

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 160.

WASHINGTON, D. C.

April 26, 1902.

AGRICULTURE.

IOWA.

Hon. WILLIAM R. MERRIAM,
Director of the Census.

SIR: I have the honor to transmit herewith, for publication in bulletin form, the statistics of agriculture in the state of Iowa, taken in accordance with the provisions of section 7 of the act of March 3, 1899. This section requires that—

The schedules relating to agriculture shall comprehend the following topics: Name of occupant of each farm, color of occupant, tenure, acreage, value of farm and improvements, acreage of different products, quantity and value of products, and number and value of live stock. All questions as to quantity and value of crops shall relate to the year ending December thirty-first next preceding the enumeration.

A "farm," as defined by the Twelfth Census, includes all the land, under one management, used for raising crops and pasturing live stock, with the wood lots, swamps, meadows, etc., connected therewith. It also includes the house in which the farmer resides and all other buildings used by him in connection with his farming operations.

The farms of Iowa, June 1, 1900, numbered 228,622, and had a value of \$1,497,554,790. Of this amount, \$240,802,810, or 16.1 per cent, represents the value of buildings, and \$1,256,751,980, or 83.9 per cent, the value of land and of improvements other than buildings. On the same date the value of farm implements and machinery was \$57,960,660, and of live stock, \$278,830,096. These values, added to that of farms, give \$1,834,345,546, the "total value of farm property."

The products derived from domestic animals, poultry, and bees, including animals sold and slaughtered on farms, are referred to in this bulletin as "animal products." The total value of all such products, together with the value of all crops, is termed "total value of farm products." This

value for 1899 was \$365,411,528, of which amount \$169,858,981, or 46.5 per cent, represents the value of animal products, and \$195,552,547, or 53.5 per cent, the value of crops, including forest products. The total value of farm products for 1899 exceeds that for 1889 by \$206,068,684, or 129.3 per cent. A part of this apparent increase is doubtless due to a more detailed enumeration in 1900 than in 1890.

The value of "net farm products" or the "gross farm income" is obtained by deducting from the total value of farm products the value of the products fed to live stock on the farms of the producers. In 1899 the reported value of products fed was \$102,028,040, leaving \$263,388,488 as the gross farm income. The percentage which this amount is of the "total value of farm property" is referred to in this bulletin as the "percentage of gross income upon investment." For Iowa in 1899 it was 14.4 per cent.

As no reports of expenditures for taxes, interest, insurance, feed for stock, and similar items have been obtained by any census, no statement of net farm income can be given.

The statistics presented in this bulletin will be treated in greater detail in the final report on agriculture in the United States, which will be published about June 1, 1902. The present publication is designed to present a summarized advance statement for Iowa.

Very respectfully,

L. G. Powers.

Chief Statistician for Agriculture.

AGRICULTURE IN IOWA.

GENERAL STATISTICS.

Iowa has a total land surface of 55,475 square miles, or 35,504,000 acres, of which 34,574,337 acres, or 97.4 per cent, are included in farms.

The state extends from the Mississippi River westward to the Missouri, and its entire area is included in the drainage basin of these two rivers, by far the larger part lying within the basin of the Mississippi. In general the land slopes toward the south and east. There is very little woodland, and almost the entire area is available for cultivation.

The soil, which is a dark, heavy, drift loam from 2 to 5 feet in depth, is very fertile, well drained, and easily cultivated. Iowa is especially adapted to stock raising, and in 1900 stood first among the states of the Union in total value of domestic animals.

NUMBER AND SIZE OF FARMS.

The following table gives, by decades since 1850, the number of farms, the total and average acreage, and the per cent of farm land improved:

TABLE 1.—FARMS AND FARM ACREAGE: 1850 TO 1900.

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900.....	228,622	34,574,337	29,897,552	4,676,785	151.2	86.5
1890.....	201,903	30,491,541	25,428,809	5,062,732	151.0	83.4
1880.....	185,351	24,752,700	19,866,541	4,886,159	133.5	80.3
1870.....	116,292	15,541,793	9,396,467	6,145,326	133.6	60.5
1860.....	61,163	10,069,907	3,792,792	6,277,115	164.6	37.7
1850.....	14,805	2,736,064	824,682	1,911,382	184.8	30.1

The number of farms reported June 1, 1900, was fifteen times as great as the number reported in 1850, and was 26,719, or 13.2 per cent, greater than in 1890. The total farm acreage has increased steadily, and since 1880 more rapidly than the number of farms, so that the average size

of farms increased from 133.5 acres in 1880 to 151.2 acres in 1900, the greater part of this gain taking place in the decade from 1880 to 1890. The improved acreage has increased faster than the total farm area, as is shown by the steady and rapid increase in the percentage of farm land improved.

FARM PROPERTY AND PRODUCTS.

Table 2 presents a summary of the principal statistics relating to farm property and products for each census year, beginning with 1850.

TABLE 2.—VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND OF FARM PRODUCTS: 1850 TO 1900.

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implementments and machinery.	Live stock.	Farm products. ¹
1900.....	\$1,834,345,546	\$1,497,554,790	\$57,960,660	\$278,830,096	\$865,411,528
1890.....	1,100,682,579	857,681,022	36,665,315	206,436,242	159,347,844
1880.....	721,517,214	567,430,227	29,371,884	124,715,103	136,108,473
1870 ²	496,159,156	392,662,441	20,509,582	82,987,133	*114,386,441
1860.....	147,792,873	119,898,547	5,327,033	22,476,293	-----
1850.....	21,519,711	16,657,597	1,172,899	3,689,275	-----

¹ For year preceding that designated.

² Values for 1870 were reported in depreciated currency. To reduce to specie basis of the other figures they must be diminished one-fifth.

³ Includes betterments and additions to live stock.

The value of farm property in 1900 was nearly ninety times as great as in 1850. The gain in the last decade was \$733,662,067, or 66.7 per cent. Of this amount \$639,973,768, or 87.2 per cent, represents the gain in value of land, improvements, and buildings; \$21,295,345, or 2.9 per cent, that in implements and machinery; and \$72,393,854, or 9.9 per cent, that in live stock.

COUNTY STATISTICS.

Table 3 gives an exhibit of general agricultural statistics by counties.

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With build-ings.	Total.	Improved.	Land and improve-ments (ex-cept build-ings).	Buildings.	Imple-ments and machinery.	Live stock.		Labor.	Fertili-zers.
The State	228,622	220,626	34,574,837	29,897,532	\$1,256,751,980	\$240,802,810	\$57,960,660	\$278,830,096	\$263,388,488	\$16,375,670	\$837,190
Adair	2,387	2,295	360,224	331,570	10,868,310	1,965,700	503,840	3,414,436	2,869,447	116,410	1,560
Adams	1,949	1,843	273,042	249,130	9,662,040	1,628,760	408,450	2,903,761	2,313,077	85,400	
Allamakee	2,368	2,333	383,324	223,256	8,389,430	2,284,690	627,670	2,110,468	2,268,083	173,130	1,600
Appanoose	2,526	2,422	325,147	265,492	8,111,620	1,653,450	373,280	2,321,730	1,762,170	61,090	1,370
Audubon	1,988	1,901	282,456	272,197	9,814,950	1,630,500	474,110	2,650,485	2,392,791	102,530	7,270
Benton	2,774	2,691	458,801	403,859	20,788,190	3,966,780	799,280	3,828,340	3,828,340	291,900	4,050
Blackhawk	2,257	2,177	349,194	318,102	14,943,470	3,354,200	675,210	3,067,935	3,040,066	194,690	4,330
Boone	2,670	2,597	349,980	307,338	18,481,850	2,495,340	632,200	2,656,709	2,656,793	142,230	190
Bremer	2,004	1,957	275,501	242,494	10,839,470	3,084,690	624,200	2,255,818	2,250,581	180,350	2,570
Buchanan	2,447	2,389	357,516	320,901	12,852,520	2,765,890	646,880	3,014,781	3,115,964	166,840	2,020
Buena Vista	1,956	1,919	360,281	338,925	13,001,470	2,306,120	562,610	2,736,760	2,512,688	133,970	1,970
Butler	2,304	2,231	360,578	323,179	14,145,360	2,571,020	641,120	2,841,148	2,778,647	167,050	6,070
Calhoun	2,134	2,092	362,873	345,079	13,248,880	1,992,520	584,120	2,496,244	3,047,603	137,170	6,060
Carroll	2,175	2,150	356,987	346,597	13,676,400	2,527,550	652,630	2,875,267	2,847,862	146,960	5,150
Cass	2,395	2,256	354,644	333,357	13,725,420	2,395,790	602,070	3,610,416	3,348,196	199,420	6,940
Cedar	2,291	2,245	348,056	313,257	16,824,370	3,627,460	649,060	3,658,147	3,261,015	208,440	2,110
Cerro Gordo	1,957	1,907	353,188	314,078	13,272,230	2,384,700	640,230	2,610,465	2,811,297	189,780	420
Cherokee	1,908	1,839	354,643	323,883	13,341,580	2,268,410	573,840	3,051,784	2,584,577	187,850	7,560
Chickasaw	2,197	2,128	311,208	255,930	11,594,740	2,330,060	589,290	2,251,826	2,280,213	151,410	1,540
Clarke	1,714	1,663	259,491	197,318	7,131,900	1,248,960	318,790	2,138,388	1,509,431	65,470	2,390
Clay	1,631	1,604	344,960	324,815	11,440,140	1,750,250	526,780	2,413,082	2,186,381	146,720	2,030
Clayton	3,318	3,264	459,892	314,776	13,826,980	3,965,540	898,390	3,217,318	3,398,416	259,200	7,480
Clinton	2,786	2,719	428,251	383,562	19,623,080	4,285,110	822,230	3,959,715	3,782,638	352,040	9,000
Crawford	2,649	2,564	449,956	416,917	15,266,790	3,049,300	779,560	3,988,215	3,584,097	206,770	8,540
Dallas	2,607	2,522	359,280	307,221	14,124,010	2,605,300	566,660	3,279,680	3,187,544	138,840	760
Davis	2,553	2,473	318,392	246,558	7,762,460	1,724,020	399,310	2,260,854	1,779,835	64,030	2,100
Decatur	2,508	2,412	326,078	235,657	8,537,330	1,676,120	402,600	2,417,781	1,800,229	90,280	8,850
Delaware	2,211	2,199	355,619	292,386	14,607,900	3,123,880	754,660	3,038,823	2,951,827	204,190	3,010
Des Moines	2,189	2,104	250,572	186,832	9,875,800	2,475,230	490,030	1,939,403	1,976,447	128,250	2,390
Dickinson	995	986	221,970	198,812	6,243,020	970,260	329,660	1,143,256	1,101,161	74,930	80
Dubuque	2,485	2,442	367,203	259,735	13,931,470	3,336,240	779,230	2,894,899	2,961,925	200,370	3,730
Emmet	1,056	999	236,580	199,877	6,859,570	979,200	312,020	1,341,214	1,293,151	104,800	970
Yayette	3,261	3,169	445,118	366,848	15,210,420	3,756,290	828,120	3,592,448	3,256,824	229,670	720
Floyd	2,054	1,976	303,843	278,541	11,533,320	2,381,020	614,370	2,201,362	2,559,415	148,900	11,430
Franklin	1,874	1,815	362,601	326,411	13,873,480	2,025,880	564,600	2,723,713	2,769,883	171,910	5,140
Fremont	2,394	2,245	328,958	295,577	12,791,750	1,996,860	420,280	2,646,021	2,457,785	178,680	2,570
Greene	2,314	2,260	366,125	329,617	13,018,450	2,186,710	584,070	2,849,654	2,671,872	140,540	1,680
Grundy	1,733	1,738	316,912	304,421	15,614,880	2,387,520	615,590	2,751,260	2,955,776	185,610	5,500
Guthrie	2,492	2,367	357,076	304,646	11,201,810	2,025,720	592,750	3,096,133	2,794,223	121,900	1,840
Hamilton	2,245	2,195	364,432	328,308	13,245,110	2,364,880	595,720	2,704,918	2,804,782	153,790	1,470
Hancock	1,703	1,660	349,342	322,088	11,367,060	1,735,980	565,090	2,068,541	2,153,116	142,700	
Hardin	2,291	2,245	351,046	305,871	13,272,250	2,471,260	604,990	2,852,577	2,915,380	158,410	1,840
Harrison	3,224	3,003	422,749	332,303	12,530,850	2,481,260	655,470	3,374,820	3,154,940	303,020	3,330
Henry	2,252	2,181	271,588	215,464	10,728,740	2,506,750	461,980	2,372,828	2,096,719	106,870	2,180
Howard	1,708	1,671	291,263	257,938	9,800,160	1,971,910	507,630	1,987,949	1,901,899	133,920	2,590
Humboldt	1,478	1,438	274,613	258,186	9,904,680	1,746,780	468,160	1,974,374	1,950,523	117,790	190
Ia	1,493	1,460	270,415	260,556	10,104,640	1,933,970	538,590	2,597,118	2,230,478	162,950	1,600
Iowa	2,454	2,318	368,779	312,378	13,740,820	2,828,300	616,260	3,463,023	2,937,937	192,430	5,100
Jackson	2,637	2,574	394,420	371,742	11,908,350	3,087,650	656,930	3,104,633	2,801,911	185,110	4,650
Jasper	3,320	3,196	464,105	425,398	18,935,080	3,344,060	778,600	4,447,620	4,138,061	228,970	1,640
Jefferson	2,206	2,135	268,189	211,089	9,042,520	2,247,510	445,610	2,247,468	1,818,059	85,090	2,160
Johnson	2,712	2,661	385,770	319,264	15,328,830	3,789,670	748,320	3,693,848	3,217,733	204,080	10,160
Jones	2,373	2,319	354,699	289,431	14,761,750	3,081,660	598,930	3,484,931	3,074,637	249,590	430
Keokuk	2,927	2,839	361,544	300,975	13,560,190	2,724,690	664,590	3,340,335	2,983,419	166,450	2,240
Kossuth	2,807	2,731	587,147	539,818	17,923,910	2,830,460	947,420	3,289,751	3,174,904	203,260	3,220
Lee	2,549	2,450	312,852	216,791	9,539,660	2,441,890	453,130	1,986,872	1,867,520	120,630	6,830
Linn	3,567	3,458	432,888	351,998	19,207,170	4,254,110	819,190	3,848,381	3,828,154	227,630	2,440
Louisia	1,619	1,580	237,972	182,032	8,812,210	1,770,530	352,660	1,871,864	1,871,756	81,710	1,440
Lucas	1,892	1,817	263,674	198,724	7,296,300	1,318,340	334,350	2,127,340	1,571,589	65,780	2,830
Lyon	1,619	1,518	358,801	344,041	11,590,090	1,727,090	552,320	1,918,442	2,238,843	268,150	7,830
Madison	2,600	2,505	354,216	271,717	11,373,450	2,206,850	517,930	3,325,232	2,685,436	119,750	5,850
Mahaska	3,202	3,082	358,250	307,823	14,835,900	3,073,970	683,180	3,320,208	3,090,997	134,440	4,250
Marion	2,914	2,729	351,163	292,500	12,013,210	2,104,720	460,680	3,122,870	2,659,330	98,540	1,500
Marshall	2,400	2,394	360,232	334,372	15,403,970	2,993,000	700,740	3,132,071	3,318,962	182,720	7,040
Mills	2,016	1,851	272,815	241,455	11,492,560	2,033,310	441,020	2,683,799	2,450,667	188,380	3,190
Mitchell	1,718	1,665	288,600	257,107	11,323,630	2,181,900	550,550	2,083,764	2,326,906	200,780	500
Monona	2,491	2,374	386,780	305,664	12,084,550	1,851,220	566,500	2,917,524	2,745,540	190,380	620
Monroe	1,987	1,883	262,296	181,110	7,756,140	1,363,820	364,850	1,839,719	1,452,296	59,160	9,770
Montgomery	1,940	1,883	272,067	252,009	12,045,480	1,976,010	470,850	2,799,733	2,321,883	155,020	160
Muscatine	1,976	1,909	264,121	219,652	11,342,880	2,604,270	492,710	2,416,388	2,416,388	199,070	10,690
O'Brien	1,845	1,791	360,025	343,008	13,751,540	2,171,510	633,950	2,618,240	2,614,846	215,780	540
Osceola	1,088	1,047	246,875	236,099	8,011,360	1,223,060	400,770	1,096,678	1,299,984	118,090	490
Page	2,643	2,549	338,132	311,495	14,982,610	2,660,300	579,330	3,184,944	3,184,944	176,790	2,830
Palo Alto	1,661	1,630	342,509	326,854	9,372,930	1,421,810	442,310	1,932,055	1,951,090	106,740	1,510
Plymouth	2,643	2,542	511,967	489,765	19,388,570	2,425,480	577,200	3,425,044	3,615,604	278,990	3,770
Pocahontas	2,005	1,936	365,455	344,243	11,338,110	2,206,070	589,880	2,633,035	2,376,889	93,770	90
Polk	3,171	3,023	370,252	326,789	18,799,700	3,272,560	689,040	3,135,246	3,556,285	186,360	6,390
Pottawattamie	4,239	3,954	599,930	524,790	24,223,790	4,440,310	1,007,670	5,414,155	5,330,116	369,960	7,330
Poweshiek	2,322	2,245	366,620	333,773	14,983,600	2,824,640	682,730	3,966,134	3,249,660	263,050	4,210
Ringgold	2,356	2,249	310,111	295,581	9,877,970	1,688,320	414,870	3,215,151	2,229,624	91,730	1,670

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES—Continued.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With build-ings.	Total.	Improved.	Land and improve-ments (ex-cept build-ings).	Buildings.	Imple-ments and machinery.	Live stock.		Labor.	Fertili-zers.
Sac.....	1,999	1,962	364,232	354,151	\$13,892,300	\$2,590,600	\$633,120	\$3,189,585	\$2,936,295	\$206,220	\$970
Scott.....	2,347	2,307	278,945	254,739	14,987,980	3,973,940	750,200	2,489,635	2,961,750	337,330	5,930
Shelby.....	2,337	2,285	371,873	350,733	13,813,760	2,418,980	661,610	3,626,677	3,246,566	205,360	4,760
Sioux.....	2,451	2,322	476,621	452,031	18,558,110	2,675,470	757,980	3,094,698	3,454,171	333,140	4,120
Story.....	2,436	2,326	356,654	329,856	15,780,830	2,627,360	658,280	2,839,454	3,131,013	151,970	5,030
Tama.....	2,725	2,632	438,596	391,668	18,403,280	3,277,300	802,290	3,895,081	3,845,577	230,750	3,090
Taylor.....	2,581	2,487	337,002	294,010	11,381,040	2,070,700	448,500	3,244,361	2,528,344	144,220	4,280
Union.....	1,823	1,742	268,518	212,705	8,622,540	1,593,930	395,850	2,517,181	1,967,490	100,890	1,700
Van Buren.....	2,242	2,192	300,111	210,723	8,079,130	2,052,030	414,380	2,260,911	1,856,524	79,920	3,750
Wapello.....	2,311	2,237	262,459	203,840	9,282,280	1,965,530	404,340	2,141,102	1,817,884	95,290	1,480
Warren.....	2,926	2,833	351,793	287,010	11,931,710	2,266,510	468,330	3,306,985	2,675,808	107,160	1,850
Washington.....	2,511	2,404	344,695	293,219	14,662,740	2,932,430	617,770	3,348,190	2,995,344	144,000	4,280
Wayne.....	2,285	2,189	332,762	293,910	9,826,640	1,891,240	462,590	2,732,306	1,859,592	95,560	1,400
Webster.....	2,564	2,502	428,975	360,558	15,556,930	2,643,920	759,620	2,733,918	2,760,576	163,450	730
Winnebago.....	1,512	1,470	239,085	207,969	7,613,020	1,294,890	367,910	1,397,096	1,459,966	84,720	1,800
Winneshiek.....	2,960	2,902	423,227	338,358	14,288,410	3,626,140	731,980	2,941,096	3,225,513	301,320	2,000
Woodbury.....	3,231	3,073	522,737	443,681	16,297,170	2,878,120	860,110	3,703,887	3,902,855	235,710	17,760
Worth.....	1,485	1,452	249,031	233,292	8,309,130	1,662,570	436,570	1,472,731	1,666,756	135,810	1,400
Wright.....	1,378	1,318	366,371	330,951	13,221,370	2,048,370	613,400	2,521,948	2,584,921	132,810	100
Sac and Fox ¹	28	18	881	789	31,450	4,310	3,380	7,540	5,426	80	-----

¹ Indian reservation.

In surface, soil, drainage, and other natural features the counties of Iowa are so similar that no striking differences are shown in their agricultural statistics. The average size of farms is largest in the northwestern counties, exceeding 200 acres in a few instances. The percentage of farm land improved does not vary materially. The average values of farms range from \$4,000 to \$10,000, being determined more by transportation facilities and the nearness of markets than by natural advantages.

The average expenditure for labor per farm was highest in the northwestern counties, where the average size of farms is greatest, and in the counties containing the largest cities. The amounts expended for fertilizers were small, averaging less than \$1.50 per farm, and in no county exceeding 5 cents per acre.

Only two counties, Grundy and Shelby, have fewer farms than in 1890, and in both cases the decreases are slight. Grundy is the only county reporting a smaller farm acreage than ten years before, but several counties report smaller improved acreages. These decreases are due largely to the stricter definition of the term "improved" by the Twelfth Census than by preceding censuses. Increases are shown for all counties in the values of the various forms of farm property, with the exception of live stock in Des Moines and Tama counties.

FARM TENURE.

Table 4 gives a comparative exhibit of farm tenure for 1880, 1890, and 1900.

The farms operated by tenants are divided into groups designated as farms operated by "cash tenants," and farms

operated by "share tenants." These groups comprise, respectively: (1) Farms operated by individuals who pay a cash rental or a stated amount of labor or farm produce; (2) farms operated by individuals who pay as rental a stated share of the products.

In Table 5 the tenure of farms for 1900 is given by race of farmer, the farms operated by owners being subdivided into four groups designated as "owners," "part owners," "owners and tenants," and "managers." These terms denote, respectively: (1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other or others owning no part, but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

TABLE 4.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES: 1880 TO 1900.

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners. ¹	Cash tenants.	Share tenants.	Owners. ¹	Cash tenants.	Share tenants.
1900.....	228,622	148,886	44,502	35,234	65.1	19.5	15.4
1890.....	201,903	145,183	24,940	31,780	71.9	12.4	15.7
1880.....	185,351	141,177	8,421	35,753	76.2	4.5	19.3

¹ Including "part owners," "owners and tenants," and "managers."

TABLE 5.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER.

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.

RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The State.	228,622	116,188	28,988	2,129	1,581	44,502	35,234
White	228,395	116,090	28,952	2,129	1,577	44,452	35,195
Colored	227	98	36		4	50	39
Indian	27	26	1				
Negro	200	72	35		4	50	39

PART 2.—PER CENT OF FARMS OF SPECIFIED TENURES.

The State.	100.0	50.8	12.7	0.9	0.7	19.5	15.4
White	100.0	50.8	12.7	0.9	0.7	19.5	15.4
Colored	100.0	43.2	15.8		1.8	22.0	17.2

That the facts epitomized in the foregoing tables may be seen in their true relation to the agricultural conditions and changes on Iowa farms in the past twenty years, they should be considered in connection with the occupation tables of the census. Those tables are available for 1880 and 1890, but not as yet for 1900. In 1880 the total number of males engaged in agriculture was 302,171, while in 1890 it was 313,484. In 1880, 88,045 of the total number were employed at farm labor for wages; in 1890 but 73,753 were so employed. In connection with each 1,000 farms there were in 1880, 1,630 males employed in some capacity. Of that number, approximately 762 operated farms as owners; 288, as tenants; 470 were farm laborers working for wages; and 160 were employed for wages at special occupations, such as gardening, floriculture, etc. In 1890 for each 1,000 farms, 1,558 males were employed, of whom 719 operated farms as owners; 281, as tenants; 365 were employed as wage laborers; and 188 at special occupations.

To show the relative changes that took place in the four classes of farming population, the following comparative statement is presented: Of every 1,000 males engaged in agriculture in 1880, approximately 467 operated farms as owners; 146, as tenants; 292 were farm laborers; and 95 were employed at special occupations for wages. In 1890 there were 463 owners, 181 tenants, 235 farm laborers, and 121 persons engaged in special occupations. The relative number of owners was practically the same in 1890 as in 1880; tenants and laborers employed at special occupations increased faster than the total number of males engaged in agriculture; while the number of farm laborers working for wages actually decreased.

It may be safely assumed that the total farming population varies from decade to decade approximately with the number of males engaged in agriculture. From figures

given above it is seen that in the decade from 1880 to 1890 the number of males engaged in agriculture, and hence the total farming population, increased 3.74 per cent. During the same period, owners increased in number 2.84 per cent, and tenants 28.4 per cent, while the number of wage laborers employed on farms decreased 16.2 per cent. In each of the classes mentioned there was a movement that assisted in raising the average social and economic level of the farming population. Whether caused by the rise of farm laborers to ownership or tenancy, as appears probable from the figures reviewed, or by additions to the classes of owners and tenants through immigration, this elevation is a beneficent change in all its aspects.

The occupation tables for 1900 are not yet prepared, but if the changes in rural population are reliable indices of the changes in the farming population proper, the movements noted for the decade from 1880 to 1890 continued with but slight modification in the last decade, and the average condition of people on Iowa farms has been improved even more than is shown by the foregoing comparisons.

In connection with the changes noted above, attention is called to the specific changes in farm tenure shown in Tables 4 and 5. The number of farms operated by owners has increased 7,709, or 5.5 per cent, since 1880, while the total number of farms has increased 23.3 per cent, resulting in a decrease in the per cent of farms operated by owners. The total number of tenant-operated farms has increased 80.5 per cent. Aside from this increase, there has been another remarkable change. The number of cash tenants is over five times as great as in 1880, while in the same time the number of share tenants has decreased 1.5 per cent. In 1880, 80.9 per cent of all tenants were share tenants; in 1890, 56.0 per cent; and in 1900, 44.2 per cent. This change is believed to be the result of a growing sentiment on the part of both landlord and tenant in favor of the cash-payment system, and indicates greater independence and financial responsibility on the part of the tenant class as a whole. This belief is supported by the fact that in the most intensively cultivated regions the greater part of the tenants are cash tenants. In Cherokee county, for instance, 67.3 per cent, and in Grundy county 68.5 per cent of all tenants pay cash rentals, while in Van Buren and Winnebago counties the corresponding percentages are only 41.8 and 44.2.

No previous census has reported the number of farms operated by "part owners," "owners and tenants," or "managers," but it is believed that the number of farms conducted by the last-named class is constantly increasing.

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

Tables 6 and 7 present the principal statistics for farms classified by race of farmer and by tenure.

TABLE 6.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER AND BY TENURE, WITH PERCENTAGES.

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	228,622	151.2	34,574,387	100.0	\$1,834,345,546	100.0
White farmers.....	228,395	151.3	34,558,319	100.0	1,833,523,669	100.0
Colored farmers ¹	227	70.6	16,018	(²)	821,877	(²)
Owners.....	116,188	143.2	16,639,363	48.1	918,612,747	50.1
Part owners.....	28,088	186.9	5,418,760	15.7	274,391,294	15.0
Owners and tenants.....	2,120	184.9	893,645	1.1	21,648,004	1.2
Managers.....	1,681	315.6	498,982	1.4	28,838,823	1.6
Cash tenants.....	44,602	144.9	6,449,286	18.7	338,475,628	18.4
Share tenants.....	35,234	146.9	5,174,801	15.0	252,379,050	13.7

¹ Comprising 200 negroes and 27 Indians.

² Less than one-tenth of 1 per cent.

TABLE 7.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY RACE OF FARMER AND BY TENURE.

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and im- prove- ments (except build- ings).	Build- ings.	Imple- ments and ma- chinery.	Live stock.		
The State-----	\$5,407	\$1,053	\$253	\$1,220	\$1,152	14.4
White farmers-----	5,500	1,054	254	1,220	1,153	14.4
Colored farmers ¹ -----	2,523	454	116	528	558	15.4
Owners-----	5,174	1,191	253	1,233	1,117	14.1
Part owners-----	6,581	1,112	301	1,472	1,517	16.3
Owners and tenants-----	6,752	1,417	300	1,699	1,342	13.2
Managers-----	11,850	2,345	334	3,712	2,397	13.1
Cash tenants-----	5,533	831	235	1,007	1,064	14.0
Share tenants-----	5,263	753	217	930	988	13.8

¹ Comprising 200 negroes and 27 Indians.

The value of the farm property of the colored farmers is \$821,877. Of this amount, \$783,377 represents the property of negroes, and \$38,500 that of Indians. Farms operated by owners have the smallest average area, 143.2 acres, while those operated by managers have the largest, 315.6. Many of the latter are adjuncts of public institutions, while others are conducted by wealthy individuals in connection with their summer homes. As a rule, such farms are favorably located and highly improved, and the average values of the various forms of farm property, shown in Table 7, are much larger for this class than for any other class of farms grouped by tenure. The ratio which the gross income of these farms bears to the total value of their farm property is, however, smaller than for the other groups. This is due to the high average valuation of land and buildings, and to the fact that many of these farms are not cultivated primarily for profit.

FARMS CLASSIFIED BY AREA.

Tables 8 and 9 present the principal statistics for farms classified by area.

TABLE 8.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY AREA, WITH PERCENTAGES.

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	228,622	151.2	34,574,387	100.0	\$1,834,345,546	100.0
Under 3 acres.....	975	1.9	1,838	(¹)	1,240,756	0.1
3 to 9 acres.....	4,756	6.0	28,517	0.1	7,078,585	0.4
10 to 19 acres.....	5,917	13.4	79,572	0.2	10,500,241	0.6
20 to 49 acres.....	21,475	35.6	765,266	2.2	49,990,584	2.7
50 to 99 acres.....	49,665	77.1	3,828,843	11.1	208,694,536	11.4
100 to 174 acres.....	79,923	140.1	11,197,376	32.4	598,231,639	32.6
175 to 259 acres.....	38,144	214.7	8,190,183	23.7	438,853,182	23.6
260 to 499 acres.....	24,609	332.0	8,171,295	23.6	418,266,142	22.5
500 to 999 acres.....	2,818	626.0	1,764,029	5.1	87,694,694	4.8
1,000 acres and over.....	340	1,610.1	547,418	1.6	23,795,187	1.3

¹ Less than one-tenth of 1 per cent.

TABLE 9.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY AREA.

AREA.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State.....	\$5, 497	\$1, 053	\$253	\$1, 220	\$1, 152	14.4
Under 3 acres	411	678	48	141	287	22.5
3 to 9 acres	637	617	60	174	237	15.9
10 to 19 acres	878	591	75	231	282	15.9
20 to 49 acres	1, 354	522	100	352	392	16.8
50 to 99 acres	2, 726	687	168	621	668	15.9
100 to 174 acres	5, 141	1, 012	258	1, 074	1, 085	14.5
175 to 259 acres	7, 941	1, 408	346	1, 684	1, 594	14.0
260 to 499 acres	11, 891	1, 806	440	2, 656	2, 238	13.6
500 to 999 acres	21, 661	2, 689	584	6, 185	4, 200	13.5
1,000 acres and over.....	47, 685	5, 850	1, 038	15, 413	9, 019	12.9

The group of farms containing from 100 to 174 acres each comprises the largest percentage of the total farm acreage and also the largest percentage of the total value of farm property. In this group the average values of the various forms of farm property approach nearest to the average for the state. Except for slight variations in the average value of buildings on small farms, the average values of the several forms of farm property advance with the size of the farm. For farms of less than 3 acres the average value of buildings exceeds that of land and improvements, as this class includes most of the florists' establishments and city dairies.

The average gross incomes per acre for the various groups are as follows: Farms under 3 acres, \$152.21; 3 to 9 acres, \$39.46; 10 to 19 acres, \$20.99; 20 to 49 acres, \$11.01; 30 to 99 acres, \$8.66; 100 to 174 acres, \$7.74; 175 to 259 acres, \$7.43; 260 to 499 acres, \$6.89; 500 to 999 acres, \$6.71; and 1,000 acres and over, \$5.60. In considering the relatively high gross income per acre for farms of less than 3 acres, it should be borne in mind that the income of the florists' establishments, nurseries, and

city dairies, of which this group is largely composed, are determined not so much by the acreage of land used as by the amount of capital invested in buildings, implements, and live stock, and the amounts expended for labor and fertilizers.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

Tables 10 and 11 present the leading features of the statistics relating to farms classified by principal source of income. If the value of the hay and grain raised on any farm exceeds that of any other crop and constitutes at least 40 per cent of the value of the products not fed to live stock, the farm is designated a "hay and grain farm." If vegetables are the leading crop, constituting 40 per cent of the value of products, the farm is designated a "vegetable farm." The farms of the other groups are classified in accordance with the same general principle. "Miscellaneous" farms are those whose operators do not derive their principal income from any one class of farm products. Farms with no income in 1899 are classified according to the agricultural operations upon other farms in the same locality.

TABLE 10.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME, WITH PERCENTAGES.

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	228,622	151.2	34,574,837	100.0	\$1,884,345,546	100.0
Hay and grain	73,210	157.6	11,536,348	33.4	578,063,766	31.2
Vegetables	2,136	39.9	85,320	0.2	7,437,889	0.4
Fruit	852	37.5	31,926	0.1	3,519,332	0.2
Live stock	133,625	158.2	21,133,392	61.1	1,151,548,425	62.8
Dairy produce	7,678	112.0	800,049	2.5	49,635,804	2.7
Tobacco	2	55.0	110	(1)	8,669	(1)
Sugar	35	115.7	4,049	(1)	325,848	(1)
Flowers and plants	97	6.9	609	(1)	646,435	(1)
Nursery products	104	60.4	6,285	(1)	866,788	0.1
Miscellaneous	10,888	84.2	916,194	2.7	47,292,000	2.6

¹ Less than one-tenth of 1 per cent.

TABLE 11.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except build-ings).	Build-ings.	Imple-ments and mach-inery.	Live stock.		
The State-----	\$5,497	\$1,053	\$253	\$1,220	\$1,152	14.4
Hay and grain	6,834	852	248	894	1,039	13.3
Vegetables	2,322	765	117	278	657	18.9
Fruit	2,690	1,037	118	286	605	14.7
Live stock	5,665	1,195	271	1,487	1,297	15.1
Dairy produce	4,281	989	208	987	699	10.8
Tobacco	3,600	350	45	339	470	10.8
Sugar	6,925	1,420	236	729	1,025	11.0
Flowers and plants	2,883	3,545	186	50	3,499	52.5
Nursery products	6,073	1,739	260	262	6,037	72.4
Miscellaneous	2,887	735	151	572	524	12.1

For the several classes of farms the average values per acre of products not fed to live stock are as follows: For farms deriving their principal income from flowers and plants, \$507.30; nursery products, \$99.89; vegetables, \$16.46; fruit, \$16.15; sugar, \$8.86; tobacco, \$8.55; live stock, \$8.20; hay and grain, \$6.59; dairy produce, \$6.25; and miscellaneous products, \$6.23.

The wide variations shown in the averages and percentages of gross income are largely due to the fact that in computing gross income no deduction is made for expenditures. For florists' establishments, nurseries, and market gardens the average expenditure for such items as labor and fertilizers represents a far larger percentage of the gross income than in the case of "hay and grain," "live stock," or "miscellaneous" farms. Were it possible to present the average net incomes, the variations shown would be comparatively slight.

FARMS CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

Tables 12 and 13 present data relating to farms classified by the reported value of products not fed to live stock.

TABLE 12.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK, WITH PERCENTAGES.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	228,622	151.2	34,574,837	100.0	\$1,884,345,546	100.0
\$0.....	769	52.5	40,408	0.1	1,612,180	0.1
\$1 to \$49	1,192	36.5	43,531	0.1	2,280,170	0.1
\$50 to \$99	2,944	32.2	94,929	0.3	5,282,150	0.3
\$100 to \$249	14,951	43.6	652,090	1.9	35,401,930	1.9
\$250 to \$499	32,381	75.5	2,446,879	7.1	119,579,480	6.5
\$500 to \$999	72,900	119.4	8,705,650	25.2	436,140,770	23.8
\$1,000 to \$2,499	87,291	193.7	16,912,255	48.9	904,556,930	49.3
\$2,500 and over	16,191	350.8	5,679,992	16.4	329,485,936	18.0

TABLE 13.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.					
	Land and im- prove- ments (except build- ings).	Build- ings.	Imple- ments and ma- chinery.	Live stock.	Gross income (products of 1899 not fed to live stock).	
The State-----	\$5, 407	\$1, 053	\$253	\$1, 220	\$1, 152	14.4
\$0-----	1, 350	306	72	368		2.4
\$1 to \$49-----	1, 244	352	61	261	47	3.9
\$50 to \$99-----	1, 138	388	57	211	70	7.7
\$100 to \$249-----	1, 473	481	88	326	183	11.0
\$250 to \$499-----	2, 444	587	135	527	405	11.0
\$500 to \$999-----	4, 027	831	211	841	683	15.0
\$1,000 to \$2,499-----	7, 220	1, 817	323	1, 503	1, 534	19.3
\$2,500 and over-----	13, 640	2, 305	516	3, 889	3, 924	

The absence of income in the first group is due in part to the inability of the enumerators to secure complete reports for certain farms where changes in ownership or tenancy had occurred shortly prior to the date of enumeration. The persons in charge of such farms, June 1, 1900, could not always give definite information concerning the products of the preceding year. The same statement is also true of some of the farms with reported incomes of less than \$100. To this extent the reports fall short of giving a complete exhibit of farm income in 1899. Other farms with small reported incomes are doubtless the suburban homes of retired farmers and of city merchants and professional men, who derive their principal incomes from other than agricultural pursuits.

LIVE STOCK.

At the request of the various live-stock associations of the country, a new classification of domestic animals was adopted for the census of 1900. Neat cattle are grouped by age, in accordance with their present and prospective relations to the dairy industry and the supply of meat products. Horses and mules are classified by age, and neat cattle and sheep by age and sex. The new classification permits a very close comparison with the figures published in previous census reports.

Table 14 presents a summary of live-stock statistics.

TABLE 14.—NUMBER OF DOMESTIC ANIMALS, FOWLS, AND BEES ON FARMS, JUNE 1, 1900, WITH TOTAL AND AVERAGE VALUES, AND NUMBER OF DOMESTIC ANIMALS NOT ON FARMS.

LIVE STOCK.	Age in years.	ON FARMS.			NOT ON FARMS.
		Number.	Value.	Average value.	Number.
Calves	Under 1	1,290,279	\$14,413,585	\$11.17	9,015
Steers	1 and under 2	730,681	17,055,451	24.16	2,824
Steers	2 and under 3	603,745	23,624,399	39.13	2,891
Steers	3 and over	173,016	3,510,610	54.97	3,142
Bulls	1 and over	93,154	4,408,021	47.32	337
Heifers	1 and under 2	592,076	12,212,609	20.62	3,313
Cows kept for milk	2 and over	1,423,648	40,349,012	32.56	56,028
Cows and heifers not kept for milk.	2 and over	461,031	14,315,225	31.05	2,330
Colts	Under 1	124,527	2,991,078	24.02	3,393
Horses	1 and under 2	133,589	5,359,392	40.12	2,728
Horses	2 and over	1,134,457	69,370,107	61.15	148,651
Mule colts	Under 1	6,488	207,356	31.96	103
Mules	1 and under 2	6,807	333,830	49.04	271
Mules	2 and over	42,452	3,045,575	71.74	4,864
Asses and burros	All ages	1,832	150,768	82.30	503
Lambs	Under 1	398,850	945,615	2.37	980
Sheep (ewes)	1 and over	576,104	2,610,908	4.53	1,561
Sheep (rams and wethers)	1 and over	81,764	399,619	4.89	313
Swine	All ages	9,723,791	43,704,176	4.50	123,138
Goats	All ages	41,468	146,703	3.54	807
Fowls: ¹					
Chickens ²		18,907,673			
Turkeys		424,306			
Geese		223,612	6,535,464		
Ducks		187,752			
Bees (swarms of)		138,811	443,923	3.20	
Unclassified			6,675		
Value of all live stock.			278,830,096		

¹The number reported is of fowls over 3 months old. The value is of all, old and young.

²Including Guinea fowls.

The total value of all live stock on farms, June 1, 1900, was \$278,830,096, of which 34.5 per cent represents the value of neat cattle other than dairy cows; 27.9 per cent, the value of horses; 16.6 per cent, that of dairy cows;

15.7 per cent, that of swine; 2.3 per cent, that of poultry; 1.5 per cent, that of sheep and goats; and 1.5 per cent, that of all other live stock.

The prices of neat cattle are high, but not higher than the excellent grade of stock kept throughout the state will warrant.

No reports were secured of the value of live stock not on farms, but it is probable that such animals have higher average values than those on farms. Allowing the same average values, however, the total value of domestic animals not on farms would be \$12,714,320, or 4.4 per cent of the total value of farm live stock; and the value of all live stock in the state exclusive of poultry and bees not on farms, would be \$291,544,416.

CHANGES IN LIVE STOCK KEPT ON FARMS.

The following table shows the changes since 1850 in the numbers of the most important domestic animals.

TABLE 15.—NUMBER OF SPECIFIED DOMESTIC ANIMALS ON FARMS: 1850 TO 1900.

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep. ¹	Swine.
1900	1,423,648	3,943,982	1,392,573	57,579	657,868	9,723,791
1890	1,498,418	3,397,132	1,312,079	41,648	547,394	8,266,779
1880	854,187	1,757,849	792,322	44,424	455,359	6,084,316
1870	369,811	636,424	433,642	25,485	855,493	1,353,908
1860	189,802	350,286	175,088	5,734	259,041	934,820
1850	45,704	90,917	38,536	754	149,960	323,247

¹Lambs not included.

The number of dairy cows increased steadily in the forty years preceding 1890, but the table shows a decrease of 5.0 per cent from 1890 to 1900. It is probable, however, that this decrease is only apparent, as many of the 461,031 "cows and heifers not kept for milk" were doubtless milch cows dry at the time of enumeration, or were cows milked at some time during the year though not "kept for milk" primarily. An increase in the last decade of 48,910,829 gallons, or 10.0 per cent, in the quantity of milk produced, supports the view that the stricter definition of the term "dairy cows" by the Twelfth Census than by preceding censuses is largely responsible for the apparent decrease.

Better conveniences for feeding stock and increased and improved facilities for packing and shipping meats have given a great impetus to the raising of beef cattle in the central and western states. The table shows that the number of other neat cattle in Iowa in 1900 was over forty times as great as in 1850 and 16.1 per cent greater than in 1890. The comparatively small rate of gain in the last decade is probably due to the fact that the unusually high prices prevailing for several months just preceding the enumeration led many farmers to reduce their herds and flocks to an unusual extent.

The number of horses increased steadily during the period covered by the table, the rate of gain for the last decade being 6.1 per cent. The number of mules and asses decreased slightly in the decade from 1880 to 1890 but increased 38.3 per cent in the last decade, making the number of mules and asses in 1900, 4.1 per cent of the number of horses.

The increase in the number of horses and mules since 1890 has not kept pace with the increase in the acreage of land under cultivation, so that the average acreage now cultivated by the aid of a single working animal is larger than it was ten years ago. This change marks the introduction of better breeds of horses and the increased use of labor-saving machinery.

Except in the decade from 1870 to 1880 the number of sheep increased steadily during the half century. The rate of gain since 1890 was 20.2 per cent. The number of swine increased 17.6 per cent in the last decade.

In comparing the poultry report of 1900 (see Table 14) with that of the Eleventh Census, it should be borne in mind that in 1900 the enumerators were instructed not to report fowls less than 3 months old, while in 1890 no such limitation was made. This fact explains to a great extent the apparent decrease in the number of all fowls. An increase of 43.4 per cent in the quantity of eggs produced is evidence that more fowls were kept in 1900 than ten years before. Compared with the figures of 1890, the present census shows decreases in the number of fowls as follows: Turkeys, 54.9 per cent; geese, 14.6 per cent; ducks, 10.8 per cent; chickens, 6.4 per cent.

ANIMAL PRODUCTS.

Table 16 is a summarized exhibit of the products of animal industry.

TABLE 16.—QUANTITIES AND VALUES OF SPECIFIED ANIMAL PRODUCTS, AND VALUES OF POULTRY RAISED, ANIMALS SOLD, AND ANIMALS SLAUGHTERED ON FARMS IN 1899.

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool.....	Pounds.....	5,015,965	\$992,334
Mohair and goat hair.....	Pounds.....	28,080	8,607
Milk.....	Gallons.....	1595,872,240	27,516,870
Butter.....	Pounds.....	61,789,288	
Cheese.....	Pounds.....	306,428	
Eggs.....	Dozens.....	99,621,920	
Poultry.....			10,016,707
Honey.....	Pounds.....	2,539,784	9,491,819
Wax.....	Pounds.....	49,314	305,188
Animals sold.....			113,078,523
Animals slaughtered.....			8,448,938
Total.....			169,858,981

¹ Includes all milk produced.

Of the value of animal products in 1899, 71.5 per cent represents the value of animals sold and animals slaughtered on farms; 16.2 per cent, that of dairy products; 11.5 per cent, that of poultry raised and eggs produced; and 0.8 per cent, that of wool, mohair, honey, and wax.

DAIRY PRODUCTS.

The production of milk in 1899 was 10.0 per cent greater than in 1889. Decreases in the last decade of 15.2 per cent in the quantity of butter and 70.5 per cent in the quantity of cheese made on farms are due in part to the transfer of these industries from the farm to the creamery, and in part to the growing demand for milk and cream in cities.

Of the \$27,516,870 given in Table 16 as the value of all dairy products in 1899, \$8,697,868, or 31.6 per cent, represents the value of such products consumed on farms, and \$18,819,002, or 68.4 per cent, the amount realized from

sales. Of the latter amount, \$12,275,844 was derived from the sale of 214,338,442 gallons of milk; \$1,349,938, from 3,323,073 gallons of cream; \$5,167,031, from 33,266,912 pounds of butter; and \$26,189, from 258,003 pounds of cheese.

POULTRY AND EGGS.

The total value of the products of the poultry industry in 1899 was \$19,508,526, of which amount, 48.7 per cent represents the value of fowls raised, and 51.3 per cent the value of eggs produced. Between 1889 and 1899 the number of eggs produced increased 43.4 per cent.

WOOL.

The quantity of wool produced increased 89.3 per cent in the last decade, the western counties reporting the greatest gains. The average weight of fleeces in 1880 was 6.5 pounds; in 1890, 7.3 pounds; and in 1900, 7.0 pounds.

HONEY AND WAX.

The quantity of honey reported in 1900 was but 37.3 per cent as great as that reported ten years before. The quantity of wax produced decreased 26.8 per cent.

ANIMALS SOLD OR SLAUGHTERED.

The total value of animals sold and animals slaughtered on farms in 1899 was \$121,527,461, or 33.3 per cent of the value of all farm products, and 46.1 per cent of the gross farm income. Sales of live animals were reported by 190,097 farmers, or 84.6 per cent of the total number reporting live stock. The average value per farm of live animals sold was \$594.84, and of animals slaughtered, \$45.16.

HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS.

Table 17 presents, for the leading groups of farms, the number of farms reporting horses and dairy cows, the total number of these animals, and the average number per farm. In computing the averages presented, only those farms which report the kind of stock under consideration are included.

TABLE 17.—HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS, JUNE 1, 1900.

CLASSES.	HORSES.			DAIRY COWS.		
	Farms reporting.	Number.	Average per farm.	Farms reporting.	Number.	Average per farm.
Total.....	218,955	1,392,573	6.4	210,276	1,423,648	6.8
White farmers.....	218,761	1,391,601	6.4	210,133	1,423,073	6.8
Colored farmers.....	194	972	5.0	143	575	4.0
Owners ¹	141,452	928,533	6.6	138,495	992,958	7.2
Managers.....	1,440	15,180	10.5	1,386	10,877	8.1
Cash tenants.....	42,578	255,817	6.0	40,119	245,256	6.1
Share tenants.....	33,485	193,013	5.8	30,326	174,557	5.8
Under 20 acres.....	8,902	19,292	2.2	8,008	16,812	2.1
20 to 99 acres.....	66,305	248,153	3.7	61,526	243,055	4.0
100 to 174 acres.....	73,467	475,725	6.5	76,714	522,960	6.8
175 to 259 acres.....	37,761	311,906	8.3	37,015	335,221	9.1
260 acres and over.....	27,520	337,496	12.3	27,013	305,590	11.3
Hay and grain.....	68,898	418,206	6.1	63,049	358,159	5.7
Vegetable.....	1,822	4,917	2.7	1,273	2,898	2.3
Fruit.....	713	1,708	2.4	545	1,231	2.3
Live stock.....	130,719	893,044	6.8	128,639	945,025	7.3
Dairy.....	7,206	37,104	5.1	7,678	74,460	9.7
Tobacco.....	2	5	2.5	2	8	4.0
Sugar.....	34	173	5.1	27	132	4.9
Miscellaneous ²	9,661	37,416	8.9	9,063	41,735	4.6

¹ Including "part owners" and "owners and tenants."

² Including florists' establishments and nurseries.

CROPS.

The following table gives the statistics of the principal crops of 1899.

TABLE 18.—ACREAGES, QUANTITIES, AND VALUES OF THE PRINCIPAL FARM CROPS IN 1899.

CROPS.	Acres.	Unit of measure.	Quantity.	Value.
Corn	9,804,076	Bushels	388,453,190	\$97,297,707
Wheat	1,689,705	Bushels	22,709,440	11,457,808
Oats	4,695,391	Bushels	168,364,170	33,254,987
Barley	627,851	Bushels	18,059,060	5,842,363
Rye	89,172	Bushels	1,179,970	480,817
Buckwheat	13,884	Bushels	151,120	84,842
Flaxseed	120,458	Bushels	1,413,380	1,380,102
Kafir corn	66	Bushels	1,408	552
Broom corn	2,220	Pounds	1,178,180	50,689
Clover seed		Bushels	15,114	69,040
Grass seed		Bushels	1,276,958	1,146,128
Hay and forage	4,614,378	Tons	6,851,871	30,042,246
Tobacco	131	Pounds	127,420	8,345
Hops	(¹)	Pounds	127	164
Peanuts		Bushels	24,903	88,296
Dry beans	2,427	Bushels	27,606	24,473
Dry pease	1,556	Bushels	17,305,919	3,870,746
Potatoes	175,888	Bushels	224,622	128,981
Sweet potatoes	2,688	Bushels	292,097	177,088
Onions	1,105	Pounds	80	2
Chicory				3,332,089
Miscellaneous vegetables	81,502		2,320	280
Maple sugar		Gallons	2,662	2,640
Maple sirup		Tons	10,088	29,125
Sorghum cane	7,999	Gallons	521,212	190,695
Sorghum sirup				31,819,767
Orchard fruits	180,076			878,447
Small fruits	9,653			4166,360
Grapes	25,180	Centals	7,403,900	320,407
Flowers and plants	140			6,014
Seeds	71			619,092
Nursery products	2,905			7,603
Nuts				3,265,628
Forest products				23,483
Miscellaneous				
Total	22,164,564			195,552,547

¹ Less than 1 acre.

² Estimated from number of vines or trees.

³ Including value of cider, vinegar, etc.

⁴ Including value of raisins, wine, etc.

Of the total value of crops in 1899, corn contributed 49.7 per cent; oats, 17.0 per cent; other cereals, 8.9 per cent; hay and forage, 15.4 per cent; vegetables, including potatoes, sweet potatoes, and onions, 3.8 per cent; forest products, 1.7 per cent; orchard products, small fruits, and grapes, 1.5 per cent; and all other products, 2.0 per cent.

Of the total acreage cultivated 44.2 per cent was devoted to corn, 21.2 per cent to oats, and 21.0 per cent to hay and forage.

The average yield per acre of hay and forage was 1.5 tons, and the average values were \$4.38 per ton and \$6.47 per acre. The average values per acre of other crops were as follows: Flowers and plants, \$2,288.62; nursery products, \$213.11; onions, \$148.19; small fruits, \$91.00; tobacco, \$63.70; sweet potatoes, \$47.98; miscellaneous vegetables, \$40.88; grapes, \$32.12; peanuts, \$23.43; broom corn, \$22.81; potatoes, \$22.01; dry beans and dry pease, \$15.76; flaxseed, \$10.91; orchard fruits, \$10.27; cereals, \$8.74; and Kafir corn, \$8.36. The crops yielding the greatest returns were grown upon very highly improved land. Their production required a relatively large amount of labor and large expenditures for fertilizers.

CEREALS.

Table 19 is an exhibit of the changes in cereal production since 1849.

TABLE 19.—ACREAGE AND PRODUCTION OF CEREALS: 1849 TO 1899.

PART 1.—ACREAGE.

YEAR. ¹	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899	627,851	13,884	9,804,076	4,695,391	89,172	1,689,705
1889	518,729	25,248	7,685,522	3,752,141	98,707	685,648
1879	198,861	16,318	6,616,144	1,507,577	102,607	3,049,288

¹ No statistics of acreage were secured prior to 1879.

PART 2.—BUSHELS PRODUCED.

YEAR.	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899	18,059,060	151,120	388,453,190	168,364,170	1,179,970	22,709,440
1889	13,406,122	286,746	313,130,782	146,679,289	1,445,283	8,219,786
1879	4,022,588	166,895	276,014,217	50,610,591	1,518,605	81,154,205
1869	1,900,779	109,432	68,985,065	21,005,142	505,807	29,485,692
1859	467,103	215,705	42,410,686	6,887,645	183,022	8,449,493
1849	25,093	52,516	8,656,799	1,624,845	19,916	1,530,581

Of the total land surface of Iowa, 47.7 per cent, or nearly one-half, was devoted to cereals in 1899, corn alone covering over one-fourth. The total number of acres in cereals was 16,920,029 in 1899; 12,560,890 in 1889; and 11,490,795 in 1879. Of the total acreage in 1899, corn occupied 57.9 per cent; oats, 27.8 per cent; wheat, 10.0 per cent; barley, 3.7 per cent; rye, 0.5 per cent; and buckwheat, 0.1 per cent.

The rates of increase in acreage for the last decade were: Corn, 29.2 per cent; oats, 25.1 per cent; barley, 21.0 per cent; while the area devoted to wheat increased nearly threefold. Decreases are shown in the acreages devoted to buckwheat and rye, neither of which receive much attention.

Corn was reported in 1900 by 212,298 farmers, or 92.9 per cent of the total number, who devoted to the crop an average of 46.2 acres each. This crop was grown most extensively in the central and southwestern counties. Oats and barley are reported in largest quantities in northern counties, and wheat in northern and northwestern counties.

The acreage given for cereals does not include 86,994 acres of grain cut green for hay, nor 178,409 acres devoted to corn, nonsaccharine sorghum, and similar crops grown for forage or ensilage.

HAY AND FORAGE.

In 1900, 187,122 farmers, or 81.8 per cent of the total number, reported hay or forage crops, from which, excluding cornstalks and corn strippings, they obtained an average yield of 1.4 tons per acre. The acreage in hay and forage in 1899 was 11.3 per cent less than it was ten years before.

In 1899 the acreages and yields of the various kinds of hay and forage were as follows: Wild, salt, and prairie grasses, 1,228,135 acres and 1,638,182 tons; millet and Hungarian grasses, 161,777 acres and 321,732 tons; alfalfa or lucern, 2,298 acres and 6,252 tons; clover, 148,720 acres and 229,326 tons; other tame and cultivated grasses, 2,838,095 acres and 3,823,133 tons; grains cut green for hay, 86,944 acres and 156,061 tons; forage crops, 178,409 acres and 425,488 tons; cornstalks and corn strippings, 161,875 acres and 251,702 tons.

In Table 18 the production of cornstalks and corn strip-

pings is included under "hay and forage," but the acreage is included under "corn," as the forage secured was an incidental product of the corn crop.

SORGHUM.

The area used in the cultivation of sorghum cane in 1899 was 8,287 acres, or 50.1 per cent of that reported in 1889. The products obtained were, 521,212 gallons of sirup, and 10,033 tons of cane, sold as cane.

The cultivation of sorghum cane in 1899 was reported by all counties except Dickinson and O'Brien. Johnson, Blackhawk, and Jones counties, ranking in the order named, reported the larger areas, and Blackhawk county produced the greatest quantity of sirup.

VEGETABLES.

The value of all vegetables grown in the state in 1899, including potatoes, sweet potatoes, and onions, was \$7,508,854. Of this amount 51.5 per cent represents the value of potatoes. This important crop was reported by 176,488 farmers, or 77.2 per cent of the total number in the state. There was a slight increase in acreage during the last decade, but a decrease in production.

Aside from the land devoted to potatoes and onions, 81,502 acres were used in the growing of miscellaneous vegetables. The products of 48,208 acres of this area were not reported in detail. Of the remaining 33,294 acres, concerning which detailed reports were received, 17,856 acres were devoted to sweet corn; 5,440 acres, to watermelons; 3,437 acres, to cabbages; 2,712 acres, to tomatoes; 1,316 acres, to cucumbers; 1,224 acres, to muskmelons; and 1,309 acres, to other vegetables.

ORCHARD FRUITS.

The changes in orchard fruits since 1890 are shown in the following table.

TABLE 20.—ORCHARD TREES AND FRUITS: 1890 AND 1900.

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples	6,869,588	3,640,588	3,129,862	5,040,352
Apricots	6,809	2,683	373	206
Cherries	791,327	199,067	118,743	49,334
Peaches	516,145	82,288	6,481	25,040
Pears	101,046	12,757	5,014	7,812
Plums and prunes	1,302,217	260,600	189,312	30,878

The total number of fruit trees in the state more than doubled in the last decade, having increased from 4,197,913 to 9,590,132. The number of apple trees increased 88.7 per cent, but as the number of other fruit trees increased more rapidly, the proportion of apple trees decreased from 86.7 per cent of all trees in 1890 to 71.6 per cent in 1900. The number of plum and prune trees reported in 1900 was nearly five times as great as in 1890; peach trees increased over sixfold and pear trees over eightfold.

In addition to the trees shown in Table 20, unclassified orchard trees to the number of 46,512 are reported, with a yield of 12,232 bushels of fruit. The value of orchard products, given in Table 18, includes the value of 9,704

barrels of cider, 3,872 barrels of vinegar, and 79,740 pounds of dried and evaporated fruits.

The quantity of fruit produced in any given year is determined largely by the nature of the season, hence comparisons between the crops of 1889 and 1899 have little significance.

GRAPES.

Grapes were grown by 29,389 farmers, who obtained, in 1899, 7,403,900 centals of fruit from 2,072,101 vines. The total value of the crop, including the value of 76,301 gallons of wine made on farms, was \$166,360. Pottawattamie, Des Moines, and Polk are the leading counties in the cultivation of grapes, reporting in 1900 more than one-third of the vines of the state.

SMALL FRUITS.

