97.6	96.0	97.9	86.2	67.4
July.....	98.9	87.5	103.8	94.3	96.5	92.7	97.8	78.6	63.6
August.....	99.3	91.0	105.5	96.1	97.5	93.5	98.3	78.0	65.3
September.....	99.2	93.3	106.4	97.7	97.9	95.0	98.1	76.2	69.5
October.....	98.8	95.8	107.4	100.1	97.0	98.1	98.1	79.8	73.0
November.....	97.8	95.0	107.5	100.0	95.9	96.9	96.7	83.4	70.7
December.....	97.6	94.9	107.9	99.7	98.0	97.9	96.1	82.5	70.9
Average.....	99.8	94.1	103.1	100.0	98.4	96.9	98.0	86.5	73.9

TABLE 11.—Index numbers of employment and of pay rolls, January, 1923, to December, 1931, by month and year—Continued

Month	Pay roll								
	1923	1924	1925	1926	1927	1928	1929	1930	1931
January.....	85.4	89.9	92.8	107.9	95.7	94.4	92.8	90.2	70.8
February.....	91.0	96.3	99.2	108.9	102.8	104.3	103.7	96.1	78.6
March.....	94.9	93.4	102.8	105.1	104.7	106.6	106.4	98.1	76.2
April.....	95.7	90.4	101.5	98.8	99.5	100.1	106.7	92.8	71.9
May.....	99.8	86.6	103.4	97.7	101.7	100.5	105.1	83.7	66.9
June.....	98.2	83.5	98.8	93.0	99.2	100.9	102.9	79.9	58.1
July.....	92.6	76.5	101.5	91.5	95.1	93.4	98.8	67.7	55.6
August.....	93.9	84.8	106.8	97.1	98.3	98.3	101.3	72.1	58.9
September.....	95.2	87.0	100.0	96.6	98.1	99.2	100.6	70.2	59.2
October.....	96.3	93.4	109.0	104.0	98.9	104.3	101.8	75.9	62.4
November.....	92.1	88.2	107.4	99.7	94.7	97.6	95.5	76.4	57.2
December.....	91.6	92.6	109.1	99.7	101.2	102.7	95.2	77.8	57.9
Average.....	93.9	88.6	102.7	100.0	99.2	100.2	100.9	81.7	64.5

Importance of the Industry

Table 12 shows for the industry the number of establishments, average number of wage earners, the amount paid in wages, the cost of materials, the value of products, and the value added by manufacture, as published by the United States Census of Manufactures. The figures are for the United States as a whole in each of the specified years from 1919 to 1929. From the census figures the average per wage earner of each item was computed, as was the per cent that amount of wages was of the value added by manufacture.

Average annual wages per wage earner increased each census year from \$854 in 1919 to \$1,097 in 1927, and then decreased to \$1,093 in 1929. The increase between 1919 and 1921 was 9.4 per cent; between 1921 and 1923, 8.5 per cent; between 1923 and 1925, 6.3 per cent; and between 1925 and 1927, 1.9 per cent. The decrease between 1927 and 1929 was 0.4 per cent.

In 1919 wages formed 36 per cent of the value added by manufacture; 45 per cent in 1921, 1923, and 1929; 44 per cent in 1925; and 46 per cent in 1927.

TABLE 12.—Establishments, wage earners, wages, cost of materials, value of products, value added by manufacture, and per capita earnings, etc., 1919 to 1929

[From United States Census of Manufactures, 1927 and 1929]

Year	Number of establishments	Average number of wage earners	Amount paid in wages	Cost of materials	Value of products
United States:					
1919.....	1,369	126,782	\$108,226,330	\$388,469,022	\$688,469,523
1921.....	1,565	121,378	113,395,626	337,568,799	583,418,766
1923.....	1,598	125,234	126,849,454	479,038,263	761,322,119
1925.....	1,659	132,509	142,733,539	484,122,527	808,979,399
1927.....	1,648	127,643	140,053,588	445,390,676	750,123,705
1929.....	1,434	126,060	137,772,194	392,543,268	701,134,319

TABLE 12.—*Establishments, wage earners, wages, cost of materials, value of products, value added by manufacture, and per capita earnings, etc., 1919 to 1929—Con.*

Year	Value added by manufacture	Average annual wages per wage earner	Cost of materials per wage earner	Value of products per wage earner	Value added by manufacture per wage earner	Per cent wages are of value added
United States:						
1919.....	\$300,000,501	\$854	\$3,064	\$5,430	\$2,366	36
1921.....	245,859,957	934	2,781	4,807	2,026	45
1923.....	282,283,856	1,013	3,825	6,079	2,254	45
1925.....	324,856,872	1,077	3,654	6,105	2,452	44
1927.....	304,733,029	1,097	3,489	5,877	2,387	46
1929.....	308,591,051	1,093	3,114	5,562	2,448	45

Scope and Method

In 1931, data as to days, hours, wage rates, and earnings of each wage earner in each occupation in the industry were collected by agents of the bureau from the pay rolls and other records of 340 representative silk and rayon mills in 13 States. The States included in the study, based on the 1927 report of the United States Bureau of Manufactures, were the more important in number of wage earners.

The study, in 1931, was limited to mills the principal products of which were broad goods, dress goods, ribbons, linings, shirtings, satins, georgettes, pongees, crêpes, chiffons, and tie goods, made of silk and/or rayon. Mills in which the principal products were velvets, plushes, tapestries, upholstery goods, braids, specialties or small wares, or goods of silk or rayon containing more than 25 per cent of other fibers were not included. Mills making spun silk were not included.

Except for a few mills, the data used in compiling the 1931 wage figures were taken for one pay period in March, April, May, or June, and therefore reflect conditions in the industry in those months.

Table 13 shows the number of mills covered in the 1931 study, the per cent of the cloth of each mill made of silk yarn only; of rayon yarn only; of a mixture of silk and rayon; or of a cloth made of a mixture of silk or rayon and other yarn; also the per cent silk, rayon, and other yarn in cloth made of two or more yarns.

The first three lines of the table show that all or 100 per cent of the cloth in 200 mills was made of silk yarn only; in 26 mills of rayon yarn only; and in 1 mill of a mixture of silk and rayon yarns and that the silk was 67 and the rayon 33 per cent of the mixture. Line 15 of the table shows that 7 per cent of the cloth made in one mill was of silk yarn only and 93 per cent of rayon yarn only.

TABLE 13.—Number of mills, per cent of cloth made of silk, rayon, silk and rayon, or silk or rayon and other fiber, and per cent of silk, rayon, and other fiber in cloth of a mixture, 1931

Number of mills included in 1931 study	Per cent of cloth made of—				Per cent in mixture of—		
	Silk yarn only	Rayon yarn only	Mixture of silk and rayon	Mixture of silk or rayon and other	Silk yarn	Rayon yarn	Other yarn
200 mills	100						
26 mills		100					
1 mill			100		67	53	
8 mills			100		50	50	
1 mill			100		75	25	
3 mills			100		40	60	
1 mill			100		(1)	(1)	
Do			100		25	75	
Do				100	80		20
Do				100	38	55	7
Do				100		60	40
Do				100	(1)		(1)
Do				100	20	50	30
Do				100		53	47
Do	7	93					
Do	29	71					
Do	62	38					
Do	83	17					
Do	12	88					
Do	40	60					
Do	94	6					
2 mills	67	33					
1 mill	44	56					
Do	42	58					
4 mills	75	25					
2 mills	76	24					
1 mill	65	35					
Do	97	3					
Do	38	62					
2 mills	98	2					
1 mill	70	30					
3 mills	19	81					
1 mill	99	1					
Do	72	28					
Do	50	50					
Do	79	21					
Do	25	75					
Do	45	55					
Do	32	68					
Do	41	59					
Do	4	96					
Do	64		36		33	67	
Do	67		33		10	90	
Do	75		25		50	50	
Do		57	43		10	90	
Do	26	21	53		15	85	
Do	72	(1)		28	(1)	(1)	(1)
Do	98			2	67		33
Do	4			96	67		33
2 mills	(1)			(1)			
1 mill	75		5	20	50	10	40
Do	19	62		18		71	29
Do	55		42	3	49	50	1
Do		47		53		60	40
Do	10	5		85	56	15	29
Do	94	5		1	(1)	(1)	(1)
Do	91	7	1	1	40	37	23
Do	19	49		83	(1)	(1)	(1)
Do	3	38		59	50		50
Do	26	21	53		15	85	
Do	21	39	4	37	22	25	53
Do	19	2		79	29		70
Do		49	15	36	6	59	36
Do	87	7		1	18		82
Do	82	13		6	27	7	65
Do	97			3	29		71
Do	68			32	25		75
Do	5	2	88	5	49	47	4
35 mills	(1)	(1)	(1)	(1)	(1)	(1)	(1)

¹ Not reported. ² Less than 1 per cent. ³ Part silk and mixtures, proportions not reported.

Table 14 shows by States the number of wage earners in the industry in the United States in 1927 according to the United States Census of Manufactures. The number of mills from which the Bureau of Labor Statistics obtained data for 1931 and the number of wage earners therein for whom data are presented in the various tables in this report are also shown in the table. The 49,036 (21,885 males and 27,151 females) wage earners included in the 1931 study by the bureau were 38 per cent of the total in the industry in 1927.

TABLE 14.—*Number of wage earners in the industry in 1927, and number of establishments and wage earners for which 1931 data are shown, by States*

State	Number of wage earners reported by United States Census Bureau in 1927	Establishments and wage earners for which data are shown for 1931 in this report	
		Number of establishments	Number of wage earners
Connecticut.....	9, 183	13	2, 975
Maryland.....	935	3	513
Massachusetts.....	7, 357	12	1, 510
New Jersey.....	24, 482	97	7, 095
New York.....	11, 204	37	4, 828
North Carolina.....	(¹)	10	2, 187
Pennsylvania.....	59, 608	131	24, 618
Rhode Island.....	6, 500	20	2, 573
South Carolina, Alabama, and Georgia.....	(¹)	5	875
Tennessee.....	(¹)	6	822
Virginia.....	1, 525	6	1, 060
Other States.....	8, 849	-----	-----
Total.....	127, 643	340	49, 036

¹ Not reported separately; included in "Other States."

Data for mills with a pay period of more than one week were converted to a 1-week basis.

Because of the carry-over of incomplete cuts from one week to another, wage figures for weavers were taken for two weeks in all mills and reduced to a 1-week basis.

Average full-time hours per week were computed by dividing the combined full-time hours per week of all wage earners in the occupation by the number of wage earners in the occupation in the week. The full-time hours per week of each wage earner were used in arriving at this average, even though some worked more or less than full time on account of overtime, sickness disability, or other cause.

Where no record of actual hours worked by piece workers was regularly kept, the officials of the mills, at the request of the bureau, had a record of the actual hours worked kept for a representative pay period.

Average earnings per hour include the earnings of both time workers and piece workers and were obtained by dividing the total earnings of all wage earners in an occupation in one week by the total number of hours actually worked in that week by such wage earners.

Average full-time earnings per week were computed by multiplying the average earnings per hour of wage earners in the occupation by their average full-time hours per week. This was done on the assump-

tion that the earnings for full time would have been at the same average per hour as for the time that was actually worked in one week.

The important occupations, as published in this bulletin, are arranged below approximately in the order of manufacture and followed by the group of "other employees," which includes wage earners in occupations other than in the important occupations. For definitions see page 49.

Winders, hard silk.	Enterers' helpers.
Doublers.	Twisters-in, hand.
Spinners.	Twisters-in, machine.
Reelers.	Loom fixers.
Laborers, dyehouse.	Bobbin boys.
Winders, rayon.	Weavers, broad silk.
Winders, soft silk.	Weavers, ribbon.
Redrawers.	Smash hands.
Warpers.	Pickers, cloth.
Quillers.	Inspectors, cloth.
Coners.	Packers.
Enterers.	Other employees.

General Tables

In addition to the preceding text tables, three general tables and a glossary of occupation terms are presented as follows:

TABLE A.—Average number of days on which wage earners worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1931, by occupation, sex, and State.

The presentation in this table in parallel columns of "average full-time hours per week" and "average hours actually worked in one week" is for the purpose of easy comparison of the hours that would have been worked in the week had all wage earners in the occupation worked no more nor less than full time, with the average hours that were actually worked in the week. One shows the average full-time hours under normal conditions, and the other the average hours actually worked in the week for the wage earners in each occupation in each State and in all States combined.

On page 36, near the end of the table, the figures show that the 21,885 males in the 340 mills worked on an average of 5.3 days in one week. Their average full-time hours per week were 51.5 and they worked an average of 48.4 hours in the week or 94 per cent of full time. They earned an average of 48.5 cents per hour or \$23.45 in one week. Had they worked the average full-time hours, 51.5, at the same average per hour as was earned in the 48.4 hours, they would have earned \$24.98 in the week.

The 27,151 females in these mills worked on an average of 5.2 days in one week. Their average full-time hours per week were 50 and they worked an average of 43.2 hours in the week or 86.4 per cent of full time. They earned an average of 33.5 cents per hour or \$14.46 per week. Had they worked the average full time of 50 hours per week at the same average as was earned in the 43.2 hours they would have earned \$16.75.

The 49,036 wage earners in the 340 mills worked on an average of 5.2 days in one week. Their average full-time hours per week were 50.7 and they worked an average of 45.5 hours in the week or 89.7

per cent of full time. They earned an average of 40.6 cents per hour or \$18.47 in the week. Had they worked their average full-time hours of 50.7 per week at the same average rate per hour as was earned in the 45.5 hours they would have earned an average of \$20.58.

TABLE B.—Average and classified earnings per hour in nine specified occupations, 1931, by occupations, sex, and State.

TABLE C.—Average and classified full-time hours per week in nine specified occupations, 1931, by occupation, sex, and State.