The total area used in the cultivation of small fruits in 1889 was 9,653 acres, distributed among 62,260 farms. The value of the fruits grown was \$878,447, an average of \$91.00 per acre. Of the total area, 3,394 acres, principally in the southern counties, were devoted to raspberries and Logan berries, the total production of which was 3,604,210 quarts. The acreage and production of other berries were as follows: Strawberries, 2,335 acres and 3,184,320 quarts; blackberries and dewberries, 1,719 acres and 1,966,070 quarts; currants, 1,017 acres and 1,226,560 quarts; gooseberries, 777 acres and 975,890 quarts; cranberries, 1 acre and 1,952 quarts; and other berries, 410 acres and 388,130 quarts.

FLORICULTURE.

Flowers and plants were grown in 1899 by 172 farmers, of whom but 97 derived their principal income from that source. The total value of the flowers and plants grown in the state was \$320,407, of which \$307,583 represents the value of those reported by the commercial florists. The value of the farm property of the florists was \$646,435, of which \$279,660 represents the value of 669 acres of land; \$343,830, that of buildings and other improvements; \$18,090, that of implements and machinery; and \$4,855, that of live stock. They expended \$65,129 for labor, and \$1,929 for fertilizers.

LAND UNDER GLASS.

The 97 florists' establishments have 1,139,364 square feet of glass surface, which is equivalent to 854,523 square feet of land under glass. In addition to the florists there are 451 farmers who reported an aggregate of 581,737 square feet of land under glass, making the total for the state 1,436,260 square feet. The counties having large areas under glass are Dubuque, Polk, Pottawattamie, Scott, and Woodbury.

NURSERIES.

Nursery stock valued at \$619,092 was raised in 1899 by 238 farmers 104 of whom derived their principal income from that source, reporting a product of \$591,531, or 95.5 per cent of the total. The farms of the commercial nurserymen were worth \$812,490, of which \$631,590 was

invested in land, and \$180,900 in buildings and other improvements. They owned implements and machinery worth \$27,063, and live stock valued at \$27,235. In the cultivation of 6,285 acres of land, they expended \$125,205 for labor and \$3,145 for fertilizers.

LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was \$16,375,670, an average of \$72 per farm. The average was highest on the most intensively cultivated farms, being \$1,204 for nurseries; \$671 for florists' establishments; \$84 for fruit farms; \$81 for live-stock farms; \$75 for sugar farms; \$74 for vegetable farms; \$60 for hay and grain farms; and \$59 for dairy farms. "Managers" expended on an average, \$311; "owners," \$72; "cash tenants," \$60; and "share tenants," \$56. White farmers expended \$72 per farm, and colored farmers, \$33.

Fertilizers were purchased in 1899 to the value of \$337,190, an average of \$1.47 per farm, and a total increase of \$250,347, or nearly threefold, since 1889. The average expenditure was greatest for nurseries, amounting to \$30. For sugar farms the average was \$22; for florists' establishments, \$20; for vegetable farms, \$6; for fruit farms, \$4; and for hay and grain, live-stock, and dairy farms, \$1.

THE SAC AND FOX INDIAN RESERVATION.

The Sac and Fox Indian reservation, located in Tama county and containing an area of 2,965 acres, is a reservation in name only, as the land is owned in fee by the Indians, although held in trust for them by the Secretary of the Interior.

The inhabitants of this reservation, 385 in number, are among the most conservative and nonprogressive Indians in the United States. They have lived in the midst of civilization for nearly half a century without making any decided advancement until the last decade. A class among

them, more industrious than the rest, now till the soil and are making considerable progress in agriculture, as is shown by their recent extensive purchases of modern farming implements and machinery, and of a better grade of horses.

The principal crops grown are corn, wheat, and oats. Most of the farmers have small gardens in which potatoes, pumpkins, sweet corn, and beans are raised, pumpkins and sweet corn being dried for use during the winter months. A few of them cut the wild grass, and also raise small quantities of tame hay. A comparative table of the crops grown in 1889 and 1899 shows a marked advancement in the ten years.

PRINCIPAL CROPS GROWN ON THE SAC AND FOX RESERVATION: 1889 AND 1899.

CROPS.	Unit of measure.	1889	1899	INCREASE.	
				Total.	Per cent.
Corn.....	Bushels.....	4,400	2,500	1,900	76
Oats.....	Bushels.....	3,870		3,870	
Wheat.....	Bushels.....	914		914	
Hay.....	Tons.....	30	10	20	200

¹ Report of Commissioner of Indian Affairs, 1899.

The first crop of wheat was harvested in 1896. In 1899 the 26 Indian farmers cultivated for all purposes from 5 to 30 acres each, the largest area operated by one farmer being 48 acres. These small tracts are not owned by individual Indians, but each farmer's right of occupation is recognized by the tribe as long as he continues to cultivate his land.

The live stock of the reservation consists principally of ponies and work horses, most of the tribe being opposed to raising cattle and swine. Only one Indian owns any cattle, those reported on the reservation being the property of two white renters. A number of the Indians have chickens and a few possess turkeys.

CENSUS BULLETIN.

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April 29, 1902.

MANUFACTURES.

SILK MANUFACTURE.

HON. WILLIAM R. MERRIAM,
Director of the Census.

SIR: I transmit herewith, for publication in bulletin form, a report on silk manufacture, prepared under my direction by Mr. Franklin Allen, of New York city, secretary of the Silk Association of America, acting in the capacity of an expert special agent of the division of manufactures of the Census Office.

The statistics demonstrate a satisfactory rate of growth, which may be considered as commensurate with the increased needs of the country for silk products. The more important features of the progress in silk manufacture, as indicated by the statistics and more fully explained in the text of the report, are briefly summarized as follows: The productive capacity of plants has been increased by the invention of improved processes and machines, which also enable the manufacturers to turn out a superior quality of goods. The decade has been marked by the almost complete supersession of hand looms by power looms. American manufacturers have shown their ability to meet the exacting demands of the consumer by producing nearly all descriptions of weaves known to the trade. A notable improvement has taken place during the decade in the work of dyeing and printing. Recognition of the changing conditions of the industry has been shown by the establishment of new plants in communities offering superior advantages in the form of abundant and suitable labor, cheap fuel, and financial inducements advanced by the municipalities.

The small increase in the number of silk manufacturing establishments from 1890 to 1900 is accounted for by the transfer of 39 establishments making braids and

trimmings to the cotton and wool industries. In prior censuses all such establishments using silk as a component material were classed as silk establishments. Seventy-eight establishments manufacturing hosiery and knit goods have also been eliminated from the silk tabulations, and are included in the special report on hosiery and knit goods. The silk glove industry, which has had a marked development since 1897, will also be included in the hosiery and knit goods tabulations.

The statistics of this industry are presented in 23 tables: Table 1, comparative figures for the industry at the several censuses; Table 2, the statistics for establishments reporting a product exceeding \$500 in value, and those reporting a product of less than \$500; Table 3, the statistics of materials and products, eliminating materials and products twice included; Table 4, import statistics, 1850 to 1900, compared with the value of silk products of domestic manufacture at the several censuses; Table 5, a comparative summary of materials and products, 1890 and 1900; Table 6, a comparative summary of textile materials, 1890 and 1900; Table 7, broad-silk mills classified by number of looms; Table 8, statistics of the several kinds of broad silks manufactured; Table 9, velvet and plush mills classified by number of looms; Table 10, ribbon mills classified by number of looms; Table 11, throwing mills classified by number of spindles; Table 12, comparative summary, by states, 1880 to 1900; Table 13, comparative summary, of capital, by states, 1890 and 1900; Table 14, comparative summary of wage-earners, by states, 1870 to 1900; Table 15, skilled and unskilled operatives, by states; Table 16, counties with products exceeding \$1,000,000 in value; Table 17, statistics of braids and trimmings manufacture, by

states; Tables 18, 19, 20, and 21, statistics of silk dyeing, printing, and finishing; Table 22, world's production of raw silk; Table 23, presenting detailed statistics for the industry, by states. In addition to the tables enumerated, several tabular statements explanatory of the various phases of the industry are shown.

In drafting the schedules of inquiry for the census of 1900 care was taken to preserve the basis of comparison with prior censuses. Comparison may be made safely with respect to all the general heads of the inquiry except those relating to capital, salaried officials, clerks, etc., and their salaries, the average number of employees, and the total amount of wages paid. Live capital—that is, cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries—was first called for at the census of 1890. No definite attempt was made, prior to the census of 1890, to secure a return of live capital invested.

Changes were made in the inquiries relating to employees and wages, in order to eliminate defects found to exist on the form of inquiry adopted in 1890. At the census of 1890 the average number of persons employed during the entire year was called for, and also the average number employed at stated weekly rates of pay, and the average number was computed for the actual time the establishments were reported as being in operation. At the census of 1900 the greatest and least number of employees were reported, and also the average number employed during each month of the year. The average number of wage-earners (men, women, and children) employed during the entire year was ascertained by using 12, the number of calendar months, as a divisor into the total of the average numbers reported for each month. This difference in the method of ascertaining the average number of wage-earners during the entire year may have resulted in a variation in the number, and should be considered in making comparisons.

At the census of 1890 the number and salaries of proprietors and firm members actively engaged in the business or in supervision were reported, combined with clerks and other officials. In cases where proprietors and firm members were reported without salaries, the amount that would ordinarily be paid for similar services was estimated. At the census of 1900 only the number of proprietors and firm members actively engaged in the industry or in supervision was ascertained, and no salaries were reported for this class. It is therefore impossible to compare the number and sala-

ries of salaried officials of any character for the two censuses.

Furthermore, the schedules for 1890 included in the wage-earning class overseers, foremen, and superintendents (not general superintendents or managers), while the census of 1900 separates from the wage-earning class such salaried employees as general superintendents, clerks, and salesmen. It is possible and probable that this change in the form of the question has resulted in eliminating from the wage-earners, as reported by the present census, many high-salaried employees included in that group for the census of 1890. With the exception of several other changes of a minor character in the special features of the schedule, the investigation has been conducted along the lines followed at the census of 1890.

In some instances the number of proprietors and firm members, shown in the accompanying tables, falls short of the number of establishments reported. This is accounted for by the fact that no proprietors or firm members are reported for corporations. The reports show a capital of \$81,082,201 invested in the 483 establishments reporting for the industry. This sum represents the value of land, buildings, machinery, tools, and implements, and the live capital utilized, but does not include the capital stock of any of the corporations. The value of the products is returned at \$107,256,258, to produce which involved an outlay of \$3,134,352 for salaries of officials, clerks, etc.; \$20,982,194 for wages; \$10,264,208 for miscellaneous expenses, including rent, taxes, etc.; and \$62,406,665 for materials used, mill supplies, freight, and fuel. It is not to be assumed, however, that the difference between the aggregate of these sums and the value of the products is, in any sense, indicative of the profits in the manufacture of the products during the census year. The census schedule takes no cognizance of the cost of selling manufactured articles, or of interest on capital invested, or of the mercantile losses incurred in the business, or of depreciation in plant. The value of the product given is the value as obtained or fixed at the factory. This statement is necessary in order to avoid erroneous conclusions from the figures presented.

Very respectfully,



Chief Statistician for Manufactures.

SILK MANUFACTURE.

By FRANKLIN ALLEN, *Expert Special Agent.*

Silk manufacture in the United States has shown a marked development since the census of 1890. It has taken its place as one of the leading industries of the nation and along several lines has established its independence of foreign competition. The causes for these favorable conditions were manifold. Chief among them were the enterprise of the manufacturer, the

perfection and reliability of his machinery, and the wise restriction of importation during the less prosperous period of the development of the industry.

Table 1 presents a comparative summary of the industry as returned at each census from 1850 to 1900, inclusive, with the percentages of increase for each decade.

TABLE 1.—COMPARATIVE SUMMARY, 1850 TO 1900, WITH PER CENT OF INCREASE FOR EACH DECADE.

	DATE OF CENSUS.						PER CENT OF INCREASE.				
	1900	1890	1880	1870	1860	1850	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860
Number of establishments.....	488	472	382	86	139	67	2.3	28.6	344.2	138.1	107.5
Capital.....	\$81,082,201	\$51,007,537	\$19,125,800	\$6,231,130	\$2,926,980	\$678,800	59.0	166.7	206.9	112.9	331.5
Salaries officials, clerks, etc., number.....	2,657	2,151	(3)	(3)	(3)	(3)	73.5	63.4	.....	.....	.....
Salaries.....	\$3,134,352	\$1,917,877	(3)	(3)	(3)	(3)	63.4	.....	.....	.....	.....
Wage-earners, average number.....	65,416	49,382	31,387	6,649	5,435	1,723	32.5	57.6	371.3	22.3	215.4
Total wages.....	\$20,982,194	\$17,762,441	\$9,146,705	\$1,942,286	\$1,050,224	\$207,416	18.1	94.2	370.9	84.9	253.1
Men, 16 years and over.....	24,206	17,632	9,375	1,734	1,585	503	37.5	87.8	440.7	9.4	215.1
Wages.....	\$10,699,483	\$9,349,531	(3)	(3)	(3)	(3)	14.4	.....	.....	.....	.....
Women, 16 years and over.....	34,797	28,914	16,396	3,529	3,850	1,220	20.3	76.3	364.6	18.3	215.6
Wages.....	\$9,377,696	\$7,976,065	(3)	(3)	(3)	(3)	17.7	.....	.....	.....	.....
Children, under 16 years.....	6,413	2,866	5,566	1,386	(3)	(3)	123.8	148.5	301.6	.....	.....
Wages.....	\$905,015	\$442,845	(3)	(3)	(3)	(3)	104.4	.....	.....	.....	.....
Miscellaneous expenses.....	\$10,264,208	\$4,250,623	(4)	(4)	(4)	(4)	141.0	.....	.....	.....	.....
Cost of materials used.....	\$62,406,665	\$51,004,425	\$22,467,701	\$7,817,559	\$3,901,777	\$1,093,800	22.4	127.0	187.4	100.4	256.7
Value of products, including amount received for contract work.....	\$107,256,258	\$87,298,454	\$41,033,045	\$12,210,662	\$6,607,771	\$1,809,476	22.9	112.8	236.0	84.8	265.2
Raw silk used, pounds.....	9,760,770	6,376,881	2,690,482	634,488	462,965	(4)	53.1	137.0	293.1	47.8	.....

¹ Decrease.

² Includes proprietors and firm members, with their salaries; number only reported in 1900. (See Table 23.)

³ Not reported separately.

⁴ Not reported.

Table 1 shows that in the items of capital, wages, materials, and products the industry has maintained a constant increase from 1850 to 1900. In considering such increases the differences in the method and scope of the inquiries at the several censuses should be taken into account. The reports on silk manufacture at prior censuses included establishments engaged in the manufacture of hosiery and knit goods, braids and trimmings, and other small goods in which silk was the fiber of chief value, but in which cotton or wool or both may also have been used. At the present census the statistics of hosiery and knit goods appear in a separate report, and only such braids and trimmings products and other small goods in the manufacture of which silk is the material of predominant value are included in this report. To what extent these differences may have affected the percentages of increase between 1890 and 1900 can not be accurately determined.

In the principal items of inquiry the absolute increase shown by the statistics for 1900, as compared with those for 1890, is less than it was during the preceding decade and, with the exception of capital invested, less than it was in the decade 1870 to 1880. A noteworthy and striking fact shown in the foregoing table is that the value of the products in 1900 was nearly sixty times as great as it was in 1850.

Table 2 presents the statistics of establishments man-

ufacturing a product exceeding \$500 in value and those reporting a product of less than \$500; the latter were not reported at previous censuses and therefore are omitted from the other tables and their use confined to Table 2.

In addition to the 488 active establishments in the United States during the census year, with a capital of \$81,097,276, shown in Table 2, there were 22 idle establishments, with a capital of \$427,491, distributed by states as follows:

STATES.	Number of idle establishments.	Capital.	SPINDLES.			LOOMS.		
			Total.	Throwing.	All other.	Total.	Broad.	Rib-bon.
Total.....	22	\$427,491	13,534	4,060	9,484	211	183	28
Connecticut.....	1	20,300	.....	.....	.....	.....	.....	.....
Massachusetts.....	2	19,000	.....	.....	.....	.....	.....	.....
New Jersey.....	11	67,810	1,354	250	1,104	185	173	12
New York.....	1	95,000	.....	.....	.....	.....	.....	.....
Pennsylvania.....	7	235,381	12,180	3,800	8,380	26	10	16

Adding the statistics of active establishments to those shown in the foregoing statement gives a total of 510 active and idle establishments in the United States, with a capital of \$81,524,767; total number of throwing spindles, 1,053,674; accessory spindles, 952,122; broad looms, 37,174; and narrow fabric looms, 7,469.

TABLE 2.—SUMMARY OF ESTABLISHMENTS WITH A PRODUCT EXCEEDING \$500 AND THOSE WITH A PRODUCT OF LESS THAN \$500.

CLASSES.	Number of establishments.	Capital.	Proprietors and firm members.	WAGE-EARNERS.		Miscellaneous expenses.	COST OF MATERIALS USED.		
				Average number.	Total wages.		Total.	Textile.	All other.
Total.....	488	\$81,097,276	482	65,420	\$20,982,680	\$10,264,444	\$62,406,800	\$58,093,267	\$4,313,533
Establishments with a product exceeding \$500....	483	81,082,201	477	65,416	20,982,194	10,264,208	62,406,665	58,093,249	4,313,416
Establishments with a product of less than \$500....	5	15,075	5	4	486	236	185	18	117

CLASSES.	Raw silk thrown into organzine or tram, on commission (pounds).	Value of products, including amounts received for contract work.	NUMBER OF SPINDLES.			NUMBER OF LOOMS.		
			Total.	Throwing.	All other.	Total.	Broad.	Ribbon.
Total.....	4,300,059	\$107,257,376	1,992,262	1,049,624	942,638	44,432	36,991	7,441
Establishments with a product exceeding \$500....	4,298,659	107,256,258	1,987,404	1,045,304	942,100	44,430	36,989	7,441
Establishments with a product of less than \$500....	1,400	1,118	4,858	4,320	588	2	2	.....

MATERIALS AND PRODUCTS TWICE INCLUDED.

Table 3 is a comparative summary by states for 1890 and 1900 of the cost of materials and value of products as reported, the cost and value, respectively, of the materials and products twice included, and the cost of materials and value of products exclusive of duplications.

The amount shown in Table 3 as the value of products as reported, \$107,256,258, is in excess of the merchant-

able product of the silk industry in 1900. The value of finished goods is \$92,451,212. The tabulation has been made in the form herein presented in order to show statistics comparable with those of the censuses of 1880 and 1890, which included in their totals thrown silks and other materials which, while completed products to the throwster, are materials to the weaver and the trimmings manufacturer. They were designated in subsidiary tables of those censuses as "materials twice

TABLE 3.—ELIMINATION OF MATERIALS AND PRODUCTS TWICE INCLUDED: 1890 AND 1900.

STATES.	Year.	MATERIALS.			PRODUCTS.		
		Cost of materials as reported.	Cost of materials twice included.	Cost of materials exclusive of duplications.	Value of products as reported.	Value of products twice included.	Value of products exclusive of duplications.
United States.....	1900	\$62,406,665	\$11,840,267	\$50,566,398	\$107,256,258	\$14,805,046	\$92,451,212
	1890	51,004,425	15,537,520	35,466,905	87,298,454	18,143,855	69,154,599
California.....	1900	146,219	8,420	137,799	255,902	9,300	246,602
	1890	140,406	9,500	142,906	271,912	5,600	266,312
Connecticut.....	1900	7,198,008	557,713	6,640,295	12,378,981	1,041,714	11,337,267
	1890	6,201,876	889,756	5,312,120	9,788,951	1,665,390	8,123,561
Illinois.....	1900	187,514	51,042	136,472	421,088	29,893	391,195
	1890	314,855	.....	314,855	785,845	.....	785,845
Maryland.....	1900	.....	.....	.....	.....	.....	.....
	1890	34,305	.....	34,305	100,361	.....	100,361
Massachusetts.....	1900	3,823,963	354,697	3,469,266	5,957,532	290,730	5,666,802
	1890	3,251,898	746,175	2,505,718	5,557,509	945,610	4,611,899
New Jersey.....	1900	21,631,118	5,704,322	15,926,796	39,966,662	2,268,720	37,697,942
	1890	17,908,883	5,205,501	12,703,382	30,760,871	5,354,389	25,406,482
New York.....	1900	6,570,037	1,144,973	5,425,064	12,706,246	751,034	11,955,212
	1890	10,174,818	1,318,742	8,856,076	19,417,796	1,681,481	17,736,315
North Carolina.....	1900	99,403	.....	99,403	135,354	64,461	70,893
	1890	.....	.....	.....	.....	.....	.....
Ohio.....	1900	.....	.....	.....	.....	.....	.....
	1890	13,983	.....	13,983	33,927	.....	33,927
Pennsylvania.....	1900	19,834,809	3,979,831	15,905,038	31,072,926	9,359,279	21,713,647
	1890	12,094,339	7,017,604	5,076,735	19,357,546	7,958,323	11,404,223
Rhode Island.....	1900	818,561	37,730	780,831	1,311,333	22,294	1,289,039
	1890	149,763	68,242	81,521	229,062	94,062	135,000
Virginia.....	1900	720,525	.....	720,525	981,680	940,776	40,904
	1890	.....	.....	.....	.....	.....	.....
All other states.....	1900	1,326,448	1,539	1,324,909	2,068,554	26,845	2,041,709
	1890	713,254	288,000	425,254	995,114	444,000	551,114

¹Included in "all other states."

²Includes establishments distributed as follows: Delaware, 2; Maine, 1; Maryland, 2; Michigan, 2; New Hampshire, 2; Utah, 2.

³Includes establishments distributed as follows: Maine, 1; Michigan, 1; Missouri, 1; North Carolina, 1; Virginia, 1.

included," but in order to avoid the erroneous impression which might be conveyed by the figures without an explanation, and make clear the reasons for this duplication and consequent elimination, the conditions under which organzine and tram are manufactured are stated as follows:

1. Raw silk is purchased by a silk manufacturer who has the same thrown into organzine and tram in a plant owned by him, but located elsewhere than in proximity to his factory, possibly in another state. In this case the raw silk and the organzine and tram are reported as material and product, respectively, by the throwing plant, and the quantity and value of the organzine and tram thus thrown is also reported as material by the manufacturer at his weaving plant, and duplication occurs.

2. Raw silk is purchased by a silk manufacturer and thrown into organzine and tram in larger quantities than his own factory consumption requires, and this excess is reported in the products as organzine and tram for sale to other silk manufacturers. In this case the organzine and tram are also reported as material by the purchasing silk manufacturers, and duplication occurs.

3. Raw silk is purchased by a throwster on his own account and thrown into organzine and tram for sale to silk manufacturers. In this case the raw silk and organzine and tram are reported by the throwster as material and product, respectively, of his mill, and also as material (organzine and tram) by the purchasing silk manufacturer, and duplication occurs.

4. Raw silk is purchased by a silk manufacturer, who has the same thrown into organzine and tram in his silk factory or in a plant owned by him in close proximity thereto. In this case the raw silk is reported as material, and the quantity and value of the organzine and tram is not shown, the conversion of the raw silk thereto being only one of the several stages of the manufacturing process for the finished product, and no duplication occurs.

5. Raw silk is purchased by a silk manufacturer, who has the same thrown, on contract, at a throwing mill not owned or operated by himself. In this case the cost of the raw silk is not reported by the throwster, but only by the manufacturer in the report for his silk factory, and no duplication occurs. (The quantity of raw silk thus thrown by commission throwsters was 4,298,659 pounds, 2,331,456 pounds being thrown into organzine and 1,967,203 pounds into tram.)

Large quantities of spun silk are imported and a very considerable quantity is also manufactured in the United States. The spun silk manufactured in the United States is reported under material as silk waste, and the manufactured product as spun silk by the mill producing the same for sale, and when purchased and used by a silk manufacturer as material is necessarily duplicated. The amount of this duplication can not be more

accurately determined than by taking the amount thus reported "for sale" and deducting its value from materials and products alike.

A considerable quantity of manufactured floss and fringe silk is also used by silk trimmings manufacturers, not the product of their own factories, which is properly charged as materials. A duplication to that extent occurs and has therefore been eliminated by deducting its cost from materials and products alike.

Briefly, the elimination of "materials and products twice included" has been accomplished as follows:

1. The cost and value of organzine and tram are deducted as reported, under both "materials" and "products."

2. The value of spun silk reported as a product is deducted from both materials and products.

3. The cost of fringe and floss reported as material is deducted from both materials and products.

4. The amount received for contract work, in all cases, is deducted from the value of the products.

The results obtained are termed in Table 3 "cost of materials, exclusive of duplications," and "value of products, exclusive of duplications." The above method has been followed for the purpose of presenting results comparable with those published in reports of silk manufacture at former censuses. The results as presented in Table 3 will differ from the net value of products presented in the general tables of manufactures. The true "net value" is obtained by deducting from the gross value of products the total amount reported as the cost of materials used in partially manufactured form.

In Table 3, \$11,840,267 is estimated to represent the cost of "materials twice included" and \$14,805,046 to represent the value of "products twice included" in 1900. At the census of 1890 the corresponding allowances were \$15,537,520 and \$18,143,855 for materials and products, respectively. The following statement shows the items in detail, for the United States, of materials and products twice included at the present census:

CLASSES.	MATERIALS.		PRODUCTS.	
	Pounds.	Value.	Pounds.	Value.
Organzine and tram...	2,338,464	\$10,539,682	12,468,387	¹ \$11,167,191
Fringe and floss, bought as such and used in manufacture.....	67,984	274,408	67,984	274,408
Spun silk made for sale.	437,459	1,026,227	437,459	1,026,227
Amount received for contract work.....				2,337,220
Total.....	2,843,907	11,840,267	2,973,830	14,805,046

¹ Organzine and tram "made for sale."

It should be noted that in many instances the products of partial manufacture reported in one state go to some other state to be completed. Hence, in some cases the gross product of a state more nearly represents the

industry in that state than would its finished products. For instance, the value of the gross product of Pennsylvania, amounting to \$31,072,926, is much nearer the total value of its manufactures of silk than the sum of \$21,713,647, the net value of its products, because a considerable portion of the thrown silk in the state went to other states to be woven into finished products. The relative figures of the number of looms and spindles in Pennsylvania and New Jersey are instructive on this point, the fact being that a considerable number of "throwing" plants in Pennsylvania are operated for account of weaving plants in New Jersey, as explained elsewhere in this report. Thus, it appears that there were 17,641 broad power looms and 2,916 ribbon power looms reported in New Jersey as against 11,135 and 1,788, respectively, in Pennsylvania, while the number of throwing spindles was 275,516 in the former state and 611,670 in the latter.

IMPORTS AND CONSUMPTION OF SILK AND SILK GOODS.

Silk factories depend entirely upon imports for their raw silk material. The quantity and value of the imports, raw silk, spun silk, raw silk waste, and manufactured silk goods for 1850, 1860, 1870, 1880, and each fiscal year between 1880 and 1900, inclusive, together with the value of silk of domestic manufacture at each census from 1850 to 1900, inclusive, are given in Table 4.

Table 4 shows the silk industry of the United States in several of its more important aspects. As the

import values of manufactured silk goods are foreign invoice values, an average of about 70 per cent should be added for freight, revenue duty, importers' profits, and occasional advances on imports, to represent cost to consumers. It should be stated in this connection that the figures of import values of manufactured goods at the several periods include the value of sundry articles, of which silk is the chief or only component material, such as silk caps, bonnets, and hats, silk wearing apparel, umbrellas and parasols of silk, and silk buttons.

The value of the domestic manufacture in the last six decennial census periods, when added to the value of foreign manufactured goods imported, presents in the most graphic way the volume of the consumption of silk goods in the United States. This consumption is shown by the table to be steadily increasing.

In 1850 there were 67 establishments reported as engaged in the manufacture of silk goods. Their total product was valued at \$1,809,476, an average of \$27,007 for each establishment. In 1900 the establishments had increased in number to 483 and the value of the products to \$107,256,258, an average product of \$222,063 for each establishment. The imports of raw silk in 1850 amounted to 120,010 pounds, valued at \$401,385, and it is probable that the total amount was consumed in the silk mills. The imports of raw silk for 1900 amounted to 11,259,310 pounds, valued at \$44,549,672, exceeding those for any prior fiscal year of the Government.

TABLE 4.—COMPARATIVE SUMMARY, 1850 TO 1900, OF IMPORTED SILK MATERIALS, AND OF IMPORTED AND DOMESTIC MANUFACTURED SILK GOODS.¹

FISCAL YEAR ENDING JUNE 30—	IMPORTED SILK MATERIALS.							VALUE OF MANUFACTURED SILK GOODS.	
	Total cost.	Raw silk.		Spun silk.		Raw silk waste, including cocoons and noils.		Imported. ²	Domestic.
		Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.		
1850.....	\$401,385	120,010	\$401,385	(⁴)	(⁴)			\$17,694,658	\$1,809,476
1860.....	1,340,676	297,877	1,340,676	(⁴)	(⁴)			32,961,120	6,607,771
1870.....	8,055,026	583,589	8,017,958	7,521	\$57,668			24,219,981	12,210,662
1880.....	12,601,490	2,562,236	12,024,699	87,239	111,999		\$554,792	31,348,948	41,038,046
1881.....	11,275,838	2,550,108	10,888,204	10,325	60,890	240,310	325,744	32,316,396	
1882.....	18,323,554	2,879,402	12,890,392	14,726	47,293	341,867	385,806	38,280,955	
1883.....	14,738,955	3,253,370	14,043,840	43,812	126,832	955,045	563,783	33,180,280	
1884.....	12,959,653	3,222,540	12,481,496	91,760	189,722	616,713	288,435	37,840,852	
1885.....	12,916,881	3,424,076	12,421,739	78,890	226,412	661,711	268,780	27,880,886	
1886.....	18,377,346	4,784,026	17,232,505	178,883	442,310	1,611,744	702,531	27,613,546	
1887.....	19,671,867	4,599,574	18,687,245	172,617	441,299	888,325	543,323	30,822,978	
1888.....	20,184,391	5,173,840	19,151,208	197,139	578,960	742,313	454,233	32,363,678	
1889.....	19,927,957	5,820,646	18,544,025	274,862	659,045	1,221,941	724,887	34,297,684	
1890.....	25,120,653	5,943,360	23,285,099	411,621	888,644	1,404,549	951,910	37,863,143	87,298,454
1891.....	20,835,357	4,917,688	17,994,654	856,706	1,821,421	1,266,888	1,019,282	35,478,966	
1892.....	26,055,036	7,521,342	24,321,494	489,652	1,093,384	1,121,486	640,158	30,348,796	
1893.....	31,064,800	7,422,436	29,055,557	758,502	1,358,851	883,118	670,392	36,681,097	
1894.....	16,841,187	4,966,875	15,627,822	437,428	719,300	703,786	493,975	28,441,189	
1895.....	23,726,633	7,974,810	22,026,068	843,647	1,239,619	1,021,029	437,946	29,783,529	
1896.....	27,649,182	8,000,621	26,246,902	782,796	998,604	1,084,299	408,626	25,623,128	
1897.....	20,001,899		18,496,944	801,336	1,083,616	1,479,882	421,339	25,433,477	
1898.....	33,289,884	10,315,162	31,446,800	956,974	1,177,817	1,762,297	659,267	21,457,249	
1899.....	34,439,927	9,691,145	31,827,061	1,703,794	1,962,588	1,545,701	650,278	23,068,916	
1900.....	48,866,752	11,259,310	44,549,672	2,836,947	8,555,227	1,784,404	761,953	26,803,534	107,256,258

¹ Figures for imported goods, both raw and manufactured, derived from reports of the United States Treasury Department.

² Not including spun silk.

³ Estimated from current prices, only the value being on record.

⁴ Not separately reported.

During the fiscal years 1898, 1899, and 1900 there was imported an annual average of 10,421,872 pounds of raw silk, valued at \$35,941,178. In the census year 1900, as shown by Table 23, there were consumed in the manufacture of silk goods and silk braids and trimmings 9,760,770 pounds of raw silk, costing \$40,721,877. Making allowance for the amount carried over as raw material from year to year, and the considerable quantity used by the wool and cotton textile industries, the consumption of raw silk as obtained for this report agrees closely with the quantities of the imports as reported by the Treasury Department.

During the year 1880 the manufactured silk goods of all varieties imported into the United States were valued at \$31,348,948 (foreign value). The gross value of manufactured silk products for the United States for that year was \$41,033,045. In 1890 the value of the imports of silk manufactures was \$37,363,143, while the gross value of the domestic product was \$87,298,454. In 1900 these values were \$26,803,549 and \$107,256,258, respectively.

In 1860 the silk goods made in the United States as compared with the entire consumption was only 13 per cent. The percentage rose to 38 in 1880,¹ to 55 in 1890,² and to 80 in 1900. In broad silk fabrics the domestic production in 1900 was 67.3 per cent of the total estimated consumption of such goods. America now produces 85 per cent of the annual consumption of silk ribbons, the value of imported ribbons representing only 15 per cent. The classes of goods now principally imported from Europe are high novelties, handmade silk velvets, and handmade silk laces which are not as yet made to any appreciable extent here, but, without doubt, will be made in due time. From Japan we are also receiving Habutai and Kaiki silks which, by reason of their extreme lightness in weight, have been in considerable demand in the American markets. American manufacturers expect, however, that international trade returns will show a considerably diminishing percentage of this class of goods in the next few years. The census tables show a production of 8,970,933 yards of velvets and plushes made in the United States by power-loom weaving in the census year. The value of this product is \$4,959,971, which is 55.5 per cent of the annual consumption. The annual import of foreign manufactured velvets and plushes during the census year was \$2,335,576, foreign invoice value, and allowing 70 per cent additional for revenue duties, freight, insurance, and importers' profits, we find the approximate value to the consumers to be \$3,970,479. The present relative position of the silk industry in the United States in the manufacture of broad silks, velvets and plushes, and ribbons, to the consumption of such silk goods annually, is shown by the following statement:

¹Tenth Census of the United States, Report on Silk Manufacture, by William C. Wyckoff, special agent, page 21.

²Eleventh Census of the United States: Report on Manufacturing Industries, Part III, page 215.

	TOTAL.		BROAD SILKS. ¹	
	Value.	Per cent.	Value.	Per cent.
Domestic production	\$75,579,966	70.0	\$52,152,816	67.3
Imports ²	32,439,342	30.0	25,379,055	32.7
Consumption	108,019,308	100.0	77,531,871	100.0
	VELVETS AND PLUSHES.		RIBBONS.	
	Value.	Per cent.	Value.	Per cent.
Domestic production	\$4,959,971	55.5	\$18,467,179	85.7
Imports ²	3,970,479	44.5	3,089,808	14.3
Consumption	8,930,450	100.0	21,556,987	100.0

¹ Does not include production of tapestry and upholstery silks, value \$1,009,885.

² Selling value to consumer by adding to invoice value 70 per cent for revenue duties, freight, insurance, and importers' profits.

In the above statement no account is taken of manufactured silk goods exported, such exports being inconsiderable. The domestic production of sewing silks and machine twist, 1,465,575 pounds, valued at \$9,274,800, practically represents the entire American consumption, there being no importations of any consequence.

MATERIALS AND PRODUCTS, 1890 AND 1900.

The growth of the silk manufacture during the last half of the century has been in keeping with the growth of other industries, and the returns of the Twelfth Census indicate the continued prosperity of the industry. The increase during the past ten years in the quantity and total cost of the different materials used and in the value of goods manufactured is shown in Table 5.

TABLE 5.—COMPARATIVE SUMMARY OF MATERIALS AND PRODUCTS: 1890 AND 1900.

	1900	1890	Per cent of increase.
Number of establishments	483	472	2.3
Materials used:			
Total cost	\$62,406,665	\$51,004,425	22.4
Raw silk	9,760,770	6,376,881	53.1
Waste silk, cocoons, and noils	1,667,195	1,357,618	22.8
Organzine and tram	\$734,539	\$1,106,608	133.6
Spun silk	2,338,464	3,305,372	129.3
Other silk materials	\$10,539,682	\$16,518,979	136.2
Yarns, other than silk	1,650,291	(²)	.....
Fuel and rent of power and heat	\$3,406,059	744,223	118.3
All other materials, including mill supplies and freight	74,040	\$2,638,242	89.9
Products:			
Total value	\$284,788	5,624,960	26.5
Organzine and tram made for sale	7,116,728	\$2,327,694	3.4
Spun silk yarn made for sale	\$2,406,354	\$485,516	40.9
Machine twist and sewing, knitting, embroidery, fringe, floss, and wash silks	\$684,002	\$1,840,025	97.2
Dress goods, figured and plain, and other silk broad goods, except velvets and plushes	\$3,629,414	\$8,917,844	14.9
Velvets and plushes	\$52,152,816	\$22,955,750	127.2
Tapestries, curtains, and other upholstery broad goods	\$4,959,971	\$3,141,026	57.9
Ribbons and laces	\$1,009,835	\$3,712,332	172.8
Braids and bindings	\$19,270,283	\$17,843,197	11.1
Dress, cloak, millinery, and military trimmings	\$1,522,565	\$2,771,382	145.1
All other products	\$2,295,010	\$8,554,566	173.2
Received for contract work	\$1,268,950	\$1,768,502	127.8
	\$2,337,220	(²)	.....

¹ Decrease.

² Not separately reported.

It will be noted that Table 5 shows an apparent decrease of 29.3 per cent in quantity and 36.2 in cost of organzine and tram as materials used and 33.8 per cent in value as products manufactured. The explanation for this seeming anomaly lies in the fact that the organzine and tram manufactured by commission or custom throwsters are not included in the statistics for 1900 presented in this report, either as materials used or as products manufactured, although so included in 1890. Therefore, in a comparison of the two censuses, the 2,331,456 pounds of raw silk thrown into organzine and the 1,967,203 pounds thrown into tram by commission throwsters in 1900 should be taken into consideration. As elsewhere explained, the small increase in the number of establishments is partly accounted for by the elimination from this report of 39 braids and trimmings and 78 hosiery and knit goods manufacturers.

The industry has undergone many changes since 1850, when the variety of its products was very limited. The demands of fashion, the adaptability of silk to fancy designs, and the varying proportions in which silk may be used with other materials in fabrics of all kinds have resulted in an almost unlimited variety of products. Much of the silk spun is now consumed in cotton and woolen mills, while the silk mills consume large quantities of cotton and woolen yarns.

There were 1,667,195 pounds of silk waste and noils consumed in the industry in the census year, from which were produced 661,292 pounds of spun-silk yarn. Of this quantity 437,459 pounds were made for sale to textile manufacturers and 223,833 pounds consumed in

manufacturing by the spinners of the yarn. Adding 1,550,291 pounds reported as spun silk used as materials, there were 1,774,124 pounds of spun silk consumed by the silk industry in the census year.

The quantity of spun-silk yarns of all grades imported in the fiscal year ending June 30, 1900, was 2,336,946 pounds; adding thereto the amount made in the United States during the census year, 661,292 pounds, we find the total for distribution among the textile industries to be 2,998,238 pounds.

The quantities of raw silk and raw-silk and spun-silk yarns consumed by the textile industries of the United States are reported as follows for the censuses of 1890 and 1900:

	RAW SILK.		SPUN-SILK YARN.	
	1890	1900	1890	1900
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Silk manufacture.....	6,376,881	9,760,770	(1)	21,774,124
Cotton manufacture.....	82,851	342,425	18,583	218,255
Wool manufacture ²	166,709	70,073	88,785	258,811
Hosiery and knit goods.....	77,597	162,424	42,744	103,823

¹ Not reported.

² Includes 223,833 pounds remanufactured into other silk goods by the spinners.

³ Including woolen goods, worsted goods, fur hats, felt goods, and carpets.

Table 6 indicates the extent of the further interchange of fibers for the silk industry, and shows the quantity and cost of the different textile materials reported at the censuses of 1890 and 1900 and the cost of all other materials (fuel, mill supplies, etc.), and the percentage which each item forms of the total.

TABLE 6.—COMPARATIVE SUMMARY OF MATERIALS: 1890 AND 1900.

	MATERIALS USED.				PER CENT OF TOTAL.			
	Pounds.		Cost.		Pounds.		Cost.	
	1900	1890	1900	1890	1900	1890	1900	1890
Total materials.....	22,507,490	17,409,054	\$62,406,065	\$51,004,425	100.0	100.0	100.0	100.0
Silk materials.....	15,390,760	11,784,094	55,636,895	46,351,200	68.4	67.7	89.2	90.9
Textile yarns other than silk.....	7,116,728	5,624,960	2,406,354	2,327,684	31.6	32.3	3.9	4.6
Cotton yarn.....	6,444,208	(1)	1,830,550	(1)	28.6	.....	2.9	.....
Mergerized cotton yarn.....	219,861	(1)	165,083	(1)	1.0	.....	0.3	.....
Wool yarn.....	239,461	(1)	167,770	(1)	1.1	.....	0.3	.....
Mohair yarn.....	104,810	(1)	107,365	(1)	0.4	.....	0.2	.....
Other yarns.....	108,888	(1)	134,986	(1)	0.5	.....	0.2	.....
All other materials.....	.....	.....	4,318,416	2,325,541	.....	.....	6.9	4.6

¹ Not reported separately in 1890.

Table 6 shows but slight differences in the several percentages at the two census periods. Owing to the high cost of silk per pound, the textile yarns other than silk form a much smaller percentage of the total cost of materials than of the total quantity.

The statistics for 1890, as presented in this table, show that establishments engaged in the manufacture of silk and silk goods used silk materials (raw, waste, spun, organzine, tram, etc.) and yarns other than silk amounting to 17,409,054 pounds. Of this total

quantity, silk materials formed 67.7 per cent and yarns other than silk 32.3 per cent. In 1900 the same class of materials amounted to 22,507,488 pounds, of which quantity silk materials formed 68.4 per cent and yarns other than silk 31.6 per cent. The total cost of these materials in 1890 was \$48,678,884, of which cost silk formed 95.2 per cent and yarns other than silk 4.8 per cent, while the cost in 1900 was \$58,093,249, of which amount silk formed 95.9 per cent and yarns other than silk 4.1 per cent.

SEWING SILK AND MACHINE TWIST.

Connecticut continues in the lead in the production of sewing silks and machine twist, its proportion being 47.1 per cent of the total quantity manufactured. Massachusetts is second, its proportion being 30 per cent. These two states produced 77.1 per cent of the total annual output of this class of goods. The following statement shows the output in pounds, for the census year, of the several states in the order of their importance as manufacturers of these products:

	Total.	Sewing, embroidery, and wash silks.	Machine twist.
	Pounds.	Pounds.	Pounds.
United States.....	1,465,575	477,658	987,917
Connecticut.....	690,455	145,032	545,423
Massachusetts.....	439,064	170,423	268,641
Michigan.....	124,535	64,000	60,535
Pennsylvania.....	117,951	74,475	43,476
New York.....	65,028	18,528	46,500
California.....	27,942	5,200	22,742

There is very little competition from abroad with domestic manufacturers of sewing silk and machine twist. In fact, the United States product is universally acknowledged as superior in finish and purity of dye to that of any other country, chiefly because only the best Japan and China filatures, dyed unweighted, are used. It is noteworthy that at the Paris Exposition of 1900, the grand prix d'honneur, the highest award given, was awarded to an American exhibitor of this class of silks.

Among the most important changes in the methods of business in this branch of the industry during the past decade are the following:

1. An increase in the use of machine twist for manufacturing purposes has been effected by shortening the lengths from 1-ounce or large spools to 200 and 100 yard spools. While this is a decided convenience and benefit to the smaller manufacturing trade, it entails greater cost to the silk manufacturer in the additional spooling and spools and in preparing the goods for the market. In the early days of the industry—say forty years ago—sewing silk was universally put up in skeins, but with the introduction of sewing machines and their use in the manufacture of clothing and shoes, that practice is now a thing of the past, fully 99 per cent of all machine and sewing silk being, at this time, put up on spools.

2. A decided tendency toward finer sizes of thread. Formerly the average size used was about size A, representing 1,000 yards per ounce. To-day the principal goods sold are double 0 (00), representing 1,600 yards per ounce.

While these changes have been a benefit to the consumer, they subject the silk manufacturer to the additional expense of spooling up 96 or 192 spools instead of 12, and to the further disadvantage of being able to

“throw” only 300 pounds of 00 in the time sufficient to “throw” 480 pounds A. The increasing quantities used in the manufacture of clothing and leather goods necessitates the use of an increased quantity of fine sizes for certain parts of the work.

These commercial changes, which are a direct loss to the manufacturer through the increase of his expense account, are indicative of his controlling desire to lead the trade in the direction of greater economies in the distribution of his product, and for that reason are noteworthy.

About two-thirds of the output of machine twist is sold to manufacturers of clothing, shoes, cloaks, etc., one-third being sold to the dry-goods trade in small wares, such as spool silks for the retail dressmaking trade. The manufacturing trade absorbs about one-half of sewings, the remaining one-half being sold as small wares in embroidery silks, knittings, and wash embroidery silks. The sale of embroidery silks has increased phenomenally during the decade, owing to the great vogue of art embroideries for decorative purposes.

Other noticeable features of the decade have been marked improvements in the luster and evenness of the thread, firmness of the twist, and great variety of brilliant, plain, and somber or shaded colors, perfectly blended. In sewing silks alone a full assortment of colors now runs up to 200.

The following statement illustrates the growth of this branch of the industry, and gives the percentage of increase in quantities produced since the census of 1860:

CENSUS YEAR.	Pounds.	Value of product.	Per cent of increase in quantity.
1850.....	(1)	\$1,209,426	.....
1860.....	409,429	(1)	.....
1870.....	516,621	(1)	26.2
1880.....	3791,525	6,783,855	53.2
1890.....	³ 1,119,825	7,068,218	41.5
1900.....	1,465,575	9,274,800	30.9

¹ Not reported separately.

² All sewing silk; machine twist first made in 1852.

³ Sewing silk and machine twist only.

BROAD SILK WEAVING.

The salient features of the development of broad silk weaving in the United States during the past decade are four in number:

1. The production of silk taffetas in both black and colors by power looms. This method of producing these goods was first employed in the United States, the production being on a scale of sufficient commercial importance to entitle this country to credit for its success. Later, power loom weaving of taffetas was adopted in Europe as a profitable commercial proposition. Foreign countries are now, therefore, close competitors in the manufacture of these goods, but the credit of original achievement remains with the United States. The

importance of this fact is best realized when we consider that fully one-half of the fabrics produced to-day in the United States on silk power looms are properly included in the "taffeta" class.

2. While a small proportion of the high-class "fancies" consumed in this country is of French origin, the great bulk is made by domestic mills. We are indebted for this result to the energy and versatility of the manufacturers, who during the last decade seized upon the possibility of reproducing here the grades of French and Swiss "fancies," which by their attractiveness dominated the American market. We have succeeded in manufacturing every variety of checks, stripes, and figured goods (Jacquards) in popular grades. The American silk industry can fairly claim to be unexcelled at the present time in the production of this class of goods.

3. Marked progress in the manufacture of piece-dyed goods woven with raw-silk warps. Continually expanding facilities for piece dyeing in silk manufacturing establishments and in dyehouses have largely increased the output of this description of fabrics. Both piece dyeing and printing have been for many years features of the foremost silk manufacturing establishment in the United States, but recent favoring circumstances have given a great impetus to these branches of the industry. At the present time piece-dyed and printed goods of domestic manufacture have largely replaced the imports from Europe. Formerly the European productions were printed exclusively in Europe. As a consequence of the American tariff, European manufacturers have been shipping a considerable quantity of their goods to this side in the raw or gum to be printed. At the present time both the manufacture and the printing of the fabric are so successfully accomplished in the United States that the domestic production dominates our own markets in these specialties.

4. Under pressure of sharp competition, both foreign and domestic, American manufacturers have been compelled to study more closely the intricate details of

manufacturing and to master the economies developed abroad by experience and long practiced there.

Warp-print fabrics have also been manufactured to a large extent in the United States during the past ten years, both in broad silks and in ribbons. Warp-print goods, including tie silks made in this country, have reached such a degree of perfection that at the Paris Exposition of 1900 gold medals were awarded to two American exhibitors of these fabrics.

A similar award was also made to an American exhibitor of plain black silks for the superior weave and finish of the fabric.

A striking feature of the industry is the increase in the number of power looms and the decrease in hand looms. The following statement presents the number of power and hand looms at each census from 1880 to 1900, inclusive:

	1880	1890	1900
Power looms on broad goods	3, 103	14, 866	36, 825
Power looms on narrow goods	2, 218	5, 956	7, 432
Hand looms on broad goods	1, 629	413	164
Hand looms on narrow goods	1, 524	1, 334	9

The power looms used on broad goods in 1900 were classified as follows:

Plain looms, 36 inches or over, reed space	13, 077
Plain looms, under 36 inches, reed space	16, 161
Jacquard broad looms	7, 587

Table 7 presents a summary, by states, of establishments classified according to the number of looms operating on broad silk goods, not including broad looms on velvets and plushes, during the census year. It should be noted that where several mills in the same state are operated by one firm they are treated as one establishment and classified according to the combined total of looms.

VELVETS.—One of the notable developments of the past decade, realizing the earlier ambitions of the Amer-

TABLE 7.—BROAD-SILK WEAVING MILLS, CLASSIFIED BY NUMBER OF LOOMS: 1900.

STATES.	Total number of establishments.	ESTABLISHMENTS CLASSIFIED BY NUMBER OF BROAD LOOMS.								Total number of broad looms.
		Under 50.	50 and under 150.	150 and under 250.	250 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and under 1,250.	1,250 and over.	
United States	239	87	81	29	31	5	2	3	1	35, 446
1. New Jersey:										
Paterson	84	26	36	11	10	1				10, 475
Outside of Paterson	31	10	8	2	8	1		2		7, 077
2. Pennsylvania	56	19	14	10	8	2	2		1	10, 662
3. New York	39	20	12	5	2					2, 867
4. Connecticut	5		2		2			1		1, 894
5. Massachusetts	6	3	2			1				896
6. Rhode Island	4	3			1					533
7. New Hampshire	1			1						209
8. Delaware	2	1	1							191
9. Virginia	1		1							147
10. Maryland	1		1							144
11. North Carolina	2		2							125
12. Maine	1		1							120
13. Michigan	1		1							62
14. Illinois	2	2								84
15. Utah	2									8
16. California	1	1								2

ican silk manufacturers, has been the manufacture of velvet in this country on a paying basis. The American consumption of velvets and plushes is not so large as that of other weaves. It is estimated at a value of \$8,930,450 annually, but when we realize that mills in the United States are now supplying 55.5 per cent of this amount it becomes evident that the problem of successful production is being solved. The development during the past decade has been principally along the lines of medium grades of black and colored velvets, used largely for millinery and dress trimmings. In these grades the United States is now supplying 75 per cent of the trade consumption. There is a growing tendency to decided improvement in the better grades; also in the successful manipulation of "panne" velvets, and in various styles of fancy velvets, such as checks, stripes, and figures. The yardage of velvets produced in the census year was 5,122,249 yards, the reported value at the factory being \$2,479,903.

Germany has been most seriously affected by the competition of the United States in the last ten years. Lyon has well held its own, on account of its new fabrics, styled "velours panne" and "velours mousseline." Its supremacy over Crefeld is due in fact to its higher grades of velvet, produced by using pure silk instead of spun silk and cotton. Lyon continues to excel and control the bulk of the trade in all pile fabrics where the material is reeled silk.

The relative importance of the velvet trade with the United States from these foreign centers is shown by the following figures of their exports to the United States for the past four years.¹

YEAR.	From Lyon, velvets and plushes.	From Crefeld, silk velvets.	From Crefeld, cotton velvets.
1897	\$328,070	\$1,263,142	\$194,450
1898	345,717	601,849	153,855
1899	304,912	631,265	174,675
1900	495,558	802,876	235,711

PLUSHES.—The production of plushes amounted to 3,848,684 yards, the factory value being \$2,480,068. The relative positions of velvets and plushes as to the quantity of each manufactured have been reversed during the past decade. Ten years ago the seal plush and

¹ Exports Declared for the United States, quarterly publication United States Department of State.

upholstery plush industry in the United States was in a flourishing condition, and continued so for some time; but in 1900 it was much less so, and at the time of writing this report the seal plush industry especially has suffered yet greater decline. The census of 1890 reported a product of velvets and plushes valued at \$3,141,026, but though no separate classification of the two items was then made, it was recognized that the output of plushes largely exceeded that of velvets.² At this census the yardage and factory cost of both descriptions of goods are given.

Seal plushes are used in the cloak, cape, cap, and trimmings trades. Sharp domestic competition finally reduced prices materially, but the benefit to consumers was of comparatively brief duration. Cheaper and yet cheaper grades of goods were made until, fashion no longer favoring the fabric, the demand declined as stated. The importation of these goods from England, where formerly the largest proportion of them was manufactured, has now entirely ceased.

The development of broad goods weaving in the United States is best illustrated by a comparison of the production of such goods in each census year since 1870, which is shown in the following statement, presenting the yardage, the value, and the per cent of increase in the quantity of broad silk goods manufactured in the United States at the periods mentioned, including tapestry and upholstery silks, velvets, and plushes, and embracing all silk goods and silk-mixed fabrics (woven on broad looms) in which silk is the material of chief value.

CENSUS YEAR.	Yards.	Value of products.	Per cent of increase in quantity.
1870	1,026,422	(1)	.....
1880	10,856,284	\$11,224,895	957.7
1890	37,648,220	29,509,108	246.8
1900 ²	97,940,935	58,122,622	160.2

¹ Not reported separately.

² The census of 1900 separates the yardage and value as follows: All silk, 68,437,218 yards, valued at \$42,573,279; and silk mixed, 29,503,717 yards, valued at \$15,549,343.

Table 8 presents, in detail, the production of broad silk goods by yardage, value, and average value per yard for the United States during the census year.

² Eleventh Census of the United States, Report on Manufacturing Industries, Part III, page 217.

TABLE 8.—SILK BROAD GOODS MANUFACTURED: 1900.

CLASSES.	TOTAL.			ALL-SILK BROAD GOODS.			SILK-MIXED BROAD GOODS.		
	Quantity (yards).	Value.	Average value per yard (cents).	Quantity (yards).	Value.	Average value per yard (cents).	Quantity (yards).	Value.	Average value per yard (cents).
Total	97,940,935	\$58,122,622	59.3	68,437,218	\$42,573,279	62.2	29,503,717	\$15,549,343	52.7
Plain and fancies	62,536,808	39,302,821	62.8	53,578,488	33,852,111	63.2	8,968,315	5,450,710	60.8
Jacquards	9,209,695	6,639,322	72.1	7,532,229	5,879,001	71.4	1,677,466	1,260,321	75.1
Piece-dyed	15,890,385	6,210,673	39.1	7,331,501	3,342,167	45.6	8,558,884	2,868,506	33.6
Velvets	5,122,249	2,479,903	48.4	.....	.....	.....	5,122,249	2,479,903	48.4
Plushes	3,848,684	2,480,068	64.4	.....	.....	.....	3,848,684	2,480,068	64.4
Tapestry and upholstery	1,333,119	1,009,835	75.7	.....	.....	.....	1,333,119	1,009,835	75.7

Table 9 presents a summary, by states, of establishments classified according to number of looms operating on velvets and plushes.

TABLE 9.—VELVET AND PLUSH WEAVING MILLS, CLASSIFIED BY NUMBER OF LOOMS: 1900.

STATES.	Total number of establishments.	ESTABLISHMENTS CLASSIFIED BY NUMBER OF LOOMS.				Total number of looms.
		Under 50.	50 and under 150.	150 and under 250.	250 and over.	
United States.....	15	4	8	1	2	1,548
1. Connecticut.....	6		4	1	1	787
2. Pennsylvania.....	4	2	1		1	499
3. New York.....	2		2			153
4. New Jersey:						
Paterson.....	2	1	1			86
Outside of Paterson.....	1	1				18

SILK RIBBONS.

Awards of gold and silver medals were made at the Paris Exposition of 1900 to American manufacturers of plain and faconné ribbons.

The invention of the high-speed ribbon loom, about ten years ago, was a great advance over the so-called "Swiss" and "German" power looms which were used exclusively in this country up to 1889. The new loom was first made in the United States, and in the last few years has reached a high state of perfection. Ease in leveling the harness, handling the warps, and the positive control of the take-up, which enable the looms to be run at continuous high speed, are the marked features of this invention. It has furnished occupation for a new class of labor, women being now generally and profitably employed in this particular grade of

work, whereas on the looms formerly in use male labor was a necessity.

It is not too much to say that the equipment of ribbon machinery in the United States is now equal to any commercial demand that may be made upon it in turning out all articles of ribbon known to the trade.

The ribbon looms reported were classified as follows:

Total.....	7,441
German looms, warps on top.....	4,471
High-speed looms.....	2,105
Jacquards.....	856
Hand looms.....	9

Table 10 presents a summary, by states, of establishments classified according to number of looms operating on ribbons.

TABLE 10.—SILK RIBBON WEAVING MILLS, CLASSIFIED BY NUMBER OF LOOMS: 1900.

STATES.	Total number of establishments.	ESTABLISHMENTS CLASSIFIED BY NUMBER OF LOOMS.					Total number of looms.
		Under 50.	50 and under 150.	150 and under 200.	200 and under 300.	300 and over.	
United States.....	115	65	39	5	5	1	7,441
1. New Jersey:							
Paterson.....	37	19	12	3	3		2,655
Outside of Paterson.....	5	4	1				261
2. New York.....	31	16	12	2		1	2,248
3. Pennsylvania.....	35	23	10		2		1,788
4. Connecticut.....	5	3	2				294
5. Massachusetts.....	1		1				144
6. Maryland.....	1		1				51

THROWING SPINDLES.

Table 11 presents a summary, by states, of establishments classified according to number of organzine and tram spindles.

TABLE 11.—MILLS CLASSIFIED BY NUMBER OF THROWING SPINDLES: 1900.

STATES.	Total number of establishments.	ESTABLISHMENTS CLASSIFIED BY NUMBER OF THROWING SPINDLES.												Total number of throwing spindles.
		Under 2,500.	2,500 and under 5,000.	5,000 and under 7,500.	7,500 and under 10,000.	10,000 and under 12,500.	12,500 and under 15,000.	15,000 and under 20,000.	20,000 and under 25,000.	25,000 and under 40,000.	40,000 and under 45,000.	45,000 and under 50,000.	75,000 and over.	
United States.....	121	35	21	21	13	8	3	5	8	3	1	2	1	1,045,304
1. Pennsylvania.....	45	7	8	8	7	4	2	4	5	2	1	1	1	611,670
2. New Jersey:														
Paterson.....	29	10	7	7	2	1		1				1		171,410
Outside of Paterson.....	13	5	2	1		2	1		1	1				104,106
3. New York.....	12	3	4	3	2									47,964
4. Massachusetts.....	3	1		1					1					31,306
5. Connecticut.....	9	5	2		1	1								29,662
6. Virginia.....	2			1					1					28,372
7. North Carolina.....	2	1			1									9,680
8. New Hampshire.....	1		1											3,408
9. Delaware.....	1		1											3,264
10. Maine.....	1		1											2,622
11. Michigan.....	1	1												1,104
12. Maryland.....	1	1												618
13. California.....	1	1												88

The number of throwing spindles reported for this census, as shown in Table 11, is 1,045,304; these spindles are classified as follows:

Organzine, first time over.....	582,180
Organzine, second time over.....	345,145
Tram spindles.....	117,979

The total number of accessory spindles, as shown in Table 23, is 942,100, making an aggregate of 1,987,404, as against 1,087,395 similar spindles in 1890 and 426,530 in 1880.

Of the total number of throwing spindles reported at

this census, 58.5 per cent were located in Pennsylvania, the center of the throwing industry. It will be noticed that 20 establishments of the 45 reported in this state operate more than 10,000 spindles, and one as high as 75,000 spindles.

American "throwing" is done principally on belt spinners which are run from 11,000 to 12,000 turns a minute on first time over and 9,000 on second time over. The machines and organizations are inferior to none.

A review of the improvements effected in the past decade in "throwing" machinery will be found appended.

FINISHED SILK GOODS.

Owing to the differences in the schedules of inquiry and in the methods employed at the several censuses, and the changing conditions in the industry, necessitating changes in the classification of the manufactured products, it is not possible to present a table giving comparable items of production for this and preceding censuses.

At this census the aim has been to indicate the production by quantities (yardage and pounds) so far as was possible, as comparison by values is frequently misleading, owing to changes in the price of merchandise. The classification of the products of the loom by their commercial designations as fabrics, which was employed in former censuses, has been abandoned, for the reason that considerable quantities are now woven and sold in the grey, even the sellers, for example, not knowing whether the fabrics would be finished for dress goods, cloak linings, hat linings, or millinery, etc. By the method adopted the yardage of all silk fabrics or silk-mixed goods is shown for 1900. For this reason comparison of production with previous censuses is difficult as to special articles, but it is believed that the change is a wise one, as the former classification is no longer practicable. The following statements present for 1880, 1890, and 1900, respectively, the quantities and values of the finished or merchantable products:

FINISHED GOODS FOR THE CENSUS YEAR 1880.¹

	Quantity.	Value.
Total value.....		\$34,519,723
Sewing silk.....		776,120
Machine twist.....	821,528 pounds...	6,007,735
Floss silk.....		225,025
Dress goods.....		4,115,205
Satins.....	10,856,284 yards...	1,101,875
Tie silks and scarfs.....		606,675
Millinery silks.....		891,955
Other broad goods.....	30,129,951 yards...	627,595
Handkerchiefs.....		3,881,590
Ribbons.....		6,023,100
Laces.....		437,000
Braids and bindings.....		999,685
Fringes and dress trimmings.....		4,950,275
Cords, tassels, passementeries, and millinery trimmings.....		1,866,575
Upholstery and military trimmings.....		1,392,355
Coach lace and carriage trimmings.....		37,510
Undertakers', hatters', and fur trimmings.....		59,805
Mixed goods and silk values therein.....		519,643

¹ Tenth Census of the United States, Report on Silk Manufacture, by William C. Wyckoff, special agent, pages 25 and 26.

FINISHED GOODS FOR THE CENSUS YEAR 1890.¹

	Quantity.	Value.
Total value.....		\$69,154,599
Machine twist and sewing silk.....	1,119,825 pounds...	7,063,213
Fringe, knitting, embroidery, and floss silk.....	329,637 pounds...	1,849,631
Dress goods, figures and plain.....		15,183,134
Tailors' linings.....		3,011,437
Tie silks and scarfs.....	37,643,220 yards...	919,919
Other broad goods.....		1,923,036
Handkerchiefs.....		1,913,224
Velvets and plushes.....		3,141,026
Upholstery goods:		
Curtains.....		471,824
Tapestries.....		1,330,287
Other upholstery goods.....		1,910,721
Ribbons.....	25,737,211 pieces...	17,081,447
Laces.....		261,750
Braids and bindings.....		2,771,382
Gimps and trimmings.....		3,918,209
Dress and cloak trimmings.....		4,403,757
Military trimmings.....		232,600
Hosiery and knit goods:		
Shirts and drawers.....		26,421
Hosiery.....		141,183
Mittens, gloves, etc.....		397,904
Jersey cloth.....		90,664
Other products.....		602,330

¹ Eleventh Census of the United States, Report on Manufacturing Industries, Part III, pages 213 and 214.

FINISHED GOODS FOR THE CENSUS YEAR 1900.

	Quantity.	Value.
Total value.....		\$92,451,212
Machine twist.....	987,917 pounds...	5,997,974
Sewing, embroidery, and wash silks.....	477,658 pounds...	3,276,826
Fringe and floss silks.....	193,659 pounds...	696,932
Broad goods, total.....	97,940,935 yards...	58,125,622
Broad silks, all silk, and silk mixed:		
Plain and fancies.....	62,536,893 yards...	39,302,821
Jacquards.....	9,209,695 yards...	6,639,322
Piece-dyed.....	15,890,385 yards...	6,210,678
Velvets.....	5,122,249 yards...	2,479,903
Plushes.....	3,843,634 yards...	2,480,068
Upholstery and tapestry.....	1,833,119 yards...	1,009,835
Ribbons.....		18,467,179
Laces, nets, veils, veilings, etc.....		803,104
Braids and bindings.....		1,522,565
Dress, cloak, millinery, and military trimmings.....		2,295,010
All other products.....		1,268,950

COMPARATIVE STATISTICS BY STATES.

Table 12 is a comparative summary, by states, for 1880, 1890, and 1900, of the data reported under the principal heads of the inquiry.

In considering the comparative statistics shown in Table 12, it should be understood that the omission of silk hosiery and knit goods, and of braids and trimmings in which silk was a material of minor value, reduces the increase between 1890 and 1900. The large decrease in New York during the last decade is due, in part, to this omission, which affects, more or less, the statistics for the other states. A noticeable feature shown in Table 12 is the practical disappearance of hand looms and the marked increase in power looms. The number of spindles has increased, since 1880, 363.6 per cent.

The five leading states in silk manufacture at the last three censuses were New Jersey, Pennsylvania, New York, Connecticut, and Massachusetts. The relative

rank of these states with respect to the principal items of information presented in the table varied slightly from time to time as shown in the following statement, the number indicating the rank:

STATES.	NUMBER OF ESTABLISHMENTS.			CAPITAL.			AVERAGE NUMBER OF WAGE-EARNERS.			WAGES.			COST OF MATERIALS USED.			VALUE OF PRODUCTS.		
	1900	1890	1880	1900	1890	1880	1900	1890	1880	1900	1890	1880	1900	1890	1880	1900	1890	1880
New Jersey.....	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Pennsylvania.....	2	3	3	2	3	4	2	3	4	2	3	4	2	3	5	2	3	5
New York.....	3	1	1	4	2	2	3	2	2	3	2	2	4	3	2	3	2	2
Connecticut.....	4	4	4	3	4	3	4	4	3	4	4	3	3	4	3	4	4	3
Massachusetts.....	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	5	5	4

Based upon all essential considerations, the states included in the statement rank, at this census, in the order given. The greatest growth is noted in Pennsylvania, which, from a position of comparative insignificance in 1880, has advanced to second place at this census. This may be characterized as one of the prin-

cipal developments of the industry during the interval. It is a result of the abundance of suitable labor and cheap fuel in the eastern part of the state, advantages which continue to influence the establishment of new silk mills and the removal of old plants from other localities.

TABLE 12.—COMPARATIVE SUMMARY FOR THE UNITED STATES, BY STATES, 1880, 1890, AND 1900.

STATES.	Year.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.					Miscellaneous expenses.	Cost of materials used.	Value of products, including amount received for contract work.	Number of spindles.	NUMBER OF LOOMS.		
				Number.	Salaries.	Total number.	Total wages.	Men, 16 years and over.	Women, 16 years and over.	Children, under 16 years.					Total.	Power.	Hand.
United States	1900	488	\$81,082,201	2,657	\$3,134,352	65,416	\$20,982,194	24,206	34,797	6,413	\$10,264,208	\$62,406,065	\$107,256,258	1,987,404	44,480	44,257	173
	1890	472	51,907,537	1,531	1,917,877	49,382	17,762,441	17,602	28,914	2,866	4,259,623	51,004,425	87,298,464	1,087,395	22,569	20,822	1,747
	1880	382	19,125,800	(1)	(1)	31,337	9,146,705	9,875	16,890	5,606	(2)	22,467,701	41,033,045	426,530	8,474	5,321	3,163
California.....	1900	5	808,847	6	4,998	117	83,055	24	91	2	4,118	146,219	255,902	3,380	2	2	.....
	1890	9	112,288	11	15,276	208	68,290	49	152	2	10,438	146,406	271,912	2,817	36	1	35
	1880	5	104,300	(1)	(1)	161	41,400	20	106	25	(2)	80,995	159,175	350	24	.....	24
Connecticut.....	1900	88	12,166,775	323	403,423	6,514	2,392,878	2,763	3,685	166	637,450	7,198,008	12,378,981	160,743	2,975	2,975	.....
	1890	85	9,037,042	117	159,273	4,964	1,847,531	1,540	3,301	123	270,426	6,201,876	9,788,951	129,664	1,378	1,372	6
	1880	28	4,486,500	(1)	(1)	3,428	1,026,530	785	1,990	658	(2)	3,311,206	5,881,000	88,325	615	603	12
Illinois.....	1900	4	259,540	33	51,180	412	121,644	81	310	21	42,410	187,514	421,088	.....	34	27	7
	1890	10	422,096	49	54,314	756	241,322	157	589	10	35,761	314,855	785,845	732	126	44	82
	1880	5	82,000	(1)	(1)	259	72,195	67	135	57	(2)	125,895	244,150	.....	64	13	51
Maryland.....	1900	4	50,400	3	3,600	72	20,638	28	44	.....	3,798	34,305	100,361	6	14	14	.....
	1890	4	20,900	(1)	(1)	82	11,000	12	56	14	(2)	15,760	35,415	.....	39	.....	39
Massachusetts.....	1900	20	5,649,758	156	227,276	3,110	1,110,324	1,102	1,837	171	382,745	3,823,963	5,957,532	107,312	1,040	1,017	23
	1890	20	3,353,296	223	258,115	2,908	1,038,284	977	1,928	88	484,390	3,251,893	5,557,569	81,435	540	444	96
	1880	22	1,306,900	(1)	(1)	1,826	521,725	353	1,235	188	(2)	1,990,515	3,764,260	30,450	241	88	153
New Jersey.....	1900	180	29,285,792	959	1,144,512	24,157	9,232,532	11,279	11,679	1,199	4,896,595	21,631,118	39,966,662	686,065	20,572	20,557	15
	1890	132	16,809,927	472	541,670	17,445	6,684,610	7,773	8,773	899	1,356,137	17,908,883	30,760,371	359,364	11,724	11,487	237
	1880	106	6,952,325	(1)	(1)	12,549	4,177,745	4,696	5,300	2,493	(2)	9,678,536	17,122,230	210,783	4,553	2,956	1,597
New York.....	1900	92	9,800,207	363	514,439	7,861	2,861,818	3,149	4,299	418	1,601,527	6,570,037	12,706,246	186,703	5,208	5,175	93
	1890	185	11,165,918	492	601,836	12,719	4,983,063	4,466	7,983	280	1,123,671	10,174,818	19,417,796	154,969	4,940	3,888	1,052
	1880	151	4,696,775	(1)	(1)	9,633	2,500,025	2,405	5,459	1,769	(2)	6,331,804	10,170,140	67,271	2,086	1,095	991
North Carolina.....	1900	3	130,376	11	3,455	209	25,420	35	119	55	5,159	99,408	135,354	18,790	125	125	.....
	1890	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio.....	1900	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1890	3	37,830	4	2,512	36	11,173	8	28	.....	2,662	13,983	33,927	96	16	.....	16
	1880	6	24,700	(1)	(1)	135	12,550	21	73	41	(2)	19,495	53,110	.....	22	.....	22
Pennsylvania.....	1900	121	20,894,023	745	718,776	21,028	4,629,626	5,214	11,565	4,249	2,451,820	10,884,869	31,072,926	942,545	12,949	12,920	29
	1890	66	9,037,042	192	256,049	9,330	2,725,285	2,420	5,617	1,298	939,051	12,094,859	19,357,546	118,215	3,583	3,360	228
	1880	49	1,379,900	(1)	(1)	3,189	678,120	1,000	1,870	319	(2)	1,830,985	3,491,840	25,241	828	566	262
Rhode Island.....	1900	6	680,252	8	12,320	455	166,675	124	326	5	103,464	818,561	1,311,338	4,212	533	533	.....
	1890	3	122,256	8	8,607	186	63,471	49	107	30	17,427	149,763	229,062	8,393	43	43	.....
	1880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Virginia.....	1900	3	594,359	12	12,678	473	105,066	144	228	101	15,300	720,525	981,680	41,798	147	147	.....
	1890	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
All other states	1900	11	1,312,272	41	41,295	1,080	303,171	291	758	31	123,635	1,326,448	2,068,554	35,856	785	779	6
	1890	5	534,426	20	17,325	678	138,779	145	392	141	15,862	713,254	995,114	36,704	169	169	.....
	1880	6	61,000	(1)	(1)	85	15,415	16	62	7	(2)	82,510	111,725	8,610	2	.....	2

¹Not reported separately.

²Not reported.

³Included in "all other states."

⁴Includes establishments distributed as follows: Delaware, 2; Maine, 1; Maryland, 2; Michigan, 2; New Hampshire, 2; Utah, 2.

⁵Includes establishments distributed as follows: Maine, 1; Michigan, 1; Missouri, 1; North Carolina, 1; Virginia, 1.

⁶Includes establishments distributed as follows: Kansas, 1; Maine, 1; Missouri, 1; New Hampshire, 1; Rhode Island, 1; Vermont, 1.

CAPITAL.

Table 13 is a comparative statement in detail of capital for 1890 and 1900, by states.

The value of land and buildings owned, as shown by Table 13, is \$12,250,905 as compared with \$6,904,628 in 1890. The estimated value of hired property as reported at the census of 1890 was \$10,335,160, for which \$734,268 was paid as rent for tenancy, or 7.1 per cent. In 1900 the amount reported as paid for rent of land and buildings was \$591,807, which, assuming that the earning power of property was the same, represented a capital value of \$8,335,310. The total amount of capital reported, \$81,082,201, does not include the

value of land and buildings rented. Compared with the census of 1890, the increase of aggregate capital is 59 per cent, and, specifically, land and buildings owned, 77.4 per cent; machinery, tools, and implements, 46.3 per cent; and cash and sundries, 60.7 per cent. The increase in the value of land and buildings owned, and the decrease in the value of land and buildings hired, as estimated, evidence the steadily growing prosperity of the industry. It is also interesting to note that in 1900 the value of finished goods produced for each dollar of capital invested was \$1.14, as compared with \$1.36 in 1890, and \$1.80 in 1880.

TABLE 13.—COMPARATIVE SUMMARY OF CAPITAL, BY STATES: 1890 AND 1900.

STATES.	Year.	Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.
United States	1900 1890	\$81,082,201 51,007,537	\$2,045,008 1,691,660	\$10,205,812 5,212,968	\$20,750,449 14,181,680	\$48,080,847 29,921,229
California	1900 1890	308,847 112,283	8,600	29,726	44,161 30,400	231,360 81,874
Connecticut	1900 1890	12,166,776 9,037,042	282,294 152,589	1,597,352 1,143,200	2,061,790 1,617,538	8,225,330 6,123,715
Illinois	1900 1890	259,540 422,096	15,000 33,000	25,000 60,000	95,959 106,200	123,581 222,896
Maryland	1900 1890	50,400	6,000	1,500	12,400	30,500
Massachusetts	1900 1890	5,649,758 8,353,296	216,341 77,300	756,454 287,500	707,345 501,908	3,969,618 2,396,588
New Jersey	1900 1890	20,285,792 16,809,927	733,367 590,919	2,966,084 1,579,160	7,297,856 5,039,564	18,288,485 9,600,284
New York	1900 1890	9,800,207 11,165,918	202,138 544,002	586,224 832,240	3,061,252 3,612,758	5,950,593 6,176,918
North Carolina	1900 1890	130,376	6,200	52,000	40,525	81,651
Ohio	1900 1890	37,880	10,000	5,000	1,750	21,080
Pennsylvania	1900 1890	20,894,023 9,362,063	491,598 236,850	3,688,545 1,225,652	6,696,158 2,941,679	10,017,722 4,957,882
Rhode Island	1900 1890	680,252 122,256	24,955	96,224	165,032 70,364	394,041 51,892
Virginia	1900 1890	594,359	12,600	174,440	210,200	197,119
All other states	1900 1890	1,312,272 534,426	57,000 41,000	283,768 78,716	370,162 167,110	651,347 257,600

¹ Included in "all other states."

² Includes statistics reported by establishments distributed as follows: Delaware, 2; Maine, 1; Maryland, 2; Michigan, 2; New Hampshire, 2; Utah, 2.

³ Includes statistics reported by establishments distributed as follows: Maine, 1; Michigan, 1; Missouri, 1; North Carolina, 1; Virginia, 1.

WAGE-EARNERS AND OPERATIVES EMPLOYED.

Table 14 presents the number of wage-earners—men, women, and children—by states, from 1870 to 1900, inclusive, with the percentage that each is of the total number.

TABLE 14.—COMPARATIVE SUMMARY OF WAGE-EARNERS, BY STATES: 1870, 1880, 1890, AND 1900.

STATES.	Year.	NUMBER.				PER CENT.		
		Total.	Men, 16 years and over.	Women, 16 years and over.	Children, under 16 years.	Men, 16 years and over.	Women, 16 years and over.	Children, under 16 years.
United States.	1900	65,416	24,206	34,797	6,413	37.0	53.2	9.8
	1890	49,382	17,602	28,914	2,866	35.6	58.6	5.8
	1880	31,337	9,375	16,396	5,566	29.9	52.3	17.8
	1870	6,649	1,734	3,529	1,386	26.1	53.1	20.8
California.....	1900	117	24	91	2	20.5	77.8	1.7
	1890	208	49	152	2	24.1	74.9	1.0
	1880	151	20	106	25	13.2	70.2	16.6
	1870							
Connecticut.....	1900	6,514	2,763	3,585	166	42.4	55.0	2.6
	1890	4,964	1,540	3,301	123	31.0	66.5	2.5
	1880	3,428	785	1,990	653	22.9	58.0	19.1
	1870	1,703	466	1,003	234	27.4	58.9	13.7
Illinois.....	1900	412	81	310	21	19.7	75.2	5.1
	1890	766	157	589	10	20.8	77.9	1.3
	1880	269	67	185	57	25.9	62.1	22.0
	1870							
Maryland.....	1900							
	1890	72	28	44		38.9	61.1	
	1880	82	12	56	14	14.6	68.3	17.1
	1870							
Massachusetts....	1900	3,110	1,102	1,837	171	35.4	59.1	5.5
	1890	2,993	977	1,928	88	32.6	64.4	3.0
	1880	1,826	553	1,285	188	19.3	70.4	10.3
	1870	453	97	286	70	21.4	63.1	15.5
New Jersey.....	1900	24,167	11,279	11,679	1,199	46.7	48.3	5.0
	1890	17,445	7,773	8,778	899	44.6	50.3	5.1
	1880	12,549	4,696	5,360	2,493	37.4	42.7	19.9
	1870	2,790	733	1,162	895	26.3	41.6	32.1
New York.....	1900	7,861	3,149	4,299	413	40.1	54.7	5.2
	1890	12,719	4,466	7,983	280	35.0	62.8	2.2
	1880	9,693	2,405	5,459	1,769	25.0	56.7	18.3
	1870	739	164	413	172	20.8	55.9	23.3
North Carolina...	1900	209	35	119	55	16.8	56.9	26.3
	1890							
	1880							
	1870							
Ohio.....	1900							
	1890	36	8	28		22.2	77.8	
	1880	135	21	78	41	15.5	64.1	30.4
	1870							
Pennsylvania.....	1900	21,028	5,214	11,565	4,249	24.8	55.0	20.2
	1890	9,330	2,420	5,617	1,293	25.9	60.2	13.9
	1880	3,189	1,000	1,870	319	31.4	58.6	10.0
	1870	986	266	655	15	28.4	70.0	1.6

¹Included in "all other states."

TABLE 14.—COMPARATIVE SUMMARY OF WAGE-EARNERS, BY STATES: 1870, 1880, 1890, AND 1900—Continued.

STATES.	Year.	NUMBER.				PER CENT.		
		Total.	Men, 16 years and over.	Women, 16 years and over.	Children, under 16 years.	Men, 16 years and over.	Women, 16 years and over.	Children, under 16 years.
Rhode Island.....	1900	455	124	326	5	27.3	71.6	1.1
	1890	186	49	107	30	26.4	57.5	16.1
	1880							
	1870							
Virginia.....	1900	473	144	228	101	30.4	48.2	21.4
	1890							
	1880							
	1870							
All other states...	² 1900	1,080	291	758	31	26.9	70.2	2.9
	³ 1890	678	145	392	141	21.4	67.8	20.8
	⁴ 1880	85	10	62	7	18.8	73.0	8.2
	⁵ 1870	28	18	10		64.3	35.7	

¹Included in "all other states."

²Includes establishments distributed as follows: Delaware, 2; Maine, 1; Maryland, 2; Michigan, 2; New Hampshire, 2; Utah, 2.

³Includes establishments distributed as follows: Maine, 1; Michigan, 1; Missouri, 1; North Carolina, 1; Virginia, 1.

⁴Includes establishments distributed as follows: Kansas, 1; Maine, 1; Missouri, 1; New Hampshire, 1; Rhode Island, 1; Vermont, 1.

⁵Includes establishments distributed as follows: New Hampshire, 1; Vermont, 1.

Table 14 shows that in 1870 children were 20.8 per cent of the total operatives in the United States, and in 1900, 9.8 per cent, a marked decrease. During the same period the percentage of women remained the same, while that of men increased from 26.1 per cent to 37 per cent. This decrease in the percentage of children took place between 1870 and 1890, for since 1890 the percentage has increased slightly. In some states the decrease in the percentage of children is even more marked, ranging from 32.1 per cent to 5 per cent in New Jersey. In contrast to this, the proportion of children in Pennsylvania has increased during the entire period. It has already been remarked that the prosperity of the throwing industry in this state is partly due to the cheap unskilled labor obtainable in the smaller towns, and this increase in the proportion of children employed corroborates the statement.

Table 15 presents the skilled and unskilled operatives, weavers, and spinners, winders, and warpers, including unskilled employees, by states, for 1900.

TABLE 15.—WAGE-EARNERS CLASSIFIED BY OCCUPATION, BY STATES: 1900.

STATES.	TOTAL.			WEAVERS.															SPINNERS, WINDERS, WARPERS, ETC.		
				Total.			Broad silks.			Ribbons.			Velvets and plushes.			All other.					
	Men.	Wom- en.	Child- ren.	Men.	Wom- en.	Child- ren.	Men.	Wom- en.	Child- ren.	Men.	Wom- en.	Child- ren.	Men.	Wom- en.	Child- ren.	Men.	Wom- en.	Child- ren.			
United States..	24,206	34,797	6,413	15,860	13,057	607	8,917	9,188	235	3,725	1,467	21	881	510	150	1,837	1,892	261	8,846	21,740	5,746
California	24	91	2																24	91	2
Connecticut.....	2,763	3,585	166	1,446	1,149	39	448	441		21	200	7	505	141		412	367	32	1,317	2,436	127
Illinois.....	81	310	21																81	310	21
Massachusetts....	1,102	1,837	171	311	282	8	301	208			40					10	34	8	791	1,555	163
New Jersey.....	11,279	11,679	1,199	7,992	4,818	116	5,491	3,548	38	1,762	502	3	48	5		691	763	75	3,287	6,861	1,083
New York.....	3,149	4,299	413	2,373	1,497	98	899	824	2	1,014	203	10	109	20		351	450	86	776	2,802	315
North Carolina...	35	119	55																35	119	55
Pennsylvania.....	5,214	11,565	4,249	3,020	4,916	401	1,645	3,777	191	885	617	1	149	344	150	341	278	59	2,194	6,649	3,848
Rhode Island....	124	326	5	104	156		74	156					10			20			20	170	5
Virginia.....	144	228	101																144	216	101
All other states ¹ .	291	758	31	114	189	5	59	184	4	43	5					12		1	177	569	26

¹Includes the statistics reported by establishments distributed as follows: Delaware, 2; Maine, 1; Maryland, 2; Michigan, 2; New Hampshire, 2; Utah, 2.

Table 15, considered in connection with Tables 6, 8, 9, and 10, presenting the number of looms, spindles, etc., indicates in a measure the relative position of the several states with reference to the production of the various silk products.

COUNTIES LEADING IN SILK MANUFACTURE.

Table 16 shows the number of establishments, capital, number of wage-earners, total wages, and value of products in counties manufacturing a product exceeding \$1,000,000 in value.

TABLE 16.—COUNTIES MANUFACTURING PRODUCTS EXCEEDING \$1,000,000 IN VALUE: 1900.

COUNTIES.	Number of establishments.	Capital.	WAGE-EARNERS.		Value of products.
			Average number.	Total wages.	
Connecticut:					
Fairfield	5	\$1,207,927	903	\$354,265	\$1,657,954
Hartford	3	6,340,705	2,546	1,064,908	4,613,243
New London	6	2,180,524	1,181	440,427	2,316,810
Tolland	10	593,933	581	162,521	1,360,518
Massachusetts:					
Hampden ¹	3	2,768,120	1,196	437,412	2,584,314
Hampshire					
New Jersey:					
Hudson	19	6,581,756	4,703	1,825,996	7,925,620
Morris	5	723,766	857	248,509	1,424,837
Passaic	140	19,192,756	16,150	6,366,334	26,329,702
Warren	5	1,556,930	1,303	416,323	2,174,705
New York:					
New York	50	4,428,148	4,001	1,579,314	6,757,544
Kings	10	859,138	653	287,199	1,042,199
Queens	6	1,718,848	823	344,330	1,632,651
Pennsylvania:					
Blair ¹	14	2,392,256	3,313	528,433	4,185,179
Lackawanna	5	524,367	1,396	284,524	1,622,494
Lancaster	13	3,321,009	3,614	894,152	4,780,909
Lehigh	8	1,115,449	1,207	229,520	1,513,833
Lycoming ¹					
Northampton	10	1,978,804	1,947	469,281	3,249,776
Northumberland ¹					
Philadelphia	28	3,813,532	2,506	826,456	4,531,794
Schuylkill ¹					
All other counties ²	9	4,329,575	3,244	861,495	7,264,660

¹Included in "all other counties."

²Includes counties having less than 3 establishments, distributed as follows: Massachusetts: Hampden, 2; Pennsylvania: Blair, 1; Lycoming, 2; Northumberland, 2; Schuylkill, 2.

The leading counties in silk manufacture, according to Table 16, are Passaic, Hudson, and Warren, N. J.;

New York, Kings, and Queens counties, which are comprised in the city of Greater New York; Lehigh, Philadelphia, Lackawanna, and Northampton, Pa.; Hartford and New London, Conn.; and Hampshire, Mass.

BRAIDS AND TRIMMINGS.

Table 17 presents, by states, the establishments manufacturing silk trimmings and braids, apportioning them among the silk, cotton, and woolen industries and showing the cost of the several textile materials used and the value of the products.

The figures appearing under the headings "Cotton" and "Wool" do not appear elsewhere in the silk tables. To properly present the entire braids and trimmings industry, however, it was necessary to include them.

It should also be noted that this table includes 19 establishments which, although manufacturing braids and trimmings as by-products, produce other silk goods of greater value, and are classified as silk manufactories.

In censuses prior to 1900 all establishments making braids and bindings, fringes and gimps, dress and cloak trimmings, millinery and military trimmings, etc., of which silk was a component material, were classed as silk establishments. At this census the number is limited to those which have reported silk as the material of greatest value. If, as in previous censuses, all establishments using silks were included, the gross product, as shown by Table 17, would be \$7,785,699, and the number of establishments 105. In 1880 the reported production was \$9,306,205; in 1890 it was \$11,325,948. At the present census \$4,059,053 is given as the product of 66 establishments classified as silk, \$1,615,707 as the production of 26 establishments classified as cotton, and \$2,110,939 as the production of 13 establishments classified as woolen.

The principal centers of the trimmings trade are New York city and Philadelphia, and the elimination of so many of these establishments from the silk tabulation in this census especially affects New York.

TABLE 17.—BRAIDS AND TRIMMINGS, WITH COST OF TEXTILE MATERIALS, CLASSIFIED BY PRINCIPAL TEXTILE COMPONENTS, BY STATES: 1900.

STATES.	TOTAL.					SILK.						
	Number of establishments.	Cost of textile materials.				Value of products.	Number of establishments.	Cost of textile materials.				Value of products
		Total.	Silk.	Cotton.	Wool.			Total.	Silk.	Cotton.	Wool.	
United States.....	105	\$3,083,804	\$1,330,298	\$942,715	\$810,791	\$7,785,699	66	\$1,565,417	\$1,037,891	\$272,503	\$255,023	\$4,059,053
Connecticut.....	5	20,000	18,000	1,500	500	38,685	5	20,000	18,000	1,500	500	38,685
Illinois.....	4	160,210	69,421	40,063	50,726	421,088	4	160,210	69,421	40,063	50,726	421,088
Massachusetts.....	11	261,582	120,912	58,085	82,584	601,425	9	230,078	120,912	26,582	82,584	533,527
New Jersey.....	8	93,416	44,751	42,516	8,149	262,938	6	61,622	44,151	11,668	5,803	162,755
New York.....	51	1,375,774	501,691	394,989	479,094	3,434,980	28	455,625	316,464	84,126	55,045	1,374,305
Pennsylvania.....	21	1,026,777	442,353	399,381	185,043	2,798,278	9	491,787	335,783	102,334	53,670	1,300,413
All other states ¹	5	146,095	133,170	6,230	6,695	228,280	5	146,095	133,170	6,230	6,695	228,280

¹Includes establishments distributed as follows: California, 2; Michigan, 1; Rhode Island, 2.

TABLE 17.—BRAIDS AND TRIMMINGS, WITH COST OF TEXTILE MATERIALS, CLASSIFIED BY PRINCIPAL TEXTILE COMPONENTS, BY STATES: 1900—Continued.

STATES.	COTTON.					WOOL.						
	Number of establishments.	Cost of textile materials.				Value of products.	Number of establishments.	Cost of textile materials.				Value of products.
		Total.	Silk.	Cotton.	Wool.			Total.	Silk.	Cotton.	Wool.	
United States.....	26	\$680,885	\$88,132	\$532,549	\$60,204	\$1,615,707	13	\$837,502	\$204,275	\$137,663	\$495,564	\$2,110,939
Connecticut.....	2	31,454	600	31,454	846	67,898	10	600,853	156,055	60,424	374,874	1,832,658
Illinois.....	2	31,794	29,182	241,439	49,175	678,017	3	237,149	48,220	68,239	120,690	728,281
Massachusetts.....	2	31,794	29,182	241,439	49,175	678,017	3	237,149	48,220	68,239	120,690	728,281
New Jersey.....	2	31,794	29,182	241,439	49,175	678,017	3	237,149	48,220	68,239	120,690	728,281
New York.....	13	319,796	29,182	241,439	49,175	678,017	10	600,853	156,055	60,424	374,874	1,832,658
Pennsylvania.....	9	297,841	58,950	228,808	10,683	769,584	3	237,149	48,220	68,239	120,690	728,281
All other states ¹												

¹Includes establishments distributed as follows: California, 2; Michigan, 1; Rhode Island, 2.

SKIEIN DYEING, PIECE DYEING, PRINTING, AND FINISHING.

The following tables present the statistics of dyeing, printing, and finishing silk goods and other textile yarns and silk-mixed fabrics, including both the work

done in silk manufacturing establishments and that done in establishments engaged exclusively in dyeing, printing, and finishing. Table 18 shows the statistics of skein dyeing; Table 19, piece dyeing; Table 20, printing; and Table 21, finishing.

TABLE 18.—SKIEIN DYEING IN SILK MILLS AND DYEING PLANTS, FOR SILK MANUFACTURE, BY STATES: 1900.

STATES.	Number of establishments.	Amounts charged for work done in dyeing plants.	Aggregate.	SILK.						OTHER YARNS.					
				Total.	Reeled.		Spun.		Total.	Cotton.		Wool.		Total.	Value of products.
					Colors.	Black.	Colors.	Black.		Colors.	Black.	Colors.	Black.		
United States...	95		Pounds. 12,175,988	Pounds. 9,876,477	Pounds. 5,551,313	Pounds. 3,383,871	Pounds. 621,043	Pounds. 309,250	Pounds. 2,300,511	Pounds. 1,007,589	Pounds. 1,049,215	Pounds. 100,658	Pounds. 83,049		
Total in silk mills....	58		5,952,391	3,936,970	1,793,955	1,641,785	425,216	176,014	2,015,421	925,255	981,559	52,658	55,949		
Total in dyeing plants.	37	\$4,805,809	6,223,597	5,938,507	3,757,358	1,862,086	195,827	133,236	285,090	142,334	67,656	48,000	27,100		
Connecticut:															
Silk mills.....	17		1,787,934	1,223,435	511,298	445,999	203,181	62,957	564,499	113,830	450,669				
Massachusetts:															
Silk mills.....	8		1,150,790	707,432	263,700	250,083	71,151	22,498	443,358	122,109	224,642	45,658	50,949		
New Jersey:															
Silk mills.....	13		1,207,345	1,098,655	838,582	257,844	2,189	90	108,690	25,640	83,050				
Dyeing plants.....	22	3,027,829	5,064,504	5,057,039	3,175,932	1,661,078	132,286	88,343	6,805	3,834	3,081				
New York:															
Silk mills.....	10		483,921	188,124	98,010	54,431	26,783	8,000	295,797	261,322	25,475	5,000	4,000		
Dyeing plants.....	9	160,063	609,685	391,460	277,869	72,591	28,375	12,625	278,225	138,500	64,625	48,000	27,100		
Pennsylvania:															
Silk mills.....	5		883,035	285,958	29,320	68,023	110,100	78,515	597,077	400,354	196,723				
Dyeing plants.....	5	215,292	484,158	484,158	300,957	115,817	35,141	32,243							
All other states: ¹															
Silk mills.....	7		439,366	433,366	52,145	365,405	11,862	3,954	6,000	2,000	1,000	2,000	1,000		
Dyeing plants.....	1	2,625	5,250	5,250	2,600	2,000	25	25							

¹Includes establishments distributed as follows: California, 2; Illinois, 1; Maine, 1; Michigan, 2; Rhode Island, 1; Virginia, 1.

TABLE 19.—PIECE DYEING IN SILK MILLS AND DYEING PLANTS, FOR SILK MANUFACTURE, BY STATES: 1900.

STATES.	Number of establishments.	Amounts charged for work done in dyeing plants.	Total.	All silk.	Silk and spun.	Silk and cotton.	Silk and wool.
United States.....	23		Yards. 40,484,911	Yards. 21,150,585	Yards. 2,044,630	Yards. 17,238,471	Yards. 51,225
Total in silk mills....	10		4,464,528	1,224,329	459,693	2,780,156	350
Total in dyeing plants.	13	\$849,294	36,020,383	19,926,256	1,584,937	14,458,315	50,875
New Jersey:							
Silk mills.....	4		1,629,181	1,046,938	110,000	471,893	350
Dyeing plants.....	8	773,229	33,679,486	19,415,550	1,580,625	12,636,436	46,875
New York:							
Silk mills.....	2		538,310			538,310	
Dyeing plants.....	4	76,493	2,323,647	497,768		1,821,879	4,000
All other states: ¹							
Silk mills.....	4		2,297,087	177,391	349,693	1,769,993	
Dyeing plants.....	1	567	17,250	12,938	4,312		

¹Includes establishments distributed as follows: Connecticut, 2; Illinois, 1; Pennsylvania, 2.

TABLE 20.—SILK PRINTING IN SILK MILLS AND SILK-PRINTING PLANTS, FOR SILK MANUFACTURE, BY STATES: 1900.

STATES.	Number of establishments.	Amounts charged for work done in silk-printing plants.	Total.	Printed in warps.	PRINTED IN PIECES.		
					Silk.	Silk and spun.	Silk and cotton.
United States.....	12		<i>Yards.</i> 10,239,606	<i>Yards.</i> 329,678	<i>Yards.</i> 4,965,893	<i>Yards.</i> 2,775,689	<i>Yards.</i> 2,168,946
Total in silk mills.....	4		3,084,811	16,355	846,704	1,684,524	537,228
Total in silk-printing plants.....	8	\$419,870	7,154,795	313,323	4,119,189	1,091,165	1,631,118
New Jersey:							
Silk mills.....	2		76,586	7,500	69,086		
Silk-printing plants.....	4	354,148	5,702,500	313,323	3,723,543	1,055,165	610,469
All other states: ¹							
Silk mills.....	2		3,008,225	8,855	777,618	1,684,524	537,228
Silk-printing plants.....	4	65,722	1,452,295		395,646	36,000	1,020,649

¹ Includes establishments distributed as follows: Connecticut, 2; Massachusetts, 1; New York, 2; Pennsylvania, 1.

TABLE 21.—SILK FINISHING IN SILK MILLS AND SILK-FINISHING PLANTS, FOR SILK MANUFACTURE, BY STATES: 1900.

STATES.	Number of establishments.	Amounts charged for work done.	Total.	Total.	Silk.	Silk and cotton.	Silk and wool.
United States.....	54		<i>Yards.</i> 133,463,540	<i>Pieces.</i> 2,228,346	<i>Pieces.</i> 1,462,594	<i>Pieces.</i> 765,569	<i>Pieces.</i> 183
Total in silk mills.....	38		44,616,500	762,062	472,584	280,362	116
Total in finishing plants.....	16	\$981,740	88,847,040	1,466,284	990,010	476,207	67
Connecticut:							
Silk mills.....	7		13,369,510	240,762	71,986	168,776	
New Jersey:							
Silk mills.....	15		17,845,930	297,949	268,128	29,767	54
Silk-finishing plants.....	6	449,021	41,706,480	680,608	453,192	227,410	
New York:							
Silk mills.....	5		4,937,520	82,292	67,240	15,052	
Silk-finishing plants.....	9	532,436	47,123,280	735,358	536,530	248,791	67
Pennsylvania:							
Silk mills.....	7		7,336,140	122,269	57,161	65,046	62
All other states: ¹							
Silk mills.....	4		1,127,400	18,790	8,069	10,721	
Silk-finishing plants.....	1	283	17,280	288	288		

¹ Includes establishments distributed as follows: California, 1; Illinois, 1; Maine, 1; Rhode Island, 1; Utah, 1.

Owing to its importance as a distinct industry, the dyeing and finishing of textiles will be presented in a separate report at this census, as it was at the census of 1890. As the various operations of skein dyeing, piece dyeing, printing, and finishing are wholly or partly done in many silk manufacturing plants, a tabulation has been made, covering not only the returns from the independent or professional dye works, print works, and finishing plants, but also those from silk manufacturing plants, which, when combined, possess special interest for silk manufacturers, and, considered in conjunction with other tables presented in this report, embrace all the elements of the silk industry in the United States.

The tables present the number of establishments engaged in the different classes of work, the quantity of goods handled, and the amount charged for the work done by dyeing, printing, and finishing establishments. Skein dyeing embraces all the yarns dyed for the silk industry in the census year. Piece dyeing, printing, and finishing embrace broad goods only, and do not include sewing silk, veilings, veils, etc. Ribbons are not

included, as a given number of yards or pieces of ribbon without designating the width has no significance. It is to be understood, therefore, that the returns for piece dyeing, printing, and finishing deal only with plain and fancy broad silks, Jacquards, piece-dyed weaves, velvets, plushes, tapestries, and upholstery silks.

Data as to capital invested, operatives employed, wages paid, cost of materials used, and miscellaneous expenses of the independent or professional plants will be found in the separate report on "Dyeing and Finishing of Textiles." The principal object of the foregoing tables is to show the quantities of silk and other textile yarns and silk-mixed fabrics dyed, printed, and finished by and for silk manufacturers.

SKEN DYEING.—Table 18 shows that there were 8,945,184 pounds of reeled silk, skein dyed in colors and black. The total consumption of reeled silk, including fringe and floss silk, in the census year was 9,828,754 pounds. The balance, 883,570 pounds, represents, with the exceptions noted below, goods woven in the grey and piece dyed.

There were 930,293 pounds of spun silk, skein dyed

in colors and black. The total consumption of spun silk was 1,774,124 pounds. The balance, 843,831 pounds, practically represents goods woven in the grey and piece dyed.

The returns show 2,116,804 pounds of cotton, skein dyed in colors and black. The total consumption of cotton yarns by the silk industry was 6,664,071 pounds. The balance, 4,547,267 pounds, largely represents piece-dyed mixed goods.

The returns show 183,707 pounds of woolen yarns, dyed in colors and black. The total consumption of wool and mohair yarns was 344,271 pounds. The balance, 160,564 pounds, represents piece-dyed mixed goods. "Other yarns" reported as raw materials in the census returns amount to 108,388 pounds.

The marked tendency in recent years to the production of silk-mixed goods, comprising silk, cotton, and wool, and the interchange of the several fibers in the textile industries, reference to which has been made elsewhere in this report, is illustrated by the returns tabulated. In the cotton textile industry the consumption of raw-silk and spun-silk yarns has increased from 51,434 pounds in 1890 to 560,680 pounds in 1900. In the wool textile industry and its several branches the consumption of such materials has increased from 255,494 pounds to 323,884 pounds, and in the hosiery and knit-goods industry an increase from 120,341 pounds in 1890 to 266,247 pounds in 1900 is reported. A considerable quantity of skein-dyed silk yarn is now used as warps by the cotton and woolen manufacturers of New England. The great development of electricity in the United States has utilized a very considerable quantity of skein-dyed silk yarns in covering electric wires.

PIECE DYEING, PRINTING, AND FINISHING.—In addition to the piece dyeing of domestic goods, very large quantities of Habutai silks from Japan figure in the returns as dyed and finished in the United States; also cotton-back satins in considerable quantities from Switzerland, Germany, and Lyon, France.

The redyeing and finishing in the United States of dress silks imported in colors, and later turned to other uses in the millinery and trimmings trade, and the re-finishing of imported taffetas to suit changed conditions of demand and use, help to account for the apparent large excess of yardage piece dyed and finished by professional plants over the figures of strictly domestic production of piece-dyed goods.

Another consideration is the probable fact that the production of double-width taffetas, 18-36 inches to 27-54 inches wide, in double pieces, may have been returned singly by the manufacturer and doubly by the dyer and finisher.

SILK PRINTING.—What has been said respecting the piece dyeing of imported goods equally applies to the printing branch of the industry. Foreign-made goods

imported in the grey are now printed here as successfully as in Europe.

The item "Amount charged for work done" in the tables indicates payments to the independent or professional establishments, as follows:

Skein dyeing.....	\$4,305,809
Piece dyeing.....	849,294
Printing.....	419,870
Finishing.....	981,740
Total.....	6,556,713

The proportion of this amount applicable to the silk manufacturers exclusively is included in the item "Contract work," under miscellaneous expenses, in the tables included in this report. From the foregoing description of the methods of the business it is plainly evident that a part of these charges was for account of importers of foreign silks in the piece, and of the domestic users of skein-dyed yarns in other industries. The reported expense of dyeing, finishing, and printing is not the total value of the work performed in these branches of the industry, but represents only the amount charged by the independent or professional establishments, and does not include the value of such work done by silk manufacturers. As one price per yard is charged by a number of concerns which do both piece dyeing and finishing, the apportionment of the returns between these processes was estimated. The principal object of the tabulation was, as stated, to report quantities under the designated headings. The price charged for "finishing" 88,829,760 yards by 15 professional establishments in New York and New Jersey is reported at \$981,457. The current price for finishing all silk broad goods is 1 cent per yard, and mixed goods 2½ cents per yard. Other prices current in this branch of the industry are as follows: Piece dyeing (including finishing), all silk, 2½ to 3 cents per yard, and mixed goods, double the price charged for all silk goods. Printing (including finishing), 5 to 7 cents per yard, and warp printing, 7 to 12 cents per yard. In broad goods the average yardage per piece is 60 yards. Some pieces measure only 30 yards, but the great bulk of the production is in 50-yard and 60-yard pieces, while all the foreign cotton-back satins dyed in the United States average 75 yards per piece.

CAPACITY OF AMERICAN MILLS.

There are now in the United States silk manufacturers who turn out over 100,000 pieces of 60 yards each per year, more than half being taffeta weaves; yarn dyers deliver uncharged silk in two days, black and colored organzine and tram, weighted 70 to 80 per cent, in five to six days and heavy charged silk in eight to fourteen days, it being possible to arrange for shorter deliveries when necessary. One yarn dyer is able to turn out and ship 4,500 pounds black and 3,000 pounds

colored daily. Finishing plants are now able to turn out 2,000 pieces per day. Formerly all piece-dyed goods made abroad were dyed in Europe and finished there, but since 1897 the piece-dyeing and printing branches in the United States have greatly enlarged their facilities, and now dye and print not only large quantities of domestic raw goods, but also some imported goods. The domestic production of piece-dyed goods as shown by the census returns is presented in the following statement:

	Quantity.	Value.
	<i>Yards.</i>	
All silk	7,331,501	\$3,342,167
Silk mixed	8,553,881	2,868,506
Total	15,890,385	6,210,673

During the last ten years every weave, article, and quality known to mechanical weaving, or which, through alterations on machinery or simplification in manufacturing, could be put in reach of power-loom weaving, have been manufactured in the United States. With the exception only of a few Lyon specialties, which for different reasons are not suitable for mechanical weaving, every style which the silk industry brings to the market is manufactured in the silk mill of to-day, viz:

Pure silk goods, silk and wool, and silk and cotton mixtures and spun-silk fabrics.

Warp prints of all descriptions and piece-dyed and printed goods in every variety.

Plain silks of all weaves; "fancies," from the simplest to the most complicated styles, and Jacquards, brochés, etc.

Light-weight goods, as chiffons, mousselines, marcelines, and the heaviest curtain and upholstery silks.

All the products of the various mills, including the great variety of dress silks, linings, and trimmings; goods for the cloak, necktie, and millinery trades; and silks for the manufacturers of silk waists, skirts, umbrellas, and parasols—all these give most convincing testimony to the many-sidedness of the American weaving mill. That the industry has in a comparatively short space of time achieved such good results may be attributed to the enterprise and intelligence of its leading men, who readily experiment with new and untried methods regardless of trouble and expense, even if there is only small hope of success.

The following is a statement in round numbers of the estimated value of the silk production of Europe and the United States in 1900, by countries, with the percentage that the production of each country forms of the total production. This statement includes only the value of finished goods, and not that of partially manufactured products. The several countries are presented in the order of their importance in the manufacture.

SILK PRODUCTION OF EUROPE AND THE UNITED STATES: 1900.¹

	Value of annual production.	Per cent of production.
France	\$122,000,000	80.9
United States	92,000,000	28.3
Germany	78,000,000	18.5
Switzerland	38,000,000	9.6
Russia (in Europe)	21,000,000	5.3
Austria	17,000,000	4.3
Great Britain	15,000,000	3.8
Italy	13,000,000	3.3
Spain and Portugal	4,000,000	1.0
Total	295,000,000	100.0

¹International Universal Exposition at Paris: Report of United States Commissioner Peck: Report on Silk Fabrics, contributed by Franklin Allen, juror of the United States in the silk section (class 83). Government Printing Office, Washington, D. C., 1901, page 565.

RELATIVE POSITION OF FRANCE AND THE UNITED STATES.

The annual production of France is claimed to be \$122,000,000, distributed as follows:¹

Lyon	\$80,000,000
St. Etienne (ribbons)	20,000,000
Paris	6,000,000
Calais, Le Nord, etc.	16,000,000

The Lyon manufactures, therefore, constitute nearly two-thirds of the production of France; they include, however, a considerable quantity of silk and cotton mixture (mélange), the manufacture of which has been greatly developed at that city. The total is further swollen by including the foulards imported from Japan and China, which are valued at about 15,000,000 francs annually, and, being printed in Lyon, are returned as Lyon manufactures with a value of 20,000,000 francs. Strictly speaking, the value of the silk woven in another country should not be included in any correct statement of the gross volume of the local production. France now consumes somewhat less raw silk than the United States, her consumption being estimated by the Lyon Chamber of Commerce at 9,000,000 pounds, while that of the United States during the census year was 9,760,770 pounds. New York city, the only raw-silk market in America, now holds the first place among the raw-silk markets of the world, Shanghai alone excepted.

More raw silk is sold annually in New York than is consumed in France, which is the largest raw-silk consuming country of Europe. As to the selling value of the product, the United States ranks second, being surpassed by France, which still dominates, without serious competition, the world's markets in church ornaments and chasubles, and Parisian specialties representing the supremacy of Paris fashions for women's wear. Many

¹From charts exhibited at the Paris Exposition of 1900, indicating the annual production of the principal silk manufacturing countries, prepared by Mr. Marius Morand, secretary of the Chamber of Commerce of Lyon.

of these are made on handlooms, the quantities required in different patterns and styles being so limited that their production in the United States by powerloom weaving would not be profitable.

WORLD'S RAW-SILK SUPPLY.

The quantity, character, and mercantile condition of the raw silk received from the several sources of supply are prime factors in the industry. The price of raw material also has an important influence. Wide variations in price are a great disadvantage. When, on the other hand, the maximum and minimum prices steadily maintain a narrow range the industry is benefited.

Likewise the stimulation of raw-silk production through the development of new centers of industrial activity in silk manufacture, as in the United States, is a general benefit. Steadier and more moderate prices follow increased production, as a rule, and these in time encourage the use of silk in ever-widening channels; the cost of raw silk to the consumer is thereby also greatly diminished. For instance, it is not so many years since the buyers of cocoons in Europe relied upon and received a profit of 10 to 20 francs a kilo for the

reeled silk, or 87½ cents to \$1.75 a pound, and in the United States, in the earlier days of the industry, the importers of raw silk confidently counted upon an equal profit. The manufacturers of the United States naturally began to import on their own account, and as a result of their competition with the importers the difference between the price here and the price abroad was reduced to less than \$1 per pound. It is sufficient to say that to-day the competition is so healthful, owing to the increasing rivalry to which the United States has so largely contributed, that a small difference in the price per pound often determines whether the purchase is effected here or abroad. In "thrown silk" the contrast is quite as great. Many men now living recall the time when the silk manufacturers paid as high as \$4.50 a pound for the process of "throwing" organzine silk. Now the common price paid is from 60 to 75 cents per pound, depending upon the condition in which the silk is reeled where produced.

Table 22 presents the total raw-silk production of the world, showing the production in detail of the several sources of supply, at five-year periods, from 1870 to 1900, inclusive, the weight being given in kilograms, and in the aggregate reduced to pounds.

TABLE 22.—WORLD'S PRODUCTION OF RAW SILK, IN KILOGRAMS AND IN POUNDS.

COUNTRIES.	1900	1895	1890	1885	1880 ¹	1875 ¹	1870 ²
	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>
Europe: Total.....	4,277,000	4,761,000	3,830,000	3,520,000	3,608,000	3,456,800	3,817,000
Italy.....	3,363,000	3,509,000	2,880,000	2,810,000	.....	.....	3,180,000
France.....	560,000	896,000	618,000	483,000	.....	.....	637,000
Austria.....	276,000	266,000	267,000	142,000	.....	.....	.....
Spain.....	78,000	90,000	65,000	85,000	.....	.....	.....
Levant: Total.....	1,760,000	1,244,000	707,000	730,000	727,000	760,400	.....
Asia: Total production exported.....	10,730,000	8,027,000	6,783,000	5,676,000	6,242,000	5,399,700	3,689,400
China, Shanghai ³	4,756,000	3,358,000	2,914,000	2,695,000	.....	.....	1,680,400
China, Canton.....	2,253,000	1,394,000	1,529,000	774,000	.....	.....	1,018,000
Japan, Yokohama.....	3,371,000	3,076,000	2,130,000	1,346,000	.....	.....	423,000
India, Calcutta.....	850,000	199,000	210,000	861,000	.....	.....	468,000
Aggregate, kilograms.....	16,767,000	14,082,000	11,320,000	9,920,000	10,577,000	9,616,900	7,406,400
Aggregate, reduced to pounds.....	36,964,528	30,934,947	24,956,072	21,882,860	23,318,054	21,201,418	16,328,149

¹ Estimated from best information obtainable.

² Trustworthy figures of the world's supply prior to 1870 can not be given.

³ Tussah silk not included.

The following statement shows the quantity and invoice value of raw silk imported into the United States in each decennial year from 1860 to 1900, inclusive, and the average cost per pound, taken from the "Reports of the Bureau of Statistics of the United States Treasury Department:"

YEAR.	Pounds.	Invoice value.	Average cost per pound.
1860.....	297,877	\$1,340,676	\$4.50
1870.....	583,569	3,017,958	5.17
1880.....	2,662,236	12,024,690	4.69
1890.....	5,943,360	23,285,099	3.92
1900.....	11,259,310	44,549,672	3.96

A rise of \$1 per pound in the price to a country using, as the United States now does, about 10,000,000 pounds

annually, means, therefore, an increase of about \$10,000,000 in the cost of raw material, and must represent that much financial loss to the manufacturers, unless recouped from the consumer.

There have been great variations in the price meanwhile, as is shown by the following quotations:

In 1868 prices of raw silk averaged \$8.43 per pound, the highest prices of Blue Elephant Tsatlee, Best Italian No. 1, and Japan Maybash No. 2 averaging \$9.29 per pound.

In 1876 the highest prices of the same silks averaged \$9.10 per pound.

In 1894 the lowest prices prevailed, the lowest prices of the same silks averaging \$2.94 per pound. Canton Filature Best No. 2 was quoted at \$2.61 per pound. The world's supply in that year was 31,860,879 pounds.

The recognition by silk reelers of the standards of merit required by the most progressive silk manufacturers is also of great commercial and industrial importance. China and Japan are the two largest contributors to the world's supply from their surplus production. As a result of the close attention given by the progressive Japanese to the requirements of silk manufacturers in the United States, a much larger proportion of the raw silk consumed in the United States is supplied by Japan than by any other country. The percentage of raw silk that each principal producing country contributes to the world's supply, according to the statistics for 1900, shown in Table 22, also the percentage that each country contributes to the consumption of raw silk in the United States, as derived from the import statistics of the Treasury Department for the same period, are shown in the following statement:

COUNTRIES.	Percent of contribution to world's supply.	Percent of American consumption.
China	41.8	84.8
Japan	20.1	42.3
Italy	20.1	19.7
France	8.8	8.2
All other countries.....	14.7	0.5
	100.0	100.0

The production of raw silk in China is an absolutely unknown quantity. When prices in Europe and America are relatively high the supply increases surprisingly. When prices are normal or low the supply decreases. It is manifest, however, that by closer attention to the United States market China could greatly extend its raw-silk trade with this country. It is to be hoped that an effort will be successfully made to overcome the commercial indifference of Chinese merchants to the trade wants of their customers. The vast amount of capital invested and the large number of operatives employed in the silk industry throughout the world should be, it would seem, a commercial stim-

ulus to China, the greatest producer of raw silk, to perfect its silk-reeling processes by the application of skilled labor, so as to secure a much larger share than now of the profits of a business in which the country has so many natural advantages. The profit of her reelers would be greater if the output of her filatures were better adapted to the requirements of foreign consumers.

In Japan the domestic consumption of raw silk is usually estimated at about 50 per cent of the production, the remainder being exported.

In Italy the domestic consumption is probably about 15 per cent of the production, the remaining 85 per cent being exported to supply the silk manufacturers of France, Switzerland, Germany, Russia, England, and the United States.

DETAILED STATISTICS OF SILK MANUFACTURE.

The detailed statistics for the industry as reported are shown in Table 23 at the end of the report. This table presents separate totals for each state in which there were 3 or more establishments, and groups the statistics for other states so as not to disclose the operations of individual establishments. The establishments are classified according to the character of the ownership, which shows that 132 were owned by individuals, 154 by partnerships, and 197 by corporations. The employees are segregated so as to show for salaried officers and wage-earners separately the number and salaries or wages of men, women, and children, respectively, and also the average number of wage-earners employed during each month of the year. Separate totals of the different materials and products are shown. The number of machines, spindles, looms, etc., are presented, and the quantities of goods dyed, finished, and printed by silk manufacturing establishments performing such work; also the number of engines, water wheels, electric motors, and other power in use, with their horsepower. The 483 establishments are grouped according to the number of employees in each.

HISTORICAL AND DESCRIPTIVE.

The silk industry has reached the point where its future seems assured as a permanent branch of the textile industries of the United States, and, judged by the commercial effect that its establishment in this country has had upon improving and cheapening the processes of manufacture, and in lowering the cost of silk goods, every American can take pride in this industrial and commercial achievement.

The silk maker's art in the United States was transplanted from Europe, but, like many another transplanted art, it has taken such a firm hold on the business activities of the country that it has become thoroughly domesticated.

The beginning of the industry on this continent dates back to the Spanish conquest of Mexico in the Sixteenth century. At the beginning of the Seventeenth century King James I of England lent his royal favor by bestowing upon the London Company "plenty of silkworms, seed of his own store being the best," and by this company the "seed" was sent out to Jamestown, Va., as one of the means of helping the early colonists.¹

Simultaneously with this effort of King James to develop silk culture in England and America, Henry of Navarre (Henry IV of France) brought 14,000 mulberry trees from Italy, which were planted in the royal gardens of France.² Silkworm eggs were also procured from Italy, and other measures were taken by this patriotic king to encourage the nascent industry in France. It is interesting now to note that the prime minister of the King, the great Duke Sully, looked coldly upon this enterprise, arguing that "Luxury should be repressed, most certainly not encouraged." But the King had been converted to the idea by Oliver de Serres, whom the French honor as "the father of agriculture," and was not moved by the arguments of the minister. Sully, referring to this matter in his *Memoirs*, 1603, says: "I could not persuade him. 'Are these,' the King said to me, 'the good reasons you have to offer? I would much rather fight the King of Spain in three pitched battles than all those gentlemen of the robe, of the inkstand, and of the city, beside their wives and daughters, whom you will bring down upon me with your fantastic regulations.'"³

The industry, thus encouraged in France three hundred years ago, made notable progress both as to culture and manufacture. In America, notwithstanding the efforts of essayists and the premiums and bounties offered by colonial assemblies and by the English Parliament, the planters could not be stirred to much activity in raising silk. Silk culture by the colonists

would evidently have been a good thing for British manufacturers, but the record of history is that it had a fitful, uncertain existence. From 1750 to 1772, the period of its greatest activity before the Revolution, the export of raw silk averaged only 500 pounds per annum and rarely exceeded 1,000 pounds in a single year.⁴

For many years after the War of the Revolution premiums and bounties for planting mulberry trees and for producing raw silk were authorized by a number of states. In New England, New York, New Jersey, and Pennsylvania, especially, great interest was taken in the subject. Dr. Ezra Stiles, president of Yale College, at New Haven, Conn., and Dr. Benjamin Franklin, of Philadelphia, were among the most notable promoters of the movement. In December, 1825, the subject of silk culture began to receive national attention, being brought before Congress by a resolution of inquiry introduced by Mr. Miner, of Pennsylvania, and referred to the Committee on Agriculture. This committee reported favorably in the spring of 1826, the report including a resolution directing the Secretary of the Treasury to cause to be prepared a well-digested manual on the growth and manufacture of silk. Inquiries for information on the subject were sent out by the Secretary, Mr. Richard Rush, in 1826; and from the replies and other material a manual was compiled entitled "Letter from the Secretary of the Treasury," dated February 7, 1828. Six thousand copies were printed by order of Congress.⁵ This document became known as the "Rush Letter;" it contains 220 pages, besides illustrations of machinery, and is a carefully executed work.