TABLE A.—Average number of days on which wage earners worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1931, by occupation, sex, and State

Occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in one week
Winders, hard silk, male:									
Massachusetts.....	1	1	3.0	48.0	22.5	46.9	\$0.207	\$9.94	\$4.65
New Jersey.....	1	15	4.9	44.0	48.2	109.5	.300	13.20	14.44
New York.....	2	9	4.6	50.0	39.4	78.8	.400	20.00	15.78
North Carolina.....	2	8	4.8	55.6	49.8	89.6	.197	10.95	9.79
Pennsylvania.....	6	9	5.6	53.3	49.0	91.9	.292	15.56	14.34
Tennessee.....	1	18	5.7	57.0	54.0	94.7	.205	11.69	11.08
Virginia.....	1	1	6.0	55.0	58.0	105.5	.400	22.00	23.20
Total.....	14	61	5.1	51.9	48.7	93.8	.287	13.86	13.00
Winders, hard silk, female:									
Connecticut.....	5	142	5.4	49.0	44.6	91.0	.375	18.38	16.69
Maryland.....	2	140	5.6	50.0	46.0	92.0	.227	11.35	10.44
Massachusetts.....	6	158	5.3	48.0	42.5	88.5	.222	10.66	9.44
New Jersey.....	25	449	5.1	48.2	41.0	85.1	.344	16.58	14.13
New York.....	33	771	5.4	49.1	44.1	89.8	.337	16.55	14.90
North Carolina.....	3	94	5.1	55.0	46.8	85.1	.273	15.02	12.78
Pennsylvania.....	92	3,034	4.8	50.3	38.7	76.9	.284	14.29	11.01
Rhode Island.....	9	111	4.2	51.9	37.4	72.1	.276	14.32	10.32
South Carolina, Alabama, and Georgia.....	1	19	5.4	57.5	55.3	96.2	.237	13.63	13.11
Tennessee.....	4	91	5.2	55.2	43.3	78.4	.168	9.27	7.27
Virginia.....	3	96	5.3	54.0	49.8	92.2	.238	12.85	11.86
Total.....	183	5,105	5.0	50.1	40.7	81.2	.293	14.68	11.94
Doublers, male:									
New York.....	1	3	5.0	55.0	47.3	86.0	.174	9.57	8.22
Pennsylvania.....	5	49	5.6	59.1	58.5	99.0	.359	21.22	21.00
Total.....	6	52	5.5	58.9	57.8	98.1	.350	20.62	20.26
Doublers, female:									
Connecticut.....	4	33	5.0	48.4	40.7	84.1	.402	19.46	16.39
Maryland.....	2	40	5.1	50.0	41.4	82.8	.211	10.55	8.73
Massachusetts.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Jersey.....	3	27	4.7	45.9	38.2	83.2	.340	15.61	12.96
New York.....	3	17	4.5	50.0	34.4	68.8	.272	13.60	9.36
Pennsylvania.....	17	221	4.5	51.1	30.9	76.3	.285	14.56	11.12
Rhode Island.....	2	19	5.7	53.1	59.0	95.9	.265	14.07	13.51
Virginia.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	33	372	4.7	50.3	39.8	79.1	.287	14.44	11.42
Spinners, male:									
Connecticut.....	3	49	4.5	53.4	42.8	80.1	.426	22.75	18.22
Maryland.....	3	56	4.8	58.0	52.6	90.7	.323	18.73	16.99
Massachusetts.....	3	54	5.1	52.1	52.2	100.2	.282	14.69	14.69
New Jersey.....	17	162	5.2	51.5	52.0	101.0	.433	22.30	22.53
New York.....	11	202	5.1	54.9	53.9	98.2	.406	22.29	21.89

†Data included in total.

TABLE A.—Average number of days on which wage earners worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1931, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in one week
Spinners, male—Continued.									
North Carolina.....	4	24	5.0	57.1	55.1	96.5	\$0.295	\$16.84	\$16.24
Pennsylvania.....	59	1,117	4.6	54.2	48.4	89.3	.330	17.89	15.98
Rhode Island.....	3	32	5.3	53.5	52.1	97.4	.381	20.38	19.85
South Carolina, Alabama, and Georgia.....	1	6	5.0	57.5	57.5	100.0	.220	12.65	12.65
Tennessee.....	3	33	5.7	56.9	57.2	100.5	.172	9.79	9.84
Virginia.....	2	59	5.3	54.7	52.1	95.2	.275	15.04	14.32
Total.....	109	1,794	4.8	54.2	49.9	92.1	.344	18.64	17.18
Spinners, female:									
Connecticut.....	3	64	6.0	48.2	48.7	101.0	.386	18.61	18.82
Maryland.....	3	47	5.3	50.0	44.8	89.6	.246	12.30	11.00
Massachusetts.....	3	99	5.6	48.0	45.1	94.0	.184	8.83	8.30
New Jersey.....	20	208	5.4	47.9	44.7	93.3	.346	16.57	15.44
New York.....	12	415	5.6	48.8	46.0	94.3	.333	16.25	15.33
North Carolina.....	3	55	5.4	55.0	49.9	90.7	.271	14.91	13.51
Pennsylvania.....	54	1,314	4.8	50.6	40.6	80.2	.278	14.07	11.27
Rhode Island.....	1	4	4.3	48.0	27.5	57.3	.237	11.38	6.51
South Carolina, Alabama, and Georgia.....	1	12	6.0	57.5	57.5	100.0	.210	12.08	12.08
Tennessee.....	3	70	5.1	55.1	43.9	79.7	.192	10.58	8.42
Virginia.....	1	58	5.5	55.0	52.6	95.6	.265	14.58	13.91
Total.....	104	2,346	5.1	50.2	43.1	85.9	.289	14.51	12.46
Reelers, male:									
Connecticut.....	1	2	5.5	50.0	47.5	95.0	.676	33.80	32.12
New Jersey.....	2	10	5.5	44.0	35.4	80.5	.313	13.77	11.05
Pennsylvania.....	2	3	4.3	52.5	41.1	78.3	.257	13.49	10.56
Rhode Island.....	1	4	6.0	48.0	53.0	110.4	.206	9.89	10.93
Total.....	6	19	5.4	46.8	41.3	88.2	.319	14.93	13.16
Reelers, female:									
Connecticut.....	4	25	5.3	49.0	43.2	88.2	.320	15.66	13.82
New Jersey.....	4	19	5.5	44.0	39.3	89.3	.327	14.39	12.85
New York.....	5	82	5.5	49.8	45.3	91.0	.296	14.74	13.40
Pennsylvania.....	16	105	4.2	51.0	34.0	66.7	.264	13.46	8.99
Rhode Island.....	1	5	3.8	48.0	28.5	59.4	.194	9.31	5.52
Virginia.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	31	237	4.9	49.8	39.3	78.9	.287	14.29	11.30
Laborers, dyehouse, male:									
Connecticut.....	3	110	5.4	48.0	46.2	96.3	.541	25.97	24.97
New Jersey.....	4	107	5.0	46.8	40.4	86.3	.533	24.94	21.60
New York.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania.....	5	232	5.3	56.5	59.1	104.6	.441	24.92	26.10
Total.....	13	464	5.2	52.0	50.9	97.9	.479	24.91	24.36
Winders, rayon, male:									
North Carolina.....	2	30	4.3	55.0	47.4	86.2	.375	20.63	17.77
Winders, rayon, female:									
Maryland.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Jersey.....	2	35	5.3	45.9	40.5	88.2	.529	24.28	21.42
New York.....	5	46	5.2	49.8	41.8	83.9	.252	12.55	10.54
North Carolina.....	4	110	4.4	55.5	39.7	71.5	.278	15.43	11.02
Pennsylvania.....	7	71	5.5	51.3	46.0	89.7	.298	15.29	13.70
Rhode Island.....	3	26	5.5	51.1	48.1	94.1	.313	15.99	15.05
South Carolina, Alabama, and Georgia.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total.....	23	372	5.0	52.5	42.2	80.4	.295	15.49	12.45

1 Data included in total.

TABLE A.—Average number of days on which wage earners worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1931, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in one week
Winders, soft silk, male:									
Connecticut.....	1	2	2.0	55.0	16.0	29.1	\$0.253	\$13.92	\$4.04
New Jersey.....	1	5	6.0	49.5	49.5	100.0	.389	19.28	19.28
Pennsylvania.....	2	9	6.3	64.7	69.1	106.8	.341	22.06	23.59
Rhode Island.....	1	2	3.0	50.0	25.3	50.6	.350	17.50	8.84
Tennessee.....	1	4	5.3	55.0	50.3	91.5	.167	9.19	8.41
Total.....	6	22	5.4	57.3	52.4	91.4	.319	18.28	16.73
Winders, soft silk, female:									
Connecticut.....	9	125	5.1	49.0	43.2	88.2	.364	17.84	15.75
Massachusetts.....	4	28	5.2	47.7	40.4	84.7	.327	15.60	13.19
New Jersey.....	61	445	5.0	46.4	30.6	65.3	.409	18.98	16.23
New York.....	3	35	5.8	47.2	44.2	93.6	.390	18.41	17.25
North Carolina.....	2	53	5.5	55.0	50.8	92.4	.308	16.94	15.65
Pennsylvania.....	36	715	5.1	50.5	43.2	85.5	.304	15.35	13.14
Rhode Island.....	6	117	4.6	48.9	39.6	81.0	.351	17.16	13.88
South Carolina, Alabama, and Georgia.....	2	7	5.9	55.0	60.4	109.8	.235	12.93	14.22
Tennessee.....	1	9	4.4	57.5	50.1	(1)	.196	11.27	9.81
Virginia.....	2	20	4.4	55.0	41.0	74.5	.174	9.57	7.13
Total.....	126	1,554	5.0	49.2	42.2	85.8	.340	16.73	14.88
Redrawers, male:									
Connecticut.....	1	1	6.0	50.0	50.0	100.0	.300	15.00	15.00
Maryland.....	1	1	6.0	50.0	51.0	102.0	.215	10.75	10.95
New York.....	1	3	5.0	50.0	46.0	92.0	.193	9.65	8.89
North Carolina.....	1	1	3.0	55.0	34.5	62.7	.145	7.98	5.02
Pennsylvania.....	8	54	5.3	52.6	50.0	95.1	.194	10.20	9.72
South Carolina, Alabama, and Georgia.....	1	3	5.0	57.5	57.5	100.0	.213	12.23	12.23
Total.....	13	63	5.3	52.7	49.9	94.7	.197	10.38	9.83
Redrawers, female:									
Connecticut.....	3	29	5.1	49.0	40.1	81.8	.331	16.22	13.25
Maryland.....	3	61	5.2	50.0	42.5	85.0	.252	12.60	10.69
Massachusetts.....	4	33	5.3	47.2	42.7	90.5	.267	12.00	11.40
New Jersey.....	16	174	5.6	48.3	45.4	94.0	.269	12.99	12.19
New York.....	11	257	5.5	48.9	44.9	91.8	.270	13.20	12.12
North Carolina.....	1	2	6.0	55.0	55.0	100.0	.136	7.46	7.46
Pennsylvania.....	64	1,215	4.7	50.9	39.3	77.2	.229	11.66	9.00
Rhode Island.....	3	21	5.4	48.8	47.9	98.2	.233	11.37	11.14
South Carolina, Alabama, and Georgia.....	2	14	5.1	57.1	49.5	86.7	.194	11.08	9.63
Tennessee.....	2	18	5.1	57.1	49.6	86.9	.187	10.68	9.30
Virginia.....	4	63	5.6	53.1	50.2	94.5	.281	14.92	14.13
Total.....	113	1,887	5.0	50.4	41.5	82.3	.243	12.25	10.08
Warpers, male:									
Connecticut.....	8	34	5.6	51.7	49.8	96.3	.616	31.85	30.67
Massachusetts.....	10	26	5.1	49.4	42.1	85.2	.613	30.23	25.79
New Jersey.....	53	218	5.2	47.9	43.6	91.0	.893	42.77	38.98
New York.....	21	125	5.3	51.1	46.6	91.2	.701	35.82	32.88
North Carolina.....	5	50	4.8	55.2	48.4	87.7	.416	22.96	20.15
Pennsylvania.....	54	477	5.1	51.8	45.0	86.9	.588	30.46	26.45
Rhode Island.....	9	23	5.2	50.9	40.7	91.7	.627	31.91	29.27
South Carolina, Alabama, and Georgia.....	1	6	4.5	57.5	51.8	90.1	.253	14.55	13.08
Tennessee.....	3	15	5.0	56.9	48.8	85.8	.361	20.54	17.63
Virginia.....	2	19	4.8	55.0	48.8	88.7	.299	16.45	14.57
Total.....	166	993	5.1	51.1	45.4	88.8	.648	33.11	29.42
Warpers, female:									
Connecticut.....	9	135	5.3	50.6	45.9	90.7	.477	24.14	21.88
Massachusetts.....	10	50	5.1	47.8	39.8	83.3	.497	23.76	19.80
New Jersey.....	38	231	4.8	45.7	37.5	82.1	.545	24.91	20.48

¹Data included in total.