This favorable action and the publication by Congress at the same session, and at many subsequent sessions, of other documents relating to silk culture, together with the serious consideration of the subject by the Congressional Committee on Manufactures, as well as by the Committee on Agriculture, enlisted general attention. Sericulture gained the public ear. Legislatures of several states passed bills for its encouragement, and a most determined effort was made to place silk growing on a paying basis. For ten years all went well. Silk conventions were held in Maryland, New Jersey, New York, and Connecticut, between December, 1838, and April, 1839, and there were many other gatherings devoted to the cause. What soon proved to be a disturbing element had, however, been introduced by an effort to supplant the white mulberry, *Morus alba*, on the leaves of which the worms had been fed, by the so-called Chinese mulberry, the *Morus multicaulis*, on account of the superior qualities claimed

¹Silk Industry, Paris Exposition, 1867, by Hon. Elliott C. Cowdin, United States commissioner, Washington, D. C., 1868, page 7. Purchas, *His Pilgrimes*, Vol. IV, page 1777.

²Tenth Census of the United States, Report on Silk Manufacture, by William C. Wyckoff, special agent, page 1.

³*Memoirs of Sully*, London, 1778, Vol. V, pages 150-159.

⁴Tenth Census of the United States, Report on Silk Manufacture, by William C. Wyckoff, special agent, page 10.

⁵H. R. Doc. 158, Twentieth Congress, first session.

for it. All the agricultural literature in the country soon became suffused with the descriptions of this wonderful tree. Speculation began, and prices of trees advanced far beyond their value. Large as were the anticipated profits of producing silk, they were insignificant as compared with the fortunes to be made by raising the new mulberry tree. Orchards of it were planted in every state in the Union. With increasing velocity the tide of speculation rose. Trees became of greater value than the silk which they could by any possibility be the means of producing. One writer says: "Prices ranged for trees produced from one bud or cutting and of a single season's growth, from 5 cents to 10, 20, 50 cents, \$1, and in some instances \$5 apiece."¹

The list of stock companies formed for raising and manufacturing silk at this period is very long, but as Mr. William C. Wyckoff, writing the report on Silk Manufactures for the Tenth Census of the United States (1880), says of them, "Their lives were very short." The bubble burst in 1839. Silk culturists and manufacturers had everywhere been swept into the rising current. As for the tree speculators, it is related that one who had been among the most successful sent an agent to France with \$80,000 to buy trees and cuttings in the winter of 1838-39. Before the whole of his purchase had arrived the crisis had come. The nurseryman had failed for so large a sum that he could never reckon up his indebtedness, and the next spring his *Multicaulis* trees were offered in vain to the neighboring farmers at \$1 a hundred for pea brush.²

Notwithstanding the favorable climatic conditions both in France and the United States for the growth of mulberry trees and the rearing of silk worms and cocoons, silk culture has dwindled in both countries, because more remunerative occupations are afforded by other lines of industry. Although in France the raisers of cocoons and reelers of silk are protected by a considerable bounty, payable by the French Government to her citizens as against the Italians, that country produces less than 4 per cent of the world's supply of raw silk. Her silk manufacturers are well content to purchase, as America does, the raw silk from Italy, Japan, and China, in all of which countries the ruling rates of wages are much less than in France and very much less than in the United States. Both France and the United States pursue the same fiscal policy of admitting raw silk free of duty and therefore both are on a par in this respect. Under this policy France produces only a small portion of the raw silk needed for its silk manufactures, while in the United States silk culture, which was introduced simultaneously to its stimulation in France three hundred years ago, practically ceased to exist in 1844, although since that date sporadic attempts to revive it have been made in Cali-

fornia and more recently in Kansas and at Salt Lake City, Utah.

Meanwhile, step by step, but slowly, improvements have been effected here in the manufacture of silk goods. The making of sewing silk became a household industry in New England, at first by hand, and later by machinery. The manufacture of silk trimmings of various kinds was commenced in 1815 at Philadelphia, and ribbons in 1829, at Baltimore.³ The invention of the sewing machine in the United States developed a demand for "machine twist," a silk thread specially suited for use on sewing machines and first applied to that purpose in February, 1852. These goods, together with fringes, gimps, and tassels, and a few ribbons, continued to be the principal products of the silk industry in the United States until the outbreak of the Civil War.

One of the foremost silk manufacturers of the United States, the first vice-president of the Silk Association of America, in a recently published treatise on the silk textile industry, correctly sets forth the reasons for its powerful development in recent years, as follows:⁴

As reasons for the rapid as well as powerful development of the United States silk industry, notwithstanding the competition of well-introduced imported goods and the splendid organization of the importers, and in spite of the mistrust which was felt by consumers for a long time against the domestic goods, we find:

1. The natural capability of the American merchant and manufacturer, his common sense, enterprise, and self-confidence.
2. The capital which is always ready to support enterprise in this country in the form of extensive and liberal credits.
3. The support which is given all these undertakings by the people, by the city and state governments in form of tax privileges, donations of lots, putting up mill buildings, and renting same at a low rate of interest; even in some cases by subscribing a certain amount of the necessary working capital.
4. The intellectuality of the American technician, who through his inventions of time-saving machinery, which are simply constructed and easy to handle, is, perhaps, unequalled. The operative also is moderate and his common sense makes him especially fit for the manufacturing business.
5. The easy intercourse between manufacturer and dealer which enables the first to get fully and promptly acquainted with the needs and wants of the consumer.

The last point can not be too strongly emphasized. In a large sense the American manufacturer is his own merchant and distributor. He is in close touch with the dealers and retailers, knows what they want, and manufactures accordingly. Silk manufacturers abroad (especially in France and Switzerland) are fully aware of this requisite to successful trade. The closer silk manufacturers get to the consumer, the greater the success they achieve. When to this genius for trade is added the unconquerable energy and persevering inventiveness of the silk manufacturer in the United States; the superior intelligence and push of the operatives, both skilled and unskilled; the perfection of methods

¹ The Silk Industry of the United States from 1766 to 1874, by A. T. Lilly, Florence, Mass., 1875, page 8.

² The Silk Industry of America, by L. P. Brockett, M. D., New York, 1876, page 40.

³ Manual of American Silk Trade, 1873, by Franklin Allen, secretary of the Silk Association of America, New York, pages 22-23.

⁴ Twenty-ninth Annual Report of the Silk Association of America, New York, March 26, 1891, pages 48 and 49.

by "throwsters" in rapidity, certainty, and economy; the simplicity of high-speed looms in weaving; quick deliveries and perfectly satisfactory work in yarn dyeing, piece dyeing, finishing, and printing; and the ready adoption, at whatever cost, of every improvement known anywhere in silk manufacturing, the general excellence of the product manufactured in the United States, and its consequent success, is accounted for.

In England the silk industry has suffered a great decline since 1860. In recent years leading manufacturers there have emphasized the importance of specially organized technical schools for the education of artisans and for teaching drawing and designing to selected pupils. In the United States every large silk plant is a school of design, a teacher of scientific and technical education. All such plants have a corps of skillful designers, and many are in touch with artists and establishments abroad, whence is derived the latest information concerning novelties in all lines of manufacture. Skillful chemists are likewise attached to these plants, and, in fact, all processes of the industry proceed simultaneously under one management. To the clerk and workman is given a certain independence and freedom of action, no restraint being put upon his enterprise. Fulfillment of his duty is all that is required. That such a system improves the working methods and produces better results is plainly evident from the census figures.

IMPROVEMENTS IN THROWING AND WEAVING MACHINERY.

THROWING.—The past decade has not been marked by many changes in the throwing of silk. Efforts have been concentrated upon increasing labor efficiency, in saving waste, and similar economies, demanded by the constantly decreasing scale of prices. Larger mills have been built and equipped with the most modern appliances for heating, lighting, power, and manufacturing; smaller mills have been consolidated into larger establishments, thus lessening the general expenses; antiquated and worn-out equipments have been replaced by modern and more economical machines, the constant effort being to reduce cost of production. The success achieved has not, however, kept pace with the reduction in price of the product; and the throwster during these years has been confronted more or less with the problem of constantly increasing wages demanded by operatives, and decreasing prices paid by the manufacturers.

As regards machinery, the principal efforts have been to save space and processes; winding frames have been improved so as to produce more perfectly wound spools at higher speed, and obviate the necessity for redrawing. In the latest improved winding frame the bobbin is carried by a spindle having two heads resting upon the driving wheels, its bearings being supported upon inclined planes that sustain most of the weight, yet force the spindle into sufficient contact with the friction

wheel to secure a positive drive, the double support allowing high speed without throwing out the spindle.

Double-decking the winding frame has also been adopted by some to economize space and has some merits, though not generally adopted.

The doubling frame has also been perfected, allowing the work to be done at about double the speed and with better results; the old "flyer" and "jack-pin" system has been displaced by a cap on the bobbin, by means of which the thread can be drawn off naturally and the desired tension applied alike upon the assembled threads.

In spinning, the belt system, so called, where the spindles are driven by contact with an endless belt instead of with bands, has been adopted in all new installations. The many advantages of this type of frame were at once recognized, and at the present date over one-half of the spinning spindles in the country are of this system, although only first practically introduced in 1889. This belt-drive system adapted to the modern self-oiling spindle instantly won favor and adoption. A double-deck machine of this type quickly followed, giving double the number of spindles in the same space, still further solving the problem of economy and being generally adopted. In 1895 a combined spinner and doubler was designed, and it was soon evident that this invention had solved another great expense-saving problem and at the same time effected an improvement in the quality of the product. In the few years the last system has been practically upon the market 90,000 spindles have been put in use, or 15 per cent of the total number of first-time spindles. The system has, moreover, been introduced into several foreign countries, and it has been adopted by the technical schools of England and Switzerland as the most practical system of spinning organzine. This is a very substantial acknowledgment of the superiority of United States machinery for silk throwing over that of the rest of the world.

During the past ten years efforts have been made to solve the problem of spinning, doubling, and twisting organzine in one process, which have finally resulted in the production of a practical machine, but of the old band-drive system. A machine for this system of the belt-drive type, for which is claimed greater simplicity combined with increased effectiveness, has also been designed. It is too early as yet to say what the future of these machines will be, but they promise a large percentage of saving in the cost of production, with a decided improvement in quality, and at the same time a reduction in the cost of the equipment of a plant.

While during the past decade there have not been such great changes in throwing appliances as distinguished previous decades, there have been many marked improvements on the lines so briefly mentioned, and it can be said, from personal observation in many of the largest spinning mills in Europe, that in every step of

this branch of the silk industry the United States excels; our operatives tend a larger number of spindles; and, in spite of the higher wages paid here, the cost of production, pound for pound, aside from fuel and rents, will in nearly every case prove to be the lowest in the world.

The results from improvements in throwing machinery during the past decade can therefore be broadly summed up in the statement that these improvements have made possible a saving of about 40 per cent in the floor space needed and about 20 per cent in cost of production over the older system, figuring all the savings resulting from less floor space, power, and processes required to turn out a corresponding amount of work.

WEAVING.—The rapid strides made in the development of the power loom, together with the skill of American labor, have made the substitution of power looms for hand looms, which has been a noticeable feature of the industry for the last three decades, especially marked during the past decade, so much so that the statistics indicate the practically complete supersession of the hand loom by the power loom, there being in use, as reported, but 173 of the former as compared with 44,257 of the latter.

There are in successful operation in the silk mills of the United States to-day nearly two and a half times as many power looms as there were ten years ago. While improvements have been made constantly in the construction of these power looms ever since their introduction, probably the past ten years have witnessed the most rapid strides in this direction. These improvements have resulted in the production of a loom of high efficiency, equipped with mechanical devices designed for the saving of both time, labor, and material, such as the numerous multipliers, two-weave, leno, swivel, embroidery motions, and many other devices, all arranged to operate automatically, by the use of which marvelous results may be obtained.

Formerly the accomplishment of some of the above results, if possible at all on the power loom, required the use of a long pattern or indicator chain. Some of the principal progress has consisted in the invention of devices for facilitating the saving of such materials as this pattern or indicator chain. By dispensing with this long and cumbersome attachment the loom is made capable of much higher speed.

Among the multipliers particularly worthy of mention, in addition to the well-known multiplier for the box chain, whereby any shuttle box may be called at will, and any color used as long as desired, is the so-called two-weave multiplier, by the use of which two distinct weaves are produced in the loom and indicated from the same pattern chain.

Another multiplier, known as the manifold multiplier, consists of a mechanical device which, when used in addition to the two-weave motion, makes it possible to

produce three or more distinct weaves in the loom; each weave may be entirely different from the others. In fact, there is hardly any limit to the number of weaves that may be produced by the use of this mechanism, the change from one weave to the other being made automatically when the loom is in full operation.

Among the many other improvements, the progress made in producing leno effects might be mentioned. Present methods and attachments for producing this class of work are far in advance of the old methods, resulting in much saving of doups and in less breakage of warp threads. The old method of using two beams, one for the whip thread and one for the standard thread, is now generally superseded by taking all the threads from one beam, unless the pattern calls for a design in which the whip thread is longer than the standard thread. Slackeners are used only on such threads as require them, instead of rocking the whole warp beam.

The lappet motion has also been successfully applied to different types of looms during recent years, and at the present time these motions are built with one, two, three, and four bars or rows of needles, producing some beautiful effects on the surface of the goods.

The cross-weave loom produces a novel open-work effect in the woven fabric. A series of forked needles engages, as desired, selected groups of warp threads and crosses them over adjacent groups previous to the forming of the shed. After the passing of the shuttle and the beating up of the lay, the warp threads resume their normal position for plain weaving until again called for the cross-over process. A recent improvement produces an undulating or wavy effect by virtue of a movable reed, whose dents are inclined at different angles instead of being parallel, alternate groups of dents spreading upward, and intermediate groups spreading downward, so that the gradual raising and lowering of the reed produces a spreading of the warp threads at one point and a closing up at another.

The embroidery loom was especially designed for the purpose of making a figure on a light ground of cloth while the cloth is being woven, without waste of stock or material. Although the ground may be a light weight of goods, the figure is thick and compact in appearance. This effect can not be produced on a regular broad-silk loom, as the filling, when not wanted to show in the figure, must be buried in the body of the goods, and, moreover, for this reason there is a considerable waste of material.

Swivel looms built to-day have one, two, or three banks of swivel shuttles, so that it is possible to put as many as three colors in each figure at will with almost no loss or waste of material.

The principal difference between the swivel and embroidery looms as built to-day is that in the former the figures are usually arranged a certain distance apart in the goods, while in the latter a figure the entire width of the goods may be made if desired.

Outside of these special features there are many types of what might be termed standard looms used to-day for the manufacture of broad silks. In this connection special mention should be made of the improvement by which all classes of taffeta effects, formerly made on hand looms only, are now successfully made on power looms.

The highest type of loom designed for best grades of fabrics, both plain and fancy, is fitted with a positive head motion by which the harnesses or shafts are positively raised and lowered. The dobby loom is similar in construction to the above-mentioned loom, but a dobby is substituted in place of the positive head motion, the harness shafts being raised by the dobby but pulled down by springs. The cam loom, the harness shafts being controlled by cams which are positive in their action, is somewhat limited in weaves and designs by reason of the weave being dependent on these cams. On the two first-mentioned classes of looms almost any weave may be produced, the head motion or the dobby being controlled by means of a pattern chain which can be changed or made over at will. On the Jacquard loom the weave is controlled entirely by the Jacquard. On all of these types of looms shuttle-box motions of different capacities may be employed, allowing the use of from one to seven colors.

In the Jacquard, which forms so important a factor in the production of broad silks, there has been nearly as much improvement as in the loom itself, particularly as regards the saving of cards and increased speed. The present double-cylinder cross-border machine accomplishes about the same result on the loom as does the manifold multiplier described above. Attachments are now added to the Jacquard so that, through a suitable intermediate mechanism, the pattern or box chain is not required at all on the loom, the Jacquard cards being so punched that the shuttle boxes are controlled by the Jacquard, thus obviating the possibility of the Jacquard getting out of time with the shuttle boxes of the loom.

In addition to the many improvements referred to in looms designed for broad silks, the changes that have taken place in the development of the ribbon loom must not be overlooked. These looms, as built to-day, are capable of very high speed, and show a great advance over the "Swiss" and "German" types of looms which were almost universally used in this country ten or fifteen years ago. The modern ribbon loom was first designed and built in this country and has been constantly improved, until to-day it has reached a very high state of perfection. Under the old method of handling the warp it was necessary to employ men on the looms. Under the present arrangement of the loom the warp is placed on beams similar to broad-silk looms, and each individual warp is let off automatically from each beam, making it entirely unnecessary for the weaver to go behind the loom for this purpose.

The best type of ribbon loom, the high-speed auto-

matic, embodies all the latest improvements of construction; it is adapted to high-grade Jacquard work, where high speed has been slow of adoption, and to single-shuttle Jacquard work on labels, etc.; it has the automatic let-off system for the warps, is capable of a more uniform weave than the old machine, and has greater productive capacity.

There has recently been perfected a very efficient silk-velvet ribbon loom which is destined to fill a very important place in the ribbon industry. This loom will produce the best quality of silk-velvet ribbon at a very high speed for this class of work, the pile being cut automatically in the loom. It is one of the latest triumphs of American skill in the art of weaving.

The modern power loom is the result of much study and inventive genius, and with it to-day can be produced many fabrics which ten years ago it was impossible to make except by hand. Nowhere has this development been so pronounced and successful as in the United States.

DATE OF THE ESTABLISHMENT OF THE SILK INDUSTRY IN CITIES, TOWNS, ETC.

Incident to the growth of the industry, silk mills have been established in nearly all the New England and Middle states and in some of the Western and Southern states. Pennsylvania has been the greatest gainer in this respect during the last decade. Delaware, Virginia, and North Carolina have also attracted silk mills by liberal inducements to manufacturers.

The dates of starting the silk industry in the Nineteenth century in some of the more important places in various states, and the classes of goods, are shown in the following statement. It should be understood that in order to avoid duplication of towns in this statement only the first date at which any branch of the industry was inaugurated is given. Thus, in Philadelphia, when W. H. Horstman commenced the manufacture of dress trimmings, 1815 is mentioned, whereas the commencement there of the manufacture of sewing silk in 1843 and of ribbons in 1852 are omitted.

YEAR.	Place.	Class of goods.
PENNSYLVANIA.		
1815.....	Philadelphia.....	Dress trimmings.
1879.....	Seranton.....	Tram and organzine.
1880.....	Hawley.....	Tram, organzine, and broad silks.
1881.....	Allentown.....	Broad silks.
1881.....	Darby.....	Spun-silk yarns.
1883.....	Easton.....	Tram and organzine.
1886.....	Bethlehem.....	Tram and organzine.
1886.....	Catasauqua.....	Spun silk, laces, and braids.
1886.....	Harrisburg.....	Tram, organzine, and broad silks.
1886.....	East Mauch Chunk.....	Tram, organzine, broad silks, and ribbons.
1886.....	South Bethlehem.....	Tram, organzine, and broad silks.
1886.....	Stroudsburg.....	Tram and organzine.
1886.....	Wilkesbarre.....	Surah and figured pongees.
1887.....	Honesdale.....	Tram, organzine, broad silks, and ribbons.
1887.....	Pittston.....	Tram and organzine.
1887.....	Pottsville.....	Tram, organzine, and broad silks.
1887.....	Reading.....	Tram and organzine.
1888.....	Altoona.....	Tram and organzine.
1888.....	Bloomsburg.....	Tram, organzine, and broad silks.
1888.....	Weatherly.....	Tram and organzine.
1891.....	Carlisle.....	Tram and organzine.
1891.....	Eden.....	Silk and cotton curtains.

YEAR.	Place.	Class of goods.	YEAR.	Place.	Class of goods.
PENNSYLVANIA—continued.			NEW JERSEY—continued.		
1892.....	Columbia.....	Tram, organzine, and broad silks.	1880.....	Hackensack.....	Broad silks.
1892.....	Hanover.....	Silk ribbons.	1881.....	Dover.....	Tram and organzine.
1893.....	Emaus.....	Broad silks.	1886.....	Phillipsburg.....	Broad and dress silks.
1893.....	Williamsport.....	Broad silks.	1887.....	Hackettstown.....	Tram and organzine.
1894.....	Hallstead.....	Ribbons and narrow fabrics.	1888.....	Stirling.....	Broad silks.
1895.....	Carbondale.....	Tram and organzine.	1888.....	Midland Park.....	Tie and dress silks.
1895.....	Taylor.....	Tram and organzine.	1888.....	Port Oram.....	Silk linings and dress silks.
1896.....	Avoca.....	Tram and organzine.	1889.....	Lakeview.....	Silk linings and dress silks.
1896.....	Marietta.....	Dress silks.	1889.....	Pompton Lakes.....	Silk linings and dress silks.
1896.....	Sunbury.....	Broad silks.	1890.....	Guttenberg.....	Umbrella silks, veils and veiling, and black taffetas.
1897.....	Alburtis.....	Brocades.	1891.....	Lodi.....	Dyeing and finishing silk piece goods.
1897.....	Bath.....	Dress and tie silks.	1891.....	Washington.....	Taffetas, furriers' satin, and brocades.
1897.....	Danville.....	Tram and organzine.	1893.....	Summit.....	Broad silks.
1897.....	Ephrata.....	Broad silks.	1894.....	Jersey City.....	Dress silks.
1897.....	Fleetwood.....	Broad silks.	1895.....	Belvidere.....	Tram and organzine.
1897.....	Freeland.....	Tram and organzine.	1895.....	Watsessing.....	Dress silks and linings.
1897.....	Plymouth.....	Tram and organzine.	1896.....	Newton.....	Broad silks.
1897.....	Pottstown.....	Sewing silk.	1898.....	Passaic.....	Silk veilings.
1897.....	Titusville.....	Ribbons.	1899.....	Plainfield.....	Dress silks.
1898.....	Athens.....	Broad and tie silks.	1900.....	Hillsdale.....	Broad silks.
1898.....	Coatesville.....	Tram, organzine, and broad silks.	ILLINOIS.		
1898.....	Dunmore.....	Plain and dress silks.	1864.....	Chicago.....	Dress trimmings.
1898.....	Hazleton.....	Umbrella silks.	1899.....	Alpine.....	Silk curtains.
1898.....	Jermyn.....	Tram and organzine.	NEW YORK.		
1898.....	Lancaster.....	Broad silks.	1880.....	New York.....	Dress trimmings.
1898.....	Newberry.....	Dress goods.	1841.....	Auburn.....	Sewing silk.
1898.....	New Holland.....	Broad and tie silks.	1860.....	Oneida.....	Sewing silk.
1898.....	New Hope.....	Broad silks.	1871.....	Brooklyn.....	Silk laces.
1898.....	Parsons.....	Tram and organzine.	1872.....	College Point.....	Ribbons.
1898.....	Phoenixville.....	Tram, organzine, and ribbons.	1882.....	Sioutsburg.....	Spun silk.
1898.....	West Pittston.....	Tram and organzine.	1885.....	Hornellsville.....	Tram and organzine.
1898.....	York.....	Tram, organzine, and ribbons.	1886.....	Fultonville.....	Silk gloves and mittens.
1899.....	Aquashicola.....	Ribbons.	1887.....	Norwich.....	Ribbons.
1899.....	Dickson City.....	Tram, organzine, handkerchiefs, and mufflers.	1887.....	Whitehall.....	Silk plushes.
1899.....	Forest City.....	Organzine.	1888.....	Long Island City.....	Tram and organzine.
1899.....	Kutztown.....	Tram and organzine.	1889.....	Mattewan.....	Tram, organzine, and sewing silk.
1899.....	Lansdale.....	Dress and umbrella silks.	1889.....	Spring Valley.....	Sent plushes.
1899.....	Leighton.....	Ribbons.	1891.....	Clark Mills.....	Tram and organzine.
1899.....	Lock Haven.....	Broad silks.	1892.....	Elmira.....	Broad silks.
1899.....	Reynoldsville.....	Broad silks.	1892.....	West New Brighton.....	Labels, etc.
1899.....	Richland Center.....	Broad silks.	1892.....	Unionville.....	Ribbons.
1899.....	Shamokin.....	Pongees and surahs.	1892.....	Port Plain.....	Tram and organzine.
1899.....	Topton.....	Dress and tie silks.	1893.....	Newburg.....	Pongees, surah, taffetas, linings, and broad silks.
1900.....	Bradford.....	Tram and organzine.	1890.....	Watertown.....	Dress silks.
1900.....	Butler.....	Dress silks.	1897.....	Port Jervis.....	Tram and organzine.
1900.....	Meadville.....	Broad silks.	1897.....	Yonkers.....	Ribbons.
1900.....	Pennsburg.....	Ribbons.	1899.....	Fort Hunter.....	Novelties and linings.
1900.....	Renovo.....	Broad silks.	1899.....	Glendale.....	Ribbons.
1900.....	Weissport.....	Tram and organzine.	1899.....	Haverstraw.....	Dress silks.
1900.....	White Haven.....	Tram and organzine.	1899.....	Onconta.....	Broad silks.
MARYLAND.			CALIFORNIA.		
1829.....	Baltimore.....	Ribbons.	1870.....	San Francisco.....	Sewing silk and fringe silk.
1889.....	Hagerstown.....	Ribbons.	MAINE.		
1898.....	Litchester.....	Pongees.	1874.....	Westbrook.....	Spool silks.
MASSACHUSETTS.			UTAH.		
1832.....	Northampton.....	Sewing silk.	1884.....	Salt Lake City.....	Handkerchiefs and dress goods.
1834.....	Boston.....	Dress trimmings.	OHIO.		
1834-38.....	Florence.....	Sewing silk.	1886.....	Piqua.....	Silk hosiery.
1835.....	Dedham.....	Sewing silk.	1893.....	Toledo.....	Knit goods.
1840.....	Canton.....	Sewing silk.	MICHIGAN.		
1848.....	Skinnerville.....	Sewing silk.	1887.....	Belding.....	Sewing silk.
1874.....	Holyoke.....	Sewing silk, braids, and linings.	1899.....	Detroit.....	Mittens, gloves, and hosiery.
1878.....	Pittsfield.....	Sewing silk.	WISCONSIN.		
1880.....	Springfield.....	Silk and mohair braids.	1887.....	Janesville.....	Silk underwear.
1882.....	Athol.....	Sewing silk.	1899.....	Milwaukee.....	Knit goods.
1884.....	Worcester.....	Silk bindings and picot ribbons.	VIRGINIA.		
1886.....	Newton Upper Falls.....	Spun-silk yarns.	1888.....	Petersburg.....	Spinning and dyeing.
1890.....	Sandwich.....	Silk and mohair braids.	1889.....	Fredericksburg.....	Tram and organzine.
CONNECTICUT.			1900.....	Norfolk.....	Broad and tie silks.
1810.....	Mansfield.....	Sewing silk.	NORTH CAROLINA.		
1814.....	Gurleyville.....	Sewing silk.	1888.....	Wadesboro.....	Tram and organzine.
1835.....	Hartford.....	Silk and musan braid.	1899.....	Fayetteville.....	Dress and tie silks.
1838.....	South Manchester.....	General silk manufacture.	1900.....	Roanoke Rapids.....	Wide pongees.
1838.....	Windsor Locks.....	Sewing silk.	RHODE ISLAND.		
1844.....	South Coventry.....	Sewing silk.	1889.....	Pawtucket.....	Silk-mixed linings.
1849.....	Watertown.....	Sewing silk.	1897.....	Newport.....	Elastic webbing.
1863.....	Rockville.....	Sewing silk.	1899.....	Wyoming.....	Lining silks.
1866.....	Willimantic.....	Sewing silk.	1900.....	Bristol.....	Curtains and portières.
1872.....	Middletown.....	Machine twist and sewing silk.	NEW HAMPSHIRE.		
1873.....	West Winsted.....	Sewing silk.	1891.....	Contoocook.....	Tram and organzine.
1874.....	Norfolk.....	Sewing silk.	1898.....	Newmarket.....	Silk and cotton mulls and pongees.
1874.....	Warehouse Point.....	Sewing silk.	1898.....	Lebanon.....	Underwear.
1878.....	Putnam.....	Machine twist.	1900.....	Lisbon.....	Cotton and silk covered wire.
1879.....	New London.....	Sewing silk.	DELAWARE.		
1882.....	Bridgeport.....	Dress silks.	1899.....	Dover.....	Dress silks.
1882.....	Preston.....	Tram and organzine.	1899.....	Wilmington.....	Black and colored taffetas.
1891.....	Norwich.....	Ribbons and hatbands.			
1892.....	Stonington.....	Silk velvets.			
1898.....	Mystic.....	Silk velvets.			
1898.....	Shelton.....	Silk velvets and ribbons.			
NEW JERSEY.					
1840.....	Puterson.....	General silk manufacture.			
1842.....	Newark.....	Sewing silk.			
1865.....	Trenton.....	Coach lace.			
1868.....	Hoboken.....	Silk dress goods.			
1868.....	Homestead.....	Broad silks.			
1870.....	West Hoboken.....	Broad silks.			
1874.....	Wortendyke.....	Silk handkerchiefs and dress goods.			
1875.....	Union.....	Silk dress goods.			
1880.....	Boonton.....	Tram, organzine, and broad silks.			

TABLE 23.—SILK AND SILK GOODS, INCLUDING

	United States.	California.	Connecticut.	Illinois.
1 Number of establishments.....	483	5	38	4
2 Character of organization:				
3 Individual.....	132	8	14	1
4 Firm and limited partnership.....	154	1	4	1
5 Incorporated company.....	197	1	20	8
6 Established during the decade.....	272	8	10	2
6 Established during the census year.....	48	1	1	1
7 Capital:				
8 Total.....	\$81,082,201	\$308,847	\$12,166,775	\$259,540
9 Land.....	\$2,045,093	\$3,600	\$282,294	\$15,000
10 Buildings.....	\$10,205,812	\$29,726	\$1,597,352	\$25,000
11 Machinery, tools, and implements.....	\$20,760,449	\$14,161	\$2,061,799	\$95,959
11 Cash and sundries.....	\$48,080,847	\$231,360	\$8,225,330	\$123,581
12 Proprietors and firm members.....	477	6	23	1
13 Salaried officials, clerks, etc.:				
14 Total number.....	2,657	6	323	33
14 Total salaries.....	\$3,184,352	\$4,998	\$403,423	\$51,180
15 Officers of corporations—				
16 Number.....	304	—	29	5
16 Salaries.....	\$769,771	—	\$103,090	\$13,000
17 General superintendents, managers, clerks, and salesmen—				
18 Total number.....	2,353	6	294	23
18 Total salaries.....	\$2,364,581	\$4,998	\$300,333	\$38,180
19 Men—				
20 Number.....	2,078	5	257	24
20 Salaries.....	\$2,240,552	\$4,530	\$284,352	\$35,200
21 Women—				
22 Number.....	275	1	37	4
22 Salaries.....	\$124,029	\$468	\$15,981	\$2,980
23 Wage-earners, including pieceworkers, and total wages:				
24 Greatest number employed at any one time during the year.....	75,110	142	7,400	507
25 Least number employed at any one time during the year.....	50,959	82	5,883	315
25 Average number.....	65,416	117	6,514	412
26 Wages.....	\$20,982,194	\$33,055	\$2,392,873	\$121,644
27 Men, 16 years and over—				
28 Average number.....	24,206	24	2,768	81
28 Wages.....	\$10,699,483	\$14,436	\$1,350,543	\$43,475
29 Women, 16 years and over—				
30 Average number.....	34,797	91	3,585	310
30 Wages.....	\$9,377,696	\$18,119	\$1,013,498	\$73,919
31 Children, under 16 years—				
32 Average number.....	6,413	2	166	21
32 Wages.....	\$905,015	\$500	\$28,332	\$4,250
33 Average number of wage-earners, including pieceworkers, employed during each month:				
34 Men, 16 years and over—				
35 January.....	24,197	25	2,677	82
36 February.....	24,729	26	2,710	82
37 March.....	25,024	26	2,708	88
38 April.....	25,200	23	2,785	86
39 May.....	24,752	23	2,746	86
40 June.....	23,855	22	2,618	66
41 July.....	23,800	18	2,719	65
42 August.....	23,829	22	2,730	75
43 September.....	23,797	24	2,855	81
44 October.....	23,749	26	2,947	88
45 November.....	23,801	27	2,967	86
46 December.....	23,747	27	2,701	81
47 Women, 16 years and over—				
48 January.....	34,742	98	3,501	319
49 February.....	35,340	95	3,581	367
50 March.....	36,221	91	3,659	363
51 April.....	36,038	86	3,719	356
52 May.....	35,352	86	3,658	293
53 June.....	34,402	82	3,534	265
54 July.....	33,822	64	3,542	238
55 August.....	34,137	88	3,515	253
56 September.....	34,045	91	3,497	238
57 October.....	34,309	99	3,589	340
58 November.....	34,517	106	3,662	335
59 December.....	34,639	105	3,566	306
60 Children, under 16 years—				
61 January.....	6,260	2	149	21
62 February.....	6,287	2	155	23
63 March.....	6,410	2	164	23
64 April.....	6,564	1	169	27
65 May.....	6,537	1	164	25
66 June.....	6,502	1	164	19
67 July.....	6,417	1	163	15
68 August.....	6,381	1	164	14
69 September.....	6,386	1	170	19
70 October.....	6,349	2	170	22
71 November.....	6,421	2	179	23
72 December.....	6,454	2	177	21
73 Weavers:				
74 Broad silk—				
75 Men.....	8,917	—	448	—
76 Women.....	9,188	—	441	—
77 Children.....	235	—	—	—
78 Ribbons—				
79 Men.....	3,725	—	21	—
80 Women.....	1,467	—	200	—
81 Children.....	21	—	7	—
82 Velvets and plushes—				
83 Men.....	881	—	565	—
84 Women.....	510	—	141	—
85 Children.....	150	—	—	—
86 Other—				
87 Men.....	1,837	—	412	—
88 Women.....	1,892	—	367	—
89 Children.....	261	—	32	—

BRAIDS AND TRIMMINGS, BY STATES: 1900.

Massachusetts.	New Jersey.	New York.	North Carolina.	Pennsylvania.	Rhode Island.	Virginia.	All other states. ¹	
20	180	92	3	121	6	3	11	1
6	51	82	1	19	3	1	1	2
3	63	34	2	47	3	1	1	3
11	66	26	2	55	3	1	9	4
6	107	58	2	79	3	1	6	5
1	11	8	2	22	1	1	1	6
\$5,649,758	\$29,285,792	\$9,800,207	\$130,376	\$20,894,023	\$680,252	\$594,859	\$1,312,272	7
\$216,341	\$733,367	\$202,138	\$6,200	\$491,598	\$24,955	\$12,600	\$57,000	8
\$756,454	\$2,966,084	\$586,224	\$52,000	\$3,688,545	\$96,224	\$174,440	\$233,703	9
\$707,345	\$7,297,856	\$3,061,252	\$40,525	\$6,696,158	\$165,032	\$210,200	\$370,162	10
\$3,969,618	\$18,288,485	\$5,950,593	\$31,651	\$10,017,722	\$394,041	\$197,119	\$651,347	11
11	197	94	1	131	3	2	8	12
156	959	363	11	745	8	12	41	13
\$227,276	\$1,144,512	\$514,439	\$3,455	\$718,776	\$12,320	\$12,678	\$41,295	14
20	98	41	6	88	3	1	13	15
\$51,850	\$269,368	\$163,891	\$875	\$144,402	\$9,200	\$1,000	\$13,035	16
136	861	322	5	657	5	11	28	17
\$175,426	\$875,144	\$350,543	\$2,580	\$674,314	\$3,120	\$11,678	\$28,260	18
115	787	298	5	543	4	10	24	19
\$160,772	\$840,337	\$338,784	\$2,580	\$528,243	\$2,320	\$11,314	\$26,120	20
21	74	24	1	108	1	1	4	21
\$8,654	\$34,807	\$11,764	-----	\$46,071	\$800	\$364	\$2,140	22
3,465	27,162	9,330	265	24,424	563	518	1,334	23
2,953	20,784	6,563	255	18,496	365	429	834	24
3,110	24,157	7,861	203	21,023	455	473	1,080	25
\$1,110,324	\$9,232,532	\$2,861,313	\$25,420	\$4,629,626	\$166,675	\$105,056	\$303,171	26
1,102	11,279	3,149	35	5,214	124	144	291	27
\$506,232	\$5,296,102	\$1,509,660	\$3,827	\$1,718,537	\$32,240	\$61,294	\$108,037	28
1,837	11,679	4,299	119	11,565	326	228	758	29
\$562,939	\$3,731,827	\$1,293,875	\$13,331	\$2,363,123	\$33,664	\$31,835	\$101,466	30
171	1,199	413	65	4,249	5	101	31	31
\$41,053	\$204,603	\$58,283	\$3,262	\$517,916	\$771	\$11,877	\$3,668	32
1,067	11,247	3,266	33	5,262	109	137	287	33
1,094	11,540	3,361	33	5,326	118	147	237	34
1,099	11,676	3,429	33	5,402	114	150	294	35
1,100	11,699	3,366	43	5,584	108	149	302	36
1,089	11,605	3,165	43	5,455	123	145	268	37
1,057	11,324	2,865	33	5,822	124	148	271	38
1,078	11,395	2,839	20	5,077	123	147	264	39
1,095	11,237	3,032	20	5,064	125	143	286	40
1,116	10,984	3,095	20	5,043	131	145	303	41
1,144	10,786	3,136	33	5,065	138	132	309	42
1,153	10,791	3,101	33	5,054	137	145	302	43
1,131	11,070	3,077	33	5,027	138	134	323	44
1,776	11,696	4,492	133	11,517	224	221	660	45
1,855	11,861	4,501	133	11,788	231	221	702	46
1,951	12,055	4,698	133	12,019	256	222	769	47
1,934	12,012	4,515	158	11,939	276	221	772	48
1,870	11,946	4,149	158	11,873	330	212	777	49
1,732	11,701	3,920	133	11,747	350	249	684	50
1,697	11,683	3,944	50	11,264	354	241	745	51
1,732	11,564	4,132	50	11,455	346	239	763	52
1,635	11,378	4,266	50	11,248	369	240	783	53
1,921	11,261	4,376	133	11,145	334	229	827	54
1,841	11,427	4,324	133	11,270	391	222	801	55
1,901	11,561	4,266	133	11,364	400	213	814	56
143	1,164	408	54	4,184	3	101	31	57
157	1,157	406	54	4,163	3	104	43	58
168	1,175	428	54	4,248	3	108	47	59
170	1,230	445	59	4,316	4	103	40	60
168	1,221	430	59	4,326	4	112	27	61
165	1,203	408	54	4,363	4	93	25	62
170	1,212	411	54	4,256	10	102	23	63
167	1,219	398	54	4,238	9	95	22	64
176	1,216	397	54	4,219	8	101	25	65
193	1,190	390	54	4,202	3	96	27	66
195	1,201	420	54	4,212	3	103	29	67
190	1,202	421	54	4,256	3	100	28	68
301	5,491	899	-----	1,645	74	-----	59	69
208	3,548	824	33	3,777	156	12	184	70
-----	38	2	-----	191	-----	-----	4	71
-----	1,762	1,014	-----	885	-----	-----	43	72
40	502	203	-----	517	-----	-----	5	73
-----	3	10	-----	1	-----	-----	-----	74
-----	48	109	-----	149	10	-----	-----	75
-----	5	20	-----	344	-----	-----	-----	76
-----	-----	-----	-----	150	-----	-----	-----	77
10	631	351	-----	841	20	-----	12	78
34	763	450	-----	278	-----	-----	-----	79
8	75	86	-----	59	-----	-----	1	80

¹ Includes establishments distributed as follows: Delaware, 2; Maine, 1; Maryland, 2; Michigan, 2; New Hampshire, 2; Utah, 2.

TABLE 23.—SILK AND SILK GOODS, INCLUDING

	United States.	California.	Connecticut.	Illinois.
81 Spinners, etc.:				
82 Men	7,332	11	1,268	
83 Women	19,513	60	1,990	
Children	4,955		227	
84 Miscellaneous expenses:				
85 Total	\$10,264,203	\$4,113	\$637,450	\$42,410
86 Rent of works	\$591,807	\$2,220	\$30,202	\$7,950
87 Taxes, not including internal revenue	\$238,116	\$680	\$36,505	\$1,974
88 Rent of offices, insurance, interest, and all sundry expenses not hitherto included	\$2,863,936	\$1,213	\$353,489	\$19,720
Contract work	\$6,570,299		\$217,253	\$12,766
89 Materials used:				
Total cost	\$62,406,665	\$146,219	\$7,198,008	\$187,514
90 Silk				
91 Raw, pounds	9,760,770	30,425	1,159,961	
92 Cost	\$40,721,877	\$113,885	\$4,537,720	
93 Spun, pounds	1,550,291	725	502,558	4,225
94 Cost	\$3,406,050	\$2,880	\$908,566	\$12,724
95 Artificial, pounds	6,056			10
96 Cost	\$10,380			\$55
97 Waste, pounds	1,667,195		749,036	
Cost	\$734,589		\$404,183	
98 Other textile yarns—				
99 Cotton, pounds	6,444,208	8,500	1,187,668	255,247
100 Cost	\$1,880,550	\$2,675	\$388,836	\$36,950
101 Mercerized cotton, pounds	219,861	650	1,642	7,178
102 Cost	\$165,683	\$655	\$1,416	\$3,113
103 Wool, pounds	239,461	150	401	65,190
104 Cost	\$167,770	\$150	\$329	\$35,702
105 Mohair, pounds	104,810	880	1,236	6,992
106 Cost	\$107,305	\$545	\$1,543	\$10,024
107 Other, pounds	108,888		2,024	7,250
Cost	\$134,986		\$4,596	\$10,000
108 Silk purchased in partially manufactured form—				
109 Organzine and tram, pounds	2,338,464	980	31,041	4,713
110 Cost	\$10,539,632	\$7,320	\$154,831	\$21,149
111 Fringe and floss, pounds	67,984	250	743	8,905
112 Cost	\$274,408	\$1,100	\$4,161	\$29,893
113 Fuel	\$548,493	\$1,382	\$90,937	\$2,500
114 Rent of power and heat	\$135,509	\$600	\$5,980	\$580
115 Mill supplies	\$994,769	\$8,684	\$155,982	\$1,624
116 All other materials	\$2,406,123	\$3,371	\$427,544	\$23,250
Freight	\$228,522	\$3,472	\$21,334	
117 Raw silk thrown under contract:				
118 Organzine, pounds	2,331,456		184,270	
Tram, pounds	1,907,203		69,588	
119 Products:				
Total value	\$107,256,258	\$255,902	\$12,378,981	\$421,088
120 Organzine and tram made for sale, pounds	2,468,387	2,000	97,000	
121 Value	\$11,167,191	\$8,000	\$502,620	
122 Spun silk yarn made for sale, pounds	437,469		166,265	
123 Value	\$1,026,227		\$398,671	
124 Machine twist, pounds	987,917	22,742	545,423	
125 Value	\$5,997,974	\$163,742	\$3,354,546	
126 Sewing, embroidery, and wash silks, pounds	477,658	5,200	145,032	
127 Value	\$3,276,826	\$47,400	\$977,213	
128 Fringe and floss silks, pounds	261,643		95,806	
129 Value	\$971,390		\$217,048	
130 Broad silk goods—				
131 Plain and fancies—				
132 All silk, yards	53,573,488	800	1,435,439	
133 Value	\$33,862,111	\$800	\$1,075,166	
134 Silk mixed, yards	8,963,315		415,648	
135 Value	\$5,450,710		\$269,937	
136 Jacquard—				
137 All silk, yards	7,532,229	800	7,563	
138 Value	\$5,379,001	\$500	\$3,905	
139 Silk mixed, yards	1,677,466		93,264	
140 Value	\$1,260,321		\$63,117	
141 Piece-dyed—				
142 All silk, yards	7,331,501		3,371,127	
143 Value	\$3,342,167		\$1,534,724	
144 Silk mixed, yards	8,558,894		147,833	
145 Value	\$2,868,506		\$98,720	
146 Other broad goods—				
147 Velvets, yards	5,122,249		4,261,208	
148 Value	\$2,479,903		\$2,087,639	
149 Plushes, yards	3,848,684		1,011,457	
150 Value	\$2,480,058		\$687,679	
151 Tapestries, yards	321,978		69,978	
152 Value	\$180,503		\$84,503	
153 Upholstery, yards	1,011,141			
154 Value	\$829,332			
155 Ribbons and laces—				
156 Ribbons, value	\$18,467,179		\$655,807	
157 Laces, nets, veils, veiling, etc., value	\$803,104			
158 Embroideries, value	\$57,625	\$1,000		\$16,477
159 Fringes and gimps, value	\$444,787	\$4,000		\$249,002
160 Braids and bindings, value	\$1,622,565	\$6,500	\$38,685	
161 Trimmings				
162 Tailors', value	\$26,624			\$6,000
163 Ladies', value	\$912,361	\$6,000		\$43,461
164 Clouk, value	\$241,560	\$3,200		\$31,000
165 Milliners', value	\$615,012	\$5,000		\$35,000
166 Military, value	\$54,666	\$5,100		\$6,346
167 Other trimmings products, value	\$183,853	\$6,000		\$3,802
168 Other products, value	\$1,027,472	\$160	\$192,744	
169 Received for contract work	\$2,357,220	\$200	\$136,362	

BRAIDS AND TRIMMINGS, BY STATES: 1900—Continued.

Massachusetts.	New Jersey.	New York.	North Carolina.	Pennsylvania.	Rhode Island.	Virginia.	All other states. ¹	
449	3,180	601	34	1,587	20	181	151	81
1,186	6,722	2,070	73	6,481	161	216	564	82
158	813	206	54	3,870	2	101	24	83
\$382,745	\$4,896,595	\$1,601,527	\$5,159	\$2,451,820	\$103,454	\$15,300	\$123,635	84
\$13,837	\$241,833	\$182,323	\$2,000	\$96,547	\$15,925		\$965	85
\$29,588	\$97,665	\$27,587	\$86	\$36,880	\$5,013	\$1,168	\$3,524	86
\$179,806	\$1,120,458	\$512,228	\$1,873	\$610,872	\$7,916	\$12,097	\$44,214	87
\$160,019	\$8,436,634	\$870,389	\$1,200	\$1,708,071	\$78,600	\$1,435	\$74,932	88
\$3,823,963	\$21,631,118	\$6,570,037	\$99,408	\$19,884,869	\$818,561	\$720,525	\$1,326,448	89
720,485	3,155,334	914,265	20,200	3,238,285	102,691	164,200	254,024	90
\$2,898,545	\$13,514,501	\$3,814,768	\$90,282	\$13,534,387	\$490,750	\$658,016	\$1,073,994	91
40,136	178,735	293,200	1,100	477,543	51,516		30,553	92
\$96,588	\$333,612	\$562,322	\$3,080	\$979,506	\$136,404		\$80,882	93
170		5,350		526				94
\$420		\$6,790		\$3,115				95
418,355		287,880		136,424	25,000		800	96
\$177,480		\$86,900		\$32,476	\$3,000		\$500	97
480,220	757,486	1,556,545		1,759,759	409,936		28,652	98
\$144,520	\$304,481	\$359,716		\$465,812	\$122,800		\$4,700	99
4,708	122,053	51,560		30,070	2,000			100
\$3,733	\$90,013	\$42,432		\$23,121	\$1,200			101
96,867	16,940	45,527		8,717	2,607		3,002	102
\$69,600	\$15,042	\$36,640		\$5,743	\$2,000		\$2,504	103
17,405		29,697		47,600			1,590	104
\$27,832		\$28,776		\$35,045			\$3,000	105
1,971	480	24,167		81,323			41,173	106
\$12,991	\$170	\$14,364		\$24,097			\$63,768	107
17,681	1,209,012	197,781		871,235	5,711		310	108
\$81,010	\$5,702,506	\$839,657		\$8,701,840	\$29,730		\$1,639	109
675	478	20,606		34,727	1,600			110
\$3,287	\$1,816	\$88,813		\$187,338	\$8,000			111
\$35,205	\$179,280	\$55,635	\$2,382	\$153,409	\$4,676	\$5,417	\$12,070	112
\$3,487	\$63,932	\$40,651		\$15,979	\$1,500	\$1,360	\$1,610	113
\$78,435	\$257,824	\$158,119	\$766	\$277,098	\$1,787	\$37,311	\$16,539	114
\$179,347	\$609,191	\$412,922	\$983	\$364,391	\$14,137	\$17,000	\$53,487	115
\$11,448	\$58,750	\$21,532	\$1,910	\$94,812	\$2,677	\$6,492	\$6,135	116
8,000	585,722	117,931		1,332,753	16,599	67,220	26,906	117
	651,900	204,400	73,000	928,915		27,710	5,690	118
\$5,957,532	\$39,966,662	\$12,706,246	\$135,354	\$31,072,926	\$1,311,333	\$381,680	\$2,068,554	119
1,855	315,646	48,263	7,800	1,723,791		277,032		120
\$7,765	\$1,500,060	\$207,500	\$38,062	\$8,011,155		\$892,129		121
104,000		92,046		75,148				122
\$270,400		\$216,503		\$140,653				123
269,241		46,500		43,476			60,535	124
\$1,413,004		\$240,405		\$285,288			\$540,889	125
170,423		18,523		74,475			64,000	126
\$1,246,445		\$113,468		\$451,800			\$440,500	127
20,964	16,611			128,282				128
\$147,773	\$64,444			\$542,130				129
665,153	28,268,970	2,859,029	105,000	17,887,478			1,351,619	130
\$766,054	\$18,871,325	\$2,616,445	\$81,000	\$10,002,648			\$688,673	131
2,020,101	2,331,493	1,047,130		669,377	2,867,437		112,129	132
\$1,437,799	\$1,680,091	\$558,261		\$310,200	\$1,119,159		\$75,163	133
	6,451,655	108,410		908,001			60,800	134
	\$4,722,532	\$115,250		\$605,714			\$30,800	135
	1,466,355	61,426		56,421				136
	\$1,154,365	\$19,608		\$28,331				137
	1,694,675	22,000		1,775,255		59,760	408,684	138
	\$905,942	\$84,561		\$586,448		\$40,904	\$189,698	139
20,384	381,000	2,447,670		5,562,097				140
\$12,434	\$154,500	\$1,080,489		\$1,563,368				141
	111,077	9,515		740,449				142
	\$62,985	\$4,757		\$324,572				143
	655,842	523,795		1,752,690				144
	\$315,540	\$302,191		\$1,114,658				145
	2,000			250,000				146
	\$9,000			\$87,000				147
	231,037	623,848		166,261				148
	\$396,850	\$222,195		\$210,377				149
\$92,000	\$3,341,721	\$4,883,011		\$4,368,399			\$126,241	150
	\$423,257	\$377,047		\$2,800				151
\$33,533		\$23,092						152
\$28,087		\$195,528		\$170,695				153
\$388,339	\$162,595	\$388,391		\$119,573	\$169,480			154
\$8,124							\$12,500	155
\$68,385		\$339,510		\$397,505			\$7,500	156
\$339		\$21,000		\$181,521			\$4,000	157
		\$231,000		\$344,012				158
\$220		\$30,000		\$15,000				159
\$6,000	\$160	\$95,784		\$72,107				160
\$21,053	\$434,501	\$138,622	\$39,893	\$171,349	\$8,400		\$25,750	161
\$9,278	\$766,844	\$238,218	\$26,399	\$1,070,133	\$14,294	\$48,647	\$26,845	162

¹ Includes establishments distributed as follows: Delaware, 2; Maine, 1; Maryland, 2; Michigan, 2; New Hampshire, 2; Utah, 2.

TABLE 23.—SILK AND SILK GOODS, INCLUDING

	United States.	California.	Connecticut.	Illinois.
Machinery:				
163 Spindles, total number	1,987,404	3,380	160,743	
Organzine—				
164 First time over, number	582,180		15,683	
165 Second time over, number	845,145		8,720	
166 Tram, number	117,979	88	6,256	
167 Cleaning or polishing, number	6,526	44	2,102	
168 Doubling, number	186,076	456	14,048	
169 Quilling, number	87,742	50	7,361	
170 Reeling, number	62,153	84	4,340	
171 Spinning and twisting, number	168,189	1,650	66,753	
172 Winding, number	442,410	1,003	86,477	
Looms—				
Power—				
173 Total number	44,257	2	2,975	27
Plain—				
174 36 inches or over reed space, number	13,077		1,660	
175 Under 36 inches reed space, number	16,161		777	27
176 German (warps on top) ribbons, number	4,471		95	
177 High-speed ribbons, number	2,105		194	
Jacquards—				
178 Ribbons, number	856		5	
179 Broad silks, number	7,587	2	244	
Hand—				
180 Total number	173			7
Plain—				
181 36 inches or over reed space, number	32			
182 Under 36 inches reed space, number	127			7
Jacquards—				
183 Ribbons, number	9			
184 Broad silks, number	5			
Other machines—				
Power—				
185 Knitting—				
186 Warp, number	108			8
187 Knitting or crochet, number	127	1		7
188 Roundhead, number	21			
189 Swiss-ribbed, number	14			
190 Milanese or traverse, number	5			
191 Beamers, number	343		54	
192 Braiders, number	15,805	21	1,005	3,809
193 Chenille, number	130	3	1	9
194 Curtain, number	1			
Embroidery—				
195 Shuttle or power, number	104			
196 Hand-stitched, number	20			
197 Gimp mills, number	122		1	7
198 Levers or lace, number	64			
199 Sewing, number	550	2	15	10
200 Slide cord, number	152	3		18
201 Spooling tables, number	743	13	288	16
202 Twist, number	64	5		2
203 Warping, number	3,589	2	187	
Other power machines, number	90		1	
Hand—				
204 Beamers, number	6	1		
205 Braiders, number	19			
206 Chenille, number	80	12		
Embroidery—				
207 Hand-stitched, number	2			
208 Levers or lace, number	1			
209 Sewing, number	79	2	3	6
210 Slide cord, number	8	8		
211 Spooling tables, number	144		81	
212 Twist, number	16			8
213 Warping, number	796	2	7	5
214 Other hand machines, number	61		15	
Dyeing, finishing, and printing:				
Skein dyeing—				
215 Silk—				
Colors, pounds	1,793,955	750	511,298	
216 Black, pounds	1,541,785	26,972	446,999	
Spun—				
217 Colors, pounds	425,216		203,181	
218 Black, pounds	176,014		62,957	
Cotton—				
219 Colors, pounds	925,255		113,830	
220 Black, pounds	981,559		450,669	
Wool—				
221 Colors, pounds	52,658			
222 Black, pounds	55,949			
Piece dyeing—				
223 All silk, yards	1,224,329		177,391	
224 Silk and spun, yards	459,693		349,693	
225 Silk and cotton, yards	2,780,166		1,077,664	
226 Silk and wool, yards	850			
Finishing—				
227 All silk, pieces	472,584	40	71,986	
228 Silk and cotton, pieces	289,362		168,776	
229 Silk and wool, pieces	116			
Printing—				
230 Printed in warps, yards	16,355		8,855	
Printed in pieces—				
231 All silk, yards	846,704		777,618	
232 Silk and spun, yards	1,684,524		1,684,524	
233 Silk and cotton, yards	637,228		537,228	

BRAIDS AND TRIMMINGS, BY STATES: 1900—Continued.

Massachusetts.	New Jersey.	New York.	North Carolina.	Pennsylvania.	Rhode Island	Virginia	All other states ¹	
107,312	536,065	136,708	18,790	942,545	4,212	41,798	35,856	163
20,088	153,312	25,208	5,000	340,298		16,696	5,892	164
9,632	92,190	14,352	2,000	205,781		8,400	4,070	165
1,586	30,014	8,404	2,680	65,591		3,276	1,084	166
467	1,023	1,389		799	102		600	167
11,040	50,587	12,977	2,900	85,535	560	4,498	2,474	168
1,910	35,961	9,232	2,000	80,438	60		710	169
3,524	13,367	4,102	158	24,956	80	404	1,143	170
86,782	6,074	15,522		27,181	1,890	1,556	10,781	171
22,283	153,537	46,517	4,652	161,946	1,520	6,968	9,102	172
1,017	20,557	5,175	125	12,920	533	147	779	173
451	4,573	1,510	125	3,709	465	147	487	174
422	7,282	1,175		6,166	68		244	175
144	1,601	1,594		980			51	176
	882	425		604				177
	433	223		195				178
	5,786	248		1,260			47	179
23	15	93		29			6	180
	7	4		13			3	181
23	8	81		8				182
		6		3				183
		2					8	184
		54		46				185
17		39		63				186
14		9		12				187
		5						188
6	97	52	1	128			5	189
2,876	744	3,869		1,381	1,400		180	190
4	1	50		62				191
				1				192
								193
20		84						194
5		24						195
4	44	38		28				196
	14	50						197
9	112	295		103			4	198
81		31		19				199
103	51	49		132	4		82	200
5	7	26		7			12	201
97	1,700	410	8	1,102	37	9	37	202
	40	41		17				203
	1	1		2			1	204
	2	17						205
		18						206
		1		2				207
	35	17		15			1	208
								209
	16	23		19				210
	2	5		1				211
6	304	263		206			3	212
33	1	12						213
								214
263,700	838,582	98,910		29,320			51,395	215
350,083	257,844	54,431		68,023		210,000	128,433	216
71,151	2,139	26,783		110,100	9,912		1,950	217
22,498	90	8,000		78,515	3,304		650	218
122,109	25,640	261,822		400,354			2,000	219
224,642	88,050	25,475		196,723			1,000	220
45,658		5,000					2,000	221
50,949		4,000					1,000	222
	1,046,988							223
	110,000							224
	471,898	538,310		692,289				225
	350							226
	268,128	67,240		57,161	130		7,899	227
	29,767	15,052		65,046	10,721			228
	54			62				229
	7,500							230
	69,086							231
								232
								233

¹ Includes establishments distributed as follows: Delaware, 2; Maine, 1; Maryland, 2; Michigan, 2; New Hampshire, 2; Utah, 2.