TABLE A.—Average number of days on which wage earners worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1931, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per hour	Average actual earnings in one week
Warpers, female—Continued.									
New York	15	58	4.9	48.6	39.2	80.7	\$0.551	\$26.78	\$21.53
North Carolina	5	128	5.4	55.0	52.3	95.1	.413	22.72	21.59
Pennsylvania	62	1,113	5.2	50.7	44.3	87.4	.465	23.58	20.59
Rhode Island	14	163	4.4	49.4	37.1	75.1	.665	32.85	24.66
South Carolina, Alabama, and Georgia	3	27	5.2	56.7	53.7	94.7	.299	15.25	14.45
Tennessee	4	28	5.3	56.6	50.6	89.4	.174	9.85	8.81
Virginia	4	41	4.9	56.0	46.5	84.5	.334	18.37	15.64
Total	164	1,974	5.1	50.4	43.5	86.3	.476	23.99	20.72
Quillers, male:									
Connecticut	3	12	5.9	54.1	55.8	103.1	.233	12.61	12.99
Maryland	1	1	5.0	50.0	41.0	82.0	.273	13.65	11.21
Massachusetts	6	25	4.6	52.6	43.1	81.9	.247	12.99	10.65
New Jersey	1	3	3.3	49.5	30.0	60.6	.286	14.11	8.55
New York	2	7	5.0	53.8	48.1	89.4	.253	13.88	12.42
North Carolina	3	31	5.1	55.5	53.8	96.9	.244	13.54	13.11
Pennsylvania	36	136	4.8	53.8	46.8	87.0	.256	13.77	11.96
Rhode Island	2	3	5.0	53.3	53.3	100.0	.327	17.46	17.46
South Carolina, Alabama, and Georgia	3	63	4.9	55.0	52.4	95.3	.224	12.32	11.74
Tennessee	2	9	5.3	57.1	57.9	101.4	.192	10.96	11.10
Virginia	3	9	5.5	56.0	52.7	95.8	.422	23.21	22.24
Total	62	299	4.9	54.2	49.2	90.8	.250	13.55	12.28
Quillers, female:									
Connecticut	10	158	5.8	50.4	49.1	97.4	.314	15.83	15.42
Maryland	1	1	6.0	50.0	50.0	100.0	.285	14.23	14.23
Massachusetts	11	96	5.2	46.3	40.5	87.5	.193	8.94	7.83
New Jersey	76	316	5.0	46.3	39.9	86.2	.345	15.97	13.75
New York	24	129	5.3	48.4	44.2	91.3	.291	14.08	12.88
North Carolina	6	60	5.1	55.0	47.8	86.9	.238	13.09	11.30
Pennsylvania	84	906	5.4	50.4	44.1	87.5	.240	12.10	10.58
Rhode Island	15	94	5.0	50.1	46.1	90.0	.305	15.28	13.77
South Carolina, Alabama, and Georgia	3	91	5.3	55.3	48.5	87.7	.222	12.28	10.75
Tennessee	3	26	5.2	56.9	48.3	84.9	.154	8.76	7.42
Virginia	5	57	5.2	54.8	49.0	89.4	.275	15.07	13.46
Total	238	1,934	5.3	50.0	44.2	88.4	.265	13.25	11.74
Coners, male:									
Maryland	1	13	4.6	60.0	54.2	90.3	.312	18.72	16.89
North Carolina	2	11	5.7	55.0	61.4	111.6	.309	17.00	18.95
Pennsylvania	4	137	4.9	51.1	47.3	92.6	.328	16.66	15.40
Total	7	161	4.9	52.1	48.8	93.7	.323	16.83	15.76
Coners, female:									
Maryland	1	16	5.4	50.0	45.1	90.2	.256	12.80	11.52
New Jersey	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New York	2	138	5.8	49.5	47.7	96.4	.287	14.70	14.1
North Carolina	2	21	5.8	55.0	53.4	97.1	.274	15.07	14.61
Pennsylvania	11	310	6.0	50.0	40.1	80.2	.276	13.80	11.09
Tennessee	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total	18	528	5.9	50.4	43.4	86.1	.278	14.01	12.07
Enterers, male:									
Connecticut	1	3	5.3	51.3	42.3	82.5	.296	15.18	12.55
Massachusetts	1	1	6.0	48.0	46.0	95.8	.333	15.98	15.30
New Jersey	3	6	5.3	45.8	48.8	106.6	.402	18.41	19.62
New York	1	5	6.0	54.0	61.7	114.3	.185	9.99	11.43
North Carolina	3	5	4.6	55.0	33.6	61.1	.437	24.04	14.69
Pennsylvania	10	20	5.0	52.0	45.6	87.7	.523	27.35	23.97
Tennessee	1	1	6.0	57.0	59.0	103.6	.193	11.00	11.39
Total	20	41	6.2	51.7	46.7	90.3	.414	21.40	19.32

1 Data included in total.

TABLE A.—Average number of days on which wage earners worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1931, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in one week
Enterers, female:									
Connecticut.....	5	16	4.3	49.6	35.4	71.4	\$0.444	\$22.02	\$15.71
Massachusetts.....	5	13	5.7	48.0	44.7	93.1	.466	22.37	20.84
New Jersey.....	6	16	5.3	48.9	44.4	90.8	.576	28.17	25.56
New York.....	8	30	5.4	48.3	43.3	89.6	.349	16.86	15.11
North Carolina.....	7	54	5.3	55.0	45.6	82.9	.382	21.01	17.39
Pennsylvania.....	32	183	5.1	50.5	43.6	86.3	.385	19.44	16.77
Rhode Island.....	4	44	4.4	48.1	36.3	75.5	.408	19.38	14.61
South Carolina, Alabama, and Georgia.....	1	7	3.3	55.0	17.7	32.2	.328	18.04	5.81
Tennessee.....	3	6	5.5	67.0	49.9	87.5	.134	7.64	6.71
Virginia.....	2	7	5.1	55.0	47.5	86.4	.144	7.92	6.83
Total.....	73	376	5.1	50.8	42.4	83.5	.387	19.66	16.39
Enterers' helpers, male:									
New Jersey.....	1	1	5.0	44.0	40.0	90.9	.250	11.00	10.00
New York.....	1	1	6.0	49.5	52.5	106.1	.220	10.89	11.55
North Carolina.....	1	2	6.0	55.0	52.8	96.0	.240	13.20	12.65
Pennsylvania.....	11	25	4.4	51.4	35.7	69.5	.248	12.75	8.85
Virginia.....	1	1	6.0	55.0	55.0	100.0	.250	13.75	13.75
Total.....	15	30	4.6	51.5	38.2	74.2	.246	12.67	9.40
Enterers' helpers, female:									
Connecticut.....	2	5	6.0	46.8	47.2	100.9	.332	15.54	15.66
New Jersey.....	3	5	5.4	46.5	45.6	98.1	.264	12.28	12.06
New York.....	3	6	5.3	49.5	45.2	91.3	.240	11.88	10.88
North Carolina.....	2	16	5.3	55.0	41.7	75.8	.314	17.27	13.50
Pennsylvania.....	26	114	5.1	50.4	42.3	83.9	.258	13.00	10.93
Rhode Island.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Tennessee.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Virginia.....	1	6	3.7	55.0	33.0	60.0	.108	5.94	3.57
Total.....	39	154	5.1	50.8	42.3	83.3	.260	13.21	10.98
Twisters-in, hand, male:									
Connecticut.....	3	32	5.5	51.2	45.9	89.6	.456	23.35	20.90
Massachusetts.....	7	8	4.8	48.0	39.3	81.9	.621	29.81	24.39
New Jersey.....	55	131	5.0	46.2	39.9	86.4	.866	40.01	34.56
New York.....	18	36	5.4	50.2	46.4	92.4	.618	31.02	28.69
North Carolina.....	4	16	5.4	55.0	47.3	86.0	.471	25.91	22.24
Pennsylvania.....	43	139	5.8	51.3	51.0	99.4	.542	27.80	27.65
Rhode Island.....	10	32	4.6	49.8	40.8	81.9	.702	34.96	28.68
South Carolina, Alabama, and Georgia.....	2	7	5.6	57.1	55.0	96.3	.250	14.28	13.73
Tennessee.....	2	3	4.3	56.3	38.0	67.5	.251	4.13	9.54
Virginia.....	1	3	6.0	55.0	60.2	109.5	.899	21.95	24.02
Total.....	145	407	5.3	49.7	45.5	91.5	.634	31.51	28.84
Twisters-in, hand, female:									
Connecticut.....	4	8	4.1	53.4	36.4	68.2	.316	16.87	11.51
Massachusetts.....	2	10	5.3	48.0	44.8	93.3	.352	16.90	15.77
New Jersey.....	9	14	4.1	45.6	35.3	77.4	.473	32.51	25.19
New York.....	7	13	5.6	46.2	46.0	99.6	.665	21.48	21.38
North Carolina.....	1	1	6.0	55.0	55.0	100.0	.289	15.88	15.88
Pennsylvania.....	25	141	5.3	50.7	41.3	81.5	.433	21.95	17.86
Rhode Island.....	9	25	5.5	51.2	45.3	88.5	.464	23.76	21.00
South Carolina, Alabama, and Georgia.....	2	10	5.4	57.3	54.2	94.6	.210	12.03	11.39
Tennessee.....	1	1	6.0	55.0	55.0	100.0	.227	12.50	12.50
Virginia.....	1	5	5.6	55.0	51.0	92.7	.319	17.55	16.25
Total.....	61	228	5.3	50.6	42.5	84.0	.428	21.66	18.19

1 Data included in total.

TABLE A.—Average number of days on which wage earners worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1931, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in one week
Twisters-in, machine, male:									
Connecticut.....	8	28	5.2	50.6	45.4	89.7	\$0.696	\$35.22	\$31.62
Massachusetts.....	4	6	6.0	48.0	54.7	114.0	.765	36.72	41.85
New Jersey.....	16	28	5.5	47.0	46.1	98.1	.864	40.61	39.84
New York.....	11	17	5.6	51.2	50.9	99.4	.629	32.20	32.03
North Carolina.....	1	2	5.0	55.0	55.0	100.0	.447	24.57	24.57
Pennsylvania.....	45	104	5.6	51.3	49.7	96.9	.537	27.55	26.72
Rhode Island.....	5	8	5.6	51.9	53.7	103.5	.685	35.55	36.80
Tennessee.....	3	3	6.3	57.0	59.0	103.5	.154	8.78	9.08
Virginia.....	1	2	6.0	55.0	54.5	99.1	.441	24.26	24.06
Total.....	94	198	5.6	50.7	49.2	97.0	.655	31.18	30.27
Twisters-in, machine, female:									
Connecticut.....	2	2	5.5	50.4	46.3	91.9	.472	23.79	21.81
New Jersey.....	4	5	5.2	49.8	42.5	85.3	.610	30.83	26.27
New York.....	3	5	5.8	50.3	48.1	95.6	.490	24.65	23.55
North Carolina.....	2	7	5.7	55.0	46.6	84.7	.478	26.29	22.27
Pennsylvania.....	22	59	5.1	51.2	43.1	84.2	.452	23.14	19.51
Rhode Island.....	2	10	5.5	48.6	43.8	90.1	.439	21.34	19.23
South Carolina, Alabama, and Georgia.....	1	2	6.0	55.0	55.0	100.0	.227	12.50	12.50
Tennessee.....	2	3	4.0	57.0	40.0	70.2	.163	8.72	6.13
Virginia.....	2	4	4.8	55.0	42.0	76.4	.217	11.94	9.11
Total.....	40	97	5.2	51.5	43.8	85.0	.440	22.66	19.30
Loom fixers, male:									
Connecticut.....	10	138	5.8	49.6	49.6	100.0	.769	38.14	38.14
Massachusetts.....	12	58	5.2	49.2	44.2	89.8	.767	37.74	33.91
New Jersey.....	73	210	5.5	47.1	45.9	97.5	.934	43.99	42.83
New York.....	29	126	5.6	49.4	48.8	98.8	.790	39.03	38.51
North Carolina.....	8	104	5.3	55.0	54.6	99.3	.564	31.02	30.81
Pennsylvania.....	73	672	5.7	51.9	51.3	98.8	.753	39.08	38.64
Rhode Island.....	16	104	5.3	50.3	49.5	98.4	.794	39.94	39.28
South Carolina, Alabama, and Georgia.....	5	46	5.5	54.7	54.4	99.5	.409	22.37	22.23
Tennessee.....	4	20	5.4	56.8	54.9	96.7	.399	22.66	21.92
Virginia.....	4	40	5.7	53.4	54.6	102.2	.499	26.65	27.27
Total.....	234	1,518	5.6	51.0	50.2	98.4	.746	38.05	37.47
Bobbin boys:									
Connecticut.....	4	26	5.6	48.8	45.5	93.2	.303	14.19	13.78
Maryland.....	3	21	4.9	53.6	48.0	89.6	.243	13.02	11.65
Massachusetts.....	2	9	6.0	48.0	48.0	100.0	.152	7.31	7.31
New Jersey.....	14	42	5.5	50.4	49.1	97.4	.219	11.04	10.75
New York.....	6	72	5.9	51.3	50.4	98.2	.266	13.65	13.42
North Carolina.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania.....	53	264	5.4	51.4	47.9	93.2	.208	10.69	9.96
Tennessee.....	2	8	6.0	57.4	57.7	100.5	.125	7.18	7.24
Virginia.....	3	13	5.6	54.2	50.3	92.8	.181	9.81	9.08
Total.....	88	460	5.5	51.4	48.6	94.6	.222	11.41	10.78
Weavers, broad silk, male:									
Connecticut.....	10	779	5.7	52.2	50.8	97.3	.517	26.99	26.29
Massachusetts.....	12	477	4.7	50.4	40.9	81.2	.456	22.98	18.67
New Jersey.....	70	1,669	5.2	47.9	43.3	90.4	.544	26.06	23.55
New York.....	25	796	5.1	51.0	45.9	90.0	.496	25.30	22.77
North Carolina.....	8	710	5.0	55.0	50.6	92.0	.474	26.07	23.99
Pennsylvania.....	70	3,964	5.2	51.7	48.1	93.0	.504	26.06	24.26
Rhode Island.....	17	930	5.1	50.6	46.7	92.3	.534	27.02	24.94
South Carolina, Alabama, and Georgia.....	4	169	5.1	54.6	50.8	93.0	.325	17.75	16.51
Tennessee.....	4	101	4.9	56.5	49.5	87.6	.247	13.96	12.24
Virginia.....	4	201	4.8	52.7	45.6	86.5	.294	15.49	13.43
Total.....	224	9,796	5.2	51.2	47.0	91.8	.499	25.55	23.47

¹ Data included in total.

TABLE A.—Average number of days on which wage earners worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1931, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in one week	Average full-time hours worked per week	Average hours actually worked in one week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in one week
Weavers, broad silk, female:									
Connecticut.....	10	486	5.6	49.0	47.3	96.5	\$0.422	\$20.68	\$19.05
Massachusetts.....	7	203	5.2	48.0	42.3	88.1	.360	17.28	15.25
New Jersey.....	62	1,078	5.2	47.5	43.3	91.2	.493	23.42	21.36
New York.....	23	528	5.2	47.3	43.5	92.0	.428	20.24	18.65
North Carolina.....	6	76	5.5	55.0	51.7	94.0	.396	21.78	20.49
Pennsylvania.....	69	2,831	5.6	50.1	46.8	93.4	.411	20.59	19.21
Rhode Island.....	13	351	5.0	49.4	45.3	91.7	.501	24.75	22.71
South Carolina, Alabama, and Georgia.....	5	108	5.4	50.4	51.1	92.2	.278	15.40	14.20
Tennessee.....	4	117	5.4	56.6	51.7	91.3	.221	12.51	11.44
Virginia.....	4	126	5.4	53.8	49.2	91.4	.319	17.16	15.70
Total.....	203	5,904	5.5	49.6	46.0	92.7	.422	20.93	19.38
Weavers, ribbon, male:									
New Jersey.....	10	213	5.1	44.0	37.5	85.2	.614	27.02	23.07
Pennsylvania.....	5	119	5.0	53.2	50.4	94.7	.483	25.70	24.32
Total.....	15	332	5.0	47.3	42.1	89.0	.558	26.39	23.51
Weavers, ribbon, female:									
New Jersey.....	5	90	5.6	44.0	40.3	91.6	.562	24.73	22.66
New York.....	2	65	5.7	49.8	47.3	95.0	.348	17.33	16.46
Pennsylvania.....	5	117	4.8	50.5	42.2	83.6	.417	21.06	17.61
Total.....	12	272	5.3	48.2	42.8	88.8	.444	21.40	19.01
Smash hands, male:									
Connecticut.....	6	25	5.9	50.4	51.3	101.8	.654	32.96	33.55
Massachusetts.....	4	10	5.5	47.1	46.8	99.4	.662	31.18	31.00
New Jersey.....	1	2	6.0	50.0	50.0	100.0	.716	35.78	35.78
New York.....	2	3	4.7	50.0	42.5	85.0	.512	25.60	21.73
North Carolina.....	7	35	5.1	55.0	51.5	93.6	.416	22.88	21.42
Pennsylvania.....	1	1	5.0	55.0	55.0	100.0	.520	28.60	28.60
Rhode Island.....	5	27	5.2	48.5	43.4	89.5	.662	32.11	28.71
South Carolina, Alabama, and Georgia.....	2	8	4.6	52.5	43.8	83.4	.301	15.80	13.17
Tennessee.....	1	5	5.0	57.4	53.1	92.5	.290	14.92	13.81
Total.....	29	116	5.3	51.5	48.5	94.2	.536	27.80	25.98
Smash hands, female:									
Connecticut.....	1	3	6.0	49.5	49.7	100.4	.472	23.33	23.43
New York.....	3	4	6.0	49.5	49.5	100.0	.572	28.34	28.34
Pennsylvania.....	2	2	6.0	53.0	52.5	99.1	.464	24.59	24.33
Rhode Island.....	1	1	5.0	43.0	49.0	102.1	.570	27.30	27.92
Tennessee.....	2	6	5.7	55.5	53.8	96.9	.235	13.10	12.69
Total.....	9	16	5.8	52.1	51.5	98.8	.409	21.31	21.03
Pickers, cloth, male:									
Massachusetts.....	1	1	6.0	48.0	48.0	100.0	.313	15.00	15.00
New Jersey.....	3	6	3.5	44.0	25.7	58.4	.600	26.40	15.41
New York.....	3	3	5.0	50.5	42.5	84.2	.449	22.67	19.10
North Carolina.....	1	1	6.0	55.0	51.0	92.7	.235	12.93	11.98
Pennsylvania.....	11	46	4.4	53.1	39.3	74.0	.221	11.74	8.68
South Carolina, Alabama, and Georgia.....	1	4	4.8	50.0	47.5	95.0	.290	14.50	13.78
Virginia.....	1	3	4.3	55.0	41.7	75.8	.165	9.08	6.88
Total.....	21	64	4.4	52.0	39.1	75.2	.260	13.52	10.18
Pickers, cloth, female:									
Connecticut.....	9	74	5.4	49.7	46.9	94.4	.302	15.01	14.16
Massachusetts.....	11	66	5.2	46.7	41.4	88.7	.229	10.69	9.48
New Jersey.....	47	193	5.2	46.2	40.1	86.8	.351	16.22	14.05
New York.....	24	124	5.0	49.0	41.3	84.3	.279	13.67	11.53
North Carolina.....	4	13	5.5	55.0	43.5	79.1	.238	13.09	10.34
Pennsylvania.....	62	442	5.2	51.1	43.5	85.1	.242	12.37	10.54

TABLE A.—Average number of days on which wage earners worked, average full-time and actual hours and earnings per week, average earnings per hour, and per cent of full time worked, 1931, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in one week
Pickers, cloth, female—Contd.									
Rhode Island	14	85	5.6	49.3	46.3	93.9	\$0.307	\$15.14	\$14.21
South Carolina, Alabama, and Georgia	4	16	4.9	55.0	44.6	81.1	.208	11.44	9.28
Tennessee	4	20	5.4	56.8	51.9	91.4	.151	8.58	7.84
Virginia	4	29	4.1	55.0	37.3	67.8	.165	9.08	6.17
Total	183	1,062	5.2	49.8	42.9	86.1	.270	13.45	11.58
Inspectors, cloth, male:									
Connecticut	2	2	6.0	51.5	51.5	100.0	.536	27.63	27.63
New Jersey	11	27	5.6	46.9	43.9	93.6	.599	28.09	26.28
New York	3	6	5.7	49.1	45.8	93.3	.748	36.73	34.22
North Carolina	2	3	6.3	55.0	65.0	118.2	.386	21.23	25.11
Pennsylvania	40	87	5.9	52.0	51.6	99.2	.533	27.72	27.50
Rhode Island	5	20	5.9	49.8	49.1	98.6	.595	29.63	29.17
South Carolina, Alabama, and Georgia	1	3	6.0	57.5	59.5	103.5	.367	21.10	21.82
Tennessee	1	1	5.0	57.0	45.0	78.9	.141	8.04	6.36
Virginia	3	11	5.5	55.0	53.0	96.4	.397	21.84	21.05
Total	68	160	5.8	51.1	50.2	98.2	.538	27.49	27.03
Inspectors, cloth, female:									
Connecticut	2	5	6.0	49.2	48.4	98.4	.272	13.38	13.18
New Jersey	4	21	5.9	47.4	45.8	96.6	.413	19.58	18.89
New York	7	22	5.7	49.9	48.6	97.4	.361	18.01	17.58
North Carolina	1	2	6.0	57.5	57.5	100.0	.250	14.38	14.38
Pennsylvania	32	113	5.5	50.7	46.7	92.1	.331	16.78	15.47
Rhode Island	5	22	5.4	48.8	46.7	95.7	.352	17.18	16.46
South Carolina, Alabama, and Georgia	2	17	6.0	55.0	52.2	94.9	.216	11.88	11.27
Tennessee	3	5	5.6	57.0	54.9	96.3	.179	10.20	9.85
Virginia	1	1	6.0	55.0	53.0	96.4	.280	15.40	14.83
Total	57	208	5.6	50.6	47.7	94.3	.327	16.55	15.60
Packers, male:									
Connecticut	4	5	5.6	51.2	46.9	91.6	.388	19.87	18.19
Maryland	1	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Massachusetts	1	3	6.0	48.0	48.0	100.0	.215	10.33	10.33
New Jersey	2	8	5.6	41.8	40.9	97.8	.523	21.86	21.35
New York	8	23	5.6	51.0	49.4	96.9	.378	19.23	18.69
Pennsylvania	17	36	5.7	50.7	49.3	97.2	.333	16.88	16.42
Rhode Island	3	5	6.0	51.2	52.4	102.3	.272	13.93	14.24
Total	36	81	5.7	49.8	48.5	97.4	.355	17.68	17.22
Packers, female:									
Massachusetts	1	1	6.0	48.0	48.0	100.0	.208	10.00	10.00
New Jersey	2	12	5.9	44.0	43.5	98.9	.368	16.19	16.01
New York	1	1	5.0	49.5	43.3	87.5	.2	13.86	12.13
Pennsylvania	17	44	4.6	50.3	37.7	75.0	.243	12.22	9.15
Rhode Island	2	12	4.6	52.2	40.0	76.6	.222	11.59	8.87
Total	23	70	4.9	49.5	39.3	79.4	.263	13.02	10.34
Other employees, male:									
Connecticut	12	298	5.7	49.3	50.3	102.0	.432	21.30	21.73
Maryland	3	39	5.7	53.6	51.9	96.8	.329	17.63	17.05
Massachusetts	8	55	5.5	48.8	48.3	99.0	.369	18.01	17.82
New Jersey	62	468	5.5	47.2	45.2	95.8	.539	25.44	24.41
New York	31	328	5.6	51.0	50.6	99.2	.460	23.46	23.23
North Carolina	10	340	5.2	55.9	51.6	92.3	.301	16.83	15.51
Pennsylvania	123	2,649	5.6	51.8	51.7	99.8	.453	23.47	23.43
Rhode Island	16	213	5.6	48.9	48.1	98.4	.507	24.79	24.40
South Carolina, Alabama, and Georgia	5	132	5.3	55.8	51.6	92.5	.254	14.17	13.09
Tennessee	6	90	5.7	57.2	55.0	96.2	.159	9.09	8.75
Virginia	6	112	5.8	54.8	55.5	101.3	.330	18.08	18.31
Total	282	4,724	5.6	51.5	50.8	98.6	.434	22.08	22.35

¹Data included in total.

TABLE A.—Average number of days on which wage earners worked, average full-time and actual hours per week, average earnings per hour, and per cent of full time worked, 1931, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in one week	Average full-time hours per week	Average hours actually worked in one week	Per cent of full time worked	Average earnings per hour	Average full-time earnings per week	Average actual earnings in one week
Other employees, female:									
Connecticut.....	8	119	5.2	48.0	40.6	84.6	\$0.320	\$15.36	\$12.97
Maryland.....	3	61	5.3	49.8	44.3	89.0	.207	10.31	9.19
Massachusetts.....	4	15	6.0	48.0	48.0	100.0	.229	10.97	10.97
New Jersey.....	38	422	5.2	45.9	39.2	85.4	.307	14.09	12.05
New York.....	23	301	5.4	49.3	44.6	90.5	.257	12.67	11.48
North Carolina.....	9	117	5.1	55.6	47.8	86.0	.240	13.34	11.48
Pennsylvania.....	100	1,200	5.3	50.7	43.6	86.0	.291	14.75	12.68
Rhode Island.....	8	59	5.3	48.5	44.8	92.4	.288	13.97	12.92
South Carolina, Alabama, and Georgia.....	5	29	5.5	55.9	53.1	95.0	.201	11.24	10.67
Tennessee.....	4	71	5.1	57.0	47.8	83.9	.106	6.04	5.06
Virginia.....	6	61	4.8	53.2	42.4	79.7	.203	10.80	8.59
Total.....	208	2,455	5.2	50.0	43.3	86.6	.276	13.80	11.95
All employees, male:									
Connecticut.....	13	1,546	5.6	51.0	49.7	97.5	.522	26.62	25.92
Maryland.....	3	132	5.1	56.0	51.7	92.3	.310	17.36	16.01
Massachusetts.....	12	734	4.9	50.2	43.0	85.7	.459	23.04	19.71
New Jersey.....	97	3,331	5.2	47.5	43.7	92.0	.597	28.36	26.06
New York.....	37	1,780	5.3	51.3	48.1	93.8	.502	25.75	24.14
North Carolina.....	10	1,378	5.1	55.3	51.2	92.6	.419	24.97	21.44
Pennsylvania.....	131	10,349	5.3	52.2	49.5	94.8	.474	24.74	23.45
Rhode Island.....	20	1,403	5.2	50.3	47.1	93.6	.553	27.82	26.04
South Carolina, Alabama, and Georgia.....	5	447	5.2	55.1	51.7	93.8	.294	16.20	15.20
Tennessee.....	6	311	5.4	56.8	53.0	93.3	.218	12.38	11.53
Virginia.....	6	474	5.2	53.8	50.2	93.3	.323	17.38	16.22
Total.....	340	21,885	5.3	51.5	48.4	94.0	.485	24.98	23.45
All employees, female:									
Connecticut.....	13	1,429	5.5	49.3	45.7	92.7	.385	18.98	17.56
Maryland.....	3	381	5.4	50.0	44.5	89.0	.230	11.50	10.22
Massachusetts.....	12	776	5.3	47.6	42.4	89.1	.278	13.23	11.79
New Jersey.....	97	3,764	5.2	46.9	41.3	88.1	.410	19.23	16.94
New York.....	37	3,047	5.4	48.7	44.4	91.2	.335	16.31	14.90
North Carolina.....	10	809	5.2	55.2	47.8	86.6	.314	17.33	15.00
Pennsylvania.....	131	14,250	5.1	50.5	42.4	84.0	.324	16.36	13.71
Rhode Island.....	20	1,170	4.9	49.7	42.6	85.7	.418	20.77	17.80
South Carolina, Alabama, and Georgia.....	5	428	5.3	55.6	49.0	88.1	.240	13.34	11.75
Tennessee.....	6	511	5.3	56.1	48.1	85.7	.181	10.15	8.70
Virginia.....	6	586	5.2	54.1	47.6	88.0	.265	14.34	12.61
Total.....	340	27,151	5.2	50.0	43.2	86.4	.335	16.75	14.46
All employees, male and female:									
Connecticut.....	13	2,975	5.6	50.2	47.8	95.2	.459	23.04	21.91
Maryland.....	3	513	5.3	51.5	46.3	89.9	.253	13.03	11.71
Massachusetts.....	12	1,510	5.1	48.9	42.7	87.3	.367	17.95	15.64
New Jersey.....	97	7,095	5.2	47.2	42.4	89.8	.500	23.60	21.23
New York.....	37	4,827	5.4	49.7	45.8	92.2	.400	19.88	18.31
North Carolina.....	10	2,187	5.1	55.2	49.9	90.4	.382	21.09	19.06
Pennsylvania.....	131	24,599	5.2	51.2	45.4	88.7	.398	20.12	17.81
Rhode Island.....	20	2,573	5.0	50.0	45.0	90.0	.495	24.75	22.29
South Carolina, Alabama, and Georgia.....	5	875	5.2	55.4	50.4	91.0	.288	14.85	13.51
Tennessee.....	6	822	5.3	56.4	49.9	88.5	.196	11.05	9.77
Virginia.....	6	1,060	5.2	54.0	48.8	90.4	.292	15.77	14.23
Total.....	340	49,036	5.2	50.7	45.5	89.7	.406	20.58	18.47