TABLE 23.—SILK AND SILK GOODS, INCLUDING

	United States.	California.	Connecticut.	Illinois.
Comparison of products:				
234 Number of establishments reporting for both years.....	378	5	35	3
235 Value for census year.....	\$101,474,146	\$255,902	\$12,209,415	\$419,088
236 Value for preceding business year.....	\$90,107,761	\$237,451	\$9,640,107	\$364,896
Power:				
237 Number of establishments reporting.....	475	5	38	4
238 Total horsepower.....	61,895	89	5,490	122
Owned—				
Engines—				
239 Steam, number.....	421	2	56	2
240 Horsepower.....	45,959	82	4,364	100
241 Gas or gasoline, number.....	19		2	
242 Horsepower.....	323		88	
243 Water wheels, number.....	117		18	
244 Horsepower.....	6,666		813	
245 Electric motors, number.....	135		6	
246 Horsepower.....	3,998		75	
247 Other power, horsepower.....	8			
Rented—				
248 Electric, horsepower.....	624	7	100	
249 Other kind, horsepower.....	3,817		50	22
250 Furnished to other establishments, horsepower.....	508		7	
Establishments classified by number of persons employed, not including proprietors and firm members:				
251 Total number of establishments.....	488	5	38	4
252 No employees.....	2	1		
253 Under 5.....	20			1
254 5 to 20.....	66	2	6	
255 21 to 50.....	83	1	7	
256 51 to 100.....	95	1	5	
257 101 to 250.....	123		14	3
258 251 to 500.....	60		3	
259 501 to 1,000.....	28		2	
260 Over 1,000.....	6		1	

BRAIDS AND TRIMMINGS, BY STATES: 1900—Continued.

Massachusetts.	New Jersey.	New York.	North Carolina.	Pennsylvania.	Rhode Island.	Virginia.	All other states. ¹	
17	142	80	1	81	5	2	7	234
\$5,874,880	\$38,864,902	\$12,264,525	\$26,399	\$28,129,885	\$1,226,588	\$940,776	\$1,761,836	235
\$4,605,428	\$36,205,469	\$11,543,103	\$16,723	\$24,872,339	\$532,246	\$855,806	\$1,234,693	236
19	180	87	3	121	6	3	9	237
4,536	17,122	5,246	455	25,227	250	1,683	1,175	238
24	111	45	3	152	3	16	7	239
2,206	12,471	3,118	455	21,670	190	580	723	240
4	7	7	6	188	1	5	7	241
28	38	15	5	620	30	695	372	242
2,039	1,245	852	54	2,017	408	18	246	243
5	35	17	8	180	30	60	100	244
205	1,158	135	110	121	6	3	11	245
86	244	73	180	2	1	1	1	246
1	1,958	1,012	599	9	2	1	1	247
	210	80	110	8				248
20	180	92	3	121	6	3	11	249
3	7	6	2	2	1	1	1	250
2	27	17	9	16	2	1	1	251
5	35	15	16	26	2	1	1	252
2	36	20	26	34	1	1	1	253
3	39	24	22	9	1	1	1	254
2	19	10	8	3				255
3	14							256
	2							257

¹ Includes establishments distributed as follows: Delaware, 2; Maine, 1; Maryland, 2; Michigan, 2; New Hampshire, 2; Utah, 2.

Twelfth Census of the United States.



CENSUS BULLETIN.

No. 162.

WASHINGTON, D. C.

April 28, 1902.

AGRICULTURE.

VERMONT.

Hon. WILLIAM R. MERRIAM,
Director of the Census.

SIR: I have the honor to transmit herewith, for publication in bulletin form, the statistics of agriculture in the state of Vermont, taken in accordance with the provisions of section 7 of the act of March 3, 1899. This section requires that—

The schedules relating to agriculture shall comprehend the following topics: Name of occupant of each farm, color of occupant, tenure, acreage, value of farm and improvements, acreage of different products, quantity and value of products, and number and value of live stock. All questions as to quantity and value of crops shall relate to the year ending December thirty-first next preceding the enumeration.

A "farm," as defined by the Twelfth Census, includes all the land, under one management, used for raising crops and pasturing live stock, with the wood lots, swamps, meadows, etc., connected therewith. It includes also the house in which the farmer resides, and all other buildings used by him in connection with his farming operations.

The farms of Vermont, June 1, 1900, numbered 33,104, and had a value of \$83,071,620, of which amount \$87,257,715, or 44.9 per cent, represents the value of buildings, and \$45,813,905, or 55.1 per cent, the value of land and of improvements other than buildings. On the same date the value of farm implements and machinery was \$7,538,490, and of live stock \$17,841,317. These values, added to that of farms, give \$108,451,427, the "total value of farm property."

The products derived from domestic animals, poultry, and bees, including animals sold and animals slaughtered on farms, are referred to in this bulletin as "animal products." The total value of all such products, to-

gether with the value of all crops, is termed "total value of farm products." This value for 1899 was \$33,570,892, of which amount \$15,400,613, or 45.9 per cent, represents the value of animal products, and \$18,170,279, or 54.1 per cent, the value of crops including forest products.

The total value of farm products for 1899 exceeds that for 1889 by \$13,205,912, or 64.8 per cent. A large part of this increase is doubtless due to a more detailed enumeration in 1900 than in 1890. The gross farm income is obtained by deducting from the total value of farm products, the value of products fed to live stock on the farms of the producers. In 1899, the reported value of products fed was \$11,576,590, leaving \$21,994,302 as the gross farm income for that year. The percentage which this amount is of the total value of farm property, is referred to in this bulletin as the "percentage of income upon investment." For Vermont in 1899 it was 20.3 per cent.

As no reports of expenditures for taxes, interest, insurance, feed for stock, and similar items have been obtained by any census, no statement of net farm income can be given.

The statistics presented in this bulletin will be treated in greater detail in the final report on agriculture in the United States, which will be published about June 1, 1902. The present publication is designed to present a summarized advance statement for Vermont.

Very respectfully,

L. G. Powers.

Chief Statistician for Agriculture.

AGRICULTURE IN VERMONT.

GENERAL STATISTICS.

The total land area of Vermont is 9,135 square miles, or 5,846,400 acres, of which 4,724,440 acres, or 80.8 per cent, are included in farms. The state lies within the Connecticut River valley on the east and the Champlain-Hudson valley on the west. The Green Mountains divide the state into nearly equal portions and render the surface everywhere irregular and broken.

Although the soil in many places is stony and sterile, much of it is productive. The valleys and the lower hills are suitable for cultivation, and the higher hills and mountains furnish excellent pasturage. Much attention is given to dairying and the raising of improved stock. The best tracts of arable land are in the western part of the state.

NUMBER AND SIZE OF FARMS.

The following table gives, by decades since 1850, the number of farms, the total and average acreage, and the per cent of farm land improved.

TABLE 1.—FARMS AND FARM ACREAGE: 1850 TO 1900.

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900.....	88,104	4,724,440	2,126,624	2,597,816	142.7	46.0
1890.....	82,578	4,395,646	2,655,948	1,739,703	134.9	60.4
1880.....	35,522	4,882,588	3,286,461	1,596,127	137.5	67.3
1870.....	33,827	4,528,804	3,073,257	1,455,547	133.9	67.9
1860.....	31,556	4,274,414	2,823,157	1,451,257	135.5	66.0
1850.....	29,763	4,125,822	2,501,409	1,524,413	138.6	63.1

The number of farms increased steadily until the decade 1880 to 1890, when there was a decrease amounting to 8.3 per cent. In the last decade the number increased 1.6 per cent and in 1900 was 11.2 per cent greater than in 1850. The total farm acreage varied in a similar manner, but the increase in the last decade was at a greater rate, amounting to 7.5 per cent. The average size of farms was greater in 1900 than in any previous census year in the half century, and the increase in the last decade was greater than in any other. The variations have not been very marked, some

decades showing an increase and others a decrease in average size. The acreage of improved land reported by the census has decreased since 1880, and especially during the last decade. As a result it constituted in 1900 a much smaller percentage of the total farm acreage than it did in any previous census year.

FARM PROPERTY AND PRODUCTS.

Table 2 presents a summary of the principal statistics relating to farm property and products for each census year beginning with 1850.

TABLE 2.—VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND OF FARM PRODUCTS: 1850 TO 1900.

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implements and machinery.	Live stock.	Farm products. ¹
1900.....	\$108,451,427	\$33,071,620	\$7,538,490	\$17,841,317	\$33,570,892
1890.....	101,805,370	80,427,490	4,733,560	16,644,320	20,364,900
1880.....	130,811,490	109,346,010	4,879,285	16,586,195	22,082,656
1870.....	158,506,189	139,367,075	5,250,279	23,838,835	34,647,027
1860.....	114,196,989	94,289,045	3,665,955	16,241,939	-----
1850.....	78,749,737	63,867,227	2,739,282	12,643,228	-----

¹ For year preceding that designated.

² Values for 1870 were reported in depreciated currency. To reduce to specie basis of other figures they must be diminished one-fifth.

³ Includes betterments and additions to live stock.

Though the total value of farm property reported for 1900 is less than that for 1860, 1870, or 1880, there has been an increase of 37.7 per cent since 1850 and of 6.5 per cent, or \$6,646,057, since 1890. Of this sum \$2,644,130, or 39.8 per cent, represents the increase in the value of land and buildings; \$2,804,930, or 42.2 per cent, in that of implements and machinery; and \$1,196,997, or 18.0 per cent, in that of live stock. The increases in the value of implements and machinery and in the value of farm products are doubtless due in part to a more complete enumeration in 1900 than heretofore.

COUNTY STATISTICS.

Table 3 gives an exhibit of general agricultural statistics by counties.

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With build-ings.	Total.	Improved.	Land and improve-ments (ex-cept build-ings).	Buildings.	Imple-ments and machinery.	Live stock.		Labor.	Fertili-zers.
The State -----	33,104	32,558	4,724,440	2,126,624	\$45,813,905	\$37,257,715	\$7,538,400	\$17,841,317	\$21,994,302	\$3,133,140	\$447,065
Addison -----	2,714	2,688	403,587	243,582	5,339,660	3,882,310	606,760	1,736,295	1,856,632	270,110	23,845
Bennington -----	1,660	1,642	270,609	112,673	2,604,380	2,103,870	301,580	776,144	1,159,715	195,340	19,380
Caledonia -----	2,579	2,558	318,641	167,169	2,857,980	2,609,750	694,090	1,420,004	1,812,902	252,390	41,730
Chittenden -----	2,101	2,077	290,737	166,808	4,806,550	3,645,190	617,160	1,454,020	1,725,179	318,720	28,820
Essex -----	2,101	2,077	158,970	58,319	899,780	780,070	174,720	475,353	640,323	78,000	10,000
Franklin -----	2,581	2,518	360,862	160,500	5,227,860	3,468,930	662,150	1,722,241	2,123,643	317,450	31,210
Grand Isle -----	494	493	47,096	35,665	1,174,900	765,730	102,850	249,964	321,848	59,730	1,650
Lamoille -----	1,620	1,602	219,754	78,487	1,565,610	1,377,410	360,880	730,782	900,206	101,970	29,500
Orange -----	3,150	3,087	425,681	184,906	2,768,050	2,670,250	655,640	1,401,166	1,737,590	223,900	43,840
Orleans -----	2,926	2,868	383,001	204,401	3,423,810	2,694,290	786,670	1,562,756	2,036,795	219,230	35,530
Rutland -----	2,930	2,872	458,282	206,093	5,080,025	4,104,085	612,530	1,737,088	2,191,581	324,470	33,270
Washington -----	2,910	2,887	378,497	143,931	3,435,280	2,721,930	621,310	1,478,722	1,830,502	250,480	47,060
Windham -----	2,765	2,719	423,896	141,581	3,059,630	2,711,270	597,900	1,303,842	1,726,416	214,860	51,800
Windsor -----	3,796	3,701	547,817	222,509	3,570,990	3,721,430	744,190	1,762,960	2,028,087	315,490	49,480

In the last decade the changes in the number of farms have been small. Five counties show decreases, the greatest loss, 5.3 per cent, being in Chittenden county. The greatest gain, 7.6 per cent, was in Orange county.

The percentage of total land area included in farms in 1900 varied from 35.9 in Essex county to 97.0 in Orange county. The average size of farms ranged from 95.3 acres in Grand Isle county to 181.1 in Essex county. Every county shows a gain since 1890 in total farm area, except Grand Isle where there was a loss of 0.3 per cent. The greatest gain, 12.6 per cent, was in Essex county. The improved farm area, however, decreased in every county except Orleans, where there was an increase of 2.2 per cent. The greatest loss, amounting to 32.2 per cent, was in Windham county.

The total value of farms did not change greatly in the decade from 1890 to 1900. Only four counties report losses, the greatest being in Lamoille county, where it amounted to 8.0 per cent. The greatest rate of increase, 11.6 per cent, was in Caledonia county. All counties report large increases in the value of implements and machinery, and but four counties report smaller values for live stock than in 1890. The greatest increase, that in Franklin county, amounted to 25.5 per cent.

The average expenditure per farm for labor, including the value of board furnished, varied from \$63 in Lamoille county to \$152 in Chittenden county. All counties show much larger amounts expended for fertilizers in 1899 than ten years before. The average per farm in 1899 varied from \$3.34 in Grand Isle county to \$18.73 in Windham county.

FARM TENURE.

Table 4 gives a comparative exhibit of farm tenure for 1880, 1890, and 1900. In Table 5 the tenure of farms for 1900 is given by race of farmer, farms operated by owners being subdivided into 4 groups designated as farms operated by "owners," "part owners," "owners and tenants," and "managers." These groups comprise, respectively:

(1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other, or others, owning no part, but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

The farms operated by tenants are divided into two groups designated as farms operated by "cash tenants" and "share tenants." These groups comprise respectively: (1) Farms operated by individuals who pay a rental in cash or a stated amount of labor or farm produce; (2) farms operated by individuals who pay as rental a stated share of the products.

TABLE 4.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES: 1880 TO 1900.

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners. ¹	Cash tenants.	Share tenants.	Owners. ¹	Cash tenants.	Share tenants.
1900 -----	33,104	28,284	2,424	2,396	85.5	7.3	7.2
1890 -----	32,573	27,816	2,301	2,456	85.4	7.1	7.5
1880 -----	35,522	30,760	2,164	2,598	86.6	6.1	7.3

¹Including "part owners," "owners and tenants," and "managers."

TABLE 5.—NUMBER OF FARMS, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER AND BY TENURE.

RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The State..	33,104	25,982	1,373	314	615	2,424	2,396
White -----	33,096	25,976	1,372	314	615	2,423	2,396
Colored -----	8	6	1			1	

In the decade from 1880 to 1890 the number of farms

operated by owners decreased, but in the last decade there was an increase of 1.7 per cent, which, however, was not sufficient to bring the number up to that of 1880, the twenty-year period showing a net decrease of 8.0 per cent. The number of cash tenants has increased in each decade, while that of share tenants has decreased, indicating a growing sentiment in favor of cash tenure. In 1890 the per cent of farms operated by "owners" was 85.4. In 1900 the aggregate number of farms operated by the four subclasses comprising "owners" constituted 85.5 per cent of all farms. Consequently there has been no material change in the decade in the relative number of farms operated by owners and by tenants, although in the preceding decade there was a decrease from 86.6 per cent to 85.4 per cent.

Of the farmers of the state, June 1, 1900, 78.5 per cent were "owners;" 4.1 per cent, "part owners;" 1.0 per cent, "owners and tenants;" 1.9 per cent, "managers;" and 14.5 per cent were tenants.

No previous census has reported the number of farms operated by "part owners," "owners and tenants," or "managers," but it is believed that the number conducted by the last-named class is constantly increasing.

OWNERSHIP OF RENTED FARMS.

The ownership of 4,504 of the 4,820 rented farms was ascertained by the enumerators; that of 316 was unreported. The titles to the 4,504 farms are vested in 4,167 owners, an average of approximately 108 farms to every 100 owners. Of the 4,167 owners, 3,927 possess 1 farm each; 238, from 2 to 6; and the remaining 2 own 7 and 19, respectively.

Of the 4,167 owners, 3,666, possessing 3,983 farms, reside in Vermont, and the owners of 3,561 live in the county in which their property is located. Of the non-resident owners, 422 live in the North Atlantic states; 35 in the North Central states; 24 in the Western states; 9 in the South Atlantic states; 1 in a South Central state; and 10 in foreign countries. The total value of the 521 farms owned by nonresidents is \$1,286,101, an average of \$2,469 per farm, as compared with an average of \$1,384 for all farms in the state.

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

Tables 6 and 7 present the principal statistics for farms classified by race of farmer and by tenure.

TABLE 6.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER AND BY TENURE, WITH PERCENTAGES.

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	33,104	142.7	4,724,440	100.0	\$108,451,427	100.0
White farmers.....	33,096	142.7	4,723,194	100.0	108,391,077	99.9
Colored farmers.....	8	155.8	1,246	(¹)	60,350	0.1
Owners.....	25,982	184.5	3,495,313	74.0	79,201,557	73.0
Part owners.....	1,373	204.9	281,293	5.9	5,699,050	5.3
Owners and tenants.....	314	181.5	57,005	1.2	1,354,390	1.2
Managers.....	615	213.7	131,449	2.8	4,824,940	4.4
Cash tenants.....	2,424	130.5	316,239	6.7	6,782,470	6.3
Share tenants.....	2,396	185.0	443,141	9.4	10,589,020	9.8

¹ Less than one-tenth of 1 per cent.

TABLE 7.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY RACE OF FARMER AND BY TENURE.

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and im- prove- ments (except build- ings).	Build- ings.	Imple- ments and ma- chinery	Live stock.		
The State-----	\$1,384	\$1,125	\$228	\$539	\$664	20.3
White farmers-----	1,383	1,125	228	539	664	20.3
Colored farmers-----	5,875	1,275	179	715	1,271	16.9
Owners-----	1,256	1,062	223	507	636	20.9
Part owners-----	1,738	1,390	305	718	884	21.3
Owners and tenants-----	1,917	1,401	270	725	861	20.0
Managers-----	3,507	2,962	462	914	1,029	13.1
Cash tenants-----	1,213	984	171	480	559	20.0
Share tenants-----	2,126	1,344	226	724	829	18.8

Farms operated by cash tenants have the smallest average area, 130.5 acres, and those operated by managers, the largest, 213.7 acres. Many of the latter are adjuncts of public institutions, while others are conducted by wealthy individuals in connection with their summer homes. Such farms, as a rule, are favorably located and highly improved, and the average values of the several classes of farm property are generally higher for this than

for any other group of farms classified by tenure. The ratio which the gross income of these farms bears to the total value of their farm property is, however, smaller than for the other groups. This is due to the high average valuation of land and buildings and to the fact that many of these farms are not cultivated primarily for profit.

Of the 101 farms containing 1,000 acres or over, 67 are operated by owners, 14 by managers, 8 by part owners, 6 by cash tenants, 4 by share tenants, and 2 by owners and tenants.

FARMS CLASSIFIED BY AREA.

Tables 8 and 9 present the principal statistics for farms classified by area.

TABLE 8.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY AREA, WITH PERCENTAGES.

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	33,104	142.7	4,724,440	100.0	\$108,451,427	100.0
Under 3 acres.....	224	1.9	436	(1)	247,300	0.2
3 to 9 acres.....	1,378	6.0	8,281	0.2	1,911,470	1.8
10 to 19 acres.....	1,683	14.0	23,559	0.5	2,536,480	2.3
20 to 49 acres.....	3,511	34.4	120,740	2.6	6,147,680	5.7
50 to 99 acres.....	6,513	71.9	468,227	9.9	13,691,980	12.6
100 to 174 acres.....	10,215	130.0	1,328,066	28.1	30,317,970	27.9
175 to 259 acres.....	5,512	208.7	1,150,449	24.4	24,144,027	22.3
260 to 499 acres.....	3,431	329.2	1,129,561	23.9	21,785,800	20.1
500 to 999 acres.....	636	602.4	322,903	6.8	5,061,830	4.7
1,000 acres and over.....	101	1,705.1	172,218	3.6	2,606,890	2.4

¹ Less than one-tenth of 1 per cent.

TABLE 9.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY AREA.

AREA.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State.....	\$1,384	\$1,125	\$228	\$539	\$661	20.3
Under 3 acres.....	282	674	58	95	197	17.9
3 to 9 acres.....	421	791	65	110	149	10.7
10 to 19 acres.....	549	736	89	133	182	12.1
20 to 49 acres.....	693	749	110	199	268	15.3
50 to 99 acres.....	859	779	149	315	409	19.5
100 to 174 acres.....	1,206	1,005	231	526	671	22.6
175 to 259 acres.....	1,892	1,391	314	793	950	21.7
260 to 499 acres.....	2,877	1,954	405	1,114	1,307	20.6
500 to 999 acres.....	4,412	2,902	520	1,610	1,827	19.3
1,000 acres and over.....	12,733	8,720	1,095	2,613	2,755	10.7

The group of medium-sized farms, containing from 100 to 174 acres each, comprise a greater number of farms and

a larger aggregate farm area and farm value than any other group. With the exception of a slight variation in the case of buildings, the average values of the several forms of farm property advance as the size of farms increases. For farms of less than 50 acres each, the value of buildings exceeds that of the land and improvements other than buildings.

The average gross incomes per acre for the various groups are as follows: Farms under 3 acres, \$101.56; 3 to 9 acres, \$24.77; 10 to 19 acres, \$12.99; 20 to 49 acres, \$7.80; 50 to 99 acres, \$5.69; 100 to 174 acres, \$5.16; 175 to 259 acres, \$4.55; 260 to 499 acres, \$3.97; 500 to 999 acres, \$3.03; and 1,000 acres and over, \$1.62. The high gross income per acre for farms of less than 3 acres is due to the fact that the group is largely composed of florists' establishments, vegetable farms, and city dairies, the incomes of which are determined not so much by the acreage of land used as by the capital invested in buildings, implements, and live stock, and the amounts expended for labor and fertilizers.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

In Tables 10 and 11 farms are classified by principal source of income. If the value of the hay and grain raised on any farm exceeds that of any other crop and constitutes at least 40 per cent of the total value of products not fed to live stock, the farm is classified as a "hay and grain" farm. If vegetables are the leading crop, constituting 40 per cent of the value of products, it is a "vegetable" farm. The farms of the other groups are classified in accordance with the same general principle. "Miscellaneous" farms are those whose operators do not derive 40 per cent of their income from any one class of farm products. Farms with no income in 1899 are classified according to the agricultural operations upon other farms in the same locality.

TABLE 10.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME, WITH PERCENTAGES.

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	33,104	142.7	4,724,440	100.0	\$108,451,427	100.0
Hay and grain.....	2,519	115.7	291,369	6.2	6,528,640	6.0
Vegetables.....	679	51.5	34,944	0.7	1,207,100	1.1
Fruit.....	204	65.5	13,363	0.3	598,690	0.6
Live stock.....	7,823	134.8	987,107	20.9	22,499,010	20.7
Dairy produce.....	10,700	152.0	2,538,943	53.7	63,251,427	58.3
Tobacco.....	38	146.4	5,564	0.1	139,340	0.1
Sugar.....	45	82.0	3,691	0.1	164,493	0.2
Flowers and plants.....	28	11.0	303	(1)	32,925	(1)
Nursery products.....	5	118.0	565	(1)	13,954,165	12.9
Miscellaneous.....	5,563	152.5	848,531	18.0		

¹ Less than one-tenth of 1 per cent.

TABLE 11.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State.....	\$1,384	\$1,125	\$228	\$539	\$661	20.3
Hay and grain.....	1,334	971	105	182	349	13.5
Vegetables.....	737	759	104	178	267	15.0
Fruit.....	1,107	1,488	130	215	438	14.9
Live stock.....	1,221	1,103	221	527	602	19.6
Dairy produce.....	1,589	1,261	267	671	787	20.8
Tobacco.....	1,374	1,403	281	609	1,207	32.9
Sugar.....	739	536	160	248	286	14.0
Flowers and plants.....	2,791	2,748	241	88	1,000	32.4
Nursery products.....	3,820	2,480	157	128	10,226	155.3
Miscellaneous.....	1,091	843	193	381	563	22.5

For the several classes of farms the average values per acre of products not fed to live stock are: Flowers and plants, \$172.70; nursery stock, \$90.50; tobacco, \$8.24; fruit, \$6.69; vegetables, \$5.18; dairy, \$5.17; live stock, \$4.47; hay and grain, \$3.02; sugar, \$2.88; and miscellaneous products, \$3.69.

The wide variations shown in the average gross income and in percentage of gross income upon investment are due largely to the fact that in computing gross income no deduction is made for expenditures. For florists' establishments, nurseries, and market gardens, the average expenditure for such items as labor and fertilizers represents a far greater percentage of the gross income than in the case of "hay and grain," "live-stock," or "miscellaneous" farms. Were it possible to present the average net income, the variations shown would be comparatively slight.

FARMS CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

Tables 12 and 13 present data relating to farms classified by the reported value of products not fed to live stock, or gross income.

TABLE 12.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK, WITH PERCENTAGES.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	38,104	142.7	4,724,440	100.0	\$108,451,427	100.0
\$0.....	133	80.6	10,718	0.2	322,650	0.3
\$1 to \$49.....	676	44.9	30,319	0.7	770,740	0.7
\$50 to \$99.....	1,619	40.6	65,760	1.4	1,845,260	1.7
\$100 to \$249.....	6,258	64.6	408,480	8.5	9,352,630	8.6
\$250 to \$499.....	8,027	107.7	861,627	18.3	17,184,650	15.8
\$500 to \$999.....	9,756	161.4	1,674,884	33.3	33,078,700	30.5
\$1,000 to \$2,499.....	6,013	250.4	1,605,948	31.9	37,465,567	34.6
\$2,500 and over.....	622	432.0	268,704	5.7	8,429,230	7.8

TABLE 13.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and im- prove- ments (except build- ings).	Build- ings.	Imple- ments and ma- chinery.	Live stock.		
The State-----	\$1,384	\$1,125	\$228	\$539	\$664	20.3
\$0.....	1,485	687	70	184	39	3.4
\$1 to \$49.....	451	549	50	90	75	6.6
\$50 to \$99.....	433	553	58	96	172	11.5
\$100 to \$249.....	607	622	94	172	366	17.1
\$250 to \$499.....	857	797	156	331	704	20.8
\$500 to \$999.....	1,399	1,139	255	598	1,460	23.4
\$1,000 to \$2,499.....	2,738	1,965	421	1,107	3,506	25.9
\$2,500 and over-----	6,144	4,310	879	2,219		

The 133 farms reporting no gross income in 1899 vary in size from less than 3 acres to 500 acres. Of this number 106 are operated by owners. The high average values of farm property for this group indicate that many of these farms were summer homes, held for pleasure and not for profit. Some, however, were partially abandoned farms, while others were farms that had changed hands shortly

prior to the enumeration, and the persons in charge, June 1, 1900, could not give any definite information concerning the products of the preceding year. To this extent the reports fall short of giving a complete exhibit of farm income in 1899.

LIVE STOCK.

At the request of the various live-stock associations of the country, a new classification of domestic animals was adopted for the census of 1900. The age grouping for neat cattle was determined by their present and prospective relations to the dairy industry and to the supply of meat products. Horses and mules are classified by age, and neat cattle and sheep by age and sex. The new classification permits a very close comparison with the figures published in previous census reports.

Table 14 presents a summary of live-stock statistics.

TABLE 14.—NUMBER OF DOMESTIC ANIMALS, FOWLS, AND BEES ON FARMS, JUNE 1, 1900, WITH TOTAL AND AVERAGE VALUES, AND NUMBER OF DOMESTIC ANIMALS NOT ON FARMS.

LIVE STOCK.	Age in years.	ON FARMS.			NOT ON FARMS.
		Num-ber.	Value.	Average value.	Num-ber.
Calves.....	Under 1.....	101,584	\$566,180	\$5.57	832
Steers.....	1 and under 2.....	11,266	151,768	13.47	138
Steers.....	2 and under 3.....	8,128	185,653	22.84	92
Steers.....	3 and over.....	5,178	261,661	50.53	120
Bulls.....	1 and over.....	15,211	260,725	17.14	35
Heifers.....	1 and under 2.....	68,664	889,081	12.95	649
Cows kept for milk.....	2 and over.....	270,194	7,740,908	28.65	6,398
Cows and heifers not kept for milk.....	2 and over.....	21,715	472,874	21.78	137
Colts.....	Under 1.....	2,489	65,888	26.45	124
Horses.....	1 and under 2.....	3,852	181,727	47.18	134
Horses.....	2 and over.....	79,180	5,072,082	64.05	20,107
Mule colts.....	Under 1.....	28	1,315	34.61	6
Mules.....	1 and under 2.....	18	630	48.40	25
Mules.....	2 and over.....	280	19,902	71.08	5
Asses and burros.....	All ages.....	25	915	36.60	49
Lambs.....	Under 1.....	114,409	225,021	1.98	329
Sheep (ewes).....	1 and over.....	108,292	597,117	5.55	674
Sheep (rams and wethers).....	1 and over.....	13,875	58,264	4.20	42
Swine.....	All ages.....	95,080	620,109	6.52	5,420
Goats.....	All ages.....	102	444	4.35	49
Fowls: ¹					
Chickens ²		806,451			
Turkeys.....		22,689	421,195		
Geese.....		5,187			
Ducks.....		8,836			
Bees (swarms of).....		12,836	46,958	3.66	
Value of all live stock.....			17,841,317		

¹ The number reported is of fowls over 3 months old. The value is of all, old and young.

² Including Guinea fowls.

The total value of all live stock on farms was \$17,841,317, of which 43.4 per cent represents the value of dairy cows; 15.6 per cent, that of other neat cattle; 20.8 per cent, that of horses; and 11.2 per cent, that of all other live stock.

As in other New England states, the value of steers 3 years old and over is comparatively high; this class includes the valuable working oxen still used in some parts of the state.

No reports were received concerning the value of live stock not on farms, but it is probable that such animals

had higher average values than those on farms. Allowing the same averages, however, the total value of all live stock in the state, exclusive of poultry and bees not on farms, would be approximately \$19,889,400.

CHANGES IN LIVE STOCK KEPT ON FARMS.

The following table shows the changes since 1850 in the number of the most important domestic animals.

TABLE 15.—NUMBER OF SPECIFIED DOMESTIC ANIMALS ON FARMS: 1850 TO 1900.

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep. ¹	Swine.
1900.....	270,194	231,746	85,581	356	182,167	95,090
1890.....	231,419	163,869	89,969	330	353,947	92,083
1880.....	217,033	156,072	75,215	283	439,870	76,884
1870.....	180,285	140,560	65,015	252	580,347	46,845
1860.....	174,667	195,783	69,071	48	752,201	52,912
1850.....	146,128	202,720	61,057	218	1,014,122	66,296

¹ Lambs not included.

Since 1850 there has been a steady increase in the number of dairy cows, the gain for the half century being 84.9 per cent, and for the last decade 16.8 per cent. The 101,584 calves reported in 1900 are included in the above table, with "other neat cattle." It is uncertain whether calves were included under this head in the reports for previous census years. If not, they should be deducted from the total given for 1900 in making comparisons with previous reports. A decrease would then be shown in the number of "other neat cattle" in keeping with that shown for each decade since 1850, except the decade from 1870 to 1880.

The number of horses reported in 1900 was 4.9 per cent less than in 1890, but 40.1 per cent greater than in 1850. Mules and asses are few in number but show a steady increase since 1860. Sheep were about one-sixth as numerous in 1900 as in 1850. The decrease has been continuous, amounting to approximately 25 per cent for each decade up to the last, when the rate of decrease was 45.5 per cent, almost double that of any previous decade. The number of swine decreased from 1850 until 1870, after which date there was a rapid increase until 1890. The last decade shows a gain of 3.3 per cent.

In comparing the poultry report for 1900 (see Table 14) with that for 1890, it should be borne in mind that in 1900 the enumerators were instructed not to report fowls less than three months old, while in 1890 no such limitation was made. This fact explains, to a great extent, the decrease in the number of turkeys, ducks, and geese and the small increase in the number of chickens. Compared with the figures for 1890, the present census shows decreases in the number of fowls as follows: Turkeys, 68.6 per cent; ducks, 32.3 per cent; and geese, 52.1 per cent.

ANIMAL PRODUCTS.

Table 16 is a summarized exhibit of the animal products of agriculture.

TABLE 16.—QUANTITIES AND VALUES OF SPECIFIED ANIMAL PRODUCTS, AND VALUES OF POULTRY RAISED, ANIMALS SOLD, AND ANIMALS SLAUGHTERED ON FARMS IN 1899.

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool.....	Pounds.....	1,334,253	\$268,967
Mohair and goat hair.....	Pounds.....	5	2
Milk.....	Gallons.....	1142,042,223	29,321,389
Butter.....	Pounds.....	18,834,706	
Cheese.....	Pounds.....	406,659	959,965
Eggs.....	Dozens.....	6,271,380	
Poultry.....	.....	.....	689,109
Honey.....	Pounds.....	182,278	27,290
Wax.....	Pounds.....	8,652	
Animals sold.....	.....	.....	2,786,137
Animals slaughtered.....	.....	.....	1,347,754
Total.....	.....	.....	15,400,613

¹Comprises all milk produced, whether sold, consumed, or made into butter or cheese.

²Comprises the value of milk sold and consumed and of butter and cheese made.

The animal products of the state in 1899 were valued at \$15,400,613, or 45.9 per cent of the value of all farm products and 70.0 per cent of the gross farm income. Of the above amount, 60.5 per cent represents the value of dairy products; 26.9 per cent, that of animals sold or slaughtered on farms; 10.7 per cent, that of poultry and eggs; and 1.9 per cent, that of wool, mohair, honey, and wax.

DAIRY PRODUCE.

The steady growth of population and the increasing popularity of its summer resorts have largely increased the demand for dairy products in Vermont. The present importance of this industry is shown by the fact that in 1899 the proprietors of 16,700 farms, or more than half of the farms of the state, derived their principal income from dairy produce. The production of milk in 1899 was 51,329,993 gallons greater than in 1889, a gain of 56.6 per cent. The quantity of milk sold in 1899 was 57,566,012 gallons, or approximately nine times as great as in 1879. The quantity sold in 1889 was not separately reported.

Of the \$9,321,389 given in Table 16 as the value of all dairy products in 1899, \$1,310,960, or 14.1 per cent, represents the value of such products consumed on farms, and \$8,010,429, or 85.9 per cent, the amount realized from sales. Of the latter sum, \$4,262,877 was derived from the sale of 57,566,012 gallons of milk; \$3,111,783, from 15,822,671 pounds of butter; \$595,692, from 1,591,237 gallons of cream; and \$40,077, from 374,240 pounds of cheese.

The production of butter on farms increased steadily from 1850 to 1880, but since that date has decreased, the rate for the last decade being 19.2 per cent. The production of cheese has decreased steadily and rapidly since 1850

and was in 1899 less than one-twentieth that reported for 1849. These decreases are due principally to the establishment of creameries and cheese factories and to the increased consumption of milk and cream in cities.

POULTRY AND EGGS.

The total value of the products of the poultry industry in 1899 was \$1,649,074, of which amount 41.8 per cent represents the value of fowls raised and 58.2 per cent that of eggs produced. Since 1889 the number of dozens of eggs produced has increased 1,756,750, or 38.9 per cent.

WOOL.

The production of wool has decreased steadily for half a century and the clip of 1899 was little more than one-third that of 1849. The decrease in the last decade was 784,630 pounds, or 37.0 per cent. The average weight of fleeces, however, has increased from 5.8 pounds in 1879 to 7.0 pounds in 1899, indicating an improvement in the grade of sheep kept.

HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS.

Table 17 presents, for the leading groups of farms, the number of farms reporting horses and dairy cows, the total number of these animals, and the average number per farm. In computing the averages presented, only those farms which report the kind of animals under consideration are included.

TABLE 17.—HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS, JUNE 1, 1900.

CLASSES.	HORSES.			DAIRY COWS.		
	Farms reporting.	Number.	Average per farm.	Farms reporting.	Number.	Average per farm.
Total.....	29,965	85,531	2.9	29,277	270,194	9.2
White farmers.....	29,960	85,513	2.9	29,271	270,153	9.2
Colored farmers.....	5	18	3.6	6	41	6.8
Owners ¹	25,079	70,110	2.8	24,468	210,765	8.6
Managers.....	480	2,475	5.2	479	5,977	12.5
Cash tenants.....	2,152	5,926	2.8	2,084	19,588	9.4
Share tenants.....	2,264	7,020	3.1	2,246	33,864	15.1
Under 20 acres.....	2,291	3,309	1.4	2,162	3,528	1.6
20 to 99 acres.....	8,831	17,726	2.0	8,722	37,766	4.3
100 to 174 acres.....	9,603	26,537	2.8	9,531	85,407	9.0
175 to 259 acres.....	5,310	18,423	3.5	4,962	69,501	14.0
260 acres and over.....	3,930	19,531	5.0	3,900	73,992	19.0
Hay and grain.....	1,278	3,416	2.7	928	4,150	4.5
Vegetable.....	556	1,096	2.0	326	798	2.4
Fruit.....	143	294	2.1	95	406	4.3
Live stock.....	6,697	19,999	3.0	6,290	39,309	6.2
Dairy produce.....	16,156	47,456	2.9	16,700	199,603	12.0
Miscellaneous ²	5,140	13,270	2.6	4,938	25,928	5.3

¹Including "part owners" and "owners and tenants."

²Including florists' establishments, nurseries, tobacco farms, and sugar farms.

CROPS.

The following table gives the statistics of the principal crops grown in 1899.

TABLE 18.—ACREAGES, QUANTITIES, AND VALUES OF THE PRINCIPAL FARM CROPS IN 1899.

CROPS.	Acres.	Unit of measure.	Quantity.	Value.*
Corn.....	60,638	Bushels.....	2,322,450	\$1,180,505
Wheat.....	1,796	Bushels.....	34,650	29,078
Oats.....	73,372	Bushels.....	2,742,140	941,711
Barley.....	12,152	Bushels.....	380,940	187,004
Rye.....	2,264	Bushels.....	31,950	18,012
Buckwheat.....	9,910	Bushels.....	196,010	90,275
Grass seed.....		Bushels.....	165	286
Clover seed.....		Bushels.....	3	10
Hay and forage.....	1,006,495	Tons.....	1,336,499	10,544,825
Tobacco.....	158	Pounds.....	291,390	48,073
Wops.....	6	Pounds.....	4,400	375
Dry beans.....	2,404	Bushels.....	27,172	51,629
Dry pease.....	408	Bushels.....	6,945	7,730
Potatoes.....	28,353	Bushels.....	3,547,829	1,338,730
Sweet potatoes.....	4	Bushels.....	306	176
Onions.....	111	Bushels.....	31,492	16,908
Miscellaneous vegetables.....	5,020			354,836
Maple sugar.....		Pounds.....	4,779,870	464,132
Maple sirup.....		Gallons.....	160,918	134,821
Small fruits.....	416			85,121
Grapes.....	155	Centals.....	2,401	27,035
Orchard fruits.....	142,794	Bushels.....	1,191,429	3450,429
Nuts.....				2,944
Forest products.....				2,108,518
Flowers and plants.....	38			58,575
Seeds.....	2			463
Nursery products.....	74			49,625
Miscellaneous.....				9,353
Total.....	1,246,465			18,170,279

* Estimated from number of vines or trees.

* Including value of raisins, wine, etc.

* Including value of cider, vinegar, etc.

Of the total value of crops, hay and forage contributed 58.0 per cent; cereals, 13.5 per cent; forest products, 11.6 per cent; vegetables, including potatoes and onions, 9.4 per cent; maple sirup and sugar, 3.3 per cent; fruits and nuts, 3.0 per cent; and other products, 1.2 per cent.

The average yield of hay and forage was 1.3 tons per acre and the average values were \$7.89 per ton and \$10.48 per acre. The acreage devoted to hay and forage was 80.7 per cent of the total area in crops, but yielded only 58.0 per cent of the total receipts. The average values per acre of other crops were as follows: Flowers and plants, \$1,541.45; nursery products, \$670.61; small fruits, \$204.62; onions, \$152.32; miscellaneous vegetables, \$70.68; potatoes, \$47.04; cereals, \$15.28; and orchard fruits, \$10.53. The crops yielding the highest returns per acre were grown upon very highly improved land. Their production required a relatively great amount of labor and large expenditures for fertilizers.

Maple sugar and sirup were reported in 1900 by 9,811 farmers, the average value of the product per farm being \$61.05. Orleans, Franklin, Caledonia, and Lamoille were the leading counties, and reported over one-half of the total production. The production of 1900 was but one-third that of 1890, each county showing a decrease of at least 50 per cent.

CEREALS.

Table 19 is an exhibit of the changes in cereal production since 1849.

TABLE 19.—ACREAGE AND PRODUCTION OF CEREALS: 1849 TO 1899.

PART 1.—ACREAGE.

YEAR. ¹	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899.....	12,152	9,910	60,638	73,372	2,264	1,796
1889.....	16,427	13,429	41,790	101,582	3,379	8,397
1879.....	10,552	17,649	55,249	99,548	6,319	20,748

¹ No statistics of acreage were secured prior to 1879.

PART 2.—BUSHELS PRODUCED.

YEAR.	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899.....	380,940	196,010	2,322,450	2,742,140	31,950	34,650
1889.....	420,761	271,216	1,700,688	3,816,141	43,256	164,720
1879.....	267,625	356,618	2,014,271	3,742,282	71,733	337,257
1869.....	117,333	415,098	1,699,882	3,602,430	73,346	454,703
1859.....	79,211	225,415	1,525,411	3,630,267	139,271	437,037
1849.....	42,150	209,819	2,032,396	2,307,794	176,233	535,955

The steady decreases shown in the production of wheat and rye indicate that the decreases in the acreages devoted to these grains have been continuous since 1850. The beginning of the decline in the production of other cereals, however, is more recent, the highest point for oats having been reached in 1879, and that for barley in 1889. In the last decade the acreage under corn increased 45.1 per cent, while other cereals show decreases as follows: Barley, 26.0 per cent; buckwheat, 26.2 per cent; oats, 27.8 per cent; rye, 33.0 per cent; wheat, 78.6 per cent. The total acreage in cereals decreased 13.4 per cent.

In 1899, 45.8 per cent of the total area in cereals was devoted to oats; 37.9 per cent, to corn; 7.6 per cent, to barley; 6.2 per cent, to buckwheat; 1.4 per cent, to rye; and 1.1 per cent, to wheat.

The acreage given for cereals does not include 17,924 acres of grain cut green for hay, nor 39,520 acres devoted to corn, nonsaccharine sorghum, and similar crops grown for forage or ensilage.

ORCHARD FRUITS.

The changes in orchard fruits since 1890 are shown in the following table.

TABLE 20.—CLASSIFIED ORCHARD TREES AND FRUITS: 1890 AND 1900.

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples.....	1,675,131	1,728,096	1,176,822	1,213,405
Apricots.....	64	210		
Cherries.....	13,850	6,777	1,069	164
Peaches.....	4,993	1,966	967	80
Pears.....	28,357	22,652	10,239	16,101
Plums and prunes.....	22,856	9,394	1,529	746

The value of the orchard products of 1899 was \$450,429. The counties whose orchard products were valued at more than \$25,000 are: Windham, \$117,935; Bennington, \$49,596; Windsor, \$42,306; Rutland, \$34,086; Washington, \$30,371; and Orleans, \$25,067.

In 1890, 97.7 per cent of all fruit trees in the state

were apple trees, and in 1900, 95.9 per cent. The number of apple trees decreased 3.1 per cent in the decade, the counties showing decreases being Franklin, Orange, Rutland, Washington, Windham, and Windsor, the leading apple-growing counties.

Apricot trees were very few in 1890, and still fewer in 1900. Cherry trees have greatly increased in number, all counties except Caledonia sharing in the gain. In 1890, 98.6 per cent of all peach and nectarine trees in the state were in Windham county, and although other counties have made rapid gains, it still has 68.7 per cent of the total number. The gain for the state was 154.0 per cent, and for Windham county, 76.8 per cent. The number of pear trees increased 25.2 per cent, and that of plum and prune trees, 143.8 per cent.

In addition to the number of trees shown in Table 20, 857 unclassified fruit trees were reported with 803 bushels of fruit. The value of orchard products given above includes the value of 9,998 barrels of cider, 1,881 barrels of vinegar, and 12,420 pounds of dried fruits.

VEGETABLES, SMALL FRUITS, AND GRAPES.

The value of all vegetables grown in the state in 1899, including potatoes, sweet potatoes, and onions, was \$1,705,650, of which 78.2 per cent represents the value of potatoes. Aside from the land devoted to potatoes, sweet potatoes, and onions, 5,020 acres were used in growing miscellaneous vegetables. Of this area the products of 3,709 acres were not reported in detail. Of the 1,311 acres which were fully reported, 799 acres were devoted to sweet corn; 127, to cabbages; 64, to turnips; 50, to beets; and 271, to other vegetables.

The total area used in growing small fruits was 416 acres, and the value of the fruit produced was \$85,121, an average of \$204.62 per acre. Of the total area, 232 acres, or 55.8 per cent, were devoted to strawberries and yielded 598,020 quarts. The acreage and production of other berries were as follows: Blackberries and dewberries, 47 acres and 84,990 quarts; currants, 30 acres and 50,490 quarts; gooseberries, 3 acres and 4,500 quarts; raspberries and Logan berries, 91 acres and 176,440 quarts; and other small fruits, 13 acres and 15,820 quarts.

Grapes were grown in 1899 by 2,057 farmers, who obtained 2,401 centals of fruit from 24,715 vines. The total value of the grape crop, including the value of 160 gallons of wine made on farms, was \$7,035.

FLORICULTURE.

The proprietors of 28 of the 43 establishments where flowers were grown for market in 1899 made commercial floriculture their principal business. They had a capital of \$164,400 invested, of which \$78,150 represents the value of land; \$76,950, the value of buildings; \$6,820, the value of implements; and \$2,480, the value of live stock. Their income in 1899 was \$53,193, of which \$50,543 was derived from flowers and foliage plants and \$2,650 from other products. During the year they expended \$10,965 for labor and \$1,655 for fertilizers.

LAND UNDER GLASS.

An aggregate of 298,710 square feet of glass was reported by 116 florists and farmers. The 28 florists reported a glass surface of 215,977 square feet, equivalent to 161,985 square feet of land under glass. The proprietors of the remaining 88 farms used land under glass principally for growing vegetables, and had an average of about 1,554 square feet.

NURSERIES.

An income of \$51,130 was reported by the 5 nurserymen of the state, of which amount \$48,530 was derived from the sale of nursery stock and \$2,600 from other products. The value of the land and buildings of these farms was \$31,500; implements, \$785; and live stock, \$640. The amount expended for labor was \$4,860, and for fertilizers, \$432.

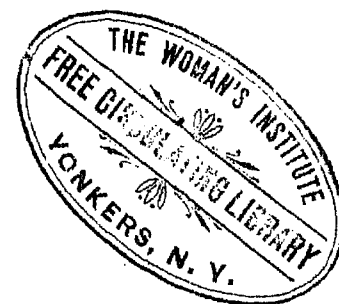
LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was \$3,133,140, an average of \$95 per farm. The average was highest for the most intensively cultivated farms, being \$972 for nurseries, \$392 for florists' establishments, \$178 for tobacco farms, \$113 for dairy farms, \$92 for live-stock farms, \$84 for fruit farms, \$54 for hay and grain farms, \$42 for vegetable farms, and \$35 for sugar farms. "Managers" expended an average of \$395; "share tenants," \$108; "owners," \$86; and "cash tenants," \$72. White farmers expended \$95 per farm and colored farmers \$85.

Fertilizers purchased in 1899 cost \$447,065, an average of \$14 per farm, and twice the amount expended in 1889. The average expenditure for nurseries was \$86; for tobacco farms, \$62; for florists' establishments, \$59; for dairy farms, \$16; for vegetable and live-stock farms, \$11; for fruit farms, \$10; for hay and grain farms, \$6; and for sugar farms, \$4.

Twelfth Census of the United States.

CENSUS BULLETIN.



No. 163.

WASHINGTON, D. C.

April 29, 1902.

MANUFACTURES.

PENNSYLVANIA.

Hon. WILLIAM R. MERRIAM,
Director of the Census.

SIR: I transmit herewith, for publication in bulletin form, the statistics of manufacturing and mechanical industries for the state of Pennsylvania for the census year 1900, taken in accordance with the provisions of section 7 of the act of March 3, 1899. This section requires that "The schedules of inquiries relating to the products of manufacturing and mechanical establishments shall embrace the name and location of each establishment; character of organization, whether individual, cooperative, or other form; date of commencement of operations; character of business or kind of goods manufactured; amount of capital invested; number of proprietors, firm members, copartners, or officers, and the amount of their salaries; number of employees, and the amount of their wages; quantity and cost of materials used in manufactures; amount of miscellaneous expenses; quantity and value of products; time in operation during the census year; character and quantity of power used; and character and number of machines employed."

In each of the above particulars the requirements of the law have been observed, but certain of the data thus elicited are reserved for publication in the final volumes.

There were 133 cities and boroughs in the state withdrawn from the enumerators and their manufacturing statistics collected by special agents, in accordance with the further provision of section 7 of the census act. Wherever the phrase "urban manufactures" is used in this bulletin, it applies only to those cities and boroughs which were withdrawn from the enumerators and committed to special agents, and only to manufacturing establishments within the corporate limits of such places.

Twenty cities and boroughs in Pennsylvania contain a population exceeding 20,000 each: Allegheny, Allentown, Altoona, Chester, Easton, Erie, Harrisburg, Johnstown, Lancaster, McKeesport, Newcastle, Norristown, Philadelphia, Pittsburg, Reading, Scranton, Shenandoah, Wilkesbarre, Williamsport, and York.

The manufacturing statistics of these 20 cities and

boroughs are presented by specified industries, and the statistics of Allegheny, Allentown, Altoona, Chester, Erie, Harrisburg, Johnstown, Lancaster, McKeesport, Philadelphia, Pittsburg, Reading, Scranton, Wilkesbarre, Williamsport, and York are presented in comparison with the returns of the Eleventh Census. The statistics of Easton, Newcastle, Norristown, and Shenandoah were not shown separately in 1890, and comparisons with that year are, therefore, not possible in these cases.

Professor Albert S. Bolles, of Haverford College, rendered valuable assistance in the preparation of the text for the accompanying report.

The statistics of Pennsylvania are presented in 9 tables: Table 1 showing comparative figures for the state at the several censuses; Table 2 showing all the industries of the state divided between hand trades and the manufactures proper, and also the statistics of governmental establishments, educational, eleemosynary, and penal institutions, and establishments with a product of less than \$500, which three latter classes were not reported at previous censuses; Table 3 showing the statistics of the 25 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the cities of Allegheny, Allentown, Altoona, Chester, Erie, Harrisburg, Johnstown, Lancaster, McKeesport, Philadelphia, Pittsburg, Reading, Scranton, Wilkesbarre, Williamsport, and York at the censuses of 1890 and 1900; Table 5 showing the urban manufactures of the state in comparison with the totals for the entire state and the state exclusive of the cities and boroughs withdrawn from the enumerators; Table 6 showing the statistics for the state by counties; Table 7 showing the statistics for the state by specified industries; Table 8 showing the statistics for the cities and boroughs of Allegheny, Allentown, Altoona, Chester, Easton, Erie, Harrisburg, Johnstown, Lancaster, McKeesport, Newcastle, Norristown, Philadelphia, Pittsburg, Reading, Scranton, Shenandoah, Wilkesbarre, Williamsport, and York by specified industries; and Table 9 showing the totals for all industries in each of the cities and boroughs withdrawn from the enumerators (exclusive of those shown in Table 8).

Table 1 shows the growth of manufactures in Pennsylvania for the half century which terminates with the Twelfth Census. The manufacturing statistics of the censuses prior to 1850 were too imperfect and fragmentary in character to make it proper to reproduce them in such a table as a measure of industrial growth in the first half of the century. Owing to changes in the method of taking the census, comparisons between the earlier and later decades, represented in Table 1, should be drawn only in the most general way. Nevertheless, the rate of growth in Pennsylvania manufactures may be fairly inferred from the figures given.

In drafting the schedules of inquiry for the census of 1900 care was taken to preserve the basis of comparison with prior censuses. Comparison may be made safely with respect to all the items of inquiry except those relating to capital, salaried officials, clerks, etc., and their salaries, the average number of employees, and the total amount of wages paid. Live capital, that is, cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries, was first called for at the census of 1890. No definite attempt was made, prior to the census of 1890, to secure a return of live capital invested.

Changes were made in the inquiries relating to employees and wages in order to eliminate defects found to exist on the form of inquiry adopted in 1890. At the census of 1890 the average number of persons employed during the entire year was called for, and also the average number employed at stated weekly rates of pay, and the average number was computed for the actual time the establishments were reported as being in operation. At the census of 1900 the greatest and least numbers of employees were reported, and also the average number employed during each month of the year. The average number of wage-earners (men, women, and children) employed during the entire year was ascertained by using 12, the number of calendar months, as a divisor into the total of the average numbers reported for each month. This difference in the method of ascertaining the average number of wage-earners during the entire year may have resulted in a variation in the number, and should be considered in making comparisons.

At the census of 1890 the number and salaries of proprietors and firm members actively engaged in the business or in supervision were reported, combined with clerks and other officials. In cases where proprietors and firm members were reported without salaries, the amount that would ordinarily be paid for similar services was estimated. At the census of 1900 only the number of proprietors and firm members actively engaged in the industry or in supervision was ascertained, and no salaries were reported for this class. It is therefore impossible to compare the number and salaries of salaried officials of any character for the two censuses.

Furthermore, the schedules for 1890 included in the wage-earning class, overseers, foremen, and superintendents (not general superintendents or managers), while the census of 1900 separates from the wage-earning class such salaried employees as general superintendents, clerks, and salesmen. It is possible and probable that this change in the form of the question has resulted in eliminating from the wage-earners, as reported by the present census, many

high-salaried employees included in that group for the census of 1890.

In some instances, the number of proprietors and firm members, shown in the accompanying tables, falls short of the number of establishments reported. This is accounted for by the fact that no proprietors or firm members are reported for corporations or cooperative establishments.

The reports show a capital of \$1,551,548,712 invested in manufactures and mechanical industries in the 52,185 establishments reporting for the state of Pennsylvania. This sum represents the value of land, buildings, machinery, tools, and implements, and the live capital utilized, but does not include the capital stock of any of the manufacturing corporations of the state. The value of the products is returned at \$1,834,790,860, to produce which involved an outlay of \$48,605,173 for salaries of officials, clerks, etc.; \$332,072,670 for wages; \$134,344,269 for miscellaneous expenses, including rent, taxes, etc.; and \$1,042,434,599 for materials used, mill supplies, freight, and fuel. It is not to be assumed, however, that the difference between the aggregate of these sums and the value of the products is, in any sense, indicative of the profits in the manufacture of the products during the census year. The census schedule takes no cognizance of the cost of selling manufactured articles, or of interest on capital invested, or of the mercantile losses incurred in the business, or of depreciation in plant. The value of the product given is the value as obtained or fixed at the shop or factory. This statement is necessary in order to avoid erroneous conclusions from the figures presented.

The value of products for the state of Pennsylvania, \$1,834,790,860, is the gross value, and not the net or true value. The difference between these two should be carefully noted. The gross value is found by adding the value of products in the separate establishments. But the finished product of one establishment is often the raw material for another. In such cases the value of the former reappears in the latter, and thus the original cost of certain materials may be included several times in the gross value. The net or true value is found by subtracting from the gross value the value of all materials purchased in a partly manufactured form. In this way the duplications in the gross value are eliminated.

At the census of 1890 the schedule was so framed that it was impossible to find the net or true value. In the present census the schedule asked for the value of the materials in two classes, those purchased in the crude state and those purchased in the partly manufactured form. From the answers to these questions the net or true value of products may be computed. Thus, for Pennsylvania, the gross value of products for 1900 was \$1,834,790,860. The value of materials purchased in a partly manufactured form was \$729,919,230. The difference, \$1,104,871,630, is the net or true value of products, and represents the value of all crude materials used, together with the increase in value resulting from the various processes of manufacture.

Very respectfully,



Chief Statistician for Manufactures.

PENNSYLVANIA.

Table 1 shows the manufacturing and mechanical industries of the state of Pennsylvania as returned at the censuses of 1850 to 1900, inclusive, with the percentages of increase for each decade. This table also presents the average number of wage-earners employed by manufactur-

ing establishments, in comparison with the total population of the state, and the value of the land and buildings owned and reported by manufacturers as capital, in comparison with the assessed value of all real estate and improvements.

TABLE 1.—COMPARATIVE SUMMARY, 1850 TO 1900, WITH PER CENT OF INCREASE FOR EACH DECADE.

	DATE OF CENSUS.						PER CENT OF INCREASE.				
	1900	1890	1880	1870	1860	1850	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860
Number of establishments	52,185	39,339	31,282	37,200	22,363	21,605	32.7	26.0	116.0	66.3	8.5
Capital	\$1,551,548,712	\$991,243,115	\$474,510,993	\$406,821,845	\$190,055,904	\$94,473,810	56.5	108.9	16.6	114.1	101.2
Salaries	47,439	250,169	(3)	(3)	(3)	(3)	15.4				
Salaried officials, clerks, etc., number	48,605,173	242,215,788	(3)	(3)	(3)	(3)	15.1				
Wage-earners, average number	733,834	570,393	387,072	310,487	222,132	146,766	28.7	47.4	21.2	43.8	51.4
Total wages	\$382,072,670	\$268,375,215	\$134,055,904	\$127,976,594	\$60,369,165	\$37,163,232	26.1	98.5	4.8	112.0	62.4
Men, 16 years and over	574,006	460,939	284,359	256,543	182,593	124,688	24.7	62.1	10.8	40.5	48.4
Wages	\$293,097,372	\$236,614,013	(3)	(3)	(3)	(3)	24.1				
Women, 16 years and over	126,093	87,085	78,046	43,712	39,539	22,078	44.9	19.2	67.1	10.6	79.1
Wages	\$38,067,828	\$23,357,951	(3)	(3)	(3)	(3)	41.6				
Children, under 16 years	38,135	22,419	29,667	19,232	(3)	(3)	47.8	124.4	54.3		
Wages	\$5,307,470	\$3,403,251	(3)	(3)	(3)	(3)	56.0				
Miscellaneous expenses	\$134,344,269	\$74,841,458	(4)	(4)	(4)	(4)	79.5				
Cost of materials used	\$1,042,434,599	\$778,734,637	\$465,020,563	\$421,197,673	\$153,477,698	\$87,206,377	34.7	66.4	10.4	174.4	76.0
Value of products, including custom work and repairing	\$1,834,790,860	\$1,331,794,901	\$744,818,445	\$711,894,344	\$290,121,188	\$155,044,910	37.8	78.8	4.6	145.4	87.1
Total population	6,302,034	5,258,014	4,282,891	3,521,951	2,906,215	2,311,786	19.9	22.8	21.6	21.2	25.7
Wage-earners engaged in manufactures	733,834	570,393	387,072	310,487	222,132	146,766	28.7	47.4	21.2	43.8	51.4
Per cent of total population	11.6	10.8	9.0	9.1	7.6	6.3					
Assessed value of real estate	\$2,766,829,685	\$2,042,016,599	\$1,540,007,957	\$1,071,680,984	\$561,192,980	\$427,865,060	35.5	32.6	43.7	91.0	31.2
Value of land and buildings invested in manufactures ¹	\$375,804,375	\$246,972,567	(3)	(3)	(3)	(3)	52.2				
Per cent of assessed value	13.6	12.1									

¹ Decrease.