TABLE B.—Average and classified earnings per hour in 9 specified occupations, 1931, by occupation, sex, and State

Occupation, sex, and State	Number of establishments	Number of wage earners	Average earnings per hour	Number of wage earners whose earnings (in cents) per hour were—																				
				Under 10	10, under 12	12, under 14	14, under 16	16, under 18	18, under 20	20, under 25	25, under 30	30, under 35	35, under 40	40, under 45	45, under 50	50, under 60	60, under 70	70, under 80	80, under 90	90, under 100	100, under 110	110, under 120	120 and over	
Winders, hard silk, male:																								
Massachusetts	1	1	\$.207								1													
New Jersey	1	15	.300									8	7											
New York	2	9	.400										9											
North Carolina	2	8	.197		1		1	2			2	1	1											
Pennsylvania	6	9	.292					1			5	2					1							
Tennessee	1	18	.205			1		2	3	10	2													
Virginia	1	1	.400										1											
Total	14	61	.267		1	1	1	5	3	13	16	10	10			1								
Winders, hard silk, female:																								
Connecticut	5	142	.375					3		14	11	9	39	45	14	7								
Maryland	2	140	.227				1	6	32	58	37	6												
Massachusetts	6	158	.222			2	20	33	24	23	33	7	15	1										
New Jersey	25	449	.344					1	1	27	28	113	228	42		9								
New York	33	771	.337			2	5	9	14	33	35	344	147	87	31	14								
North Carolina	3	94	.273			1	4	2	11	23	19	15	18	1										
Pennsylvania	92	3,034	.284	2	5	21	43	64	80	708	1,014	693	240	92	38	27	3			3			1	
Rhode Island	9	111	.276		1	2	4	1	4	28	27	26	17	1										
South Carolina, Alabama, and Georgia	1	19	.237						1		15	3												
Tennessee	4	91	.168	9	6	21	11	5	7	14	15	3												
Virginia	3	96	.238	8	6	1	3	6	3	19	36	12	1			1								
Total	183	5,105	.293	19	18	50	91	131	176	962	1,308	1,228	705	269	93	48	3			3			1	
Spinners, male:																								
Connecticut	3	49	.426									3	5	31	6	4								
Maryland	3	56	.323								8	2	38	5	3									
Massachusetts	3	54	.282				1		1	26	3	12	6	5										
New Jersey	17	162	.433								15	5	20	43	46	28	5							
New York	11	202	.406					2	1	7	10	26	36	58	24	35	3							
North Carolina	4	24	.295							1	3	12	7		1									
Pennsylvania	59	1,117	.330		1	7	1	9	17	141	196	308	225	114	80	10	5	3						
Rhode Island	3	32	.381								2	3	2	8	14	2								

TABLE B.—Average and classified earnings per hour in 9 specified occupations, 1931, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average earnings per hour	Number of wage earners whose earnings (in cents) per hour were—																				
				Under 10	10, under 12	12, under 14	14, under 16	16, under 18	18, under 20	20, under 25	25, under 30	30, under 35	35, under 40	40, under 45	45, under 50	50, under 60	60, under 70	70, under 80	80, under 90	90, under 100	100, under 110	110, under 120	120 and over	
Spinners, male—Continued.																								
South Carolina, Alabama, and Georgia.....	1	6	\$0.220							6														
Tennessee.....	3	33	.172			2	16	5	8	2														
Virginia.....	2	59	.275				1			18	15	25												
Total.....	109	1,794	.344		1	9	19	16	28	213	256	426	305	268	159	78	13	3						
Spinners, female:																								
Connecticut.....	3	64	.386							2	1	10	25	20	4	2								
Maryland.....	3	47	.246						3	33	7	4												
Massachusetts.....	3	99	.184				52	15	9	13		4	6											
New Jersey.....	20	208	.346							19	24	45	73	24	16	1	4				2			
New York.....	12	415	.333					1	1	13	21	62	145	41	4									
North Carolina.....	3	55	.271					1	1	4	11	27	11											
Pennsylvania.....	54	1,314	.278	1	4	8	20	34	42	314	459	321	56	34	17	3				1				
Rhode Island.....	1	4	.237																					
South Carolina, Alabama, and Georgia.....	1	12	.210																					
Tennessee.....	3	70	.192				24			38	8													
Virginia.....	1	58	.265						1	6	49	2												
Total.....	104	2,346	.289	1	4	8	98	51	72	473	637	542	287	119	41	6	4	1	2					
Winders, soft silk, male:																								
Connecticut.....	1	2	.253								1	1												
New Jersey.....	1	5	.389										3	2										
Pennsylvania.....	2	9	.341					1				5	1	1										
Rhode Island.....	1	2	.350										2											
Tennessee.....	1	4	.167				1	2	1															
Total.....	6	22	.319				1	3	1		1	6	6	3	1									
Winders, soft silk, female:																								
Connecticut.....	9	125	.364				1		1	39	25	29	5	3	18	3								
Massachusetts.....	4	28	.327			2			2	3	15	2	4											
New Jersey.....	61	445	.409					2		4	17	17	107	176	85	28	7	2						
New York.....	3	35	.390							1	1	6	10	11	3	3								

TABLE C.—Average and classified full-time hours per week in nine specified occupations, 1931, by occupation, sex, and State

Occupation, sex, and State	Number of establishments	Number of wage earners	Average full-time hours per week	Number of wage earners whose full-time hours per week were—											
				Under 40	40	Over 40, under 44	44	Over 44, under 48	48	Over 48, under 51	51, under 54	54	Over 54, under 57	57, under 60	60
Winders, hard silk, male:															
Massachusetts.....	1	(1)	(1)												
New Jersey.....	1	(1)	(1)												
New York.....	2	9	50.0						9						
North Carolina.....	2	8	55.6								7		1		
Pennsylvania.....	6	9	53.3						2	6			1		
Tennessee.....	1	(1)	(1)												
Virginia.....	1	(1)	(1)												
Total.....	14	61	51.9				15		1	11	6		8	18	2
Winders, hard silk, female:															
Connecticut.....	5	142	49.0						108	19			15		
Maryland.....	2	140	50.0							140					
Massachusetts.....	6	158	48.0						158						
New Jersey.....	25	449	48.2			3	160	5		238		23	20		
New York.....	33	771	49.1	2	6		47	5	5	711					
North Carolina.....	3	94	55.0										94		
Pennsylvania.....	92	3,034	50.3	24			39	13		2,427	243	242	46		
Rhode Island.....	9	111	51.9		4			3	10	10	71	13		19	
South Carolina, Alabama, and Georgia.....	1	19	57.5											39	
Tennessee.....	4	91	55.2								5	47			
Virginia.....	3	96	54.0							20			76		
Total.....	183	5,105	50.1	26	10	3	246	21	281	3,565	319	325	251	58	
Spinners, male:															
Connecticut.....	3	49	53.4						22	13					14
Maryland.....	3	56	58.0							11				45	
Massachusetts.....	3	54	52.1						13	27				14	
New Jersey.....	17	162	51.5			64	4			23		1	28	25	17
New York.....	11	202	54.9				6			72		3	40	78	3
North Carolina.....	4	24	57.1										16	6	2
Pennsylvania.....	59	1,117	54.2							416		10	58	389	193
Rhode Island.....	3	32	53.5						12		10			38	10

¹ Data included in total.

TABLE C.—Average and classified full-time hours per week in nine specified occupations, 1931, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average full-time hours per week	Number of wage earners whose full-time hours per week were—											
				Under 40	40	Over 40, under 44	44	Over 44, under 48	48	Over 48, under 51	51, under 54	54	Over 54, under 57	57, under 60	60
Spinners, male—Continued.															
South Carolina, Alabama, and Georgia.....	1	6	57.5											6	
Tennessee.....	3	33	56.9									4		29	
Virginia.....	2	59	54.7							19			24		16
Total.....	109	1,794	54.2			64	10	47	581	20	66	497	73	387	49
Spinners, female:															
Connecticut.....	3	64	48.2						57	7					
Maryland.....	3	47	50.0						47						
Massachusetts.....	3	99	48.0						99						
New Jersey.....	20	208	47.9			1	82	3	102		12	8			
New York.....	12	415	48.8		14		13	22	31	335					
North Carolina.....	3	55	55.0										55		
Pennsylvania.....	54	1,314	50.6						1,129	38	111	26		10	
Rhode Island.....	1	(1)	(1)												
South Carolina, Alabama, and Georgia.....	1	12	57.5											12	
Tennessee.....	3	70	55.1								44			26	
Virginia.....	1	(1)	(1)												
Total.....	104	2,346	50.2		14	1	95	25	191	1,620	38	167	147	38	10
Winders, soft silk, male:															
Connecticut.....	1	(1)	(1)												
New Jersey.....	1	(1)	(1)												
Pennsylvania.....	2	9	64.7								1				8
Rhode Island.....	1	(1)	(1)												
Tennessee.....	1	(1)	(1)												
Total.....	6	22	57.3							7		1	6		8
Winders, soft silk, female:															
Connecticut.....	9	125	49.0	10				4	7	40	53		11		
Massachusetts.....	4	28	47.7		1				27						
New Jersey.....	61	445	46.4				268	46	4	62	39	11	15		
New York.....	3	35	47.2					29		2	4				
North Carolina.....	2	53	55.0										53		

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Pennsylvania.....	36	715	50.5	20			15	21	309	286	54	10		
Rhode Island.....	6	117	48.7					99	2		16			
South Carolina, Alabama, and Georgia.....	2	7	55.0									7		
Tennessee.....	1	(1)	(1)											
Virginia.....	2	20	55.0									20		
Total.....	126	1,554	49.2	30	1	268	94	158	415	382	81	116	9	
Redrawers, male:														
Connecticut.....	1	(1)	(1)											
Maryland.....	1	(1)	(1)											
New York.....	1	(1)	(1)											
North Carolina.....	1	(1)	(1)											
Pennsylvania.....	8	54	52.6						25	2	1	25	1	
South Carolina, Alabama, and Georgia.....	1	3	57.5										3	
Total.....	13	63	52.7						30	2	1	26	4	
Redrawers, female:														
Connecticut.....	3	29	49.0					14	15					
Maryland.....	3	61	50.0						61					
Massachusetts.....	4	33	47.2				7	26						
New Jersey.....	16	174	48.3			60			88		16			
New York.....	11	257	48.9	10		24			223					
North Carolina.....	1	(1)	(1)											
Pennsylvania.....	64	1,215	50.9						909	111	191	4		
Rhode Island.....	3	21	48.8				1	17		3				
South Carolina, Alabama, and Georgia.....	2	14	57.1									2	12	
Tennessee.....	2	18	57.1										18	
Virginia.....	4	63	53.1						24			39		
Total.....	113	1,887	50.4	10		91	1	57	1,330	114	207	47	30	
Warpers, male:														
Connecticut.....	8	34	51.7				3		9	12		10		
Massachusetts.....	10	26	49.4					21				5		
New Jersey.....	53	218	47.9			92	17		62	25	7	12		3
New York.....	21	125	51.1			2			98	3	8	8	2	4
North Carolina.....	5	50	55.2									47	2	1
Pennsylvania.....	54	477	51.8						202	105	70	55	22	2
Rhode Island.....	1	23	50.9			11	10		1	4	1	5		
South Carolina, Alabama, and Georgia.....	1	6	57.5					12						
Tennessee.....	3	15	56.9										6	
Virginia.....	2	19	55.0									2	13	
Total.....	166	993	51.1			105	30	33	372	149	86	163	45	10

1 Data included in totals.

TABLE C.—Average and classified full-time hours per week in nine specified occupations, 1931, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average full-time hours per week	Number of wage earners whose full-time hours per week were—														
				Under 40	40	Over 40, under 44	44	Over 44, under 48	48	Over 48, under 51	51, under 54	54	Over 54, under 57	57, under 60	60	Over 60		
Warpers, female:																		
Connecticut.....	9	135	50.6					10	37	30	38		20					
Massachusetts.....	10	50	47.8		1			49	8		1							
New Jersey.....	38	231	45.7				160	4		58								
New York.....	15	58	48.6		5				7	46								
North Carolina.....	5	123	55.0										128					
Pennsylvania.....	62	1,113	50.7				10	25	3	708		90	29					
Rhode Island.....	14	163	49.4		1	4			104	4	28	22						
South Carolina, Alabama, and Georgia.....	3	27	56.7										9	18				
Tennessee.....	4	28	56.6								2		2	24				
Virginia.....	4	41	55.0										41					
Total.....	164	1,974	50.4	1	10		170	39	208	840	316	113	229	42				
Quillers, male:																		
Connecticut.....	3	12	54.1							2			10					
Maryland.....	1	(1)	(1)															
Massachusetts.....	6	25	52.6						7	6	4		2		6			
New Jersey.....	1	(1)	(1)															
New York.....	2	7	53.8							1		3	3					
North Carolina.....	3	31	55.5										28		3			
Pennsylvania.....	36	136	53.8					1		29	29	13	51	6	3			4
Rhode Island.....	2	3	53.3							1			2					
South Carolina, Alabama, and Georgia.....	3	63	55.0										62	1				
Tennessee.....	2	9	57.1										1	8				
Virginia.....	3	9	55.0										9					
Total.....	62	299	54.2					1	7	43	33	16	168	15	12			4
Quillers, female:																		
Connecticut.....	10	158	50.4					3	62	22	41		30					
Maryland.....	1	(1)	(1)															
Massachusetts.....	11	96	46.3		7	10			79									
New Jersey.....	76	316	46.3		3		183	26		84		10	10					
New York.....	24	129	48.4			5		3	18	9	2							
North Carolina.....	6	60	55.0										60					
Pennsylvania.....	84	906	50.4		6	16	14	33		523	207	87	20					

Rhode Island.....	15	94	50.1					2	48	12	17	15							
South Carolina, Alabama, and Georgia.....	3	91	55.3											80	11				
Tennessee.....	3	26	56.9											1	25				
Virginia.....	5	57	54.8							2				55					
Total.....	238	1,934	50.0	16	15	16	200	82	198	736	267	112	256	36					
Loom fixers, male:																			
Connecticut.....	10	138	49.6					32	52	20	10			19				1	4
Massachusetts.....	12	58	49.2				9		32	1	7			12				1	
New Jersey.....	73	210	47.1			2	101	19	5	62	2	7		8					
New York.....	29	126	49.4		7		2	7	22	69	2	6		8					
North Carolina.....	8	104	55.0											101	3				
Pennsylvania.....	73	672	51.9				11	26	1	296	124	82	94	14	18	12			8
Rhode Island.....	16	104	50.3					8	52	5	15	10		14					
South Carolina, Alabama, and Georgia.....	5	46	54.7							9				25					
Tennessee.....	4	20	56.8											4					
Virginia.....	4	40	53.4						9					31					
Total.....	234	1,518	51.0		7	2	123	92	173	462	160	105	316	52	14	12			
Weavers, broad silk, male:																			
Connecticut.....	10	779	52.2					88	224	60	88	12	218					8	81
Massachusetts.....	12	477	50.4		14		31	9	163	27	130		86					12	
New Jersey.....	70	1,669	47.9			27	704	148	36	476	32	71	112	17	46				
New York.....	25	796	51.0				16	80	15	408	10	75	159	33					
North Carolina.....	8	710	55.0										710						
Pennsylvania.....	70	3,964	51.7		45		68	359	48	1,251	730	387	819	107	146				4
Rhode Island.....	17	930	50.6					49	465	35	94	97	190						
South Carolina, Alabama, and Georgia.....	4	169	54.6							42			73	54					
Tennessee.....	4	101	56.5										36	65					
Virginia.....	4	201	52.7						66				135						
Total.....	224	9,796	51.2		59	27	819	733	1,022	2,299	1,064	642	2,538	276	212	85			
Weavers, broad silk, female:																			
Connecticut.....	10	486	49.0					208	25	127	46	14	66						
Massachusetts.....	7	203	48.0						203										
New Jersey.....	62	1,078	47.5				410	134	30	420	2	45	37						
New York.....	23	528	47.3				9	49	86	278	15		76						
North Carolina.....	6	76	55.0		91								76						
Pennsylvania.....	69	2,831	50.1			63	61	187		1,755	525	210	30						
Rhode Island.....	13	351	49.4					13	231	6	78	23							
South Carolina, Alabama, and Georgia.....	5	108	55.4											90	18				
Tennessee.....	4	117	56.6								7			9	101				
Virginia.....	4	126	53.8						21					105					
Total.....	203	5,504	49.6		91	63	450	501	596	2,566	673	292	413	119					

† Data included in total.

TABLE C.—Average and classified full-time hours per week in nine specified occupations, 1931, by occupation, sex, and State—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average full-time hours per week	Number of wage earners whose full-time hours per week were—													
				Under 40	40	Over 40, under 44	44	Over 44, under 48	48	Over 48, under 51	51 under 54	54	Over 54, under 57	57, under 60	60	Over 60	
Pickers, cloth, male:																	
Massachusetts.....	1	(1)	(1)														
New Jersey.....	3	6	44.0				6										
New York.....	3	3	50.5						1	1		1					
North Carolina.....	1	(1)	(1)														
Pennsylvania.....	11	46	53.1							15	3	3	25				
South Carolina, Alabama, and Georgia.....	1	4	50.0							4							
Virginia.....	1	(1)	(1)														
Total.....	21	64	52.0				6		2	20	3	4	29				
Pickers, cloth, female:																	
Connecticut.....	9	74	49.7					4	30	20	12		8				
Massachusetts.....	11	66	46.7		11				55								
New Jersey.....	47	193	46.2				121	12		49			11				
New York.....	24	124	49.0		5		4	2	13	96	4						
North Carolina.....	4	13	55.0														
Pennsylvania.....	62	442	51.1					8		268	113	51	13				
Rhode Island.....	14	85	49.3						57	3	12	12	2				
South Carolina, Alabama, and Georgia.....	4	16	55.0	1												16	
Tennessee.....	4	20	56.8													2	18
Virginia.....	4	29	55.0													29	
Total.....	183	1,062	49.8	1	16		125	28	155	436	141	63	81	18			

¹ Data included in total.

Appendix

Factory terms of occupations, with definitions, and classification by Bureau of Labor Statistics

Factory term	Definition	Classified by bureau under—
Ager operator.....	Regulates temperature, steam pressure, and ventilation of machine, and speed at which cloth or yarn is run through it. This application of moist heat develops and fixes the colors on printed cloth or yarn and gives printed designs the appearance of being woven in.	Other employees.
Assistant foreman.....	(See Foreman, assistant).....	Do.
Automatic weaver.....	Operates looms used for weaving broad silk in which bobbins of filling are fed into them automatically. The work of weaving is similar to that done by other broadcloth weavers.	Weavers, broad silk.
Back tender.....	Attends rear end of machines used for printing designs or patterns on cloth goods, to see that cloth runs from rolls properly.	Other employees.
Back winder.....	(See Rewinder).....	Rewinders.
Bale opener.....	Cuts tie bands, removes covers, and opens bales of raw silk received from importer. This work is often done by soakers.	Other employees.
Bale piler.....	Moves and piles bales of silk in receiving room or other place about the plant.	Do.
Baler, waste paper.....	(See Paper baler).....	Do.
Bander.....	Laces bands through skeins by hand on four sides of fly to prevent them from becoming tangled when in process of dyeing. This work is done after fly has been placed on banding stand. When 12 skeins have been banded, an identification check is tied on the fly.	Do.
Banker.....	(See Creeler).....	Do.
Beamer.....	Tends machine which transfers warp from large drums or creels to smaller ones known as beams, and places a layer of paper between threads at every turn of beam.	Do.
Beltman.....	Installs and repairs power-transmission belts throughout the plant.	Do.
Blacksmith.....	Does repair welding of metal parts by hand, or forms parts on anvil with hand hammer.	Do.
Block maker.....	Uses a brush by hand to cement cut parts of cardboard to make small forms or "blocks" on which ribbon is wound. May also operate a machine which cuts these parts.	Do.
Board filler.....	(See Creeler).....	Do.
Bobbin boy.....	Collects and distributes bobbins, quills, or spools, and sometimes cleans the empty ones.	Bobbin boys.
Bobbin carrier.....	(See Bobbin boy).....	Do.
Bobbin cleaner.....	Uses sand or emery paper to remove accumulated lint or any other substance. This term also applies to those who remove silk from partly filled bobbins left by warpers.	Other employees.
Bobbin doffer.....	(See Doffer).....	Do.
Bobbin fixer.....	Uses sandpaper to smooth rough or cracked places or may remove chipped or split ends and replace them with new ones.	Do.
Bobbin weigher.....	Places full bobbins of yarn on scales to determine weight of yarn, as well as for payment of work of winding.	Do.
Box loom weaver.....	Operates loom containing 2 to 4 boxes on each side and from 3 to 7 shuttles. His duties are very similar to those of any other broadcloth weaver.	Weavers, broad-silk.
Box maker.....	Constructs boxes in which product is shipped.....	Other employees.
Boxer, ribbon.....	Packs rolls of ribbons in boxes of specified sizes.....	Do.
Breaker operator.....	Tends machine which removes hard and stiff condition of fabric, which was attained during finishing process.	Do.
Broad-silk weaver.....	(See Weaver, broad-silk).....	Weavers, broad-silk.
Brusher, warp.....	Uses hand brush to straighten warp ends for twister-in.	Other employees.
Bundler.....	Twists 4 to 8 skeins of yarn together in a roll and ties about 20 of these rolls into a bundle to be sent to dyer or to weaving mill.	Do.

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Factory term	Definition	Classified by bureau under—
Calender operator.....	Tends calender machine, which imparts glaze or soft finish to fabric as it passes through it under pressure.	Other employees.
Card cutter, Jacquard...	Operates punching machine for cutting designs in cardboard used in Jacquard looms.	Do.
Card cutter's helper, Jacquard	Works under supervision of the card cutter, Jacquard..	Do.
Carpenter.....	Makes changes and repairs in woodwork structure of plant.	Do.
Carpenter's helper.....	Assists carpenter in repair and upkeep of buildings and does other work under his supervision.	Do.
Carrier, general.....	(See Floor boy).....	Do.
Carrier, quills.....	(See Quill boy).....	Bobbin boys.
Chain builder.....	Constructs steel chains used in looms for pattern weaving.	Other employees.
Check clerk.....	(See Checker).....	Do.
Checker.....	Checks or counts picks of loom ends of warp, number or weight of bobbins in winding or spinning. Also records quantity of materials received, goods produced, etc.	Do.
Checker, stock.....	(See Stock clerk).....	Do.
Cleaner hand (dye house).	Sweeps and scrubs dyehouse floors and cleans dyeing machines, tanks, etc.	Laborers, dyehouse.
Cleaner, cloth.....	(See Cloth cleaner).....	Other employees.
Cleaner, harness.....	(See Harness cleaner).....	Do.
Cleaner, looms.....	(See Loom cleaner).....	Do.
Cleaner, machine.....	(See Machine cleaner).....	Do.
Cleaner, quills.....	(See Quill cleaner).....	Do.
Cleaner-up.....	Sweeps and cleans up around machines of the plant.	Do.
Cloth cleaner.....	Uses cleaning preparations to remove spots of dirt, grease, etc., from woven goods.	Do.
Cloth examiner.....	Inspects woven cloth for imperfections.....	Inspectors, cloth.
Cloth inspector.....	(See Inspector, cloth).....	Do.
Cloth picker.....	(See Picker, cloth).....	Pickers, cloth.
Cloth printer.....	(See Printer, cloth).....	Other employees.
Cloth stretcher.....	Feeds and minds tentering machine in which width of cloth is stretched while wet or steamed, by means of clips attached to two endless chains rotating at specified distances apart, and is then dried under tension; regulates heat of steam pipes or gas jets which supply heat for drying.	Do.
Color man.....	(See Color mixer).....	Do.
Color mixer.....	Prepares colors by mixing specified pigments or other ingredients for printing machines or dye tanks.	Do.
Conditioner, silk.....	(See Silk conditioner).....	Do.
Cone inspector.....	Examines filled cones for irregularities.....	Do.
Cone wrapper.....	Wraps filled cones in paper by hand to assure perfect condition in transit.	Do.
Coner.....	Operates machine which winds spun yarn from bobbins on to wooden receptacles in shape or form of cone for use by knitters of hosiery or underwear.	Coners.
Cop examiner.....	Inspects filled cops to see that they are properly wound.	Other employees.
Copper.....	Operates machine which winds spun yarn from bobbins on to cops (paper tubes) instead of quills, for use by weavers as weft or filling in loom shuttles.	Quillers.
Counter.....	(See Measurer, cloth).....	Other employees.
Counter girl.....	Hands out bobbins for distribution to machines where needed.	Do.
Crate maker.....	(See Box maker).....	Do.
Creeler.....	Keeps creels or racks supplied with full spools of yarn.	Do.
Cut-off man.....	Because of the multiple number of ribbons woven on each loom a special operator other than weaver, is usually employed to cut off the completed lengths of woven ribbon from the loom. This work is done with a pair of hand shears.	Do.
Cutters, cards, Jacquard.	(See Card cutter, Jacquard).....	Do.
Degummer.....	(See Soaker).....	Do.
Designer.....	Devises new patterns for weaving cloth on Jacquard looms.	Do.
Distributor (general)....	Carries goods in process of manufacture from one machine to another.	Do.
Distributor (quills).....	(See Quill boy).....	Bobbin boys.
Doffer.....	Removes full bobbins from spinning or winding frames and replaces them with empty ones.	Other employees.
Dope mixer.....	Prepares compound known as "dope" or finishing solution used in finishing process.	Do.
Doubler.....	Operates machine which draws two or more threads from as many separate bobbins and winds them on to a single one, at the same time twisting them into a single thread.	Doublers.
Drawer-in.....	Draws warp ends through the heddle eyes of harness in loom.	Enterers.