² Includes proprietors and firm members, with their salaries; number only reported in 1900. (See Table 7.)

³ Not reported separately.

⁴ Not reported.

⁵ Exclusive of 81 Indians and other persons on Indian reservations, which classes were not included at previous censuses.

⁶ As given in the Annual Report of the Secretary of Internal Affairs, 1900.

⁷ Does not include value of rented property.

Table 1 shows that there has been a large growth in the manufacturing and mechanical industries of Pennsylvania during the half century. The population during these years increased from 2,311,786 to 6,302,034, while the average number of wage-earners employed in manufacturing establishments increased from 146,766 to 733,834, embracing, in 1900, 11.6 per cent of the entire population, compared with 6.3 per cent in 1850. Probably the best indication of the importance of the wage-earning class is afforded by the greatest number employed at any one time during the year. In 1900 this was 928,522, or 14.7 per cent of the total population of the state. The greatest percentage of increase in the value of products, 145.4, is shown for the decade ending with 1870, but the greatest absolute increase, \$586,976,456, was between the years 1880 and 1890. The absolute increase during the decade ending with the year 1900, \$502,985,959, was greater than that shown for any other state of the United States.

In 1840 and in 1850 Pennsylvania ranked third in the United States in manufacturing and mechanical industries, but at all succeeding censuses its rank has been second. In the amount of power used in manufacturing—an index

of the factory system proper—Pennsylvania has ranked first since 1870, using in that year 15.5 per cent of the total power used in the United States and 16.4 per cent in 1900.

Among the various causes which contributed to the early development of manufacturing in Pennsylvania, the favorable location of the state for marketing its manufactured products must be given a very important place. No other state touches the Atlantic seacoast, the Great Lake system, and the navigable waters of the Ohio-Mississippi Valley. Before the construction of railroads, when the densest population was along the Atlantic coast and in the valleys of the Mississippi and Ohio rivers, this location proved a great stimulus to manufacturing. Many of the manufacturers of Philadelphia and vicinity sold their products in the states immediately to the south, while the iron, steel, lumber, and leather industries of the western part of the state, as well as the woolen industry generally, were greatly stimulated by the market for their products afforded by the settlements along the Ohio and Mississippi rivers. The first steam vessel launched on these waters was built at Pittsburg, in 1811, and regular communication was shortly afterwards established between Pittsburg and the Southern states. Communication in the interior

of the state was improved between 1826 and 1839 by the construction of a network of canals and canalized rivers aggregating 578 miles in length—a greater mileage than that of any other state except New York and Ohio. After the building of railroads, many of these canals were abandoned, but the stimulus they gave to manufacturing is evidenced by the fact that of the 12 leading manufacturing cities in the state in 1900, 9 were touched by these canals, while 2 of the remaining 3 were located on the navigable waters of the Delaware and Allegheny rivers. In railroad mileage Pennsylvania ranked second in the United States in 1899, with 10,181 miles of road in operation.¹

Few states have been so favored as Pennsylvania in natural resources. The raw materials for many kinds of manufactures are abundant, the state ranking high in the production of lumber, tanbark, tobacco, cereals, crude petroleum, and iron ore. It not only has fuel sufficient for its extensive manufactures, but ships an immense surplus each year to other states. The annual coal production of Pennsylvania between the years 1880 and 1899 was each year more than one-half of the total for the United States.² Natural gas has been used in the state for manufacturing purposes since 1874.³ This fuel is without a rival for the manufacture of glass, the puddling of iron, the heating of large furnaces in the manufacture of steel, and the roasting of ores.⁴ In 1899 it was used for manufacturing in Pennsylvania in 50 rolling mills and steel works, 75 glass works, and 1,111 other establishments. Although many of the gas fields prominent twelve years ago are now almost exhausted, and the value of the production in 1899 amounted to less than one-half that of

1888, the state still ranked second in production. Partly as a result of these abundant supplies of fuel, the use of waterpower has been relatively of less importance in Pennsylvania than in most other states, and has declined very much in recent years. In 1870 the waterpower was 141,982 horsepower, or 39 per cent of the total power, while in 1900 it had declined to 86,223 horsepower and represented but 4.6 per cent of the total. The use of waterpower was confined very largely to the manufacture of flouring and grist mill products, lumber and timber products, and paper and wood pulp, the amount used in these three industries constituting 82.7 per cent of the total waterpower used in the state.

At the end of the last century manufacturing in Philadelphia and the adjacent parts of Pennsylvania was very much stimulated by the activity of one man, Benjamin Franklin, whose interests extended to the promotion of almost every form of industry. The Society of Arts, the American Philosophical Society, and other similar associations in Philadelphia were active at this time, offering prizes for inventions which were desired in various lines of manufacturing. The Centennial Exposition, held in Philadelphia in 1876, was a great benefit to the industries of the state, and in 1883, a textile department was added to the Pennsylvania Museum and School of Industrial Art.⁵ More recently, the Philadelphia Commercial Museum has been organized, for the purpose of assisting American manufacturers to enter the foreign market with their products.

Table 2 divides the industries of the state between the hand trades and the manufactures proper. This table also gives the statistics for governmental establishments, educational, eleemosynary, and penal institutions, and establishments with a product of less than \$500; these were not reported at previous censuses, and therefore are omitted from the other tables and their use confined to Table 2.

⁵ Report of the Secretary of Internal Affairs of Pennsylvania, Part III, Industrial Statistics, 1883, page E1.

TABLE 2.—SUMMARY FOR ALL ESTABLISHMENTS.

CLASSES.	Number of establishments.	Capital.	Proprietors and firm members.	WAGE-EARNERS.		Miscellaneous expenses.	COST OF MATERIALS USED.				Value of products, including custom work and repairing.
				Average number.	Total wages.		Total.	Purchased in raw state.	Purchased in partially manufactured form.	Fuel, freight, etc.	
Total	63,228	\$1,562,286,508	70,254	737,258	\$382,881,798	\$134,671,739	\$1,043,912,345	\$249,529,532	\$731,218,337	\$68,164,476	\$1,888,987,038
Hand trades ¹	20,799	53,748,704	23,061	59,198	29,735,786	22,815,039	50,489,016	1,183,050	48,297,303	1,008,683	134,678,795
Governmental establishments	3	8,199,131	-----	397	307,913	14,875	261,064	-----	251,936	9,123	688,062
Educational, eleemosynary, and penal institutions	17	3,763,917	-----	676	371,551	26,726	369,255	39,838	299,072	30,300	816,007
Establishments with a product of less than \$500	11,023	3,774,748	11,418	2,351	123,664	255,869	847,427	99,323	748,099	-----	2,792,109
All other establishments	31,386	1,497,800,008	35,775	674,683	802,386,884	111,529,230	991,945,583	248,207,271	681,621,927	62,116,385	1,700,112,065

¹ Includes bicycle and tricycle repairing, 502; blacksmithing and wheelwrighting, 4,509; boots and shoes, custom work and repairing, 2,580; carpentering, 1,846; clothing, men's, custom work and repairing, 2,281; clothing, women's, dressmaking, 1,190; dyeing and cleaning, 184; furniture, cabinetmaking, repairing, and upholstering, 710; lock and gun smithing, 197; masonry, brick and stone, 608; millinery, custom work, 1,344; painting, house, sign, etc., 1,512; paper hanging, 389; plastering and stucco work, 207; plumbing, and gas and steam fitting, 1,552; sewing machine repairing, 32; taxidermy, 10; typewriter repairing, 3; watch, clock, and jewelry repairing, 1,187.

Of the 63,228 establishments of all classes shown in this table, 31,822, or 50.3 per cent, were small shops included in the groups of "hand trades" and "establishments with a product of less than \$500." The value of the products of these establishments, consisting principally of the sums received for custom work and repairing, amounted to

\$137,470,904, or only 7.5 per cent of the total value of the products of the state.

In addition to the 63,228 active establishments in the state during the census year, with a capital of \$1,582,286,508, shown in Table 2, there were 349 idle establishments, with a capital of \$10,751,710, divided as follows:

INDUSTRIES.	Number of idle estab- lishments.	Capital.	INDUSTRIES.	Number of idle estab- lishments.	Capital.
Bicycles and tricycles	2	\$36,500	Leather, tanned, curried, and finished	13	\$807,866
Brass castings and brass finishing	1	20,717	Liquors, distilled	8	122,230
Brick and tile	26	660,512	Liquors, malt	1	15,000
Cheese, butter, and condensed milk, factory product	8	15,675	Lumber and timber products	33	201,223
Clothing, men's, factory product	1	12,000	Lumber, planing mill products, including sash, doors, and blinds	10	49,855
Coke	4	59,200	Marble and stone work	3	48,500
Cooperage	1	35,000	Masonry, brick and stone	1	20,000
Explosives	3	23,300	Paints	3	16,600
Flouring and grist mill products	82	155,270	Paper and wood pulp	2	154,000
Foundry and machine shop products	11	262,430	Paving and paving materials	4	30,089
Fruits and vegetables, canning and preserving	8	24,750	Pottery, terra cotta, and fire-clay products	4	211,200
Furniture, factory product	2	65,500	Pumps, not including steam pumps	1	10,000
Gas and lamp fixtures	1	16,800	Roofing and roofing materials	8	84,500
Glass	19	1,963,532	Silk and silk goods	7	235,331
Hosiery and knit goods	9	61,843	Soap and candles	1	30,000
Ice, manufactured	2	117,000	Tin andterne plate	2	76,000
Iron and steel	35	4,453,269	Woolen goods	20	255,100
Iron and steel, forgings	1	15,000	All other industries	63	118,596
Iron and steel, pipe, wrought	1	237,672			

TABLE 3.—COMPARATIVE SUMMARY OF TWENTY-FIVE LEADING INDUSTRIES.

INDUSTRIES.	Year.	Num- ber of estab- lish- ments.	Capital.	WAGE-EARNERS.		Miscella- neous expenses.	Cost of materials used.	Value of products, including custom work and repairing.
				Average number.	Total wages.			
Total for selected industries for state	1900	15,665	\$1,111,294,443	478,730	\$221,138,148	\$56,059,020	\$780,436,743	\$1,291,000,950
	1890	12,613	723,553,973	381,760	174,023,356	51,900,172	550,318,362	935,303,641
Increase, 1890 to 1900		3,052	387,735,470	97,020	47,114,792	34,158,848	199,618,381	355,697,309
Per cent of increase		24.2	53.6	25.4	27.1	65.8	34.4	38.0
Per cent of total of all industries in state	1900	0.0	71.6	65.2	66.6	64.1	74.9	70.4
	1890	32.1	73.0	66.9	66.1	69.3	75.1	72.2
Boots and shoes, factory product	1900	146	6,860,480	9,144	3,111,113	572,624	8,210,846	13,235,933
	1890	153	5,394,799	7,616	3,094,582	311,684	5,012,096	10,354,850
Cars and general shop construction and repairs by steam railroad companies	1900	144	19,182,001	28,554	15,825,640	3,280,079	23,147,574	43,065,171
	1890	61	17,475,056	22,049	12,301,884	82,909	15,822,037	23,769,728
Cars, steam railroad, not including operations of railroad companies	1900	11	33,828,723	5,840	3,111,556	1,265,456	12,188,311	19,260,910
	1890	15	7,060,466	4,535	1,833,407	465,900	6,496,258	10,080,722
Cheese, butter, and condensed milk, factory product	1900	749	8,038,128	976	445,708	116,195	8,711,635	10,200,006
	1890	300	1,322,284	766	267,147	61,665	4,433,395	5,319,434
Chemicals	1900	100	22,756,656	4,278	2,198,243	931,869	6,805,789	13,034,384
	1890	71	16,618,052	3,234	1,696,148	461,270	5,138,498	13,144,210
Clothing, men's, factory product	1900	481	10,446,107	10,497	4,422,074	2,137,272	12,212,763	23,389,048
	1890	337	15,609,046	7,675	3,298,517	4,053,254	14,780,351	26,732,348
Clothing, women's, factory product	1900	230	5,197,094	8,311	2,606,024	629,266	6,269,950	11,694,530
	1890	80	1,819,002	2,939	766,094	249,188	2,281,471	3,903,596
Coke	1900	89	20,213,147	9,283	4,516,651	1,227,259	11,678,079	22,282,358
	1890	98	12,000,820	5,855	2,902,892	256,263	7,280,566	10,415,628
Electrical apparatus and supplies	1900	68	20,967,587	7,817	4,002,737	1,647,426	11,872,730	19,112,665
	1890	10	475,169	209	90,952	22,767	430,899	674,565
Flouring and grist mill products	1900	2,719	19,516,993	2,195	1,061,869	667,372	30,566,466	36,630,423
	1890	2,226	21,079,642	3,378	1,269,991	865,868	33,238,981	39,478,076
Foundry and machine shop products	1900	1,260	154,958,750	62,828	33,199,521	6,830,037	62,336,770	127,292,440
	1890	886	69,121,468	38,247	21,483,069	3,672,673	29,275,156	67,587,025
Glass	1900	119	28,287,187	19,420	10,287,491	1,867,879	6,435,463	22,011,130
	1890	99	20,459,049	13,510	8,728,520	611,178	5,234,992	17,179,137
Iron and steel:								
Total	1900	291	309,729,222	110,864	61,908,405	17,845,789	283,142,785	434,445,200
	1890	311	223,556,407	92,473	49,550,665	9,709,125	180,220,237	264,571,624
Blast furnaces	1900	77	72,512,725	16,075	8,083,016	3,269,022	64,095,277	101,575,487
	1890	116	57,411,570	15,612	7,084,308	2,634,671	57,222,481	75,239,203
Forges and bloomeries	1900	5	87,465	125	52,901	3,174	186,859	281,530
	1890	9	281,030	252	109,768	11,620	407,212	613,231
Rolling mills and steel works	1900	209	237,129,032	94,664	53,817,488	14,578,593	218,860,649	332,588,174
	1890	186	165,863,301	76,609	42,356,539	7,072,834	122,530,544	188,714,190
Iron and steel, pipe, wrought	1900	10	11,698,057	3,675	1,678,961	148,202	11,586,470	15,333,893
	1890	14	13,849,616	9,170	4,294,969	311,216	20,597,331	30,249,795

TABLE 3.—COMPARATIVE SUMMARY OF TWENTY-FIVE LEADING INDUSTRIES—Continued.

INDUSTRIES.	Year.	Number of establishments.	Capital.	WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.
				Average number.	Total wages.			
Leather, tanned, curried, and finished	1900	254	\$57,820,227	13,896	\$5,457,518	\$2,432,724	\$42,403,503	\$55,615,009
	1890	410	30,165,420	10,956	5,222,421	1,650,023	35,641,274	49,931,716
Liquors:								
Total	1900	281	69,524,514	4,976	3,134,590	15,704,954	8,178,458	34,520,356
	1890	203	28,781,116	3,548	2,864,469	6,921,010	7,787,284	22,698,423
Liquors, distilled	1900	78	5,840,084	471	250,348	2,665,583	1,568,569	5,357,615
	1890	40	2,624,761	400	235,026	2,054,435	1,326,202	4,339,689
Liquors, malt	1900	208	63,684,480	4,505	2,884,242	13,039,371	6,609,889	29,162,743
	1890	163	26,106,355	3,148	2,129,443	4,866,575	6,461,082	18,358,734
Lumber and timber products	1900	2,338	47,832,548	13,510	5,550,183	980,687	20,777,869	35,749,965
	1890	1,948	45,107,300	19,598	5,440,480	1,404,992	15,677,103	29,087,970
Lumber, planing mill products, including sash, doors, and blinds	1900	542	14,191,248	7,472	3,516,550	698,316	9,441,029	16,738,839
	1890	467	14,094,095	7,888	4,219,264	626,568	10,492,131	18,398,688
Paper and wood pulp	1900	73	16,424,107	4,840	1,939,128	1,090,321	6,374,315	12,267,900
	1890	72	9,404,772	2,951	1,256,340	646,472	4,646,456	7,838,299
Petroleum, refining	1900	38	26,580,504	3,299	1,681,603	640,429	27,513,735	34,977,706
	1890	55	17,082,606	3,284	1,503,592	543,668	15,006,919	18,498,777
Printing and publishing:								
Total	1900	1,795	33,667,775	16,991	8,546,517	5,510,178	9,952,198	36,455,629
	1890	1,487	29,749,695	15,009	8,013,445	7,208,717	8,415,911	34,408,493
Book and job	1900	740	14,226,342	7,190	3,357,306	1,841,852	3,878,618	12,833,204
	1890	478	13,072,177	6,051	2,980,861	2,446,554	3,840,578	18,444,459
Music	1900	18	489,288	236	94,442	47,045	108,792	373,345
	1890	17	607,170	146	75,622	94,057	126,519	427,496
Newspapers and periodicals	1900	1,042	23,952,145	9,565	5,094,769	3,621,281	5,969,788	23,249,080
	1890	992	16,070,348	8,812	4,956,962	4,753,106	4,448,814	20,536,538
Slaughtering:								
Total	1900	111	6,548,577	1,669	920,190	526,972	21,601,810	25,238,772
	1890	242	6,180,789	1,582	772,422	316,572	18,575,330	21,991,604
Slaughtering and meat packing, wholesale	1900	68	6,009,347	1,333	733,932	372,368	15,128,096	17,826,697
	1890	114	4,828,593	1,004	540,940	215,850	11,609,651	14,110,308
Slaughtering, wholesale, not including meat packing	1900	43	589,230	286	186,258	154,604	6,478,714	7,412,075
	1890	128	1,352,195	578	231,482	100,722	6,905,679	7,881,301
Sugar and molasses, refining	1900	7	23,992,552	1,249	647,592	604,871	33,658,440	36,163,817
	1890	10	7,113,245	1,459	694,195	584,892	41,836,095	46,599,754
Textiles:								
Total	1900	1,102	127,318,858	102,213	32,772,556	11,841,157	93,371,800	158,732,087
	1890	1,028	93,326,609	79,579	27,205,879	6,102,735	80,074,416	134,001,269
Carpets and rugs, other than rag	1900	98	17,957,607	12,919	5,330,643	1,671,015	18,773,788	23,118,058
	1890	142	15,129,619	12,418	5,246,179	820,434	13,548,371	22,886,416
Cotton goods (including cotton small wares)	1900	178	24,331,965	17,011	6,037,286	2,057,143	13,176,718	25,447,697
	1890	158	15,884,936	12,666	4,388,017	730,125	10,485,247	18,431,773
Dyeing and finishing textiles	1900	105	7,679,906	4,716	2,065,752	556,083	3,174,507	7,038,012
	1890	88	6,296,340	3,855	1,596,565	419,456	2,395,432	5,240,761
Felt goods	1900	8	186,445	75	30,490	11,678	88,715	160,633
	1890	3	242,207	165	101,272	10,780	138,736	322,800
Hosiery and knit goods	1900	319	15,743,931	21,540	5,825,783	1,884,722	10,928,118	21,896,063
	1890	236	9,121,632	15,453	4,262,299	741,956	8,720,363	16,944,237
Shoddy	1900	26	972,070	368	148,240	57,728	1,069,944	1,448,886
	1890	13	640,382	302	116,459	50,305	1,205,258	1,633,770
Silk and silk goods	1900	121	20,894,023	21,028	4,623,626	2,451,820	19,834,869	31,072,926
	1890	66	9,362,063	9,380	2,725,285	939,061	12,094,889	19,357,546
Wool hats	1900	13	750,798	634	255,818	19,501	663,463	1,106,076
	1890	17	1,048,804	1,013	307,425	68,490	747,700	1,444,180
Woolen goods	1900	193	19,405,505	13,721	5,091,932	1,444,778	15,874,544	25,389,344
	1890	264	21,671,137	15,562	5,290,374	1,356,208	19,198,990	29,878,010
Worsted goods	1900	51	19,396,558	10,201	3,337,491	1,686,689	14,737,134	22,109,892
	1890	41	13,929,489	9,315	3,172,004	975,930	11,539,880	17,861,776
Tobacco:								
Total	1900	2,712	16,218,401	25,483	8,545,748	6,911,686	12,496,866	33,355,932
	1890	2,025	11,762,350	18,550	6,751,412	3,814,563	9,362,600	28,387,910
Chewing, smoking, and snuff	1900	20	1,765,589	257	102,395	451,243	1,247,397	1,247,397
	1890	11	1,347,228	232	104,217	372,956	507,282	1,355,121
Cigars and cigarettes	1900	2,664	13,836,368	25,045	8,404,687	6,448,701	11,570,888	31,433,141
	1890	1,967	9,471,276	17,385	5,496,557	3,362,955	7,299,732	19,978,429
Stemming and rehandling	1900	28	616,494	181	11,742	502,733	625,394	625,394
	1890	47	943,846	833	150,638	78,652	1,555,536	2,054,360

The 25 leading industries of the state in 1900, as shown in Table 3, embraced 15,665 establishments, or 30 per cent of the total number in the state; used a capital of \$1,111,294,448, or 71.6 per cent of the total; gave em-

ployment to 478,780 wage-earners, or 65.2 per cent of the total number; and paid \$221,138,148, or 66.6 per cent of the total wages. The value of their products was \$1,291,000,950, or 70.4 per cent of the total. In the dis-

cussion of Table 3, which follows, these industries are ranked with reference to the value of their products.

Table 3 shows that the manufacture of iron and steel is the most important industry in the state. The 291 establishments reported in 1900 gave employment to 110,864 wage-earners, or 15.1 per cent of the wage-earners employed in the state, and the products were valued at \$434,445,200, or 23.7 per cent of the total value of the products of the state. In 1890 there were 311 establishments, 92,473 wage-earners, and products valued at \$264,571,624. The increase in the value of products during the decade was \$169,873,576, or 64.2 per cent.

From a very early period Pennsylvania has ranked first in this industry. In 1880 the value of its iron and steel products amounted to 49.1 per cent of the total for the United States, and in 1900 to 54 per cent. Allegheny county, which includes the cities of Pittsburgh, McKeesport, and Duquesne, was the most important center for the industry in 1900. Other important centers were Johnstown and Newcastle. Iron had been made in several of the other colonies before its manufacture was attempted in Pennsylvania. The industry had its beginning under the encouragement of William Penn. In a book published in Philadelphia in 1692 it was stated that a small amount of iron had been made in the state, but the location was not specified.¹ The first successful attempt to establish works in Pennsylvania for the manufacture of iron was made in 1716, when Thomas Rutter, a smith, erected a bloomery forge on Manatawny Creek, in Berks county, about three miles above Pottstown. In 1728-29 the colony exported 274 tons of pig iron to England. In 1756 Pennsylvania was spoken of as "the most advanced of all the American colonies in regard to its iron works." The industry was greatly stimulated by the discovery of immense deposits of magnetic iron ore in the Cornwall ore hills, near the city of Lebanon. Beginning in 1788 there was a considerable development of the industry in the Juniata Valley, in the south central part of the state, the pig and bar iron manufactured being sold chiefly in Pittsburgh, to which point it was carried partly on the backs of horses and partly on flatboats, until the canals were built between the years 1826 and 1839.² The first blast furnace west of the Allegheny Mountains was erected on Jacob's Creek, in Fayette county, south of Pittsburgh, in 1789, and was blown in 1790.³ This was the great iron center of western Pennsylvania far into the Nineteenth century, supplying Pittsburgh and the Ohio and Mississippi valleys with pig iron and castings for many years. A blast furnace erected at Pittsburgh about the year 1792 was soon abandoned, because no ore could be found in the vicinity, and the expense of transporting it from a distance was too great.⁴ It was not until 1859 that pig iron was again made in Pittsburgh,

the Clinton Furnace having been built and blown in that year. In 1812 a rolling mill was built at Pittsburgh, and in 1829 there were 8 rolling mills in Allegheny county.

Practically all the furnaces operated in the state prior to 1840 used charcoal as fuel. About that year the use of mineral fuel was introduced, and the modern era of the industry began. With the immense coal supplies of the state available as fuel, the production of charcoal pig iron declined until in 1900 it amounted to only 4,341 tons. Anthracite coal was used first, and for many years was more important than bituminous fuel, but since 1875 this relation has been reversed. In 1880 bituminous coal and coke pig iron constituted 34.9 per cent of the total production, as compared with 61.3 per cent in 1890 and 76.1 per cent in 1900. In the latter year almost all the pig iron made with bituminous fuel was produced with coke alone, very little bituminous coal being mixed with the coke. There are extensive deposits of iron ore in the state, and these local ores were used almost exclusively, up to the middle of the century. Since then the production of iron ore has greatly increased, amounting to 1,009,327 long tons in 1899, when the state ranked fourth in the United States,⁵ but these ores supplied but a small part of the blast furnaces of the state, the more important source of supply, in recent years, being the mines in the Lake Superior district. This ore was first used in a blast furnace in the United States near Sharon, Pa., in 1853. In 1855 the Sault Ste. Marie Canal was opened, and the great development of the Lake Superior iron ore trade began.⁶ Of the 18,251,804 long tons of iron ore shipped from these mines in 1899, 15,222,187 tons were received at the eleven Lake Erie ports, the greater part of this being shipped directly to Pennsylvania.⁷ To control deliveries and freight rates, one Pennsylvania steel company has built a railroad connecting its works at Pittsburgh with Lake Erie.

As a result of these two important changes—the increased use of bituminous as compared with anthracite fuel, and the increased use of Lake Superior iron ores as compared with the Pennsylvania ores—the localization of the iron industry in the state has been considerably changed. The anthracite coal region is in the eastern part of the state, chiefly in Luzerne, Lackawanna, and Schuylkill counties, and the iron ore deposits are located here and in the southern parts of the state.⁸ Until about the middle of the century the center of iron manufactures also was here. During recent years, however, as a result of the causes just named, the greatest production has come to be in the western part of the state, chiefly in the Pittsburgh district. Here the blast furnaces are nearer the Lake Superior ore, and are favored by their proximity to the abundant coke of the Connellsville region, which is equal, if not superior, to

¹Tenth Census of the United States, Manufactures, folios 807, 809, and 814.

²Ibid., folios 817 and 820.

³Iron in all Ages, by J. M. Swank, Second Edition, 1892, page 214.

⁴Tenth Census of the United States, Manufactures, folio 821.

⁵United States Geological Survey: Mineral Resources, 1899, Metallic Products, Coal, and Coke, page 34.

⁶Tenth Census of the United States, Manufactures, folios 843 and 844.

⁷United States Geological Survey: Mineral Resources, 1899, Metallic Products, Coal, and Coke, pages 57, 60, and 62.

⁸Ibid., pages 46 and 487.

any other coke produced in the United States. The western part of the state has been further favored by the abundant production of natural gas in that region. This fuel is very largely used in the rolling mills of the state, its cost during the census year constituting 22.3 per cent of the total cost of fuel.

The development of the steel manufacture in Pennsylvania was slow. It had been attempted about 1750, and in 1805 there were 2 steel furnaces in the state which produced annually 150 tons of steel. In 1810 only 917 tons were produced in the United States, of which amount 531 tons were produced in 5 furnaces in Pennsylvania. Three years later there was a steel furnace in Pittsburgh, the first in that city. While there was a considerable increase in the quantity, the quality was variable until 1860, when crucible cast steel of the highest grade was made in Pittsburgh as a regular product.¹ This triumph marks the establishment of a new industry. The manufacture of Bessemer steel was begun in Pennsylvania in 1867, an establishment at Steelton, in Dauphin county, being the third in the United States to use this process. The first steel rails made in the United States upon order, in the way of regular business, were manufactured in the same year at Johnstown.² The most characteristic development in the steel industry of Pennsylvania during the last fifteen years has been the increasing importance of open-hearth as compared with Bessemer steel.

Closely allied to the iron and steel industry is the manufacture of tin and terne plate, the statistics of which are shown in Table 7. There were 25 establishments engaged in this industry in 1900, with 1,578 wage-earners, and products valued at \$12,530,991. The state ranked first in this manufacture, the value of its products amounting to 39.3 per cent of the total for the United States. Tin and terne plate was first regularly made in the United States in 1872, at an establishment in Pittsburgh, but the great development of the industry has taken place since 1890.

The manufacture of textiles ranks second among the industries of the state, with 1,102 establishments, 102,213 wage-earners, and products valued at \$158,782,087. In 1890 there were 1,028 establishments, 79,579 wage-earners, and products valued at \$134,001,269. The increase in the value of products during the decade was \$24,780,818, or 18.5 per cent.

Pennsylvania ranked second in the United States in this industry in 1900, by far the larger part of the operations being confined to the city of Philadelphia, which is the greatest textile center in the country.

Of the several branches of the industry, the manufacture of silk stood first in the value of products in 1900. In 1880 Pennsylvania ranked fifth in this manufacture in the United States, having 8.5 per cent of the total value of products for the country. In 1900 it ranked second, with 29 per cent of the total. The industry was carried on

most extensively at Philadelphia, Scranton, Allentown, and Easton. Silk culture was recommended and encouraged very early in the history of the state, and a filature for reeling silk from cocoons was opened in Philadelphia in 1750, under the patronage of Benjamin Franklin and others. Considerable quantities of sewing silk were made in families, and to Susanna Wright, of Columbia, Lancaster county, a Quaker of some literary fame, a premium was awarded in 1770 for reeling and weaving, from home-grown cocoons, a piece of "mantua," sixty yards long, from which a dress was made for Queen Charlotte.³ In 1793 the making of fringes, coach laces, and tassels was begun in Philadelphia, and in 1815 the industry was expanded to include silk trimmings, naval sashes, ribbons, and braids. Power looms were introduced about 1837, for weaving ribbon and other narrow goods. One establishment soon became the most extensive producer of trimmings in the United States, having made gold lace several years before its manufacture was attempted in Europe. Excellent black silk plush was made in Philadelphia in 1831, and figured silk vestings and other woven goods at Economy about the same time. About 1839 the culture of silk was abandoned, and attention confined to the manufacture, which has advanced steadily, the greatest growth being between the years 1880 and 1890. During the last decade many localities have offered financial inducements to attract the industry. At many of the establishments in recent years the operations consist entirely in "throwing," the thrown silk being sent to other states to be woven into cloth.

In 1880 Pennsylvania ranked sixth in the United States in the manufacture of cotton goods, having 5.7 per cent of the total value of products for the United States. In 1900 the state ranked fifth, with 7.0 per cent of the total. The industry was carried on in 1900 most extensively at Philadelphia and Chester. As early as 1775 a spinning jenny of 24 threads was put into operation in Philadelphia, and in 1782 Samuel Wetherall advertised for sale probably the first factory-made jeans, fustians, and everlastings made in the United States.⁴ In 1810, 611,481 yards of cotton goods of household manufacture were produced in the state, 233,232 yards of which were made in the county of Philadelphia. The industry was reported, however, for almost every county in the state. In addition 65,326 yards were made in 6 mills in Philadelphia county. A plant for the manufacture of "Nottingham lace" was established at Wilkesbarre in 1886, and operated with considerable success. In 1891 the manufacture was begun in Philadelphia, and in 1895 and 1896 plants were built at Scranton and Columbia. In 1899 there were 9 lace plants in the United States, 7 of which were located in Pennsylvania.⁵ The use of cotton for decorative fabrics originated in Philadelphia, where it has been brought to

¹Tenth Census of the United States, Manufactures, folio 858.

²Ibid., folio 862.

³Eighth Census of the United States, Manufactures, Introduction, pages xcix, c, and cii.

⁴Ibid., page xv.

⁵Report of the Secretary of Internal Affairs of Pennsylvania, Part III, Industrial Statistics, 1899, pages 54 to 57.

great perfection, cotton tapestries and chenille curtains being most conspicuous in this line.

In 1870 Pennsylvania ranked second in the manufacture of woollen goods, having 17.7 per cent of the total value of the products for the United States. The state ranked second in 1900 also, with 21.4 per cent of the total. The industry was carried on in 1900 almost entirely in the city of Philadelphia. The manufacture of woollen goods was established in Pennsylvania, on the banks of the Schuylkill River, by English settlers, and was characterized in the early days by the large number of small, independent factories, many of which used hand looms.¹ In 1810, 30,666 yards of woollen cloth were manufactured in the factories of the state, and the industry was carried on also in households in almost every county, 997,346 yards of cloth being thus manufactured. There were 213 fulling mills in operation, which reported 687,383 yards of cloth fulled, and 340 carding mills, which reported 1,940,350 pounds of wool carded. In 1850 Pennsylvania produced more yarn than any other state. This was consumed chiefly by the hand-loom weavers of that and the Western states. In 1860 all-wool and mixed cassimeres, satinets, Kentucky jeans, twills, tweeds, and flannels were manufactured in Philadelphia in large quantities, and were sold largely in the West. With the concentration of the industry in the city of Philadelphia, there has been a gradual subdivision of the manufacture. This has created a large number of independent subordinate industries, carried on in separate establishments. The mills of this city excel in various products, especially in women's dress goods novelties.²

The growth of the carpet industry in Pennsylvania has been remarkable. In 1850 the state ranked third, with products valued at 21 per cent of the total for the United States. In 1870 it ranked first, with 44.8 per cent of the total, and in 1900 first, with 48 per cent of the total. The industry was carried on in 1900 almost entirely in the city of Philadelphia. Carpets were seldom seen in the United States before the Revolution. As early as 1791, however, a factory was in operation at Philadelphia, making Turkey and Axminster carpets.³ In 1810, 9,034 yards of carpets were manufactured in Pennsylvania, 7,501 yards of which were made in Philadelphia. In 1857 there were more than a hundred carpet manufacturers in this city using hand looms, and one manufacturer using power looms. The first successful power loom for weaving ingrain carpets was invented by a New England man, and the New England manufacturers refused for a long time to allow it to be used outside of their mills.⁴ It was, therefore, not until 1868, when the Murkland power loom was introduced, that Philadelphia was placed on an equal footing with New England in this industry. Between the years 1880

and 1890 great improvements were made in the weaving and designing of ingrain carpets, due largely to the importation of some remarkably beautiful specimens of these carpetings from England.

Ingrain carpets have always been the most important product of the Philadelphia factories. Desultory attempts were made to manufacture finer fabrics,⁵ but as late as 1870 there was not a Brussels loom in operation in the state, although they had been in practical use in the New England states for years. Probably more ingrain carpets are now made in this city than in any other city in the world. The manufacture of Venetian carpeting—a striped fabric for halls and stairs—was for many years an extensive branch of the Philadelphia industry. This has now almost disappeared, due to the decreased cost of tapestry Brussels carpeting, which has taken its place. The first tapestries manufactured in Pennsylvania were made in Philadelphia in 1873, and tapestry weaving has since become a very considerable feature of the Philadelphia industry.⁶ The manufacture of Smyrna rugs was introduced from England about 1876, and was soon brought to great perfection in Philadelphia. Since the invention of the power “setting machine,” the cost of manufacture has been very much reduced.

In 1870 Pennsylvania ranked second in the manufacture of worsted goods, with 35.7 per cent of the total value of products for the United States; and third in 1900, with 18.4 per cent of the total. The industry was carried on in 1900 almost entirely in the city of Philadelphia. The first power-combing worsted mills in this city were established about 1860, making nothing but yarns. At this time the industry received its greatest stimulus, through the introduction of the Noble comb from England, a machine which made possible the use of short, fine wools for worsted yarns.⁷

Pennsylvania has ranked second in the manufacture of hosiery and knit goods since 1870, having in that year 28.8 per cent of the total value of products for the United States, and 22.9 per cent in 1900. Philadelphia is the leading center of the industry. It differs from the other great center, Cohoes, N. Y., and its neighboring towns, in that the products in Philadelphia are chiefly hosiery, while the New York mills produce mostly underwear. The German Palatines who settled in Germantown about 1698 appear to have introduced the manufacture of hosiery into the United States. At the semiannual fairs established by William Penn in Philadelphia, the German hosiery exhibit was always a striking feature.⁸ In 1810, 107,508 pairs of stockings were manufactured in Pennsylvania, 53,981 of which were made in Philadelphia county. In 1858 there were 700 hand-knitting frames in operation in the city of Philadelphia. Some of the most famous and successful knitting machines have been invented in this

¹ Eighth Census of the United States, Manufactures, Introduction, page xxxiii.

² Report of the Secretary of Internal Affairs of Pennsylvania, Part III, Industrial Statistics, 1899, pages 94 and 96.

³ Eighth Census of the United States, Manufactures, Introduction, pages liv and lviii.

⁴ Report of the Secretary of Internal Affairs of Pennsylvania, Part III, Industrial Statistics, 1889, pages D14 to D18.

⁵ Report of the Secretary of Internal Affairs of Pennsylvania, Part III, Industrial Statistics, 1889, pages D9, D41, and D45.

⁶ Ibid., pages D38 and D43.

⁷ Ibid., 1888, page D1.

⁸ Eighth Census of the United States, Manufactures, Introduction, pages xlii and xlv.

city. A peculiarity of the industry in Philadelphia in early days—the carrying on of knitting as a house occupation by hand-frame operatives—has persisted somewhat to the present time. While Pennsylvania has a representation of large mills unequalled by any other state except New York, it has also a large number of establishments located within its borders which employ very few machines, and use knitting merely as an outlet for some other business or manufacturing enterprise.

The dyeing and finishing of textiles in Pennsylvania is centered chiefly in the city of Philadelphia. Calico printing from wooden blocks was carried on in this city as early as 1788, when John Hewson, sr., assisted by a loan of £200 from the state, began operations at Dyottsville, within the present limits of Philadelphia. The cloth was spread out on a table and the stamping done by hand.¹ In 1803 there were 3 print works in Philadelphia, printing annually 300,000 pounds of calico. It was in 1809 that cotton goods were first printed in the United States upon engraved copper rollers. This was done at the printing and bleaching works of Thorp, Siddle & Co., near Philadelphia, the machinery being imported from England. In 1810 there were 40 dyers in Pennsylvania, 8 of whom were in Philadelphia county. In 1822 the engraving of metallic rollers for calico printing was begun in Philadelphia by Mason & Baldwin, who took out patents in 1827 for biting figures on steel cylinders.

A machine for reducing rags to shoddy was patented by a Philadelphia manufacturer about the beginning of the century, and shortly afterwards an attempt was made to make shoddy at this point, but the industry did not assume importance until about the middle of the century.²

Reading and the adjoining village of Mohn's Store constitute the chief center in the United States for the manufacture of wool hats.³ In 1786 it was estimated that 160,000 wool hats were made in the state, and Berks county, which includes the city of Reading, was even at that time the chief center.⁴ In 1860, 474,924 wool and mixed hats were manufactured, the state leading all others in this industry. The decline in recent years has been due to the increased use of rabbits' fur instead of wool in the manufacture of hats.

There were 1,260 establishments engaged in 1900 in the manufacture of foundry and machine shop products, the industry third in rank, with 62,828 wage-earners, and products valued at \$127,292,440. In 1890 there were 886 establishments, 38,247 wage-earners, and products valued at \$67,587,025. The increase in the value of products during the decade was \$59,705,415, or 88.3 per cent. Allied to this industry is the manufacture of iron and steel wrought pipe, in which there were 10 establishments

engaged in 1900, with 3,675 wage-earners, and products valued at \$15,383,693. In 1890 there were 14 establishments, 9,170 wage-earners, and products valued at \$30,249,795. The decrease in the value of products during the decade was \$14,866,102, or 49.1 per cent. Pennsylvania has always held high rank in the foundry and machine shop industry, and especially so in certain of the products. The state ranked first in the number of steam locomotives built in 1900, producing more than one-half of the total for the United States; second in metal-working machinery; and second in pumping machinery. In 1831, one year after the first locomotive was built in the United States for actual work, locomotive building was begun at Philadelphia, and in 1832 "Old Ironsides" was completed for the Germantown and Norristown Railroad Company. This locomotive had a stiff wooden frame, and its driving wheels had wooden spokes. This pioneer company is still in existence, and has now a capacity of over a thousand locomotives per year. The exportation of locomotives from Pennsylvania to European markets began in 1845, and has continued increasingly up to the present time. In 1865 works were organized in Pittsburg which still exist, and have now a capacity of 300 locomotives per year.⁵

What was probably the first stove made in the United States, a "jamb stove," was manufactured by Christopher Sauer, of Germantown, between 1730 and 1740.⁶ In 1742 Franklin invented his stove, the pieces of which were cast in a new furnace near Reading. The name of this furnace, "Warwick," was cast on the front of each stove.⁷ The first printing press made in the United States came from the shop of Adam Ramage, in Philadelphia, about 1795.⁸ In 1810 there were 2 printing-press factories in this city, reporting products valued at \$26,000, and 2 manufactories of hydraulic engines, reporting products valued at \$25,000. The cannon balls used by General Jackson at the battle of New Orleans were cast in works built in Fayette county in 1797. Hollow ware, Dutch ovens, stoves, sugar kettles, skillets, pots, grates, irons, and plow castings also were made. A portion of these goods was consumed in the state, and the remainder shipped down the Ohio and Mississippi rivers.⁹ In 1836 there were 18 foundries, engine factories, and machine shops in the city of Pittsburg.

Numerous other iron and steel products are made in large quantities in Pennsylvania, the statistics being shown in Table 7 under the classifications, bridges, and iron-work, architectural and ornamental.

There were 254 establishments engaged in the tanning, currying, and finishing of leather in 1900, with 13,396 wage-earners, and products valued at \$55,615,009. In

¹ Eighth Census of the United States, Manufactures, Introduction, page xviii.

² Ibid., page xxxiv.

³ Report of the Secretary of Internal Affairs of Pennsylvania, Part III, Industrial Statistics, 1899, pages 109 and 110.

⁴ Eighth Census of the United States, Manufactures, Introduction, page clviii.

⁵ One Hundred Years of American Commerce, Vol. II, pages 337 and 338.

⁶ Ibid., page 357.

⁷ Tenth Census of the United States, Manufactures, folio 810.

⁸ One Hundred Years of American Commerce, Vol. II, page 650.

⁹ Tenth Census of the United States, Manufactures, folios 814 and 821.

1890 there were 410 establishments, 10,956 wage-earners, and products valued at \$49,931,716. The increase in the value of products during the decade was \$5,683,293, or 11.4 per cent. In 1880 Pennsylvania ranked second in this industry, having 18.9 per cent of the total value of the products for the United States; and first in 1900, with 27.3 per cent of the total. The industry was carried on in 1900 most extensively at Philadelphia and in Tioga, Elk, Potter, and Clearfield counties. In 1810 there were 715 tanneries in the state, with products valued at \$1,599,044. The value of products was large in Philadelphia, York, and Lancaster counties, but the industry was carried on in almost every county in the state. The process of tanning by the use of chemicals was brought to perfection at Philadelphia shortly after 1856, and within five years led to the development of an establishment which, in 1895, was reported to be the largest leather manufactory in the world.¹ Upon the exhaustion of the hemlock bark in the southeastern part of New York state, some years after the Civil War, tanners turned their attention to the vast hemlock forests of central and northern Pennsylvania, and a great development in the leather industry followed.² Hemlock bark and chemicals were the leading tanning materials used in the state in 1900.

There were 144 establishments engaged in the car construction and general shop work of steam railroad companies in 1900, with 28,554 wage-earners, and products valued at \$43,065,171. In 1890 there were 61 establishments, 22,649 wage-earners, and products valued at \$28,769,728. The increase in the value of products during the decade was \$14,295,443, or 49.7 per cent. Pennsylvania ranked first in this industry in 1900, the value of its products amounting to 19.7 per cent of the total for the United States.

Allied to this is the manufacture of steam railroad cars other than by railroad companies. There were 11 establishments engaged in this industry in 1900, with 5,840 wage-earners, and products valued at \$19,260,910. In 1890 there were 15 establishments, 4,535 wage-earners, and products valued at \$10,080,722. The increase in the value of products during the decade was \$9,180,188, or 91.1 per cent. Pennsylvania ranked second in this industry in 1900, and the value of its products amounted to 21.3 per cent of the total for the United States.

In these two classes of establishments 167 passenger cars, valued at \$200,400, and 23,697 freight cars, valued at \$12,968,113, were manufactured during the census year. Establishments operated by steam railroad companies were located at Altoona, Reading, Philadelphia, and other cities, while car construction by other establishments was carried on most extensively at Allegheny, Pittsburg, and Berwick.

There were 2,719 establishments engaged in the manufacture of flouring and grist mill products in 1900, with 2,195 wage-earners, and products valued at \$36,639,423. In 1890 there were 2,226 establishments, 3,378 wage-

earners, and products valued at \$39,478,076. The decrease in the value of products during the decade was \$2,838,653, or 7.2 per cent. In 1900 the industry was carried on most extensively in Dauphin, Lancaster, Berks, and York counties. In 1899 Pennsylvania ranked thirteenth in the production of corn and twelfth in the production of wheat.³ In 1810 flour and grist milling was carried on in almost every county in the state, the value of products of the "wheat mills" being reported at \$10,800,290. At that time Northampton produced more flour than any other county.

There were 1,795 establishments engaged in printing and publishing in 1900, with 16,991 wage-earners, and products valued at \$36,455,629. In 1890 there were 1,487 establishments, 15,009 wage-earners, and products valued at \$34,408,493. The increase in the value of products during the decade was \$2,047,136, or 5.9 per cent. Pennsylvania ranked second in the printing and publishing of newspapers and periodicals in 1900, and the value of its products amounted to 10.4 per cent of the total for the United States. The first printing press in Pennsylvania was erected in Philadelphia, in 1686, four years after the first English settlement was made in the colony. The publication of magazines and other periodicals was attempted by Franklin as early as 1741. In 1810 it was estimated that half a million volumes were printed annually in Philadelphia.⁴ The first Bible printed in the United States, except those printed in the Indian language, was from the press of Christopher Sauer, at Germantown, in 1743. The descendants of this early printer are still publishers in the city of Philadelphia. For fifty years after the Revolution this city was unquestionably first in the printing industry, the first daily paper in the United States having been established there in 1784. Shortly after the beginning of the century 110 wooden presses were in operation in Philadelphia—a larger number than in any other English-speaking city in the world except London.⁵ The growth of book publishing was promoted by annual fairs and auction sales established in 1802 by the American Company of Booksellers, and held for a while alternately in New York and Philadelphia. In 1810, 73 newspapers were published in Pennsylvania, 8 of which were daily papers—a larger number than was published in New York state at that time.⁶ In 1817 "The Columbian," a hand press, was invented by George Clymer, of Pennsylvania, and was introduced in the following year into England, where it remained in use until 1860. It was the first press built in the United States capable of printing both sides of a newspaper at once.

There were 7 establishments engaged in the refining of sugar and molasses in 1900, with 1,249 wage-earners, and products valued at \$36,163,817. In 1890 there were 10 establishments, 1,459 wage-earners, and products valued at \$46,599,754. The decrease during the decade was

³ Yearbook of the United States Department of Agriculture, 1899, pages 765 and 766.

⁴ Eighth Census of the United States, Manufactures, Introduction, pages cxxxv, cxxxvii, and cxxxviii.

⁵ One Hundred Years of American Commerce, Vol. I, pages 309 and 314.

⁶ Ibid., page 167.

¹ One Hundred Years of American Commerce, Vol. II, page 497.

² Report of the Secretary of Internal Affairs of Pennsylvania, Part III, Industrial Statistics, 1892, page A11.

\$10,435,937, or 22.4 per cent. This industry has always been confined very largely to Philadelphia, because the raw sugar used is brought chiefly from foreign markets. In 1810, 10 sugar refineries were in operation in this city, with products valued at \$805,600. In 1840 there were 3 small refineries, located in alleys and side streets and operated by rude and unscientific methods.¹ In 1866 the first sugar refinery was built on the Delaware River front. This marked a new era in the industry, with better transportation facilities, improved machines, and scientific methods of operation. In 1890 the largest of the refineries in Philadelphia had a capacity of 7,000 barrels per day, and used more raw sugar each year than was produced in the United States. The raw cane sugar was brought chiefly from the West Indies, Brazil, Demerara, and the East Indies, and large cargoes of raw beet sugar were brought from Germany and other countries.

There were 2,338 establishments engaged in the manufacture of lumber and timber products in 1900, with 13,510 wage-earners, and products valued at \$35,749,965. In 1890 there were 1,948 establishments, 19,598 wage-earners, and products valued at \$29,087,970. The increase in the value of products during the decade was \$6,661,995, or 22.9 per cent.

Although the production of lumber has increased since 1870, the state has fallen in rank. In that year it stood second, having 13.8 per cent of the total value of products for the United States, while in 1900 it stood fourth, with but 6.3 per cent of the total. Hemlock, the principal variety of lumber cut in 1900, constituted 73 per cent of the total amount produced in the state. This wood, despised twenty years ago except for tanbark, is being rapidly exhausted, though it is still found in considerable quantities in northern Pennsylvania.² Oak, white pine, poplar, and spruce ranked next to hemlock in importance, in the order named. The lumber industry is carried on most extensively in Lycoming, Potter, Elk, McKean, Jefferson, and Forest counties—Williamsport, Bradford, and South Williamsport being important centers. Of the 4 plants in the United States which produced more than 100,000,000 feet of lumber, board measure, during the census year, 1 was located in Pennsylvania.

In 1810, 73,847,640 feet of lumber were sawed in the state, chiefly in Northumberland, Luzerne, Chester, Warren, and Philadelphia counties. In addition to this, 700,000 feet of mahogany were sawed in 21 sawmills in the state. As early as 1804 large amounts of lumber were handled at Pittsburg, and about 1819, in a St. Louis price list, mention is made of pine boards brought from Pittsburg in flatboats, selling at \$8 per 100 feet. In 1838 the first large mills were erected at Williamsport, but the boom which afterwards supplied forty or fifty mills was not built until 1850. Lumber was sent down the Ohio River in large quantities until about 1876, by which time the

pine of northern Pennsylvania had become nearly exhausted.³ Between 1860 and 1874 there was a marked development in the industry. Timber was cut extravagantly and for a time it was feared the state's timber supply would be entirely exhausted. The panic of 1873 completely paralyzed the industry and checked this waste.⁴ Since that time there has been a gradual rise in the price of lumber, due to the decreasing supplies, and the forests have been cleared with more discretion.

There were 38 establishments engaged in the refining of petroleum in 1900, with 3,299 wage-earners, and products valued at \$34,977,706. In 1890 there were 55 establishments, 3,284 wage-earners, and products valued at \$18,498,777. The increase in the value of products during the decade was \$16,478,929, or 89.1 per cent. Pennsylvania ranked first in this industry both in 1870 and in 1900, the value of its products constituting 56.6 per cent of the total for the United States in the former year, and 28.2 per cent in the latter. In 1900 the industry was carried on most extensively at Philadelphia and in Venango county. Petroleum has been known in Pennsylvania from very early times, and in the census of 1810, 550 gallons of "spring oil" were reported for Venango county. Until Drake's invention, in 1858, at Titusville, by which oil was obtained from driven wells, all supplies had been gotten from springs and surface wells.⁵ In 1899 the production of crude petroleum in the state amounted to 13,053,603 barrels, or 22.9 per cent of the total for the United States.⁶ This amount was somewhat less, however, than the amount of crude petroleum used in the refineries of the state during the census year, considerable quantities of crude oil being received from neighboring states. In the days of railroad transportation of petroleum, freight charges were so heavy that it was economical to carry on refining near the wells, and the region about Pittsburg and Oil City was filled with numerous small works, the first refinery at the former city having been established in 1855. After the introduction of pipe lines, in 1875, the cost of transportation was so much reduced that it became advantageous to ship the crude oil to large refineries on the seaboard, near New York, Philadelphia, and Baltimore, and on the shores of Lake Erie, near Buffalo and Cleveland.⁷

There were 281 establishments engaged in the manufacture of liquors in 1900, with 4,976 wage-earners, and products valued at \$34,520,358. In 1890 there were 203 establishments, 3,548 wage-earners, and products valued at \$22,698,423. The increase in the value of products during the decade was \$11,821,935, or 52.1 per cent. The production of malt liquors has come to be by far the most important branch of the liquor industry, although in the

³ One Hundred Years of American Commerce, Vol. I, page 197.

⁴ Report of the Secretary of Internal Affairs of Pennsylvania, Part III, Industrial Statistics, 1876-77, page 654.

⁵ One Hundred Years of American Commerce, Vol. I, pages 204-206.

⁶ United States Geological Survey: Mineral Resources, 1899, Nonmetallic Products, except Coal and Coke, page 12.

⁷ One Hundred Years of American Commerce, Vol. I, page 209.

¹ Report of the Secretary of Internal Affairs of Pennsylvania, Part III, Industrial Statistics, 1890, pages D2 and D18.

² One Hundred Years of American Commerce, Vol. I, page 200.

early years of the century the production of distilled liquors was more important. In 1900 Pennsylvania ranked second in the malt liquor industry, having 12.3 per cent of the total value of the products for the United States. The industry was carried on in 1900 most extensively at Philadelphia, Pittsburg, Allegheny, and Scranton. The state ranked fifth in distilled liquor production in 1900, its value of products amounting to 5.5 per cent of the total for the United States. The industry was carried on in 1900 most extensively in Westmoreland, Allegheny, and Fayette counties.

Distilling was carried on to a considerable extent about the middle of the last century. The attempt of the United States Government to collect the first internal-revenue tax upon distilled spirits resulted, in 1794, in the uprising in the western part of Pennsylvania, known as the "Whiskey Rebellion." In 1810, 6,552,284 gallons of whiskey were reported for the state, the largest production being in Lancaster and Philadelphia counties, although the industry was carried on in almost every county in the state.

There were 2,712 establishments engaged in the manufacture of tobacco in 1900, with 25,483 wage-earners, and products valued at \$33,355,932. In 1890 there were 2,025 establishments, 18,550 wage-earners, and products valued at \$23,387,910. The increase in the value of products during the decade was \$9,968,022, or 42.6 per cent. In 1899 Pennsylvania produced tobacco leaf to the value of \$2,959,304, ranking sixth in the United States. The manufacture was extensive as early as 1810, during which year 29,061,000 "American cigars" were manufactured in Pennsylvania, nearly the entire quantity being made in Philadelphia. In addition to these, more than three million "Spanish cigars" were manufactured.

There were 111 establishments engaged in the slaughtering industry in 1900, with 1,669 wage-earners, and products valued at \$25,238,772. In 1890 there were 242 establishments, 1,582 wage-earners, and products valued at \$21,991,604. The increase in the value of products during the decade was \$3,247,168, or 14.8 per cent. The branch of the industry which includes meat packing is by far the more important of the two, and was carried on during the census year chiefly at Philadelphia, Allegheny, and Pittsburg.

There were 481 establishments engaged in the factory manufacture of men's clothing in 1900, with 10,497 wage-earners, and products valued at \$23,389,043. In 1890 there were 337 establishments, 7,675 wage-earners, and products valued at \$26,732,348. The decrease in the value of products during the decade was \$3,343,305, or 12.5 per cent. Allied to this industry is the factory manufacture of women's clothing, in which there were 230 establishments engaged in 1900, with 8,311 wage-earners, and products valued at \$11,694,580. In 1890 there were 80 establishments, 2,989 wage-earners, and products valued at \$3,903,596. The increase in the value of products during the decade was \$7,790,984, or 199.6 per cent. The manufacture of men's clothing was carried on in the state as a hand trade early in the Eighteenth century. In 1718 the tailors of Philadelphia applied to the state for an act of

incorporation.¹ In the early years of the industry in this city, clothing was sent out into the country to be sewed by the wives and daughters of farmers during the winter.² The factory industry began in the United States about 1820, and shortly after that date several establishments were in operation in Philadelphia, shipping their products to the Southern states. In 1860 the value of men's clothing manufactured in Pennsylvania exceeded that of all New England, Philadelphia contributing three-fourths of the entire product. The manufacture of women's clothing assumed importance in the United States about the year 1845, and in 1860 there were 4 establishments in the city of Philadelphia, with products valued at \$345,000.

There were 89 establishments engaged in the manufacture of coke in 1900, with 9,283 wage-earners, and products valued at \$22,282,358. In 1890 there were 98 establishments, 5,855 wage-earners, and products valued at \$10,415,628. The increase in the value of products during the decade was \$11,866,730, or 113.9 per cent. Pennsylvania has long ranked first in this industry, the production in 1880 amounting to 84.2 per cent of the total for the United States, and in 1900 to 62.6 per cent of the total. For twenty years the Connellsville district, famous for both the quantity and the quality of its coke, has contributed each year, with one exception, over 50 per cent of the entire production of the United States.³ The yield of coal in coke rose from 65.5 per cent in 1880 to 69.4 per cent in 1899, while the value fell from \$1.79 per ton in 1880 to \$1.64 in 1899. An average of 1,676 carloads of coke leave this district each day. The quality of the coal used is such that it needs little or no preparation before being charged into the ovens.

There were 119 establishments engaged in the manufacture of glass in 1900, with 19,420 wage-earners, and products valued at \$22,011,130. In 1890 there were 99 establishments, 18,510 wage-earners, and products valued at \$17,179,137. The increase in the value of products during the decade was \$4,831,993, or 28.1 per cent. Pennsylvania has long led all other states in this manufacture, having 51.8 per cent of the total value of the products for the United States in 1870, and 38.9 per cent in 1900. The industry was carried on in 1900 most extensively in Allegheny, Westmoreland, Washington, and Armstrong counties, in the western part of the state. Glass making has been stimulated in this section by abundant supplies of bituminous coal and natural gas, and by deposits of glass sand in Juniata and Fayette counties, equal in quality to that found anywhere else in the world, and by the abundance of fire clay suitable for furnaces, found in western Pennsylvania and eastern Ohio.⁴

Mention was made by William Penn, in 1683, of a glass-house in Pennsylvania, but its location was not stated.

¹Eighth Census of the United States, Manufactures, Introduction, pages lx, lxiii, lxxxiii.

²One Hundred Years of American Commerce, Vol. II, page 563.

³United States Geological Survey; Mineral Resources, 1899, Metallic Products, Coal, and Coke, pages 594, 598, 599, and 600.

⁴Tenth Census of the United States, Manufactures, folios 1066, 1074, and 1075.

The first glass works west of the Allegheny Mountains was built by Albert Gallatin at New Geneva, on the Monongahela River, probably in 1797. About the same time a glasshouse was established at Pittsburgh, and was the first works to use coal as a fuel.¹ In 1810 there were 8 glass factories in Pennsylvania, with products valued at \$144,800, the greatest production being shown for Allegheny county.

The most important event in the glass industry in recent years was the introduction of natural gas as fuel. The first successful use of this fuel in the manufacture of glass was at a large plate glass establishment at Creighton, near Pittsburgh, in 1883.² Many small towns where natural gas was discovered offered land and bonuses to induce the establishment of glass works within their limits, and the building of glasshouses progressed rapidly.³ During the census year the cost of natural gas constituted 71.5 per cent of the total cost of fuel used in the glass industry. During the same year glass of various kinds, valued at \$107,958, was exported from establishments in Pennsylvania to England, South America, Canada, Australia, and New Zealand. These figures include only glass sold directly from the factory to foreign consumers.