Factory term	Definition	Classified by bureau under—
Dresser, warp	(See Slasher)	Other employees.
Drop-wire boy	Threads each warp fiber through drop wires (attachment to loom which causes it to stop when a thread is broken).	Do.
Dry-room laborer (dye-house)	Performs all kinds of common labor in dry room of plant.	Laborers, dyehouse.
Dyehouse laborer	(See Laborer, dyehouse)	Do.
Dye-machine hand	Works at and around dye machine under supervision of dyer. Operates machine, placing material on and taking it off; gets chemicals from dyer and prepares bath ready for materials; submits sample to dyer for test and final result.	Do.
Dye-machine tender	Operates dye machine, works at and around it, places material on, takes it off, etc., under direction of dyer.	Other employees.
Dye-stuff keeper	Has charge of dyes and other chemicals used in dyeing, degumming, etc.	Do.
Dye tubman	Works at or about tubs or vats of dyehouse, placing materials in, working them around in tanks, and removing them.	Laborers, dyehouse.
Dyer	Supervises work of degumming, dyeing, matching colors, etc., in dyehouse.	Other employees.
Dyers' assistant	Assists dyer in supervising work in dyehouse.	Do.
Edge warper	(See Warper, edge)	Warpers.
Electrician	Installs and maintains electrical equipment and wiring of plant.	Other employees.
Electrician's helper	Assists electrician in making changes or repairs in electrical equipment of plant.	Do.
Elevator operator	Operates elevator for hoisting or lowering employees or materials from one floor to another.	Do.
Embroiderer	(See Numberer)	Do.
Enterer	Draws warp ends of a new warp through heddle eyes of loom harness.	Enterers.
Enterer's helper	Assists enterer by placing warp ends in proper position to be drawn through heddle eyes of loom harness.	Enterer's helpers.
Enterer, machine	Operates machine which automatically separates each warp end and threads it through each heddle eye of loom harness.	Other employees.
Erector	Is a skilled workman who sets up machines for operation by others.	Do.
Errand girl	Carries messages, packages, and runs errands about plant.	Do.
Examiners	(See Inspector, cloth)	Inspectors, cloth.
Examiner, cops	(See Cop examiner)	Other employees.
Extractor (dyehouse)	Operates machine for extracting moisture from goods.	Do.
Filling boy	Carries full quills and cops of filling to weavers when needed.	Bobbin boys.
Filling superintendent	Has charge of work done in filling or weft department.	Other employees.
Finish mixer	(See Dope mixer)	Do.
Finisher, ribbon	Operates machine which steams, presses, and produces irregular waves or smooth finish to surface of ribbon as it passes over or between various heated rolls.	Do.
Fixer, bobbins	(See Bobbin fixer)	Do.
Fixer, general	Repairs and keeps machines in various departments in good running order.	Do.
Fixer's helper	Assists fixer in repairing various machines about plant.	Do.
Fixer, smashes	(See Smash hand)	Smash hands.
Fixer, warp	(See Warp-machine fixer)	Other employees.
Floor boy	Does general unskilled work about plant wherever needed.	Do.
Floor checker	(See Checker)	Do.
Floor hand	(See Floor boy)	Do.
Floor helper	do	Do.
Floor man	do	Do.
Folder, cloth	Operates machine which folds and measures finished cloth as it passes through machine in preparation for the market. A ticket, showing number of yards, is attached to each piece.	Do.
Foreman, assistant	Assists foreman in supervising, also does considerable productive work.	Do.
Foreman, sub	(See Foreman, assistant)	Do.
Garage man	Cares for, cleans, polishes, lubricates, and makes minor repairs on trucks and autos of plant.	Do.
Gray boy	Puts on and takes off back cloths which cover rolls of printing machine. The cloths serve as a cushion to absorb extra color from the silk.	Do.
Gray-cloth washer	(See Gray-washer tender)	Do.
Gray-washer laborer	Loads and unloads gray cloths from truck to washer.	Do.
Gray-washer tender	Operates machine for washing gray cloth in printing department. Gray cloth is backing used to absorb excessive color from fabric as it is being printed. This backing (gray) cloth is washed after each printing operation to remove excessive color deposits.	Do.

Factory term	Definition	Classified by bureau under—
Hander-in.....	(See Enterer's helper).....	Enterers' helpers.
Hander-up.....	do.....	Do.
Handy man.....	Is a workman of considerable skill, who has no specific duties, but is employed on various kinds of work about plant.	Other employees.
Hanger (dyehouse).....	Hangs skeins of yarn over pegs after dyeing or treating processes for purpose of drying, shakes them well to separate individual fibers and, when dry, rolls several skeins together for subsequent handling.	Laborers, dyehouse.
Hanger, silk.....	(See Silk hanger).....	Other employees.
Hanger, warp.....	(See Warp hanger).....	Do.
Hanger, wet silk.....	(See Wet silk hanger).....	Do.
Hanger, ribbon.....	Operates machine which measures and cuts specified lengths of ribbon.	Do.
Hard-silk winder.....	(See Winder, hard silk).....	Winders, hard silk.
Harness builder.....	Constructs new or remodels old harness for each new pattern of cloth which is woven. The harness is a system of threads or wires (heddles with an eye in the center of each), through which warp threads pass in the loom. The alternate rising and falling of sections of harnesses raises and lowers corresponding warp threads, between which the shuttle carries the filling and creates the weave of the cloth.	Other employees.
Harness cleaner.....	Makes minor repairs, dusts and cleans lint, etc., from all parts of loom harness before it is again used.	Do.
Harness maker.....	(See Harness builder).....	Do.
Harness man.....	do.....	Do.
Hooker (dyehouse).....	Removes skeins of yarn from vats and hangs them on hooks to drain or dry.	Laborers, dyehouse.
Humidity man.....	Regulates humidity of air in mill by means of a sprinkler system.	Other employees.
Inspector, cloth.....	Examines finished cloth for defects of any character which may have passed the pickers.	Inspectors, cloth.
Inspector, cones.....	Examines filled cones to ascertain if winding is properly done.	Other employees.
Inspector, looms.....	(See Loom inspector).....	Do.
Inspector, process.....	(See Process inspector).....	Do.
Inspector, quality.....	(See Quality inspector).....	Do.
Inspector, quills.....	(See Quill inspector).....	Do.
Invoicer.....	Makes records of goods passing through mill or for shipment.	Do.
Jacquard fixer.....	(See Loom fixer).....	Loom fixers.
Jacquard weaver.....	Operates loom used for weaving designs of various shapes, figures, or colors into cloth.	Weavers, broad-silk.
Knottling-machine operator.....	Operates machine which ties old warp ends to those of new warp.	Other employees.
Knottling-machine operator's helper.....	Brushes out tangled ends of warp, in preparation for knottling machine operator.	Do.
Labeller.....	Pastes descriptive labels on finished rolls of ribbon or other product.	Do.
Laboratory assistant.....	Works under direction of graduate chemist, in making simple quality and quantitative tests.	Do.
Laborer.....	Does heavy and unskilled work about plant and yard.	Do.
Laborer, dyehouse.....	Does unskilled labor, such as placing skeins of silk into "degumming," washing, or dyeing tanks; works stock back and forth in any of the stations; transfers stock to various tanks, etc., under direction of superiors.	Laborers, dyehouse.
Lacer.....	Uses bands or laces to tie through several sections of each skein on four sides of fly to prevent it from becoming tangled when in process of dyeing.	Other employees.
Loom cleaner.....	Uses brush and cotton waste with cleaning preparation to remove dirt, lint, grease, etc., from various parts of loom, and may oil same when necessary.	Do.
Loom fixer.....	Is a highly skilled mechanic who sets up, repairs, adjusts, and keeps looms in proper running order.	Loom fixers.
Loom fixer's apprentice.....	Works with loom fixer to learn duties of the occupation.	Other employees.
Loom fixer's helper.....	Works under supervision of loom fixer in making repairs and adjustments.	Do.
Loom girl.....	Helps weavers start looms, and assists smash hands in mending broken warp, filling threads, etc.	Do.
Loom inspector.....	Examines cloth on loom, which is in process of weaving, to determine whether imperfections of filling or warp are being eliminated.	Do.
Lot maker and stitcher.....	Makes up and stitches lots for machine operations....	Do.
Lot maker-up.....	Prepares printed pieces into lots for steamer and ager.	Do.
Machine cleaner.....	Uses cleaning preparation on cotton waste to remove dirt, lint, etc., from looms and other machines.	Do.
Machine fixer.....	Makes minor repairs and keeps in good running order machines in various departments of plant.	Do.

Factory term	Definition	Classified by bureau under—
Machine reeder	Operates machine used for drawing warp ends between blades or thin wires of reed frame which keep the ends separate and in their proper places while weaving.	Other employees.
Machine repairer	(See Machine fixer)	Do.
Machinist	Installs, moves, repairs, and adjusts machines, and makes minor parts.	Do.
Machinist's helper	Assists machinist in setting up machines, making repairs, and does any other work as directed by him.	Do.
Magazine boy	Keeps magazines of automatic looms filled with quills or cops.	Do.
Mail boy	Collects and delivers mail or orders from and to desks in various departments.	Do.
Matron	Looks after comfort of females who visit rest room.	Do.
Measurer, cloth	Measures and cuts woven goods into commercial lengths. Also makes record of yardage in each piece.	Do.
Measurer, ribbon	Operates machine for winding, measuring, and cutting ribbon into specified lengths for the market.	Do.
Mechanic	(See Machine fixer)	Do.
Mechanic for reelers	(See Reeler mechanic)	Do.
Mechanic for winders	(See Winder mechanic)	Do.
Mechanic's helper	Assists mechanic in making repairs on machines in various departments and keeping same in proper running order.	Do.
Messenger	Carries messages, packages, etc., from one department to another.	Do.
Millwright	Installs or moves machinery, shafting, etc., and makes repairs not made by fixers and machinists.	Do.
Millwright's helper	Assists millwright in installing machinery, shafting, pulleys, etc.	Do.
Mixer, colors	(See Color mixer)	Do.
Mixer, dope	(See Dope mixer)	Do.
Moveman	(See Truck pusher)	Do.
Numberer	Operates sewing machine for embroidering numbers or other designs in edge of silk for identification after being dyed.	Do.
Oiler	Supply oil and grease to working parts of machines, shafting, etc.	Do.
Oiler's helper	Works under supervision of oiler	Do.
Opener	(See Bale opener)	Do.
Opener's helper	Assists in opening and removing contents of bales	Do.
Other employees	This group includes all occupations in the industry other than the selected occupations. Each occupation had too few workers in number to warrant separate tabulation, and is defined and arranged alphabetically in this glossary.	Do.
Painter	Uses brush or spray to paint any part of factory building.	Do.
Palmer operator	Feeds cloth into and operates machine which stretches the goods to proper width and fixes the finish.	Do.
Paper baler	Files waste paper into machine which presses it into a compact bundle. Wires are then fastened around to hold it together.	Do.
Picker, cloth	Inspects cloth for imperfections as it comes from loom, picking out loose ends or knotted threads, removing lumps and "mispicks," cleaning spots, etc.	Pickers, cloth.
Picker, cloth, machine	Operates machine which automatically removes loose ends, knotted threads, lumps, or other foreign matter from cloth.	Do.
Piece weighter	(See Tinman, dyehouse)	Other employees.
Pinner, ribbon	Fastens, with a pin, ends of each piece of ribbon to block on which it is wound.	Do.
Pipe man	Cuts and fits new pipe where needed. Repairs and maintains steaming, drying, and draining systems of dyehouse and other departments.	Do.
Plumber	Repairs and maintains plumbing throughout plant.	Do.
Plumber's helper	Assists plumber by passing tools or parts to be used in repair work.	Do.
Porter	Does sweeping, cleaning, carrying goods from one department to another, and other common labor about plant.	Do.
Preparer, ribbon	Arranges or winds ribbon which has been woven (without color) into skeins or bundles of suitable lengths for dyeing, depending on width, ranging from 50 yards for wide to 500 yards for narrow. These skeins are laced or otherwise tied to prevent being tangled during dyeing process.	Do.
Printer, cloth	Operates machine which prints design or pattern on woven cloth.	Do.
Process inspector	Examines for defects goods in process of manufacture.	Do.

Factory term	Definition	Classified by bureau under—
Production boy.....	(See Checker).....	Other employees.
Quality inspector.....	Examines finished goods for quality test.....	Do.
Quetch operator.....	Runs machine which impregnates cloth with preparation known as finish sizing which is composed of gelatines, softening oils, etc. It is used to fill body of the cloth.	Do.
Quill boy.....	Supplies looms with full quills of filling yarn whenever needed.	Bobbin boys.
Quill carrier.....	(See Quill boy).....	Do.
Quill cleaner.....	(See Bobbin cleaner).....	Other employees.
Quill distributor.....	(See Quill boy).....	Bobbin boys.
Quill inspector.....	Examines quills of filled yarn for defects.....	Other employees.
Quiller.....	Operates machine which winds spun yarn from bobbins on to quills for use by weavers as the weft or filling in loom shuttles.	Quillers.
Raw-stock tender.....	Has charge of raw-silk storage; gets out orders; and maintains record of quantity in stock.	Other employees.
Rayon winder.....	(See Winder, rayon).....	Winders, rayon.
Rebeamer.....	Operates machine which transfers warp from one beam to another.	Other employees.
Reclaim, soap tank.....	(See Soap reclaim tankman).....	Do.
Redrawer.....	Operates machine which transfers yarn from one spool to another.	Redrawers.
Reed fixer.....	Repairs and puts new metal blades or wires in reed frame of loom.	Other employees.
Reed maker.....	Makes up new reed frames for looms or repairs old ones. The main function of loom reed frame is to keep warp ends separate and to beat up the filling to cloth.	Do.
Reed man.....	Cleans, stores, and gives out reed frames when needed.....	Do.
Reed repairer.....	(See Reed fixer).....	Do.
Reeder.....	Enters warp ends between metal blades or thin wires of reed frame, which serves to keep the warp ends separate and in proper place while weaving.	Do.
Reel carrier.....	Carries full reels to hooks for stripping and replaces them with empty reels.	Do.
Reel stripper.....	Removes full skeins of yarn from reels.....	Do.
Reeler mechanic.....	Makes repairs or adjustments on reeling machines.....	Do.
Reeler.....	Operates machine which transfers yarn from spools to skeins for purpose of dyeing in skeins.	Reelers.
Rejoiner.....	Winds yarn from partly filled bobbins or spools to make full ones.	Redrawers.
Reroller.....	Operates machine which transfers cloth from one roll to another.	Other employees.
Rewinder.....	Operates machine which winds yarn from one spool to another.	Rewinders.
Ribbon boxer.....	(See Boxer, ribbon).....	Other employees.
Ribbon cleaner.....	Uses liquid cleaning compounds to remove spots of dirt, oil, grease, etc., from ribbon.	Do.
Ribbon finisher.....	(See Finisher, ribbon).....	Do.
Ribbon hanker.....	(See Hanker, ribbon).....	Do.
Ribbon pinner.....	(See Pinner, ribbon).....	Do.
Ribbon preparer.....	(See Preparer, ribbon).....	Do.
Ribbon warper.....	(See Warper, ribbon).....	Warpers.
Ribbon weaver.....	(See Weaver, ribbon).....	Weavers, ribbon.
Ribbon winder.....	Operates machine which winds finished ribbon on paper blocks, and cuts it to specified lengths.	Other employees.
Roll handler.....	Loads and unloads rolls of cloth to and from hand trucks and transfers them to various departments.	Do.
Rubber.....	Uses prepared cleaning chemical to rub chafes, grease, or oil spots from cloth.	Do.
Sampleman.....	Prepares samples of cloth for the trade.....	Do.
Scrubber.....	Uses mop with water to scrub factory floors.....	Do.
Seamstress.....	(See Stitcher).....	Do.
Second hand.....	(See Foreman, assistant).....	Do.
Section hand.....	Supervises small group of workmen, as well as performing some production labor.	Do.
Sewer.....	(See Stitcher).....	Do.
Shaker.....	Shakes and straightens out skeins of yarn in process of dyeing and before being placed on reels for winding.	Do.
Shearer, cloth.....	Operates machine, with very sharp revolving knives, which shears surface of cloth smooth as it passes over, usually on velvet, plush, and pile fabrics.	Do.
Shearer's helper.....	Works under supervision of shearer, cloth.....	Do.
Shipper.....	Supervises packing and shipping of goods and keeps records of quantity, dates of shipments, destination, etc.	Do.
Shipping clerk.....	Keeps records of goods shipped, dates, destination, etc.	Do.
Shook maker.....	Assembles and nails together into complete units shipping boxes purchased in sections.	Do.

Factory term	Definition	Classified by bureau under—
Silk conditioner.....	Draws samples of raw silk from bale, dries out all moisture, weighs samples before and after drying, to determine amount of moisture content. A sprinkling (damping) machine is then used to add sufficient water to bring moisture content to 11 per cent, which is the normal amount required for silk yarn.	Other employees.
Silk hanger.....	Straightens out and hangs skeins of yarn on hooks for drying after soaking process.	Do.
Silk opener.....	(See Bale opener).....	Do.
Silk snapper.....	Straightens out skeins of silk after soaking or dyeing. Snaps and shakes them into shape.	Do.
Silk soaker.....	(See Soaker).....	Do.
Silk tester.....	Examines threads in skeins of silk received from importers or throwsters, for quality, weight, twist per inch, etc.	Do.
Silk throwster.....	Tends any of various twisting and doubling machines, pieces broken threads, reels spun yarn, which is to be dyed in skeins, laces them to prevent tangling, etc.	Do.
Singeing-machine operator.	Regulates speed of machine equipped with flaming gas jets used for singeing loose ends and lint from surface of woven goods as it passes through machine.	Do..
Sizer, warp.....	(See Slasher).....	Do.
Skein straightener.....	(See Silk snapper).....	Do.
Skein winder.....	(See Reeler).....	Reelers.
Skeiner, ribbon.....	(See Preparer, ribbon).....	Other employees.
Skeiner, yarn.....	(See Reeler).....	Reelers.
Slasher.....	Operates machine which coats warp threads with starchy substance known as "size," which gives it strength and smoothness so that it will stand continued beating up of filling by reed frame in loom.	Other employees.
Smash firer.....	(See Smash hand).....	Smash hands.
Smash hand.....	Repairs smashes or breaking of warp and filling threads, crossing of threads, or other causes of serious interruption of work of weaver.	Do.
Smash piecer.....	(See Smash hand).....	Do.
Snapper, silk.....	(See Silk snapper).....	Other employees.
Soaker.....	Places skeins of raw silk into softening tanks, works them around in soap water or other chemicals, which softens gum on the fiber.	Do.
Soaker's helper.....	Assists soaker in working skeins about in soaking tanks.	Do.
Soap reclaim tankman.....	Attends settling machine which reclaims soap from degumming liquids after soaking operation.	Do.
Soft-silk winder.....	(See Winder, soft silk).....	Winders, soft-silk.
Spare hand.....	Is an extra workman with considerable skill who replaces those absent for any cause, generally in weaving department.	Other employees.
Spindle tester.....	Operates testing machine which determines whether spindles are running at proper speed.	Do.
Spinner.....	Operates machine which puts specified number of twists per inch in thread, which binds fibers together and gives more strength for manipulation. The number of twists varies with purpose for which yarn is to be used.	Spinners.
Spinner, 5 B.....	Takes 2 to 14 ends or strands of silk from bobbins and combines them into one, with 2½ to 12 twists to the inch.	Do.
Spool boy.....	(See Bobbin boy).....	Bobbin boys.
Steamer.....	(See Ager operator).....	Other employees.
Sticker (dyehouse).....	Handles rods, or sticks on which skeins of yarn are suspended, works skeins back and forth in dye tanks, and turns them on the rods, thereby causing color to strike in uniformly.	Laborers, dyehouse.
Stitcher.....	Operates power sewing machine for stitching seams in bags, making smocks, marking fabrics, etc.	Other employees.
Stock boy.....	Helps stockman in handling materials, counting books, etc.	Do.
Stock checker.....	(See Stock clerk).....	Do.
Stock clerk.....	Keeps record of inventory, stocks received and disposition of same.	Do.
Stockman.....	Has charge of silk vault where dyed and woven goods, also bales of raw silk are stored. Books are counted and skeins bundled and prepared for soaking. Records are kept of receipts and disposition of both raw and finished materials.	Do.
Stock tender.....	(See Raw-stock tender).....	Do.
Stop-motion boy.....	(See Drop-wire boy).....	Do.
Straightener, skeins.....	(See Silk snapper).....	Do.
Stretcher, cloth.....	(See Cloth stretcher).....	Do.
Stringer.....	Put strings or laces through skeins of yarn to hold them in proper shape while in degumming baths.	Do.

Factory term	Definition	Classified by bureau under—
Stripper (dyehouse).....	Places skeins of raw silk into "degumming" chemicals and works them around in tanks until necessary amount of gum has been removed from silk fibers.	Laborers, dyehouse.
Sweeper.....	Uses brooms or brushes to sweep factory floors and removes refuse.	Other employees.
Tankman, soap reclaiming.....	(See Soap reclaim tankman).....	Do.
Tenterer.....	(See Cloth stretcher).....	Do.
Tester.....	(See Silk tester).....	Do.
Tester's helper.....	Assists tester in ascertaining weights of skeins, twists per inch, and does any other work under his supervision.	Do.
Tester, spindles.....	(See Spindle tester).....	Do.
Tester, warp.....	(See Warp tester).....	Do.
Throwster, silk.....	(See Silk throwster).....	Do.
Tin weighter.....	(See Tinman, dyehouse).....	Do.
Tin whiz operator.....	Operates machine which adds tin and extracts surplus after time-limit fixation.	Do.
Tinman, dyehouse.....	Works at and around special weighting machine which rotates skeins or woven cloth through vat of tin or other weighting solution to add desired weight; places material into and takes it out of machine; makes tests of weighted goods to determine per cent of chemical gain, correct amount of tin or other weightings, temperature of bath, etc., all under supervision of dyer.	Do.
Transferrer.....	(See Redrawer).....	Redrawers.
Truck driver.....	(See Trucker, power).....	Other employees.
Truck pusher.....	Operates hand truck for transferring goods from one department to another.	Do.
Trucker, power.....	Operates power truck for transporting materials about mill yard or from one department to another.	Do.
Tuber.....	Operates machine which winds spun yarn from bobbins on to paper tubes for use by weavers as weft or filling in loom shuttles.	Redrawers.
Tubman (dyehouse).....	(See Sticker, dyehouse; also Dye tubman).....	Laborers, dyehouse.
Twister mechanic.....	Repairs and maintains twisting machines in good working condition.	Other employees.
Twister.....	Operates machine for twisting two or more threads together into one, with 12 to 60 twists to the inch.	Spinners.
Twister-in, hand.....	Joins ends of new warp (which is ready for loom) to ends of old warp by twisting motion of the fingers.	Twisters-in, hand.
Twister-in, machine.....	Operates automatic machine which twists old and new warp ends together.	Twisters-in, machine.
Utility man.....	(See Handy man).....	Other employees.
Vaultman.....	(See Stockman).....	Do.
Warp brusher.....	(See Brusher, warp).....	Do.
Warp dresser.....	(See Slasher).....	Do.
Warp hanger.....	Lifts full beam from warping machine and replaces it with empty one. Also carries full warp beams to looms when needed by weavers.	Do.
Warp-machine fixer.....	Repairs and adjusts warping machines. (See Machine fixer.)	Do.
Warp sizer.....	(See Slasher).....	Do.
Warp tester.....	Inspects warp after sizing to determine if it is in proper condition for weaving.	Do.
Warper.....	Places spools or bobbins of organzine or warp threads on creel, for purpose of grouping specific number of desired length. The end of each thread is drawn through a rack having a series of glass pins for guiding thread to reed frame where it passes between blades or wires of frame to keep it separate and in proper place, and then is attached to the warping mill (a drum-like cylinder). This drum is operated by power. Constant watching is necessary to see that threads are wound evenly over surface of drum. The operator also repairs breaks, etc. Many warping machines are now provided with automatic devices which stop the machinery when a thread breaks.	Warpers.
Warper, direct.....	Operates machine which winds the warp direct from spools (bobbins) to warp beam of ribbon loom.	Do.
Warper, edge.....	Operates machine specially adapted to winding the warp for edges of ribbon and broad cloth.	Do.
Warper, hand.....	Tends warp-winding machine which is operated by hand.	Do.
Warper, ribbon.....	Operates machine which winds warp to beams of special design for weaving ribbon.	Do.
Waste collector.....	Collects sweepings from various departments and stores, same to be convenient for packing into bales.	Other employees.
Waste-paper baler.....	(See Paper baler).....	Do.

Factory term	Definition	Classified by bureau under—
Weaver, automatic.....	(See Automatic weaver).....	Weavers, broad-silk.
Weaver, broad-silk.....	Operates loom for weaving broad goods, watches loom to see that it is working properly, corrects defects in fabric before they are carried too far, pieces broken warp threads, and keeps shuttles filled. Most looms are provided with automatic devices which stop machinery when a thread breaks.	Do.
Weaver, ribbon.....	Operates ribbon loom on which 6 to 100 ribbons are woven at the same time. The method of operation is similar to that of broad silk, except for added duties due to large number of shuttles to be kept filled.	Weavers, ribbon.
Weighers (dyehouse)....	Makes tests of weighted goods to determine per cent of chemical gain, correct amount of tin or other weightings.	Other employees.
Weighmaster.....	Uses scales to weigh or check weights of yarns taken from various machines to determine earnings of piece workers.	Do.
Weighter, cloth.....	(See Tinman, dyehouse).....	Do.
Weighter, pieces.....	do.....	Do.
Weighter, skeins.....	Immerses skeins in tank containing weighting solution such as tin, iron, gambia, etc., works them around in solution and removes them when properly weighted. May operate machines which are equipped with revolving arms which rotate skeins through bath.	Do.
Weighter, tin.....	(See Tinman, dyehouse).....	Do.
Welder.....	Uses acetylene torch or electric-welding device to join metal parts.	Do.
Wet-silk hanger.....	(See Silk hanger).....	Do.
Winder mechanic.....	Makes repairs or adjustments on winding machines.....	Do.
Winder, hard silk.....	Operates machine for winding raw silk from skeins onto bobbins or spools. Constant watchfulness is necessary to mend broken threads and replace full bobbins with empty ones.	Winders, hard-silk.
Winder, rayon.....	Operates machine for winding rayon yarn from skeins onto bobbins or spools. The work is similar to that of winding hard and soft silk.	Winders, rayon.
Winder, ribbon.....	(See Ribbon winder).....	Other employees.
Winder, skeins.....	(See Reeler).....	Reelers.
Winder, soft-silk.....	Operates machine for winding onto bobbins or spools silk from which at least some of the natural gum has been removed and which may or may not have been spun or doubled. The winding is done in a similar manner as that of hard silk.	Winders, soft-silk.
Working foreman.....	(See Foreman, assistant).....	Other employees.
Wrapper.....	Uses thin paper in which to wrap various woven goods for shipment.	Do.