There were 63 establishments engaged in the manufacture of electrical apparatus and supplies in 1900, with 7,817 wage-earners, and products valued at \$19,112,665. In 1890 there were 10 establishments, 209 wage-earners, and products valued at \$674,565. The increase in the value of products during the decade was \$18,438,100, or 2,738.3 per cent.

There were 542 establishments engaged in the manufacture of planing mill products in 1900, with 7,472 wage-earners, and products valued at \$16,736,839. In 1890 there were 467 establishments, 7,888 wage-earners, and products valued at \$18,398,688. The decrease in the value of products during the decade was \$1,661,849, or 9 per cent.

There were 146 establishments engaged in the factory manufacture of boots and shoes in 1900, with 9,144 wage-earners, and products valued at \$13,235,933. In 1890 there were 158 establishments, 7,616 wage-earners, and products valued at \$10,354,850. The increase in the value of products during the decade was \$2,881,083, or 27.8 per cent. Pennsylvania ranked fourth in this industry in 1890, having 4.7 per cent of the total value of products for the United States; and fifth in 1900, with 5.1 per cent of the total. In 1900 the industry was centered at Philadelphia, Carlisle, and Allentown. The manufacture was carried on in the state as early as 1698, the workers being known as cordwainers.⁴ In 1810, 1,327,776 pairs of boots, shoes, and slippers were manufactured in the state, 709,883 pairs of which were made in Philadelphia county. In 1851 an ingenious machine for pegging boots and shoes was patented

and put into operation at Pittsburgh. In 1860 fine shoes were manufactured in Philadelphia, where the industry was stimulated by the large manufacture of fine calf and morocco leather.

There were 100 establishments engaged in the manufacture of chemicals in 1900, with 4,278 wage-earners, and products valued at \$13,034,384. In 1890 there were 71 establishments, 3,284 wage-earners, and products valued at \$13,144,210. The decrease in the value of products during the decade was \$109,826, or eight-tenths of 1 per cent. The industry was carried on in 1900 most extensively at Philadelphia and in Allegheny county. Oil of vitriol was manufactured in Philadelphia as early as 1793. By 1830 this city was the chief center of the chemical industry in the United States,⁵ and in 1880 Pennsylvania led all other states in the manufacture of sulphuric acid, sulphate of ammonia, and white lead, contributing more than one-fourth of the production of sulphuric acid in the United States.⁶

There were 73 establishments engaged in the manufacture of paper and wood pulp in 1900, with 4,840 wage-earners, and products valued at \$12,267,900. In 1890 there were 72 establishments, 2,951 wage-earners, and products valued at \$7,838,299. The increase in the value of products during the decade was \$4,429,601, or 56.5 per cent. Pennsylvania ranked third in this industry in 1880, having 10.1 per cent of the total value of products for the United States; and fourth in 1900, with 9.6 per cent of the total. In 1900 the industry was carried on most extensively in Philadelphia, York, Erie, Blair, and Elk counties. The first paper mill in the United States was established near Germantown in 1693. Printing, writing, and wrapping paper were manufactured.⁷ About 1728 a mill was erected on Chester Creek, Delaware county. This mill supplied the press of Benjamin Franklin, and made the bank-note paper used for Continental currency. The paper manufacture in Philadelphia and vicinity was greatly promoted by the enterprise of the printers and booksellers, especially by Benjamin Franklin, who stated in 1787 that he had been interested in the establishment of 18 paper mills, and that there were 48 such mills then in operation in the state. In 1816 the first steam paper mill in the United States began operations in Pittsburgh, with an engine of 16 horsepower, and 40 employees.

The increasing demand for paper made it necessary to develop some new material for the production of fiber, and in this Pennsylvania has had an important part. In 1830 Wooster and Holmes, of Meadville, Pa., took out patents for making paper from whitewood and hemlock. The process of producing white paper from straw was developed at Flat Rock Mills in 1854. In 1857 J. A. Roth, of Philadelphia, patented the process of treating wood fibers with a combination of sulphuric acid and chlorine bleaching agents. In 1863 M. L. Keen, of Royersford, Pa.,

¹ One Hundred Years of American Commerce, Vol. I, pages 274 and 275.

² United States Geological Survey: Mineral Resources, 1885, page 172.

³ One Hundred Years of American Commerce, Vol. I, page 282.

⁴ Eighth Census of the United States, Manufactures, Introduction, pages lxxix, lxx, and lxxii.

⁵ One Hundred Years of American Commerce, Vol. II, page 429.

⁶ Tenth Census of the United States, Manufactures, folio 993.

⁷ Eighth Census of the United States, Manufactures, Introduction, pages cxxiii, cxxiv, cxxv, and cxxviii.

patented a boiler for making pulp from wood, and in the following year Richard Magee, of Philadelphia, patented a method of coating writing paper.¹ In the early part of the century the paper mills of Pennsylvania produced all the paper required by the newspapers of the state.² At present nearly all the paper so used is produced in other states. This change has been due chiefly to the comparatively limited waterpower of Pennsylvania, and to a lack of spruce, the wood best adapted to news paper manufacturing. Most of the mills in Pennsylvania are producing book paper by the chemical treatment of wood, the power required not being an important factor.

There were 749 establishments engaged in the factory manufacture of cheese, butter, and condensed milk in 1900, with 976 wage-earners, and products valued at \$10,290,006. In 1890 there were 300 establishments, 766 wage-earners, and products valued at \$5,319,434. The increase in the value of products during the decade was \$4,970,572, or 93.4 per cent. In 1900 Pennsylvania ranked fifth in this industry, having 7.9 per cent of the total value of products for the United States. The chief centers were Chester, Lancaster, Montgomery, Bucks, and Berks counties. There were 943,773 dairy cows reported during the census year, the state ranking fifth in the United States.

In addition to the industries included in Table 3, attention is directed to an important industry—iron and steel shipbuilding—the statistics for which appear only in Table 7, since comparable statistics for 1890 are not available. There were 3 establishments engaged in this industry in 1900, with 6,820 wage-earners, and products valued at \$14,085,895. Pennsylvania ranked first in the industry in 1900, having 28 per cent of the total value of products for the United States. The industry is practically confined to the Delaware River in and near Philadelphia, and its great development is due to the proximity of this sec-

tion to the great iron manufacturing establishments of the state; to the depth of the river close up to the shipyards; to the fresh water of the river giving comparative immunity from rust; and to the mild winters, which allow outside work on vessels. The beginning of shipbuilding in Philadelphia was almost coincident with the settlements made under William Penn.³ In 1775 Philadelphia was the leading center for the building of ships, its preeminence being due to the immense shipping trade carried on between that city and the West Indies. In 1793 twice as many ships were built in Philadelphia as in any other locality in the United States.⁴ The first steamboat in this country was launched on the Delaware River in 1786, and in 1809 steam navigation began its continuous existence at this point. In 1869 the Reading Railroad Company built 14 iron steamboats to be used in their coast coal trade. From that date wooden shipbuilding in Pennsylvania declined, and in 1900 it was an insignificant part of the whole industry. Next to the Clyde River, in Scotland, the Delaware River is now the greatest shipbuilding stream in the world. Builders on this river have been prominent in the construction of war vessels for the Government. The first six ships of the Navy were designed by a Philadelphia shipbuilder, Joshua Humphreys, and of the steel ships recently built for the Navy, more have been constructed at Philadelphia than at any other point.

URBAN MANUFACTURES.

Table 4 shows the totals for the manufacturing and mechanical industries of the cities of Allegheny, Allentown, Altoona, Chester, Erie, Harrisburg, Johnstown, Lancaster, McKeesport, Philadelphia, Pittsburg, Reading, Scranton, Wilkesbarre, Williamsport, and York as returned at the censuses of 1890 and 1900, with the percentages of increase.

¹ Report of the Secretary of Internal Affairs of Pennsylvania, Part III, Industrial Statistics, 1876-1877, page 806.

² Ibid., 1897, page 65.

³ Report of the Secretary of Internal Affairs of Pennsylvania, Part III, Industrial Statistics, 1891, page C8 ff.

⁴ One Hundred Years of American Commerce, Vol. I, page 119.

TABLE 4.—COMPARATIVE SUMMARY, ALLEGHENY, ALLENTOWN, ALTOONA, CHESTER, ERIE, HARRISBURG, JOHNSTOWN, LANCASTER, McKEESPORT, PHILADELPHIA, PITTSBURG, READING, SCRANTON, WILKESBARRE, WILLIAMSPORT, AND YORK, 1890 AND 1900, WITH PER CENT OF INCREASE.

	Year.	Number of establishments.	Capital.	WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.
				Average number.	Total wages.			
The State.....	1900	52,185	\$1,551,548,712	738,834	\$332,072,670	\$134,344,269	\$1,042,484,599	\$1,834,790,860
Per cent of increase.....	1890	39,339	991,243,115	570,393	268,375,215	74,841,458	773,734,637	1,831,794,901
		32.7	56.6	28.7	26.1	79.5	84.7	37.8
Allegheny.....	1900	893	50,122,503	20,804	10,352,502	5,120,269	29,478,781	54,136,967
Per cent of increase.....	1890	875	22,253,243	11,857	5,916,525	1,723,571	14,231,768	26,878,979
		32.3	125.2	75.6	75.0	196.2	107.1	101.4
Allentown.....	1900	491	11,996,971	8,447	3,150,970	1,310,643	9,846,047	16,947,722
Per cent of increase.....	1890	382	6,977,091	5,293	1,910,882	532,875	5,102,911	8,876,665
		28.5	71.9	59.6	64.9	146.0	92.9	90.9
Altoona.....	1900	220	8,108,319	8,090	4,619,328	350,501	8,376,483	14,250,656
Per cent of increase.....	1890	208	7,955,423	6,216	3,440,298	241,121	6,133,222	10,497,019
		10.6	1.9	30.1	34.3	45.4	36.6	35.8
Chester.....	1900	315	18,977,710	7,682	3,462,196	1,222,400	9,261,886	16,421,725
Per cent of increase.....	1890	201	9,897,033	6,559	2,807,941	608,831	6,844,825	11,864,899
		56.7	102.0	17.1	23.3	100.8	35.3	38.4
Erie.....	1900	644	20,418,016	9,339	4,574,625	1,197,411	9,107,805	19,053,202
Per cent of increase.....	1890	236	12,812,594	6,463	3,248,366	718,157	6,145,680	12,765,768
		172.9	59.4	44.5	40.8	66.7	48.2	49.3
Harrisburg.....	1900	446	8,749,516	7,862	2,949,544	646,950	9,402,516	16,064,597
Per cent of increase.....	1890	475	6,716,074	6,314	2,947,291	428,757	5,432,303	10,538,444
		16.1	30.3	16.6	0.1	50.9	73.1	52.4
Johnstown.....	1900	248	16,940,450	6,116	3,213,189	1,922,080	14,445,126	22,559,890
Per cent of increase.....	1890	113	13,230,296	5,369	2,879,569	789,843	13,137,331	18,422,989
		119.5	27.6	13.9	11.6	143.5	10.0	22.5
Lancaster.....	1900	738	10,803,464	9,349	3,323,743	1,193,997	8,342,709	16,370,281
Per cent of increase.....	1890	599	7,991,314	7,330	2,219,917	691,291	6,306,495	11,861,535
		23.2	40.5	27.5	49.7	72.7	32.3	44.1
McKeesport.....	1900	180	17,376,016	7,605	4,370,331	428,226	22,309,161	37,074,136
Per cent of increase.....	1890	118	10,970,812	6,078	3,189,558	737,562	10,617,338	17,432,721
		52.5	62.8	25.1	37.0	141.9	110.1	112.7
Philadelphia.....	1900	15,887	478,529,407	246,445	111,847,076	55,576,685	326,877,441	608,466,526
Per cent of increase.....	1890	18,166	375,249,715	234,647	113,306,173	39,615,476	311,645,304	577,234,446
		12.5	27.0	5.0	1.3	40.3	4.9	4.5
Pittsburg.....	1900	1,938	193,162,900	69,977	36,684,568	15,293,017	116,833,174	203,261,251
Per cent of increase.....	1890	1,420	103,365,838	52,963	29,839,486	7,561,199	99,892,195	126,859,657
		36.5	78.3	32.1	22.7	102.3	67.2	60.2
Reading.....	1900	843	27,975,628	19,165	7,544,950	5,085,456	19,089,332	36,902,511
Per cent of increase.....	1890	495	14,083,374	12,211	4,780,470	1,042,366	12,009,332	20,855,165
		93.8	98.6	56.9	57.8	337.9	59.0	76.9
Scranton.....	1900	710	19,954,525	12,669	5,191,522	1,857,881	18,411,022	27,646,418
Per cent of increase.....	1890	177	16,237,271	8,825	3,923,334	874,621	16,922,753	24,841,745
		301.1	22.9	43.6	32.1	112.4	8.8	13.6
Wilkesbarre.....	1900	438	10,501,537	5,977	2,286,676	1,142,358	5,167,777	10,758,348
Per cent of increase.....	1890	270	5,598,139	4,141	1,803,226	678,640	4,026,579	7,746,371
		62.2	87.6	44.3	26.5	97.4	28.3	33.9
Williamsport.....	1900	396	9,363,311	5,595	2,065,920	517,059	6,420,337	11,199,600
Per cent of increase.....	1890	302	12,335,423	5,653	2,271,531	625,646	5,919,284	11,107,087
		31.1	120.0	1.0	19.1	17.5	8.5	0.3
York.....	1900	464	9,640,784	7,785	2,679,175	798,453	6,078,070	11,961,706
Per cent of increase.....	1890	350	3,342,453	3,669	1,320,413	358,635	3,170,840	5,963,223
		32.6	150.9	112.2	102.9	122.6	91.7	100.4
Total for 16 cities.....	1900	24,861	911,622,057	452,407	203,816,875	93,662,386	619,447,172	1,113,075,536
Per cent of increase.....	1890	24,127	633,773,093	338,585	185,864,885	57,134,091	497,538,650	902,751,563
		3.0	43.8	17.9	12.1	63.9	24.5	23.9
Per cent of 16 cities to total for state.....	1900	47.6	58.8	61.6	62.7	69.7	59.4	60.9
	1890	61.3	63.9	67.2	70.6	76.3	64.3	67.3

¹ Decrease.

It appears from Table 4 that there has been a considerable increase during the past decade in the combined manufactures of these 16 cities. The number of establishments increased from 24,127 to 24,861, or 3 per cent; the average number of wage-earners from 383,588 to 452,407, or 17.9 per cent; and the value of products from \$902,751,563 to \$1,118,075,536, or 23.9 per cent. The percentage of increase in each of these particulars was smaller in these 16 cities than in the state as a whole. The city of McKeesport shows the most rapid growth, the value of products having increased from \$17,432,721 to \$37,074,136, or 112.7 per cent. In Philadelphia, the leading manufacturing city, the number of establishments decreased from 18,166 to 15,887, or 12.5 per cent. The average number of wage-earners increased, however, from 234,647 to 246,445, or 5 per cent; and the value of products from \$577,234,446 to \$603,466,526, or 4.5 per cent. The number of establishments, number of wage-earners, and value of products in this city constituted 30.4, 33.6, and 32.9 per cent, respectively, of the totals for the state.

In Philadelphia the leading manufacturing industries were foundry and machine shop products; sugar and molasses, refining; carpets and rugs, other than rag; petroleum, refining; and clothing, men's, factory product.

In Pittsburg, the city second in rank, the leading manufacturing industries were iron and steel; foundry and machine shop products; electrical apparatus and supplies; ironwork, architectural and ornamental; and iron and steel, pipe, wrought.

In Allegheny, the city third in rank, the leading manufacturing industries were cars, steam railroad, not including operations of railroad companies; iron and steel; foundry and machine shop products; pickles, preserves, and sauces; and slaughtering and meat packing, wholesale.

In McKeesport, the city fourth in rank, the leading manufacturing industries were iron and steel; tin and terne plate; iron and steel, pipe, wrought; bottling; and lumber, planing mill products, including sash, doors, and blinds.

In Reading, the city fifth in rank, the leading industries were iron and steel; cars and general shop construction and repairs by steam railroad companies; foundry and machine shop products; tobacco, cigars and cigarettes; and hardware.

In Scranton, the city sixth in rank, the leading manufacturing industries were iron and steel; silk and silk goods; foundry and machine shop products; liquors, malt; and cars and general shop construction and repairs by steam railroad companies.

In Johnstown, the city seventh in rank, the leading manufacturing industries were iron and steel; foundry and machine shop products; pottery, terra cotta, and fire-clay products; liquors, malt; and tin and terne plate.

In Erie, the city eighth in rank in Table 4, but tenth in rank in the state, the leading manufacturing industries

were foundry and machine shop products; paper and wood pulp; lumber, planing mill products, including sash, doors, and blinds; flouring and grist mill products; and liquors, malt.

In Allentown, the city ninth in rank in Table 4, but eleventh in rank in the state, the leading manufacturing industries were iron and steel; silk and silk goods; foundry and machine shop products; boots and shoes, factory product; and slaughtering and meat packing, wholesale.

In Chester, the city tenth in rank in Table 4, but twelfth in rank in the state, the leading manufacturing industries were iron and steel; cotton goods; iron and steel, pipe, wrought; shipbuilding, iron and steel; and worsted goods.

In Lancaster, the city eleventh in rank in Table 4, but thirteenth in rank in the state, the leading manufacturing industries were umbrellas and canes; tobacco, cigars and cigarettes; confectionery; cotton goods; and iron and steel.

In Harrisburg, the city twelfth in rank in Table 4, but fourteenth in rank in the state, the leading manufacturing industries were iron and steel; cars and general shop construction and repairs by steam railroad companies; foundry and machine shop products; boots and shoes, factory product; and slaughtering and meat packing, wholesale.

In Altoona, the city thirteenth in rank in Table 4, but fifteenth in rank in the state, the leading manufacturing industries were cars and general shop construction and repairs by steam railroad companies; foundry and machine shop products; lumber, planing mill products, including sash, doors, and blinds; printing and publishing, newspapers and periodicals.

In York, the city fourteenth in rank in Table 4, but seventeenth in rank in the state, the leading manufacturing industries were foundry and machine shop products; tobacco, cigars and cigarettes; paper hangings; iron and steel, nails and spikes, cut and wrought, including wire nails; and carriages and wagons.

In Williamsport, the city fifteenth in rank in Table 4, but eighteenth in rank in the state, the leading manufacturing industries were lumber and timber products; boots and shoes, rubber; silk and silk goods; clothing, men's, factory product; and leather, tanned, carried, and finished.

In Wilkesbarre, the city sixteenth in rank in Table 4, but twentieth in rank in the state, the leading manufacturing industries were silk and silk goods; cotton goods; foundry and machine shop products; liquors, malt; and wirework, including wire rope and cable.

Table 5 presents the totals for the manufacturing industries of the 133 cities and boroughs withdrawn from the enumerators, places them in comparison with the totals for the entire state and the state exclusive of these cities and boroughs, and shows their rank in population and in value of products.

TABLE 5.—URBAN MANUFACTURES.

	Number of establishments.	Capital.	Proprietors and firm members.	WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	PRODUCTS.			POPULATION.		
				Average number.	Total wages.			Value.	Rank.	Per cent of total.	Total.	Rank.	Per cent of total.
Total for state	52,185	\$1,551,548,712	58,836	733,834	\$332,072,670	\$184,844,269	\$1,042,431,599	\$1,834,790,860	-----	100.0	16,302,034	-----	100.0
Total for urban manufactures	33,440	1,170,694,661	37,969	583,923	265,871,261	113,427,652	803,732,711	1,437,923,515	-----	78.4	8,202,439	-----	50.8
Allegheny	893	50,122,503	1,040	20,804	10,352,502	5,120,269	29,478,781	54,136,967	8	3.0	129,896	3	2.1
Allentown	491	11,996,971	617	8,447	3,150,070	1,810,643	9,846,647	16,947,722	11	0.9	35,416	12	0.6
Altoona	230	8,108,819	267	8,000	4,619,828	330,501	8,376,488	14,250,656	15	0.8	38,973	10	0.6
Ashland	54	307,871	65	108	85,640	9,779	132,909	274,765	125	(2)	6,438	65	0.1
Athens	51	843,719	54	580	220,250	51,356	618,956	1,012,183	88	0.1	3,749	102	0.1
Bangor	73	804,517	81	944	318,687	110,955	552,647	1,230,350	81	0.1	4,106	94	0.1
Beaver Falls	119	6,367,196	110	2,231	1,022,075	303,189	3,780,051	6,245,501	29	0.3	10,054	42	0.2
Bellefonte	62	874,076	71	506	219,770	46,731	652,436	1,175,668	82	0.1	4,216	91	0.1
Berwick	33	2,446,403	28	1,385	730,505	111,067	2,808,813	4,372,953	41	0.2	3,916	97	0.1
Bethlehem	106	1,871,072	117	1,265	326,954	240,028	995,368	1,832,219	65	0.1	7,293	58	0.1
Birdsboro	26	1,095,856	30	861	335,450	58,240	1,321,574	2,026,928	58	0.1	2,264	126	(2)
Bloomington	65	2,093,473	60	1,029	328,385	106,093	978,508	1,732,559	67	0.1	6,170	68	0.1
Bradford	121	2,724,333	132	1,437	893,037	875,170	3,111,916	5,643,152	33	0.3	15,654	24	0.2
Bridgeport	149	2,674,380	133	1,965	1,031,949	224,962	2,011,858	4,101,339	45	0.2	15,029	25	0.2
Bridgeport	28	1,954,100	24	838	265,209	66,292	1,358,235	1,821,535	66	0.1	3,097	112	(2)
Bristol	72	3,616,181	72	2,027	751,033	332,920	2,577,508	4,008,248	46	0.2	7,104	61	0.1
Butler	129	1,606,306	159	1,003	505,468	144,793	1,449,338	1,877,419	63	0.1	10,853	40	0.2
Carbondale	92	1,618,034	103	1,138	387,528	100,701	672,101	1,884,662	75	0.1	13,536	29	0.2
Carlisle	109	1,125,635	129	1,385	415,986	83,436	1,249,450	2,131,239	57	0.1	9,626	44	0.2
Carnegie	53	465,830	55	881	231,510	67,192	434,660	909,800	93	0.1	7,330	56	0.1
Catawug	68	3,136,958	63	1,543	592,026	190,598	1,660,319	3,197,297	47	0.2	3,963	96	0.1
Chambersburg	107	853,037	124	793	283,676	62,527	633,952	1,127,423	85	0.1	8,861	50	0.1
Charlottesville	62	2,395,002	65	1,270	671,371	278,069	700,669	1,871,503	69	0.1	5,930	70	0.1
Chester	815	18,977,710	327	7,682	3,462,196	1,222,400	9,261,886	16,421,725	12	0.9	38,988	14	0.6
Chester	70	4,772,487	73	1,854	840,322	219,305	3,752,864	6,350,079	28	0.4	5,721	74	0.1
Columbia	142	2,403,571	141	2,720	968,288	160,051	2,897,765	4,729,477	38	0.3	12,316	36	0.2
Connellsville	121	1,283,667	149	916	495,761	50,344	1,449,338	2,380,137	52	0.1	7,160	60	0.1
Conshohocken	55	3,957,818	51	1,951	896,797	219,482	2,303,063	4,454,230	40	0.2	5,762	73	0.1
Cornopolis	20	471,204	19	397	171,916	35,336	353,093	731,840	100	(2)	2,555	121	(2)
Corry	109	830,727	112	585	255,129	65,053	493,058	1,061,461	87	0.1	5,369	79	0.1
Danville	92	2,886,268	107	2,414	855,306	227,030	2,759,707	4,317,776	42	0.2	8,042	53	0.1
Darby	45	1,363,579	54	744	270,921	78,366	570,333	1,152,278	84	0.1	3,429	108	0.1
Dubois	56	1,514,316	74	893	365,925	89,756	1,229,312	1,926,391	61	0.1	9,375	46	0.1
Dunmore	53	1,336,477	51	893	354,922	180,467	662,480	1,472,676	71	0.1	12,583	33	0.2
Duquesne	19	14,358,059	21	1,497	1,075,152	435,881	14,011,842	20,365,667	9	1.1	9,036	48	0.1
East Mauch Chunk	21	301,135	19	383	76,267	66,905	478,844	685,394	102	(2)	3,458	105	0.1
Easton	285	4,289,879	323	3,912	1,516,525	485,020	3,794,496	6,746,078	26	0.4	25,238	18	0.4
Ephrata	66	370,198	74	501	130,323	65,227	308,958	634,350	107	(2)	2,451	123	(2)
Erie	644	20,418,016	718	9,339	4,574,625	1,197,411	9,107,905	19,053,202	10	1.0	52,733	6	0.8
Etna	37	3,701,581	37	1,709	865,992	64,848	2,615,585	5,655,269	32	0.3	5,384	78	0.1
Franklin	120	4,523,916	156	758	354,318	1,506,301	1,826,916	6,046,218	31	0.3	7,317	57	0.1
Greencastle	26	18,526	29	61	19,476	3,980	40,673	94,622	130	(2)	1,463	132	(2)
Greenville	79	1,988,509	90	999	544,612	65,063	1,116,066	1,900,471	62	0.1	4,814	85	0.1
Hamburg	62	416,757	77	369	113,515	20,950	883,291	1,627,209	109	(2)	2,315	124	(2)
Hanover	35	766,387	113	849	262,627	78,399	557,542	1,153,492	83	0.1	5,302	80	0.1
Harrisburg	446	8,749,516	464	7,362	2,949,544	646,950	9,402,516	16,064,597	14	0.9	50,167	8	0.8
Hawley	28	716,842	34	448	140,953	21,825	557,627	809,724	96	(2)	1,925	128	(2)
Hazleton	141	1,488,200	156	1,049	841,769	166,935	2,020,222	1,478,503	70	0.1	14,230	26	0.2
Hollidaysburg	38	167,649	41	197	77,736	8,961	190,979	352,022	122	(2)	2,998	114	(2)
Homesland	52	2,591,815	63	1,030	439,247	59,737	725,729	1,444,245	72	0.1	12,554	35	0.2
Honesdale	71	1,357,399	81	680	238,684	90,242	714,659	1,235,425	80	0.1	2,864	117	(2)
Huntingdon	68	1,062,620	75	550	208,583	82,072	547,414	971,674	90	0.1	6,053	69	0.1
Johnstown	218	16,940,450	316	6,116	3,213,189	1,922,080	14,445,126	22,539,890	7	1.2	35,936	11	0.6
Lancaster	738	10,803,464	855	9,349	3,323,748	1,193,997	8,543,709	16,370,281	13	0.9	41,469	9	0.7
Lansford	21	208,116	22	283	119,815	3,728	200,274	348,517	121	(2)	4,888	83	0.1
Lebanon	219	7,756,890	247	5,613	2,245,809	350,716	6,512,892	10,167,455	21	0.6	17,628	22	0.3
Lehigh	42	618,281	44	380	99,715	38,955	414,945	601,705	101	(2)	4,629	89	0.1
Lewistown	36	389,487	40	260	82,927	11,286	310,212	469,221	114	(2)	3,457	106	0.1
Lewistown	61	1,011,949	69	563	223,705	41,760	562,710	984,234	89	0.1	4,451	90	0.1
McKeesport	180	17,876,016	199	7,605	4,370,381	428,226	22,809,161	37,074,136	4	2.0	84,227	13	0.5
McKees Rocks	34	14,990,471	32	2,055	1,206,476	539,720	2,517,940	4,288,985	43	0.2	6,352	66	0.1
McKeesport	99	607,059	112	474	131,582	119,879	230,275	648,645	104	(2)	13,504	30	0.2
Manheim	58	157,490	59	334	76,908	36,158	273,015	450,698	117	(2)	2,019	127	(2)
Marletta	37	819,538	33	674	210,151	33,986	651,529	1,125,701	86	0.1	2,469	122	(2)
Mauch Chunk	34	366,370	35	323	143,714	22,802	251,282	506,252	112	(2)	4,029	95	0.1
Meadville	135	1,415,783	151	1,445	648,020	77,057	1,099,379	2,159,110	56	0.1	10,291	41	0.2
Mechanicsburg	58	482,155	60	444	173,840	22,811	313,820	636,083	106	(2)	3,841	98	0.1
Media	40	235,997	41	170	75,309	27,418	87,575	279,436	123	(2)	3,075	113	(2)
Middletown	50	2,323,876	49	1,572	556,818	52,608	3,260,223	5,198,286	35	0.3	5,608	75	0.1
Millvale	37	319,149	38	119	70,609	80,649	466,389	67,736	115	(2)	6,736	64	0.1
Milton	60	1,950,893	69	1,421	534,674	80,020	1,885,416	2,912,209	50	0.2	6,175	67	0.1
Minersville	36	75,177	38	84	25,290	11,821	87,705	167,798	126	(2)	4,815	84	0.1
Monongahela	58	805,861	65	438	288,310	56,285	337,720	841,155	95	0.1	5,173	82	0.1
Nanticoke	73	328,414	83	207	73,161	47,646	194,244	399,678	118	(2)	12,116	37	0.2
New Brighton	68	2,903,449	77	1,482	690,589	108,677	1,003,463	2,195,552	55	0.1	6,820	68	0.1
Newcastle	216	13,308,220	232	4,992	3,226,669	491,336	13,646,648	21,046,842	8	1.1	28,339	17	0.4
New Haven	22	40,401	25	46	20,941	2,203	44,473	90,002	131	(2)	1,332	130	(2)
New Holland	23	76,843	27	81	23,804	36,196	78,425	165,687	128	(2)	982	133	(2)
Norristown	210	4,069,449	227	3,429	1,168,942	418,854	2,467,861	4,821,745	37	0.3	22,265	19	0.4
Northumberland	16	238,768	18	267	74,940	6,766	224,827	360,928	120	(2)	2,748	119	(2)

¹Includes 81 Indians and other persons on Indian reservations, which classes were not included at previous censuses.

²Less than one-tenth of 1 per cent.

TABLE 5.—URBAN MANUFACTURES—Continued.

	Number of establishments.	Capital.	Proprietors and firm members.	WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	PRODUCTS.			POPULATION.		
				Average number.	Total wages.			Value.	Rank.	Per cent of total.	Total.	Rank.	Per cent of total.
Oil City	158	\$4,578,237	189	1,992	\$1,038,173	\$161,228	\$4,742,848	\$6,710,886	27	0.4	13,264	81	0.2
Orwigsburg	27	268,522	34	453	133,189	15,625	406,423	618,223	105	(1)	1,518	131	(1)
Pen Argyl	31	392,615	58	336	177,873	46,457	219,184	537,322	111	(1)	2,784	118	(1)
Philadelphia	15,887	476,529,407	18,082	246,415	111,847,076	55,575,685	326,877,441	603,406,526	1	82.0	1,293,037	1	20.5
Phoenixville	92	6,482,025	94	2,556	1,009,719	232,963	3,202,965	4,992,772	36	0.3	9,190	47	0.1
Pittsburg	1,935	193,162,900	2,253	69,977	36,684,563	15,293,017	116,893,174	203,261,251	2	11.1	321,616	2	5.1
Pittston	95	1,038,797	100	505	222,340	98,686	722,800	1,261,500	79	0.1	12,556	34	0.2
Plymouth	101	579,553	98	323	213,497	95,935	362,488	503,728	97	(1)	13,649	36	0.2
Pottstown	144	4,922,856	164	3,059	1,251,229	386,985	5,263,759	8,111,486	25	0.4	13,696	27	0.2
Pottsville	206	3,883,237	232	1,967	671,179	389,317	3,626,129	5,354,633	34	0.3	15,710	23	0.2
Rankin	12	4,662,354	8	1,622	983,867	716,539	5,437,357	8,607,680	24	0.5	3,775	100	0.1
Reading	848	27,976,628	939	19,165	7,544,950	5,085,481	19,089,332	36,902,511	5	2.0	78,961	5	1.3
Rochester	47	2,228,337	59	1,433	589,516	104,262	470,450	1,410,567	73	0.1	4,688	86	0.1
St. Clair	31	94,863	42	213	47,506	2,225	57,678	146,277	129	(1)	4,638	88	0.1
Sayre	46	1,341,905	52	1,261	591,238	40,754	1,170,323	1,945,797	60	0.1	5,243	81	0.1
Schuylkill Haven	53	545,701	59	702	259,499	15,605	1,105,426	1,497,484	69	0.1	3,454	103	0.1
Seranton	710	19,954,525	771	12,669	5,191,022	1,857,881	18,411,022	27,646,418	6	1.5	102,026	4	1.6
Shamokin	143	971,130	154	1,068	313,057	130,080	995,421	1,656,606	68	0.1	18,202	21	0.3
Sharon	96	6,140,725	112	3,115	1,601,748	470,574	6,751,805	9,863,039	22	0.5	8,916	46	0.1
Sharpsburg	103	1,053,416	117	1,213	669,946	81,674	1,854,014	2,950,668	49	0.2	6,842	62	0.1
Sharpsville	21	3,657,100	22	912	531,309	229,576	4,220,305	6,238,801	30	0.3	2,970	116	(1)
Shenandoah	78	874,057	88	210	88,555	96,920	180,224	479,336	113	(1)	20,321	20	0.3
Shippensburg	54	263,081	70	284	71,437	17,233	186,803	391,727	119	(1)	3,228	111	0.1
Slatington	54	756,751	61	926	362,384	49,231	321,121	947,737	92	0.1	8,773	101	0.1
South Bethlehem	127	8,713,185	126	5,544	2,390,100	931,898	5,301,034	10,964,911	19	0.6	13,241	32	0.2
South Williamsport	15	586,678	14	386	146,218	41,671	842,755	629,446	108	(1)	3,328	109	0.1
Spring City	47	509,362	46	482	198,685	19,573	280,290	658,974	103	(1)	2,569	120	(1)
Steelton	55	6,315,833	51	4,871	2,127,334	941,119	10,006,789	14,204,954	16	0.3	12,086	38	0.2
Stroudsburg	55	461,770	63	544	232,046	25,142	589,797	959,845	91	0.1	3,450	107	0.1
Summit Hill	14	31,078	16	29	11,105	745	27,342	51,323	132	(1)	2,986	115	(1)
Sunbury	76	2,161,602	76	1,140	441,531	177,578	1,360,181	2,254,609	51	0.1	9,810	43	0.2
Susquehanna	82	810,076	81	1,187	613,508	18,938	855,438	1,416,927	74	0.1	3,813	99	0.1
Tamaqua	61	917,124	65	564	229,728	87,826	388,937	847,964	94	0.1	7,267	59	0.1
Tarentum	55	2,192,747	58	1,420	628,233	254,885	765,942	1,980,947	59	0.1	5,472	76	0.1
Taylor	12	170,549	12	197	30,375	29,742	95,113	166,438	127	(1)	4,215	92	0.1
Titusville	113	2,550,452	127	1,204	522,749	216,767	1,657,275	2,995,292	48	0.2	8,244	51	0.1
Towanda	89	673,021	111	559	185,477	35,655	358,155	732,433	99	(1)	4,663	87	0.1
Turtle Creek	14	14,800	15	15	9,710	1,434	21,825	45,078	133	(1)	3,262	110	0.1
Tyrene	69	1,038,861	80	560	243,711	62,286	670,868	1,805,899	78	0.1	5,817	71	0.1
Uniontown	130	872,549	157	743	323,863	90,467	632,238	1,348,936	77	0.1	7,541	55	0.1
Warren	119	2,869,020	138	1,270	585,590	350,190	2,357,681	4,152,859	44	0.2	8,043	52	0.1
Washington	150	2,897,671	174	2,266	1,052,616	461,068	2,363,113	4,637,330	39	0.3	7,670	54	0.1
Watsonstown	21	257,571	20	289	91,651	11,747	288,200	459,670	116	(1)	1,808	129	(1)
Waynesboro	61	3,984,774	61	1,103	507,628	265,093	1,072,213	2,731,059	51	0.2	5,396	77	0.1
West Bethlehem	17	143,990	22	69	29,214	19,028	174,573	276,939	124	(1)	3,465	104	0.1
West Chester	112	1,244,188	127	740	351,087	164,169	459,559	1,378,362	76	0.1	9,524	45	0.2
West Pittston	35	567,287	36	299	123,238	127,444	212,730	621,996	110	(1)	5,846	72	0.1
Wilkesbarre	438	10,501,537	520	5,977	2,286,676	1,142,358	5,167,777	10,758,348	20	0.6	51,721	7	0.8
Wilkesburg	131	1,049,083	159	655	464,107	644,594	897,931	2,295,846	53	0.1	11,886	39	0.2
Williamsport	396	9,863,811	439	5,595	2,055,930	517,059	6,420,337	11,199,600	18	0.6	28,757	16	0.5
Wilmerding	10	19,546,553	9	2,015	1,353,869	636,488	2,592,726	9,171,384	23	0.5	4,179	93	0.1
Wrightsville	34	462,672	38	427	133,735	31,909	470,759	781,452	98	(1)	2,266	125	(1)
York	464	9,640,784	564	7,785	2,679,175	798,453	6,078,070	11,961,706	17	0.7	33,708	15	0.5
Total for state exclusive of urban manufactures	18,736	380,854,051	20,867	149,911	66,201,409	20,916,617	238,701,888	396,867,315	-----	21.6	3,099,595	-----	49.2
Per cent of urban manufactures to total for state	64.1	75.4	64.5	79.6	80.1	84.4	77.1	78.4	-----	-----	50.8	-----	-----

¹ Less than one-tenth of 1 per cent.

Of the 52,185 establishments in the state, 33,449, or 64.1 per cent, were located in these 133 cities and boroughs. They furnished employment to 583,923 wage-earners, or 79.6 per cent of the total number; and the value of their products, \$1,437,923,545, formed 78.4 per cent of the total for the state.

Table 6 shows the totals for the state by counties.

Table 7 shows the totals for the state by specified industries.

Table 8 shows the totals for the cities and boroughs of Allegheny, Allentown, Altoona, Chester, Easton, Erie, Harrisburg, Johnstown, Lancaster, McKeesport, New-castle, Norristown, Philadelphia, Pittsburg, Reading, Scranton, Shenandoah, Wilkesbarre, Williamsport, and York by specified industries.

Table 9 shows the totals for all industries in the cities and boroughs withdrawn from the enumerators, exclusive of those shown in Table 8.

TABLE 6.—MANUFACTURES

COUNTIES AND MANUFACTURING AND MECHANICAL INDUSTRIES.		Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
1	The State.....	52, 185	\$1,551,548,712	\$148,768,571	\$227,035,804	\$392,150,856	\$783,593,481	58, 836	47, 439	\$48, 605, 173	733, 834	\$332, 072, 670
2	Adams.....	350	1, 385, 415	125, 651	229, 143	274, 807	755, 814	389	45	30, 262	1, 386	371, 140
3	Allegheny.....	4, 145	401, 558, 044	35, 949, 245	48, 318, 156	94, 117, 699	223, 178, 541	4, 740	9, 547	9, 981, 618	128, 382	69, 345, 233
4	Armstrong.....	266	8, 442, 201	706, 933	2, 338, 793	3, 263, 128	2, 133, 377	299	148	189, 361	3, 811	1, 652, 769
5	Beaver.....	359	15, 262, 391	1, 009, 302	2, 985, 303	4, 659, 903	6, 607, 883	385	416	489, 223	7, 095	3, 143, 341
6	Bedford.....	286	3, 469, 344	678, 755	678, 362	469, 458	1, 612, 769	332	49	45, 000	1, 114	438, 339
7	Berks.....	1, 699	37, 279, 817	2, 968, 360	6, 979, 987	9, 177, 828	18, 158, 642	1, 930	1, 801	1, 131, 101	25, 379	9, 676, 954
8	Blair.....	486	11, 916, 060	725, 487	2, 354, 182	4, 235, 118	4, 511, 273	567	503	398, 547	10, 676	5, 718, 785
9	Bradford.....	538	5, 979, 273	1, 049, 949	1, 267, 603	1, 178, 342	2, 433, 379	653	173	129, 360	3, 272	1, 314, 753
10	Bucks.....	735	8, 504, 278	868, 260	1, 359, 953	2, 501, 423	4, 271, 637	790	217	185, 590	5, 600	1, 952, 187
11	Butler.....	344	2, 027, 912	250, 313	452, 861	905, 247	1, 019, 501	414	56	59, 922	1, 346	657, 853
12	Cambria.....	472	20, 244, 523	1, 582, 647	3, 759, 657	7, 855, 021	7, 017, 196	572	470	523, 810	7, 511	3, 791, 541
13	Cameron.....	48	8, 307, 343	1, 043, 830	288, 481	300, 745	1, 674, 284	49	52	44, 827	507	253, 299
14	Carbon.....	237	4, 179, 459	298, 110	1, 400, 967	1, 111, 103	1, 369, 279	231	149	125, 456	3, 287	1, 030, 329
15	Center.....	292	2, 978, 386	554, 818	750, 783	686, 597	986, 188	336	90	74, 481	1, 514	583, 497
16	Chester.....	924	18, 014, 467	1, 263, 295	3, 274, 707	4, 915, 435	8, 561, 030	978	563	464, 100	8, 034	3, 485, 780
17	Clarion.....	202	1, 177, 286	274, 375	145, 604	289, 419	467, 888	243	38	24, 424	593	206, 555
18	Clearfield.....	318	12, 502, 454	3, 625, 454	1, 235, 542	1, 544, 822	6, 096, 632	368	168	156, 939	3, 946	1, 625, 745
19	Clinton.....	218	5, 823, 684	731, 380	990, 195	1, 308, 917	2, 793, 192	262	157	138, 467	2, 561	1, 093, 996
20	Columbia.....	304	5, 721, 489	332, 583	1, 185, 117	1, 503, 527	2, 650, 262	338	144	140, 729	3, 028	1, 277, 387
21	Crawford.....	600	5, 618, 988	360, 752	940, 130	1, 795, 008	2, 322, 098	705	208	191, 451	8, 373	1, 446, 226
22	Cumberland.....	421	5, 193, 136	882, 639	680, 123	990, 320	2, 640, 054	470	200	181, 130	3, 138	971, 920
23	Dauphin.....	869	19, 080, 076	1, 370, 372	2, 988, 071	4, 237, 283	10, 484, 850	931	871	823, 443	15, 430	6, 198, 796
24	Delaware.....	602	30, 315, 934	2, 083, 290	5, 011, 424	9, 586, 434	18, 634, 816	639	520	747, 071	13, 923	5, 833, 786
25	Elk.....	188	15, 947, 430	3, 294, 836	2, 111, 749	2, 793, 939	7, 836, 906	194	208	214, 870	3, 302	1, 434, 740
26	Erie.....	1, 068	23, 330, 186	1, 671, 221	4, 051, 380	6, 268, 945	11, 338, 640	1, 216	786	785, 631	11, 263	5, 339, 638
27	Fayette.....	559	16, 300, 498	899, 632	2, 226, 379	6, 818, 216	6, 356, 271	648	473	405, 420	7, 663	3, 948, 274
28	Forest.....	83	3, 527, 417	1, 065, 206	184, 242	620, 941	1, 656, 939	122	45	38, 473	756	349, 015
29	Franklin.....	419	6, 224, 095	238, 857	719, 352	951, 266	4, 313, 020	460	193	184, 328	2, 778	1, 140, 705
30	Fulton.....	84	229, 861	42, 827	51, 490	78, 090	57, 484	109	4	1, 145	59	22, 027
31	Greene.....	118	360, 301	41, 395	78, 524	111, 184	129, 198	169	3	1, 140	147	52, 717
32	Huntingdon.....	259	2, 481, 604	340, 132	439, 097	672, 800	1, 029, 515	279	78	47, 404	1, 875	451, 895
33	Indiana.....	278	3, 143, 971	845, 351	315, 293	797, 810	1, 155, 107	350	59	45, 871	1, 499	650, 147
34	Jefferson.....	310	8, 213, 413	1, 811, 351	1, 243, 572	1, 446, 032	3, 712, 458	369	83	86, 800	2, 489	1, 102, 346
35	Juniata.....	121	429, 776	47, 038	104, 885	140, 794	137, 059	149	11	7, 464	214	77, 850
36	Lackawanna.....	1, 010	24, 538, 039	2, 645, 732	4, 642, 993	6, 269, 540	10, 982, 774	1, 070	839	973, 328	15, 582	6, 248, 633
37	Lancaster.....	2, 213	20, 058, 299	1, 507, 937	3, 875, 152	5, 227, 804	9, 442, 376	2, 419	743	602, 823	17, 786	6, 015, 903
38	Lawrence.....	339	15, 536, 065	889, 337	2, 624, 702	7, 718, 845	4, 302, 981	383	295	330, 001	6, 185	3, 849, 976
39	Lebanon.....	492	3, 764, 771	770, 351	2, 309, 991	2, 912, 359	3, 751, 070	562	305	302, 237	7, 691	2, 979, 635
40	Lehigh.....	1, 013	26, 254, 303	2, 325, 943	7, 445, 807	6, 200, 897	10, 279, 056	1, 252	687	640, 083	16, 463	6, 223, 380
41	Luzerne.....	1, 290	10, 351, 784	1, 479, 177	3, 405, 914	7, 923, 968	7, 437, 725	1, 382	721	724, 960	12, 674	4, 753, 888
42	Lycoming.....	792	19, 780, 341	3, 102, 096	2, 097, 112	3, 552, 898	11, 028, 295	849	584	507, 265	8, 923	3, 401, 701
43	McKean.....	416	11, 235, 735	1, 466, 822	1, 696, 953	2, 674, 296	5, 497, 924	474	299	316, 794	5, 163	2, 888, 152
44	Mercer.....	382	12, 969, 299	749, 041	2, 771, 468	3, 848, 909	5, 599, 821	449	232	250, 368	5, 696	3, 023, 551
45	Mifflin.....	190	4, 032, 288	198, 903	632, 679	1, 233, 873	1, 966, 833	216	82	92, 087	1, 995	814, 428
46	Monroe.....	195	2, 360, 281	412, 414	476, 305	545, 099	927, 463	221	53	48, 417	1, 162	417, 913
47	Montgomery.....	1, 199	30, 774, 139	2, 280, 362	4, 903, 712	7, 833, 437	15, 747, 028	1, 285	1, 076	1, 135, 724	17, 619	7, 754, 381
48	Montour.....	137	2, 923, 748	123, 629	321, 656	1, 141, 106	1, 339, 357	157	74	75, 998	2, 449	870, 516
49	Northampton.....	1, 016	33, 557, 215	3, 066, 689	4, 848, 971	9, 759, 826	15, 611, 729	1, 120	837	886, 671	17, 461	7, 012, 067
50	Northumberland.....	476	6, 720, 821	506, 008	1, 115, 997	1, 810, 131	3, 288, 690	516	270	211, 353	4, 719	1, 645, 938
51	Perry.....	167	2, 311, 743	350, 539	400, 431	453, 942	1, 106, 831	185	38	34, 614	786	299, 988
52	Philadelphia.....	15, 887	476, 523, 407	43, 726, 855	64, 859, 709	113, 918, 281	254, 024, 562	18, 062	19, 113	20, 154, 836	246, 445	111, 847, 076
53	Pike.....	49	314, 997	74, 060	52, 970	66, 020	121, 947	64	3	3, 150	134	47, 838
54	Potter.....	240	10, 631, 130	3, 780, 061	691, 415	1, 284, 080	4, 875, 574	245	122	127, 656	3, 005	1, 197, 895
55	Schuylkill.....	944	9, 329, 209	803, 923	2, 408, 534	3, 031, 838	3, 084, 914	1, 048	345	235, 339	6, 301	2, 219, 313
56	Snyder.....	108	373, 361	34, 433	67, 972	114, 273	156, 688	124	3	1, 100	232	62, 815
57	Somerset.....	311	2, 642, 194	922, 123	309, 044	654, 604	756, 423	367	67	49, 800	1, 519	588, 051
58	Sullivan.....	90	3, 185, 327	920, 086	485, 909	460, 896	1, 318, 436	92	27	31, 324	660	242, 338
59	Susquehanna.....	395	2, 198, 411	242, 480	483, 248	923, 069	549, 614	404	71	42, 435	2, 200	1, 050, 928
60	Tioga.....	379	6, 791, 517	1, 605, 144	1, 187, 425	847, 725	3, 151, 223	418	84	83, 939	1, 663	678, 328
61	Union.....	152	1, 081, 338	159, 247	136, 455	322, 172	463, 464	177	23	14, 054	512	172, 691
62	Venango.....	408	14, 290, 606	601, 508	1, 246, 264	3, 342, 660	9, 099, 619	494	346	519, 417	3, 424	1, 752, 044
63	Warren.....	351	7, 909, 263	582, 449	873, 447	1, 697, 769	4, 755, 538	421	149	142, 417	2, 710	1, 132, 676
64	Washington.....	552	8, 298, 768	597, 401	1, 767, 587	2, 548, 942	3, 385, 738	632	306	312, 836	4, 915	2, 563, 423
65	Wayne.....	282	3, 778, 358	375, 946	557, 677	870, 398	1, 974, 337	306	120	92, 679	2, 047	749, 041
66	Westmoreland.....	624	31, 587, 664	1, 857, 142	4, 149, 606	11, 352, 275	14, 228, 611	662	811	993, 557	14, 535	8, 050, 020
67	Wyoming.....	178	2, 046, 437	245, 895	381, 812	1, 132, 625	1, 382, 625	198	31	25, 486	593	234, 167
68	York.....	1, 706	17, 621, 871	1, 528, 363	2, 921, 454	4, 468, 849	8, 702, 705	1, 905	655	602, 607	14, 128	4, 563, 987

TABLE 7.—MANUFACTURES BY

1 All industries.....	52, 185	\$1,551,548,712	\$148,768,571	\$227,035,804	\$392,150,856	\$783,593,481	58, 836	47, 439	\$48, 605, 173	733, 834	\$332, 072, 670
2 Agricultural implements.....	50	4, 102, 327	184, 407	554, 284	440, 382	2, 923, 254	64	197	183, 549	1, 564	688, 014
3 Ammunition.....	4	100, 608	2, 300	8, 450	3, 875	85, 983	4	5	3, 460	245	45, 411
4 Artificial feathers and flowers.....	25	546, 056	42, 700	33, 500	49, 680	419, 176	35	42	52, 948	873	208, 800
5 Artificial limbs.....	12	33, 545	700	550	13, 640	18, 655	13	12	5, 512	41	19, 361
6 Artists' materials.....	4	50, 625	4, 500	12, 000	8, 195	25, 930	5	8	4, 832	28	9, 761

BY COUNTIES: 1900.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.						COST OF MATERIALS USED.				Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not including internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.				
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.												
574,606	\$293,697,372	126,093	\$33,067,828	33,135	\$5,807,470	\$134,344,269	\$10,814,621	\$4,444,216	\$86,207,684	\$32,877,748	\$1,042,434,599	\$995,673,525	\$16,761,074	\$1,831,790,860	1		
878	268,572	454	97,402	64	5,166	232,853	12,715	3,007	211,088	6,043	1,171,897	1,145,063	26,834	2,177,105	2		
110,416	66,558,755	8,844	2,178,237	3,122	613,241	28,657,932	1,275,778	1,180,283	20,939,192	5,262,679	255,073,508	240,077,637	14,935,871	433,837,410	3		
3,383	1,538,034	839	47,886	92	16,849	523,100	33,225	34,133	445,592	10,150	3,862,084	3,398,210	464,874	7,169,257	4		
5,622	2,803,474	812	240,356	661	93,511	736,516	23,391	26,731	682,727	23,667	6,672,762	6,268,751	404,011	13,459,848	5		
1,069	431,075	19	4,366	26	2,898	168,584	9,521	12,966	145,210	887	2,258,815	2,064,993	193,822	3,331,056	6		
18,641	8,172,571	5,229	1,304,729	1,500	199,654	5,724,218	227,803	116,457	2,069,751	3,310,207	27,064,902	25,502,407	1,562,495	49,977,253	7		
9,804	5,545,303	616	135,310	256	38,172	501,385	55,467	22,850	360,330	62,738	11,525,174	11,110,029	415,145	19,606,238	8		
2,915	1,248,289	291	56,259	66	10,205	212,465	36,620	18,171	149,631	8,043	4,211,326	4,155,478	55,848	6,704,955	9		
3,489	1,438,176	1,645	440,282	466	73,729	883,242	52,294	20,855	764,361	45,732	6,242,830	6,063,792	179,038	10,653,339	10		
1,215	628,855	88	20,187	43	8,811	184,059	13,690	19,955	105,028	46,386	1,475,193	1,392,093	83,100	3,130,125	11		
7,280	3,738,289	115	29,899	116	23,353	2,042,581	267,269	71,825	1,620,993	82,444	16,049,417	14,635,435	1,413,982	25,506,094	12		
489	249,326	15	3,723	3	250	190,017	16,430	11,453	149,858	12,276	1,584,166	1,469,973	114,193	2,175,069	13		
2,372	986,521	587	75,637	328	28,171	234,375	19,369	14,585	144,897	55,524	3,430,033	3,245,688	184,365	5,461,339	14		
1,423	570,719	62	14,111	29	4,667	116,103	16,436	10,301	87,156	2,270	1,980,133	1,645,070	335,063	3,424,681	15		
6,767	3,205,247	940	223,890	327	56,643	944,104	63,186	36,941	702,407	141,570	12,542,675	11,859,655	683,020	21,103,894	16		
469	185,592	97	16,402	27	4,561	52,236	3,565	6,911	41,704	56	771,865	753,258	18,607	1,403,737	17		
3,801	1,597,611	55	12,691	90	16,543	361,883	17,146	48,596	294,437	1,704	5,449,488	5,341,002	107,586	8,838,483	18		
2,215	1,033,159	321	57,110	28	3,727	280,535	15,835	18,855	207,823	38,014	2,888,509	2,796,075	92,434	5,279,405	19		
2,435	1,164,551	459	92,308	184	20,628	269,114	15,009	11,036	183,843	54,226	4,762,212	4,638,115	124,097	7,065,729	20		
2,928	1,330,296	428	105,068	17	1,862	434,312	34,679	16,175	373,191	60,287	4,387,340	4,269,713	117,627	7,724,001	21		
2,060	774,097	977	188,365	101	9,458	223,747	29,380	9,221	169,833	15,313	2,860,843	2,803,240	57,594	4,980,616	22		
12,721	5,694,145	2,359	462,362	350	42,279	2,013,921	198,312	57,868	1,625,360	132,381	25,141,437	23,325,171	1,816,266	39,417,393	23		
9,944	4,748,326	3,083	923,514	896	161,946	1,806,179	122,518	67,372	1,286,243	330,046	16,483,059	15,770,714	712,345	28,444,940	24		
3,111	1,408,594	149	39,848	42	6,298	700,629	9,616	58,931	605,459	26,623	6,431,211	6,272,652	158,559	10,375,315	25		
10,134	5,072,333	861	216,694	208	50,611	1,345,778	119,965	77,288	1,018,987	129,538	11,395,878	11,032,053	363,825	23,156,994	26		
7,395	3,889,543	177	40,296	91	18,435	1,169,594	45,815	128,415	967,231	28,133	10,434,506	10,076,360	358,146	19,544,100	27		
751	347,885	3	780	2	400	79,098	1,749	22,641	48,658	6,050	1,934,287	1,925,867	8,420	2,962,051	28		
2,408	1,073,615	295	58,180	75	9,010	337,898	23,920	10,303	294,885	58,790	2,805,703	2,762,001	43,702	5,738,330	29		
57	21,627			2	400	3,035	565	1,026	1,394	30	167,354	166,118	1,236	261,692	30		
122	47,798	22	4,295	3	624	14,939	3,139	1,918	9,847	35	319,126	313,326	5,800	520,258	31		
1,142	401,259	180	43,586	53	6,550	170,336	15,630	10,202	144,304	200	1,443,193	1,385,347	57,846	2,483,832	32		
1,321	619,823	88	15,612	87	14,712	96,132	6,430	9,823	79,779	150	2,055,229	2,007,190	48,039	3,292,532	33		
2,238	1,053,217	179	34,514	72	14,816	359,352	21,604	25,605	299,898	12,250	4,341,031	4,135,792	205,239	7,028,416	34		
169	69,013	39	8,890	6	417	16,282	2,407	1,870	12,005	378,667	378,667	373,885	4,832	597,757	35		
10,717	5,405,462	3,482	639,060	1,383	198,411	2,265,740	186,645	111,247	1,441,952	525,596	20,873,564	19,758,004	1,115,560	32,510,627	36		
11,033	4,538,691	5,319	1,266,887	1,434	210,322	2,243,109	135,217	57,071	1,774,587	276,234	17,373,686	16,802,507	570,879	31,886,944	37		
5,799	3,748,612	280	75,944	106	25,420	588,401	34,471	61,220	470,991	21,719	15,524,722	14,051,830	1,472,892	24,153,160	38		
6,070	2,572,194	1,807	359,986	305	47,455	756,101	94,844	21,947	499,701	9,609	9,355,079	7,721,406	1,633,673	14,586,151	39		
12,242	5,361,620	3,121	710,695	1,100	151,071	2,041,644	151,269	62,828	1,297,692	529,855	17,693,067	16,833,723	1,759,344	31,250,205	40		
7,957	3,134,731	3,537	689,363	1,150	129,794	1,961,538	162,631	61,564	1,399,771	347,572	10,346,885	10,175,787	171,098	21,035,711	41		
6,747	2,872,278	1,781	472,263	395	57,160	935,022	81,608	46,624	753,908	52,882	11,054,680	10,900,446	154,234	18,945,237	42		
4,833	2,806,387	213	55,230	117	23,535	581,629	30,969	33,877	485,479	31,304	6,109,707	5,884,384	225,323	11,906,132	43		
5,608	2,981,977	145	31,637	43	6,940	886,623	20,267	33,084	742,280	90,692	13,883,440	11,707,514	2,175,926	21,001,413	44		
1,850	786,673	100	22,381	45	6,374	148,229	8,510	6,232	120,122	13,365	2,008,755	1,886,663	122,097	3,621,281	45		
920	377,146	141	26,007	101	14,760	82,323	10,383	6,942	65,008		1,368,899	1,328,334	40,565	2,288,726	46		
13,113	6,687,991	3,688	928,013	818	138,377	2,049,505	372,412	56,277	1,546,007	74,809	23,154,709	21,961,056	1,193,653	40,691,273	47		
2,003	814,154	209	35,808	237	20,551	281,821	10,949	8,397	211,075	1,400	2,876,488	2,601,844	274,644	4,492,949	48		
14,174	6,348,493	2,403	528,482	884	135,062	2,484,190	675,816	71,732	1,312,343	424,299	15,040,341	13,489,634	1,550,707	30,811,623	49		
3,468	1,415,684	1,053	209,015	198	21,239	517,065	41,577	16,165	278,739	180,587	5,593,958	5,480,179	111,779	9,118,742	50		
699	286,077	15	3,840	72	9,466	55,627	3,288	7,611	44,128	500	1,417,408	1,315,723	101,685	2,065,516	51		
172,011	91,540,077	61,688	13,151,177	12,746	2,155,822	55,575,685	5,607,288	1,222,710	28,973,408	19,767,279	326,877,441	320,684,140	6,193,301	603,466,526	52		
132	47,608			2	230	6,298	700	1,879	3,719		108,654	107,363	1,291	219,475	53		
2,815	1,149,332	150	42,105	40	6,458	213,119	10,165	33,313	169,571	70	5,516,434	5,480,240	36,194	8,169,237	54		
3,983	1,801,518	1,979	377,806	339	89,899	829,905	67,776	25,971	679,379	56,779	8,108,688	8,011,086	97,602				

TABLE 7.—MANUFACTURES BY

	MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
7	Awnings, tents, and sails.....	75	\$240,867	\$3,825	\$6,000	\$38,488	\$191,454	84	16	\$11,190	287	\$127,705
8	Babbitt metal and solder.....	6	74,673	4,400	3,250	7,300	59,723	7	2	1,400	19	10,103
9	Bags, other than paper.....	3	41,250			9,250	32,000	6	2	2,020	29	10,425
10	Bags, paper.....	12	217,407	5,000	6,772	46,890	158,745	9	14	13,924	163	52,575
11	Baking and yeast powders.....	8	56,350	1,200	5,000	11,450	38,700	7	19	12,970	32	12,006
12	Baskets, and rattan and willow ware.....	57	120,754	6,640	15,809	26,456	71,849	60	5	3,120	190	66,652
13	Bells.....	3	20,400	2,000	8,500	12,000	6,900	4	2	1,080	7	2,535
14	Belt and hose, leather.....	9	488,337	8,500	32,570	61,252	386,015	13	25	15,077	87	52,880
15	Bicycle and tricycle repairing.....	502	578,633	29,200	55,455	213,210	280,768	571	30	16,889	418	171,833
16	Bicycles and tricycles.....	21	1,550,957	78,930	211,840	422,635	837,552	26	110	91,681	947	431,369
17	Billiard tables and materials.....	5	47,435	4,000	3,000	1,935	33,500	6	2	1,560	17	9,986
18	Blacking.....	12	394,804	20,500	36,688	45,225	292,391	12	59	59,074	146	49,435
19	Blacksmithing and wheelwrighting.....	4,509	5,182,393	1,015,703	1,888,122	895,040	1,883,528	4,789	21	13,184	2,766	1,894,095
20	Bluing.....	7	38,175	6,800	8,200	4,875	18,300	10	10	7,000	19	6,739
21	Bone, ivory, and lampblack.....	12	725,535	148,603	177,422	290,371	109,139	15	15	16,650	66	37,857
22	Bookbinding and blank book making.....	111	1,470,816	11,150	84,100	593,964	831,602	130	92	94,233	1,006	638,363
23	Boot and shoe cut stock.....	7	145,944	3,725	5,500	9,818	127,401	11	10	7,000	72	22,220
24	Boot and shoe uppers.....	16	44,230	16,350	16,150	2,665	9,065	21	1	700	31	14,938
25	Boots and shoes, custom work and repairing.....	2,580	1,098,111	182,765	294,490	265,664	355,282	2,611	22	12,604	904	358,417
26	Boots and shoes, factory product.....	146	6,860,480	279,602	660,300	1,309,513	4,611,065	209	663	579,794	9,144	3,111,113
27	Bottling.....	492	3,012,944	448,554	560,694	498,220	1,505,476	588	130	104,522	1,243	628,833
28	Boxes, cigar.....	101	992,528	69,510	159,366	210,035	517,617	128	36	21,699	1,170	318,538
29	Boxes, fancy and paper.....	87	1,077,711	130,350	242,126	651,224	954,011	101	126	109,546	3,443	877,873
30	Boxes, wooden packing.....	69	1,211,133	229,180	181,616	257,631	539,756	66	56	47,092	365	352,545
31	Brass castings and brass finishing.....	58	2,796,284	260,725	370,777	533,387	1,631,845	66	137	141,195	961	495,638
32	Brassware.....	28	1,103,636	159,039	106,150	881,330	457,417	23	73	74,777	683	251,279
33	Bread and other bakery products.....	2,443	10,985,714	1,975,996	3,246,297	3,023,254	2,740,167	2,552	1,031	720,025	7,398	3,254,699
34	Brick and tile.....	385	10,506,823	2,796,468	2,885,801	2,108,046	2,710,508	507	269	247,074	6,733	2,626,291
35	Bridges.....	12	4,136,499	310,720	277,012	714,763	2,831,014	8	99	120,318	1,939	1,201,192
36	Bronze castings.....	4	448,181	37,500	50,500	44,425	315,756	3	23	35,490	137	82,722
37	Brooms and brushes.....	167	1,026,032	74,905	89,415	108,445	753,267	206	88	61,906	925	348,130
38	Buttons.....	21	557,488	24,500	47,580	200,052	285,356	30	42	39,152	1,140	321,473
39	Calcium lights.....	3	12,039			4,700	7,339	3	1	1,000	7	2,886
40	Card cutting and designing.....	16	99,132	3,000	2,600	40,779	52,753	21	1	520	113	54,540
41	Carpentering.....	1,846	12,674,714	1,119,406	1,164,102	1,043,034	9,248,172	2,143	438	354,379	13,266	7,641,982
42	Carpets and rugs, other than rag.....	93	17,957,607	936,875	2,705,050	5,294,986	9,020,696	103	336	375,483	12,919	5,330,643
43	Carpets, rag.....	250	400,148	76,872	107,525	61,540	154,211	275	20	7,401	472	145,919
44	Carpets, wood.....	4	38,699			6,050	32,649	9	10	5,430	57	24,631
45	Carriage and wagon materials.....	57	2,574,074	196,925	411,731	709,031	1,256,387	75	87	106,835	1,454	691,490
46	Carriages and sleds, children's.....	8	297,863	1,000	15,000	35,669	246,194	11	28	25,244	307	120,597
47	Carriages and wagons.....	872	8,643,315	1,897,475	2,025,796	919,800	4,300,244	1,064	247	206,649	5,166	2,497,452
48	Cars and general shop construction and repairs by steam railroad companies.....	144	19,182,001	2,128,063	5,706,904	4,888,929	6,427,505	1,065	1,065	810,857	28,554	15,825,640
49	Cars and general shop construction and repairs by street railroad companies.....	10	766,450	285,585	212,600	134,826	133,439		22	13,230	1,005	573,654
50	Cars, steam railroad, not including operations of railroad companies.....	11	33,828,723	944,900	1,780,000	1,424,595	29,679,228	6	414	428,399	5,840	3,111,556
51	Charcoal.....	6	43,529	26,050	1,750	1,820	18,900	5	1	480	110	23,125
52	Cheese and butter, urban dairy products.....	5	11,682	2,500	4,500	3,150	1,532	7	2	480	3	991
53	Cheese, butter, and condensed milk, factory product.....	749	3,033,128	126,836	896,453	1,268,416	741,423	692	127	45,596	976	445,708
54	Chemicals.....	100	22,756,656	2,080,346	3,939,376	6,709,182	10,077,752	54	415	572,846	4,278	2,193,243
55	China decorating.....	26	51,389	12,100	6,600	6,907	25,782	25	8	2,170	33	13,731
56	Chocolate and cocoa products.....	3	799,071	45,000	170,000	126,343	458,328	3	48	35,238	123	40,307
57	Cleansing and polishing preparations.....	13	37,650	400	900	4,780	31,570	13	25	15,594	16	5,687
58	Cloth, sponging and refinishing.....	3	51,339	8,000	5,000	19,484	18,855	3	4	3,990	50	21,750
59	Clothing, horse.....	9	203,464		75	15,706	187,683	12	13	11,940	206	56,751
60	Clothing, men's, custom work and repairing.....	2,231	6,711,201	684,728	789,500	348,595	4,943,378	2,549	363	273,713	7,710	3,410,804
61	Clothing, men's, factory product.....	481	10,446,107	403,840	452,936	394,780	9,189,551	659	831	819,176	10,497	4,422,074
62	Clothing, men's, factory product, buttonholes.....	18	16,495			12,190	4,305	19	1	760	140	47,763
63	Clothing, women's, dressmaking.....	1,196	1,175,036	104,935	182,908	147,299	739,894	1,307	72	56,412	8,866	1,110,978
64	Clothing, women's, factory product.....	230	5,197,091	40,650	80,900	626,376	4,549,165	346	596	524,828	8,311	2,606,024
65	Coffee and spice, roasting and grinding.....	59	1,280,994	91,550	120,850	211,436	857,158	77	139	183,886	341	153,148
66	Coffins, burial cases, and undertakers' goods.....	22	2,010,721	230,132	498,100	257,079	1,031,410	27	74	71,009	666	281,413
67	Coke.....	89	20,213,147	744,341	1,501,105	12,460,419	5,507,282	40	518	481,133	9,283	4,515,651
68	Combs.....	6	107,559	12,100	5,400	25,544	64,515	12	1	250	185	65,070
69	Confectionery.....	694	5,943,287	742,000	1,239,749	1,449,466	2,512,022	793	745	537,003	5,244	1,519,861
70	Cooperage.....	119	1,884,174	354,420	334,253	174,701	1,020,800	139	42	30,793	1,058	479,258
71	Cordage and twine.....	15	4,550,999	284,873	414,400	994,884	2,856,842	21	76	87,164	1,567	488,888
72	Cork, cutting.....	10	1,488,438	126,100	179,364	178,846	999,623	9	43	73,326	1,538	401,592
73	Corsets.....	14	78,470	2,300	1,500	16,965	57,705	14	11	13,100	167	52,152
74	Cotton goods.....	151	22,386,121	1,193,575	3,364,273	8,152,753	9,675,520	207	515	677,303	15,567	5,602,339
75	Cotton small wares.....	24	1,945,844	107,500	215,500	627,758	995,086	34	50	61,620	1,441	454,917
76	Cotton waste.....	10	273,905	13,500	29,100	44,925	186,380	11	8	10,430	78	41,950

SPECIFIED INDUSTRIES: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.						COST OF MATERIALS USED.				Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not including internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.				
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.												
175	\$97,743	110	\$29,632	2	\$330	\$29,587	\$18,159	\$190	\$11,238		\$312,662	\$310,872	\$1,790	\$662,659	7		
19	10,108					2,149	1,980	148	621		146,025	144,934	1,091	189,310	8		
8	4,650	21	5,775			2,446	1,924	45	477		85,220	81,970	250	130,208	9		
92	37,213	71	15,362			12,976	4,632	276	8,068		338,480	335,621	2,859	504,835	10		
21	10,266	9	1,565	2	175	8,355	3,600	70	4,685		57,355	56,358	997	107,260	11		
144	57,234	37	8,161	9	1,257	9,479	4,210	328	4,911		72,901	72,133	828	196,121	12		
7	2,535					651	120	109	422		7,046	6,031	1,015	15,525	13		
85	52,520			2	360	14,553	6,075	408	8,070		470,004	467,456	2,548	665,954	14		
386	167,087			32	4,746	77,529	57,247	1,601	17,048	\$1,630	351,822	339,615	12,177	956,499	15		
891	419,958	29	7,280	27	4,131	128,931	10,597	1,700	110,834	5,800	1,065,461	1,050,195	15,266	1,855,043	16		
17	9,986					2,185	1,068	80	1,037		24,565	24,485	80	51,837	17		
48	23,017	88	24,671	10	1,747	48,054	9,332	1,159	37,093		239,389	236,282	3,107	519,536	18		
2,716	1,386,706			50	7,389	258,025	168,200	81,624	55,315	2,886	1,888,575	1,762,062	126,513	6,904,109	19		
9	4,189	3	800	7	1,750	1,626	630	231	665		20,116	20,071	342	42,805	20		
66	37,857					67,524	4,750	2,021	59,852	891	88,739	82,339	1,350	309,397	21		
770	420,062	759	207,684	77	10,617	129,827	67,257	1,027	46,545	14,998	697,613	684,886	13,227	1,903,483	22		
47	17,800	20	4,500	5	420	1,879	1,202	95	582		431,693	430,011	1,682	523,811	23		
26	12,606	5	2,272			2,250	796	303	938	150	39,626	39,361	266	70,488	24		
872	850,668	19	5,921	13	1,833	236,378	189,727	7,477	28,455	10,794	837,287	817,066	20,221	2,705,357	25		
5,291	2,157,786	8,239	838,589	614	114,788	572,624	48,953	10,193	509,079	4,399	8,210,846	8,158,539	52,257	13,285,933	26		
1,225	624,852	9	2,204	9	1,692	457,857	88,578	145,015	223,848	416	7,135,046	7,113,515	21,631	9,637,049	27		
519	182,344	586	128,624	65	7,570	43,963	6,596	3,066	34,301		909,900	896,344	13,556	1,553,005	28		
748	316,019	2,260	501,638	435	59,696	158,142	58,088	4,662	95,452		1,260,423	1,237,328	25,095	2,986,118	29		
820	845,662	21	2,944	24	8,929	51,197	18,624	5,157	32,416		1,844,918	1,830,687	14,231	2,117,029	30		
955	493,143	5	2,250	1	245	174,232	18,209	7,644	147,612	767	2,643,666	2,604,188	39,378	3,362,135	31		
513	217,912	77	19,041	93	14,326	79,632	12,055	2,907	64,490	200	409,414	396,441	12,973	981,081	32		
5,967	2,959,484	1,011	236,570	390	58,645	1,009,193	311,933	76,899	619,096	455	11,055,386	10,715,752	339,631	20,784,041	33		
6,433	2,568,232	2	270	238	57,789	535,007	112,412	84,100	343,219	45,876	1,137,944	1,137,621	850,323	5,811,415	34		
1,989	1,198,192			10	3,000	177,423	1,870	5,706	97,212	72,635	3,807,053	3,807,351	59,577	6,991,565	35		
136	82,566	1	156			44,314	1,800	1,011	39,973	1,530	876,182	868,056	8,126	1,146,074	36		
681	303,330	179	34,538	65	10,262	68,922	30,011	2,245	31,770	4,896	941,190	933,346	7,844	1,769,172	37		
347	166,892	711	141,001	82	12,980	17,683	7,715	1,233	8,555	180	403,106	390,475	6,631	999,355	38		
7	2,886					1,432	1,004		428		3,286	2,768	518	17,774	39		
106	51,520	3	2,400	4	620	6,877	3,030	123	2,189	1,536	37,244	36,446	798	150,414	40		
13,241	7,635,911	1	520	24	5,551	16,259,156	127,438	36,635	278,917	15,846,166	15,591,271	15,550,637	40,684	46,580,575	41		
6,608	3,269,567	5,461	1,926,024	850	135,052	1,671,015	107,624	35,151	1,248,944	279,646	13,773,788	13,538,025	235,763	23,113,058	42		
404	133,597	59	11,335	9	1,017	32,517	10,533	2,135	9,513	10,366	332,151	328,236	3,915	697,338	43		
57	24,634					10,618	8,710		6,908		76,273	74,856	1,417	165,148	44		
1,417	685,671			37	5,819	93,747	4,730	8,408	73,609	2,000	1,144,743	1,110,381	34,362	2,496,955	45		
237	104,022	45	11,375	25	4,600	41,787	7,730	647	33,360		221,818	219,618	1,700	419,660	46		
5,082	2,481,857	17	3,919	67	11,676	393,101	87,260	38,407	210,027	27,407	3,215,741	3,134,481	81,260	8,342,662	47		
28,372	15,779,638	144	38,974	38	7,028	9,280,079	225	61,366	265,622	2,952,866	23,147,574	22,790,439	357,035	43,065,171	48		
1,005	573,654					14,819	100	9,087	5,632		595,620	589,127	6,493	1,244,518	49		
5,753	3,088,636			87	27,920	1,265,456	20,804	20,806	823,846	400,000	12,188,811	11,992,884	195,927	19,200,910	50		
110	23,125					6,626		42	4,550	2,034	23,383	23,063	300	69,705	51		
3	991					452	222	36	194		8,411	8,136	275	18,959	52		
922	435,101	35	8,629	19	1,978	116,195	23,828	11,868	79,844	1,155	8,711,635	8,602,063	109,572	10,290,006	53		
4,055	2,136,905	211	59,036	12	2,302	931,869	16,881	50,838	861,657	2,493	6,805,769	6,240,847	564,922	13,034,384	54		
20	10,581	11	2,992	2	208	4,629	4,029	426	1,095	135	39,196	37,492	1,701	83,216	55		
76	30,700	37	8,644	10	963	43,696	600	2,064	41,922		870,360	861,663	8,697	1,039,032	56		
12	4,477	4	1,210			10,106	1,671	68	8,367		21,754	21,290	464	65,323	57		
49	21,650			1	100	7,431	2,280	170	4,981		2,553	1,265	1,293	52,548	58		
53	21,096	116	29,126	87	6,532	30,953	6,125	58	1,970	22,800	319,700	318,472	1,233	474,366	59		
4,998	2,702,349	2,606	693,142	106	14,813	1,059,909	529,128	20,985	262,438	247,353	5,195,493	5,141,322	54,111	13,374,712	60		
5,024	2,962,561	5,115	1,409,067	358	59,446	2,137,272	251,787	10,102	369,723	1,505,660	12,212,763	12,159,198	53,565	23,389,043	61		
76	31,212	49	14,456	15	2,095	3,959	2,614		1,345		16,383	15,579	804	102,181	62		
265	165,008	3,568	942,108	33	3,862	203,551	161,152	4,147	36,428	1,824	1,243,625	1,225,811	17,814	3,741,180	63		
1,961	1,057,678	0,183	1,524,493	162	23,553	629,266	151,184	6,772	870,030	101,280	6,269,950	6,223,816	40,134	11,604,580	64		
253	130,660	80	22,300	2	188	90,330	23,645	3,913	62,772		1,981,504	1,958,330	23,174	2,769,056	65		
520	258,780	138	21,787	8	846	74,654	6,381	6,659	61,614		584,627	576,327	8,300	1,214,488	66		
9,278	4,515,749			5	902	1,227,259	32,177	186,344	935,882	12,856	11,678,079	11,555,923	122,156	22,282,358	67		
139	55,451	30	6,632	16	2,987	6,274	1,992	255	4,027		116,655	113,813	2,842	230,312	68		
2,150	929,639	2,422	492,274	672	97,948	608,886	176,190	27,168	401,458	570	5,854,988	5,732,452	102,546	10,361,878	69		
944	453,868			114	25,330	153,695	25,287	3,856	35,854	83,698	1,958,021	1,945,914	12,107	2,974,553	70		

TABLE 7.—MANUFACTURES BY

MANUFACTURING AND MECHANICAL INDUSTRIES.		Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
77	Crucibles.....	5	\$617,074	\$33,000	\$107,601	\$105,780	\$370,693	11	7	\$12,049	69	\$39,688
78	Cutlery and edge tools.....	31	2,027,680	189,074	485,553	514,852	838,201	41	53	59,062	1,005	445,543
79	Dentists' materials.....	18	1,288,171	120,000	217,000	210,028	741,143	20	70	79,131	630	327,117
80	Druggists' preparations, not including prescriptions.....	18	4,512,682	195,200	460,906	424,117	3,462,459	19	333	358,870	1,190	415,871
81	Dyeing and cleaning.....	184	493,303	125,025	147,390	126,478	94,410	198	40	20,680	402	180,739
82	Dyeing and finishing textiles.....	105	7,679,906	783,612	1,200,133	2,368,629	3,287,532	155	216	260,277	4,716	2,065,752
83	Dye stuffs and extracts.....	12	1,778,173	121,450	273,179	537,993	845,551	5	36	60,686	257	118,544
84	Electrical apparatus and supplies.....	63	20,967,587	302,348	2,406,873	2,924,209	15,274,157	48	616	836,960	7,817	4,002,737
85	Electrical construction and repairs.....	132	552,237	32,500	9,975	90,268	419,464	168	67	60,611	597	327,443
86	Electroplating.....	49	150,919	6,000	3,400	86,762	54,757	66	6	4,976	200	86,996
87	Emery wheels.....	6	509,163	10,900	57,201	133,138	307,924	2	26	26,116	75	39,626
88	Enameling and enameled goods.....	10	140,150	10,500	28,600	47,840	53,210	10	21	10,243	101	33,823
89	Engraving and diesinking.....	50	52,387			34,000	18,387	58	1	1,040	68	35,407
90	Engraving, steel, including plate printing.....	36	381,911	18,750	28,000	193,528	144,633	52	83	53,350	557	269,487
91	Engraving, wood.....	19	55,360	5,500	3,000	3,525	43,335	23	1	1,000	24	12,964
92	Envelopes.....	5	176,081			78,498	97,586	9	19	13,858	139	47,707
93	Explosives.....	36	2,810,458	110,466	391,515	913,102	1,374,375	17	102	130,394	629	320,362
94	Fancy articles, not elsewhere specified.....	36	282,397	4,600	14,300	65,535	197,872	46	40	17,731	420	105,197
95	Felt goods.....	3	186,445	6,150	53,800	68,050	58,445	4	6	6,336	75	30,490
96	Fertilizers.....	51	8,802,794	490,711	681,315	508,872	2,121,866	43	167	200,755	765	351,873
97	Files.....	14	1,650,414	139,824	336,930	573,621	600,039	17	39	57,666	1,149	445,045
98	Flags and banners.....	4	51,950	5,000	21,200	2,244	23,506	4	4	2,352	25	9,028
99	Flavoring extracts.....	30	199,837	15,700	18,925	17,659	147,553	39	25	18,062	54	22,077
100	Flouring and grist mill products.....	2,719	19,616,993	2,673,364	5,073,724	5,741,177	6,028,728	3,210	270	206,001	2,195	1,061,869
101	Food preparations.....	50	854,109	77,075	137,333	188,410	450,691	61	128	77,229	495	182,145
102	Foundry and machine shop products.....	1,260	154,958,750	14,285,139	22,327,171	33,052,633	85,293,807	1,354	4,664	5,170,370	62,828	33,199,521
103	Foundry supplies.....	11	640,144	221,050	66,543	133,634	219,017	8	31	35,270	129	69,579
104	Fruits and vegetables, canning and preserving.....	39	520,206	38,216	77,355	101,668	302,977	43	35	25,309	468	123,179
105	Fur goods.....	51	671,921	32,450	18,820	27,901	591,850	58	61	29,882	260	136,213
106	Fur hats.....	20	5,726,259	818,940	1,368,207	736,849	2,772,263	22	180	269,619	2,890	1,187,272
107	Furnishing goods, men's.....	48	794,042	11,500	16,900	120,179	646,363	65	147	151,830	2,125	639,066
108	Furniture, cabinetmaking, repairing, and upholstering.....	710	1,402,784	156,140	273,425	170,820	802,399	797	51	35,637	1,262	635,583
109	Furniture, factory product.....	192	7,715,730	669,527	1,214,073	1,360,209	4,471,921	296	514	478,687	6,412	2,732,359
110	Furs, dressed.....	3	37,245	12,000	13,000	7,120	5,125	5	6		19	13,400
111	Galvanizing.....	10	1,269,629	80,804	100,956	156,857	921,012	9	22	22,749	838	136,463
112	Gas and lamp fixtures.....	30	1,679,799	52,900	75,230	308,988	1,242,686	32	123	134,886	1,018	501,001
113	Gas and oil stoves.....	9	233,487	33,500	30,500	52,657	116,830	7	20	17,538	142	69,963
114	Gas, illuminating and heating.....	89	47,312,537	2,654,906	2,861,606	31,235,121	10,560,904	577	577	457,092	3,144	1,506,266
115	Gas machines and meters.....	12	2,161,806	111,500	159,500	320,500	1,570,306	8	59	57,616	872	435,272
116	Glass.....	119	28,287,187	2,589,897	8,021,796	7,683,311	9,092,183	81	842	1,110,383	19,420	10,287,491
117	Glass, cutting, staining, and ornamenting.....	67	605,984	26,600	51,822	107,987	419,575	80	75	65,870	944	412,147
118	Gloves and mittens.....	4	28,950	500	4,500	4,650	19,300	6	3	1,800	43	9,759
119	Glue.....	11	2,194,141	123,362	276,262	199,850	1,594,670	13	24	39,320	519	218,642
120	Gold and silver, leaf and foil.....	8	408,894	53,900	62,900	47,002	214,492	12	6	5,268	189	87,730
121	Gold and silver, reducing and refining, not from the ore.....	6	38,565	6,000	10,000	14,153	8,412	4	3	2,094	7	4,216
122	Graphite and graphite refining.....	4	75,425	1,500	8,100	35,000	30,825	1	4	6,800	27	10,637
123	Grease and tallow.....	38	1,380,348	132,334	339,700	399,599	508,715	39	40	46,350	347	178,606
124	Hairwork.....	37	122,655	35,000	17,000	9,350	61,305	41	2	1,600	98	35,907
125	Hand knit goods.....	8	15,795	1,075	1,200	2,770	10,750	9			44	8,400
126	Hand stamps.....	27	207,217	11,000	7,500	91,146	97,571	31	24	21,543	130	65,083
127	Hardware.....	49	5,264,174	599,830	757,832	1,396,604	2,510,408	48	272	220,855	4,095	1,604,362
128	Hardware, saddlery.....	6	24,950	1,500	1,550	4,200	17,100	7	3	2,166	37	13,356
129	Hat and cap materials.....	6	88,200	12,000	8,000	5,600	62,600	8	2	1,500	27	11,350
130	Hats and caps, not including fur hats and wool hats.....	83	660,985	83,150	41,600	110,797	475,438	108	67	60,459	998	853,676
131	Hosiery and knit goods.....	319	15,743,981	721,967	1,800,357	5,599,572	7,582,055	367	688	638,483	21,540	5,825,783
132	House furnishing goods, not elsewhere specified.....	19	486,641	31,500	84,400	86,969	283,772	30	37	22,216	284	87,994
133	Ice, manufactured.....	73	8,259,861	1,233,100	1,539,675	4,712,816	774,270	51	246	169,993	930	537,748
134	Ink, printing.....	7	471,000	73,000	74,000	74,000	276,907	7	29	60,824	78	47,947
135	Ink, writing.....	7	37,804	2,050	1,850	11,400	22,504	8	3	3,124	21	9,328
136	Instruments, professional and scientific.....	36	1,284,738	53,000	166,950	359,903	704,885	53	105	119,175	781	366,570
137	Iron and steel.....	291	309,729,222	23,030,601	46,149,423	94,760,497	145,788,701	130	5,068	6,184,780	110,864	61,908,405
138	Iron and steel, bolts, nuts, washers, and rivets.....	15	3,169,800	489,120	340,005	1,170,236	1,179,379	18	76	96,591	1,948	602,502
139	Iron and steel, forgings.....	24	2,568,629	239,734	168,118	805,369	1,355,408	27	91	103,250	1,392	777,957
140	Iron and steel, nails and spikes, cut and wrought, including wire nails.....	13	2,059,954	121,588	238,400	1,049,928	600,038	8	57	58,489	856	312,026
141	Iron and steel, pipe, wrought.....	10	11,698,057	886,043	2,314,582	3,966,839	4,530,593	1	121	151,100	3,675	1,678,961
142	Ironwork, architectural and ornamental.....	93	7,621,620	851,695	698,238	1,235,141	4,836,496	102	355	330,133	4,085	2,066,160
143	Ivory and bone work.....	6	89,190	1,000	3,000	24,500	60,690	6	6	7,000	107	39,454
144	Japanning.....	6	26,680	2,000	8,000	3,870	12,810	7	1	300	23	8,753
145	Jewelry.....	22	684,932	15,000	5,000	119,098	545,834	28	60	38,987	434	200,793
146	Jewelry and instrument cases.....	6	51,750			13,300	41,450	8	5	2,560	76	28,928

SPECIFIED INDUSTRIES: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.						COST OF MATERIALS USED.				Value of products, including custom work and repairing.
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not including internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.			
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.											
69	\$39,688					\$10,746	\$1,200	\$1,638	\$7,908		\$301,588	\$893,130	\$8,453	\$1,146,807	77	
978	441,968	9	\$2,013	18	\$1,562	76,569	1,784	3,692	71,068	\$25	461,576	412,886	49,090	1,212,665	78	
388	233,680	234	32,317	8	1,120	57,210	12,946	5,102	39,162		981,064	968,833	12,231	1,828,976	79	
395	212,368	788	202,283	7	1,230	531,699	26,581	3,843	441,275	60,000	2,034,841	2,018,351	21,490	3,969,064	80	
254	135,361	142	44,809	6	1,069	65,286	24,273	4,989	32,799	3,275	103,314	89,788	13,526	603,241	81	
4,013	1,905,718	316	93,706	357	66,328	556,083	68,990	23,296	455,595	3,205	3,174,507	2,823,064	351,443	7,038,012	82	
251	117,169	5	1,250	1	125	158,252	1,785	3,272	153,134	61	661,444	638,997	22,447	1,269,246	83	
6,600	3,677,780	1,054	294,236	163	30,721	1,647,426	50,943	30,674	1,318,786	217,023	11,372,739	11,220,120	152,619	19,112,665	84	
582	323,732	2	500	13	3,211	88,191	30,224	602	25,875	31,490	833,076	828,739	4,337	1,632,931	85	
180	82,326	9	2,951	11	1,719	19,122	13,850	155	5,117		60,888	53,098	7,790	259,365	86	
74	39,210	1	416			37,556	1,080	519	35,957		63,004	57,356	5,708	209,295	87	
93	25,907	32	6,508	6	908	4,806	1,428	352	2,858	168	48,443	44,501	8,942	127,005	88	
62	34,326	2	450	4	631	9,197	7,530	11	1,423	233	14,145	12,800	1,345	130,508	89	
342	208,797	199	58,466	16	2,224	53,756	19,969	709	32,078	1,000	186,280	181,620	4,769	805,990	90	
23	12,808			1	156	7,416	1,878	148	890	4,500	4,155	4,081	74	49,055	91	
33	14,980	100	31,841	6	936	14,169	7,720	132	6,317		101,916	99,083	2,833	243,486	92	
598	312,357	27	7,405	4	600	200,371	3,215	10,889	180,267		1,500,252	1,467,531	32,721	2,595,180	93	
135	51,901	237	46,929	48	6,367	21,920	11,724	307	8,889	1,000	226,976	221,516	2,460	509,190	94	
74	29,890	1	600			11,678	1,200	410	10,068		88,715	84,216	4,499	160,683	95	
764	351,773			1	100	238,324	15,023	10,414	203,364	9,623	2,684,272	2,529,728	54,544	3,644,320	96	
815	374,379	164	46,859	140	24,307	111,768	4,124	4,704	102,666	274	457,756	418,767	38,989	1,236,486	97	
6	3,073	19	5,955	1		1,875	520	191	661		24,691	24,379	315	66,811	98	
42	19,165	11	2,840	1	72	22,241	6,743	503	12,945	2,050	153,619	152,741	878	326,475	99	
2,180	1,039,307			16	2,562	607,372	171,032	95,731	400,199	350	30,506,466	30,347,301	219,165	36,639,423	100	
353	148,355	128	31,410	14	2,380	115,861	13,693	2,676	99,487		985,816	962,471	22,345	1,611,890	101	
62,096	33,045,261	130	35,481	602	118,779	6,830,037	385,694	480,572	5,672,375	341,396	62,336,770	60,379,209	1,957,561	127,292,440	102	
129	69,579					15,557	1,190	2,859	12,098		399,113	355,664	13,449	634,152	103	
211	81,345	206	35,833	51	6,001	58,788	3,527	1,409	53,700	162	499,353	492,358	7,015	801,250	104	
87	74,487	166	60,676	7	1,050	65,605	34,623	973	29,759	250	402,009	399,729	2,280	876,435	105	
2,043	984,782	714	182,006	133	19,884	351,729	9,536	6,956	315,322	19,885	1,866,866	1,824,251	42,615	4,243,352	106	
274	142,586	1,615	455,506	236	40,974	62,110	22,800	891	38,919		1,927,214	1,921,609	5,605	3,171,757	107	
1,074	577,547	171	55,428	17	2,608	203,985	93,406	5,768	47,551	57,260	942,485	928,971	13,514	2,704,917	108	
6,146	2,689,388	80	16,347	186	26,024	462,296	81,494	21,697	344,657	14,358	4,443,877	4,369,373	74,501	9,804,677	109	
19	13,400					710	40	195	475		1,985	1,561	424	22,500	110	
331	135,188			7	1,275	23,511	4,656	2,347	16,538		1,330,097	1,287,110	12,987	1,847,611	111	
963	487,639	41	9,956	14	3,406	148,592	44,797	3,076	97,219	3,500	809,548	849,731	19,817	1,928,898	112	
133	68,159	4	804	5	1,000	15,718	4,063	480	10,165	1,020	200,790	198,301	2,489	351,307	113	
3,143	1,506,116	21	120			1,113,998	436,500	50,329	627,169		3,150,655	3,095,008	55,647	7,870,562	114	
848	430,476	4	4,250	3	546	46,731	6,405	2,186	37,780	300	680,817	669,594	14,283	1,550,606	115	
15,136	9,338,261	1,546	414,250	2,738	534,980	1,867,879	12,465	100,838	1,723,445	31,131	6,435,463	6,013,691	1,421,772	22,011,130	116	
739	363,485	161	42,487	44	6,175	56,323	24,434	1,659	29,327	903	449,952	438,070	16,882	1,262,983	117	
16	4,800	27	4,959			893	223	40	620		20,737	20,524	203	42,236	118	
509	207,737	15	4,405	25	6,500	176,093	133	13,426	162,264	270	1,240,467	1,170,022	70,445	1,699,567	119	
137	73,794	44	12,904	8	1,632	4,072	729	1,792	1,551		341,534	339,879	1,655	483,192	120	
6	3,956	1	260			3,240	1,834	31	1,925		90,070	90,255	424	114,109	121	
27	10,637					2,672	1,371	184	1,117		16,645	13,889	2,766	59,374	122	
347	178,606					138,946	9,226	5,652	124,066		1,887,360	1,846,004	41,356	2,501,671	123	
16	10,714	81	25,011	1	132	11,665	7,441	864	3,020	340	47,605	46,759	846	148,829	124	
		44	8,400			1,000	856	42	178		7,650	7,695	45	33,363	125	
108	60,997	11	2,200	11	1,886	18,480	8,840	367	9,273		51,833	49,427	2,456	207,628	126	
3,466	1,493,762	258	56,097	371	54,503	221,804	11,191	22,368	187,785	460	1,833,331	1,759,827	73,554	4,843,866	127	
35	13,096			2	260	1,585	654	74	857		17,426	16,363	1,063	48,955	128	
17	8,966	7	1,760	3	624	4,282	2,870	360	1,052		99,586	99,460	126	136,821	129	
880	201,869	601	149,919	17	1,883	56,004	25,930	1,099	26,235	2,740	803,741	797,403	6,338	1,682,442	130	
3,725	1,599,766	13,789	3,648,805	4,076	577,212	1,884,722	107,905	26,416	1,012,198	708,203	10,928,113	10,750,770	177,343	21,896,063	131	
104	36,873	171	49,493	9	1,628	56,664	6,683	1,730	39,401	8,850	433,990	429,430	4,560	660,252	132	
930	537,748					290,339	24,474	24,748	241,679	33	392,481	156,929	235,555	2,038,504	133	
76	47,427	1	260	1	260	33,477	2,705	1,072	29,700		204,482	193,089	6,393	407,966	134	
15	7,704	6	1,624			4,854	2,224	50	2,580		23,262	23,054	208	49,638	135	
654	319,108	120	46,394	7	1,068	134,728	18,787	2,143	113,798		479,624	463,174	16,450	1,828,101	136	
109,420	61,600,400	308	62,801	4,136	245,204	17,815,789	1,165,741	745,165	15,327,353	607,530	283,142,785	253,605,188	29,537,597	434,445,200	137	
1,736	556,235	21	8,750	192	37,517	114,984	6,060	11,704	97,220		2,108,225	2,036,096	72,129	3,502,375	138	
1,314	763,550			78	14,407	145,228	7,969	608	122,039	8,217	1,945,801	1,842,725	103,076	3,369,543	139	
726	285,148	114	24,481	16	2,447	42,061	980	2,740	37,716	625	818,003	784,725	33,278	1,497,715	140	
3,625	1,671,443			50	7,5											

TABLE 7.—MANUFACTURES BY

	MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
147	Jute and jute goods	5	\$1,611,510	\$156,798	\$222,550	\$238,656	\$393,506	4	14	\$16,624	\$1,116	\$272,694
148	Knobin and other earth grinding	33	1,691,435	108,680	133,714	231,838	1,217,203	35	41	73,272	572	214,590
149	Kindling wood	15	1,102,378	19,675	110,050	643,297	329,351	7	38	34,332	836	292,224
150	Labels and tags	9	88,195	2,000	3,000	47,200	35,995	10	10	9,436	87	18,427
151	Lamps and reflectors	18	580,779	26,350	102,053	171,125	281,251	21	34	46,332	334	176,014
152	Lapidary work	3	3,800			700	3,100	3			4	3,000
153	Lasts	5	100,676	18,000	19,922	21,494	41,260	5	4	4,134	72	36,914
154	Lead, bar, pipe, and sheet	7	1,006,766	128,000	93,000	250,395	535,371	10	36	47,690	141	74,958
155	Leather goods	27	877,231	60,400	44,450	95,821	676,560	42	101	103,894	1,180	365,668
156	Leather, tanned, curried, and finished	254	57,320,227	8,816,196	7,730,782	3,782,110	36,991,131	260	506	643,895	13,396	5,457,518
157	Lime and cement	251	15,567,849	1,988,300	2,926,305	6,516,068	4,137,176	262	203	203,591	4,559	1,783,718
158	Liquors, distilled	73	5,840,034	387,340	1,322,203	598,454	3,532,037	99	97	123,339	471	250,348
159	Liquors, malt	208	63,684,480	6,270,152	17,290,687	12,476,071	27,647,570	171	816	1,474,092	4,505	2,884,242
160	Liquors, vinous	3	180,681	2,700	16,700	2,231	109,000	3			7	1,700
161	Lithographing and engraving	27	1,248,118	41,500	55,500	740,237	410,881	34	61	78,384	747	330,223
162	Lock and gun smithing	197	436,909	99,570	85,027	98,149	154,163	215	9	5,222	311	141,539
163	Looking-glass and picture frames	184	737,579	24,912	28,750	81,028	602,889	221	110	69,036	596	253,482
164	Lumber and timber products	2,338	47,832,548	19,339,297	1,862,845	7,998,310	18,682,096	3,078	506	429,044	18,510	5,550,163
165	Lumber, planing mill products, including sash, doors, and blinds	542	14,191,248	1,778,264	1,816,084	2,378,087	8,218,813	765	527	450,697	7,472	3,516,650
166	Malt	8	804,877	99,000	142,000	44,224	519,653	8	15	26,200	55	29,380
167	Mantels, slate, marble, and marbleized	6	65,873	4,700	8,800	3,235	48,638	5	12	9,570	40	23,220
168	Marble and stone work	339	8,065,083	1,375,372	354,713	1,025,774	5,309,219	444	246	261,475	6,654	3,032,062
169	Masonry, brick and stone	608	8,885,592	837,450	937,221	765,544	5,845,377	785	298	282,732	11,355	6,063,076
170	Matches	5	109,905	5,350	24,185	50,052	30,318	2	6	6,088	90	29,854
171	Mattresses and spring beds	78	986,421	69,150	122,833	123,664	670,764	90	93	69,370	791	301,202
172	Millinery and lace goods	41	670,499	97,000	48,500	81,804	443,195	50	75	57,053	946	305,195
173	Millinery, custom work	1,344	3,264,454	489,990	567,442	99,575	2,107,447	1,544	446	153,662	2,913	820,005
174	Mineral and soda waters	233	1,966,872	128,930	214,786	563,066	1,070,090	296	168	87,102	746	289,331
175	Mirrors	15	353,184	17,200	37,088	69,845	229,101	16	36	34,895	360	141,937
176	Models and patterns	67	397,946	10,300	22,575	118,439	246,032	86	14	14,220	397	246,666
177	Monuments and tombstones	390	1,712,125	328,398	194,236	169,044	1,020,397	474	44	27,524	923	552,760
178	Mucilage and paste	16	277,955	2,500	6,007	239,448	239,448	19	37	37,079	92	27,371
179	Musical instruments and materials, not specified	20	438,746	25,700	49,400	63,977	299,669	27	14	8,030	152	77,000
180	Musical instruments, organs and materials	17	526,281	25,428	72,180	38,062	390,616	23	19	31,235	274	149,738
181	Musical instruments, pianos and materials	14	863,099	67,100	121,200	72,436	602,368	13	45	60,061	438	265,267
182	Needles and pins	4	15,665	250	1,150	8,500	5,765	6	1	720	18	7,976
183	Oil, linseed	4	879,628	75,600	141,740	168,944	403,344	2	36	30,038	111	59,914
184	Oil, not elsewhere specified	32	3,921,835	162,000	130,147	280,020	3,348,978	25	168	299,416	174	103,375
185	Optical goods	66	795,953	106,000	65,000	273,919	351,039	80	94	60,908	573	198,038
186	Painting, house, sign, etc	1,512	2,550,393	320,435	374,345	296,909	1,558,644	1,712	133	93,263	5,278	2,923,319
187	Paints	66	10,263,515	1,501,877	1,333,808	2,767,768	4,600,092	47	405	453,024	1,649	736,111
188	Paper and wood pulp	73	16,424,107	925,950	2,752,700	7,289,030	5,456,337	74	281	385,478	4,840	1,939,128
189	Paper goods, not elsewhere specified	15	572,866	63,000	73,749	65,950	370,167	16	28	30,475	233	106,056
190	Paper hanging	389	1,328,273	135,390	242,204	186,387	761,232	428	94	73,677	1,228	638,109
191	Paper hangings	13	2,194,106	72,834	222,668	812,526	1,086,078	8	96	183,658	921	482,109
192	Patent medicines and compounds	151	2,905,363	145,525	192,141	323,352	2,244,350	160	354	265,341	936	360,931
193	Paving and paving materials	188	4,275,018	297,729	506,848	671,867	2,798,574	206	174	156,797	4,719	2,147,380
194	Perfumery and cosmetics	26	327,311	77,000	13,250	23,020	273,471	33	60	52,437	191	54,373
195	Petroleum, refining	38	26,530,504	1,188,955	1,009,855	9,865,515	13,919,179	40	277	403,466	3,299	1,681,603
196	Photographic materials	14	229,605	11,400	19,500	57,700	141,005	15	24	23,276	129	53,224
197	Photography	576	1,379,004	107,647	152,485	589,243	530,229	637	129	79,936	873	363,154
198	Photolithographing and photoengraving	17	295,250	15,000	31,000	147,100	102,150	22	43	35,479	270	169,460
199	Pickles, preserves, and sauces	40	2,981,813	226,522	559,617	209,471	1,986,203	54	762	704,652	1,730	514,591
200	Pipes, tobacco	6	150,363	10,000	18,000	34,175	93,188	7	4	3,754	229	99,077
201	Plastering and stucco work	207	862,864	54,300	69,360	197,587	541,617	253	19	18,230	868	496,078
202	Plated and britannia ware	4	67,319	20,000	5,000	24,034	13,285	4	3	2,440	48	19,318
203	Plumbers' supplies	21	3,457,043	354,800	557,157	579,552	1,965,134	19	183	200,145	1,588	854,669
204	Plumbing, and gas and steam fitting	1,552	6,032,993	631,717	907,303	666,393	3,887,580	1,854	375	244,340	5,688	3,173,035
205	Pocketbooks	6	101,550			6,864	94,686	10	10	8,810	113	34,318
206	Pottery, terra cotta, and fire-clay products	143	11,308,786	2,080,698	3,570,302	1,386,793	4,270,993	172	408	450,905	8,872	3,007,354
207	Printing and publishing, book and job	740	14,226,342	520,071	808,694	6,143,792	6,733,785	866	990	886,971	7,190	3,357,306
208	Printing and publishing, music	13	489,238	25,000	20,000	183,142	261,146	20	38	47,840	236	94,442
209	Printing and publishing, newspapers and periodicals	1,042	23,952,145	2,366,820	3,297,929	9,333,799	8,963,697	1,169	3,028	2,812,873	9,565	5,094,769
210	Printing materials	10	46,736			17,998	28,738	11	5	1,845	35	12,830
211	Pumps, not including steam pumps	17	113,034	33,850	34,950	14,770	29,464	21	4	3,784	27	12,964
212	Refrigerators	5	245,388	46,000	58,000	37,588	103,800	5	6	4,700	177	94,500
213	Regalia and society banners and emblems	18	189,308	12,300	12,950	49,382	114,076	22	20	12,128	146	59,604
214	Roofing and roofing materials	455	4,820,223	1,329,709	453,176	948,658	2,087,680	571	249	177,213	4,713	2,021,593
215	Rubber and elastic goods	11	924,106	42,700	92,919	272,721	515,760	14	30	43,836	599	275,699
216	Saddlery and harness	1,039	2,678,539	275,444	431,797	258,207	1,713,991	1,098	79	57,333	1,477	633,382
217	Safes and vaults	6	753,307	22,000	39,406	199,230	442,621	3	52	55,424	370	163,669
218	Sand and emery paper and cloth	3	324,314	8,000	8,000	21,000	295,314	1	17	40,216	75	43,558
219	Sausage	20	87,825	18,800	23,900	16,680	28,445	25	1	1,000	54	24,972
220	Saws	12	4,602,089	326,051	462,234	663,619	3,150,185	15	87	98,299	1,411	734,612
221	Scales and balances	8	394,497	9,000	20,000	112,278	253,219	10	21	25,532	213	122,135

SPECIFIED INDUSTRIES: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.
Men, 16 years and over..		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not including internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.	
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.									
370	\$138,647	453	\$92,609	293	\$41,438	\$63,030	\$300	\$1,711	\$38,622	\$22,397	\$775,641	\$767,938	\$7,708	\$1,318,167
572	214,590					57,076	15,562	2,956	36,441	2,117	273,639	242,729	\$0,910	714,813
631	227,502	188	61,692	17	3,030	35,245	915	2,643	19,894	11,793	296,561	292,578	3,983	821,105
24	10,720	53	6,590	10	1,117	5,295	3,106	80	1,859	250	52,320	51,445	875	100,753
305	168,112	7	2,249	22	5,653	43,837	8,070	1,873	33,894		185,068	177,939	7,129	533,025
4	3,000					388	312		26		1,101	1,020	81	8,500
67	35,659	2	720	3	535	5,130	1,616	494	3,020		20,273	18,507	1,706	37,330
141	74,958					49,288	14,099	3,376	31,813		1,331,962	1,322,074	9,888	1,567,091
533	253,331	536	99,404	111	12,923	106,384	21,476	1,968	30,490	2,450	821,776	818,273	3,503	1,830,672
12,839	5,311,200	287	84,078	270	62,240	2,432,724	47,955	136,805	2,214,026	3,933	42,403,503	42,182,568	220,935	55,615,009
4,499	1,772,083			60	11,680	504,297	38,071	24,071	370,533	71,622	2,333,212	1,499,645	\$63,567	6,790,392
431	243,788	37	6,265	3	295	2,665,533	36,420	39,658	2,539,103	397	1,568,569	1,492,459	76,110	5,337,255
4,490	2,881,215	6	1,346	9	1,681	13,039,371	52,307	335,263	12,651,551	250	6,609,839	6,085,932	523,957	29,102,733
7	1,700					961	25	368	456	112	29,446	29,446		53,800
615	294,385	103	31,310	29	4,528	110,608	23,355	1,644	64,929	20,740	339,638	349,142	10,496	1,099,078
270	134,450	3	1,946	38	5,743	33,307	21,925	2,798	7,514	1,070	150,061	141,958	3,103	529,530
503	233,168	49	12,797	44	7,517	94,628	60,646	1,472	26,625	5,785	674,849	668,215	6,634	1,496,655
13,337	5,521,469	42	7,756	131	20,938	930,867	44,783	207,053	666,336	12,615	20,777,869	20,770,826	7,043	85,749,965
7,297	3,482,416	66	18,355	109	15,779	693,316	89,371	50,499	383,500	171,946	9,441,629	9,319,813	121,816	16,736,839
55	29,380					13,700	5,200	2,376	6,124		331,571	324,906	6,665	452,765
40	23,220					3,987	1,530	224	2,183		62,914	62,852	62	141,017
6,639	3,009,524	1	495	14	2,043	483,136	49,181	32,328	195,079	211,545	2,555,869	2,471,481	64,338	7,699,255
11,349	6,061,734			6	1,342	2,909,404	47,525	37,017	230,150	2,594,712	10,598,180	10,570,316	27,861	23,768,787
40	19,774	40	8,496	10	1,581	1,530	65	109	1,356		46,899	44,161	1,378	82,866
574	236,988	205	61,574	12	2,340	96,410	32,695	2,403	61,400	12	1,148,205	1,140,375	7,330	1,838,377
113	61,107	810	211,403	23	2,685	83,269	32,673	2,650	47,946		792,429	786,314	6,115	1,564,008
20	13,618	2,348	800,134	46	6,233	391,659	208,338	15,744	106,057	1,020	3,276,413	3,252,636	23,727	6,178,960
549	239,175	170	46,345	27	3,811	284,144	24,392	6,211	253,291	250	1,070,576	1,000,037	70,539	2,334,986
266	122,767	81	16,061	13	2,509	33,875	5,165	1,269	27,411		508,065	503,551	5,111	831,116
389	245,423	3	658	5	885	27,947	17,431	650	9,616	250	137,007	123,552	3,455	579,557
921	552,421			2	339	91,113	22,259	7,373	34,144	27,337	1,083,924	1,073,880	10,044	2,363,955
56	21,035	34	5,870	3	466	34,756	6,800	287	27,669		370,203	367,350	2,853	551,074
146	75,897	6	1,103			16,335	1,679	654	13,221	731	61,409	59,127	2,282	221,064
266	147,010	6	2,270	2	458	38,343	2,839	664	32,774	2,016	210,879	205,926	4,953	509,802
420	263,067			13	2,200	68,197	6,682	1,823	54,692		402,349	387,983	14,366	978,331
11	6,474	2	572	5	930	781	474	20	287		2,029	1,609	420	22,100
111	59,914					23,966		2,331	21,135		1,423,342	1,412,125	11,217	1,551,153
169	102,427	2	443	3	500	1,490,522	4,477	3,783	1,432,262		1,997,743	1,970,712	27,031	5,336,300
231	126,448	309	66,002	33	5,583	70,800	33,710	2,243	34,722	1,325	300,071	302,751	7,320	1,007,443
5,231	2,913,899	3	886	44	8,664	235,885	125,133	10,762	73,280	26,720	2,037,805	2,027,799	10,006	7,317,863
1,557	711,635	87	23,512	5	964	511,533	26,541	23,208	408,839	52,855	5,203,343	5,060,009	143,334	9,137,970
4,033	1,809,391	756	170,721	51	9,016	1,090,321	22,010	64,069	973,712	30,530	6,374,315	6,746,949	627,966	12,907,900
176	79,793	106	26,113	1	150	20,548	9,271	1,503	9,271	900	649,583	645,141	4,439	950,261
1,192	692,709	21	3,271	15	2,129	135,117	60,872	4,264	74,048	5,938	725,628	720,814	4,814	2,260,915
608	363,538	127	30,910	186	31,641	252,094	36,707	5,678	209,709		1,847,719	1,823,417	24,302	2,393,037
454	239,048	469	119,997	13	1,886	1,050,749	54,869	6,573	938,495	812	1,456,916	1,438,479	18,437	4,368,534
4,709	2,145,439			10	1,941	238,400	35,585	8,801	469,342	14,872	2,725,507	2,679,270	46,237	6,719,576
42	19,261	135	33,174	14	1,938	98,821	16,966	827	82,028		253,367	251,025	1,742	611,965
3,142	1,600,397	1	505	156	20,701	640,429	2,027	42,530	588,008	7,264	27,513,735	26,787,453	726,282	34,977,705
88	41,598	35	10,708	6	918	28,009	8,956	511	18,542		147,220	144,509	2,717	339,232
486	253,188	349	103,986	38	5,980	218,747	144,921	4,199	62,254	7,373	583,820	575,516	11,301	1,934,225
245	163,593	14	4,189	11	1,678	37,911	9,348	519	23,861	4,183	58,805	52,870	5,935	379,314
955	370,296	760	142,395	15	1,900	1,172,444	10,822	10,944	1,160,678		2,423,255	2,401,609	26,646	5,239,807
195	91,047	19	5,340	15	2,690	8,217	1,350	417	6,420		107,131	104,778	2,353	231,715
863	495,860			5	713	59,025	11,961	1,986	14,874	30,204	509,600	505,919	3,681	1,389,280
35	14,897	12	4,265	1	156	2,800	1,560	312	928		18,187	17,362	825	55,810
1,540	843,809	27	6,918	21	3,942	133,968	13,792	10,879	108,572	725	1,676,012	1,612,253	63,759	3,156,248
5,617	3,160,680	3	845	63	11,510	439,668	207,658	23,694	180,564	47,852	6,539,858	6,488,002	48,256	13,439,596
57	21,921	45	10,872	11	1,525	13,910	5,176	8,734	64,720		65,167	64,720	447	132,464
8,120	2,885,794	409	60,173	843	61,387	402,589	17,551	43,253	321,803	19,982	2,451,980	1,905,192	546,788	8,127,429
5,114	2,820,590	1,650	471,765	426	64,961	1,841,852	327,986	21,891	637,544	854,931	3,873,618	3,754,941	118,677	12,833,204
166	77,936	67	15,944	3	562	47,045	13,552	592	17,843	16,658	108,792	106,509	2,283	373,345
7,841	4,677,768	1,125	345,945	599	71,056	3,621,281	383,907	79,411	2,201,493	951,530	5,969,783	5,		

TABLE 7.—MANUFACTURES BY

MANUFACTURING AND MECHANICAL INDUSTRIES.		Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
222	Sewing machine repairing.....	32	\$29,034	\$2,950	\$900	\$10,799	\$14,885	31	1	\$1,040	33	\$15,992
223	Sewing machines and attachments.....	4	506,452	100,750	118,450	205,804	81,448	1	15	10,708	160	80,008
224	Ship and boat building, wooden.....	35	283,401	58,550	59,450	44,790	120,611	41	13	8,680	257	119,719
225	Shipbuilding, iron and steel.....	2	13,858,081	2,505,514	4,551,982	2,042,882	4,757,703	148	148	245,221	6,820	3,425,226
226	Shirts.....	164	3,050,840	92,365	180,223	452,436	2,325,816	228	347	289,452	6,888	1,719,307
227	Shoddy.....	26	972,070	83,650	145,600	254,181	488,689	19	34	24,746	368	148,240
228	Show cases.....	5	90,542	13,328	21,192	11,022	45,000	8	3	1,690	73	41,300
229	Silk and silk goods.....	121	20,894,023	491,598	3,688,545	6,096,158	10,017,722	181	745	718,776	21,028	4,629,626
230	Silverware.....	4	165,600	32,000	10,000	65,000	58,600	7	10	6,412	55	88,736
231	Slaughtering and meat packing, wholesale.	68	6,009,347	700,563	1,291,502	675,700	3,341,582	101	849	289,165	1,383	733,932
232	Slaughtering, wholesale, not including meat packing.	43	539,230	64,800	140,700	52,984	272,246	57	27	27,988	286	186,258
233	Smelting and refining, not from the ore.	16	864,072	66,500	101,800	81,426	614,346	18	72	49,996	213	109,827
234	Soap and candles.....	60	2,984,308	209,800	382,297	400,657	1,991,551	78	166	152,936	811	296,169
235	Soda water apparatus.....	3	589,867			34,464	555,403	5	35	60,960	165	78,204
236	Sporting goods.....	13	282,685	9,300	55,100	41,020	177,265	16	16	24,894	376	124,638
237	Springs, steel, car and carriage.....	8	2,668,841	184,943	182,860	400,504	1,900,534	12	56	132,822	523	828,579
238	Stamped ware.....	13	2,299,712	31,800	130,300	1,025,764	1,111,848	7	95	111,769	1,238	518,695
239	Stationery goods, not elsewhere specified.	13	485,430	3,300	5,900	181,141	295,089	13	17	16,910	416	122,786
240	Steam fittings and heating apparatus.....	37	1,780,279	122,900	194,204	336,008	1,127,167	26	145	164,473	992	479,652
241	Steam packing.....	22	1,822,886	48,000	207,562	646,325	921,999	31	186	184,246	655	277,658
242	Stencils and brands.....	8	23,875	6,500	2,500	10,650	4,225	12			10	4,296
243	Stereotyping and electrotyping.....	19	336,825			164,934	171,891	28	39	31,462	328	177,674
244	Sugar and molasses, refining.....	7	23,922,552	2,750,000	2,060,000	2,649,719	16,542,833	15	119	185,078	1,249	647,592
245	Surgical appliances.....	29	576,849	34,800	86,050	135,685	320,314	30	46	49,467	267	133,436
246	Taxidermy.....	10	18,885	7,150	3,000	745	7,990	10			5	1,612
247	Tin and terne plate.....	25	2,027,029	233,500	267,947	915,349	1,610,233	11	139	147,202	1,573	813,692
248	Tinsmithing, coppersmithing, and sheet-iron working.	1,338	6,215,346	704,136	1,037,761	1,176,587	3,296,862	1,678	348	269,383	4,679	2,236,044
249	Tobacco, chewing, smoking, and snuff.....	20	1,765,539	181,097	345,063	223,357	1,016,022	26	35	40,065	257	102,395
250	Tobacco, cigars and cigarettes.....	2,664	13,836,368	818,457	1,781,004	740,389	10,495,918	2,928	886	819,995	25,045	8,404,687
251	Tobacco, stemming and rebanding.....	28	616,494	7,140	54,000	4,284	551,070	34	5	8,222	181	38,666
252	Tools, not elsewhere specified.....	51	2,178,318	188,850	253,975	528,600	1,201,884	60	96	123,518	1,122	600,202
253	Toys and games.....	18	476,285	36,400	119,125	113,675	207,085	18	21	31,525	458	145,489
254	Trunks and valises.....	40	410,550	12,350	33,500	37,290	327,410	59	28	19,882	308	139,571
255	Typewriter repairing.....	3	1,530			750	780	4			2	1,326
256	Typewriters and supplies.....	4	416,075	5,000	20,000	86,746	304,329	4	74	67,974	328	178,947
257	Umbrellas and canes.....	47	1,898,856	57,750	83,147	277,644	1,480,315	73	184	198,889	2,832	884,540
258	Upholstering materials.....	30	2,696,332	173,209	358,775	453,888	1,710,469	48	77	92,784	1,321	440,293
259	Varnish.....	27	1,816,481	198,435	183,138	170,350	1,264,598	17	120	172,216	167	119,428
260	Vinegar and cider.....	145	876,011	42,650	71,565	168,965	92,881	161	19	10,836	119	49,563
261	Washing machines and clothes wringers.	14	494,434	25,345	78,418	81,810	308,866	16	15	32,332	353	113,757
262	Watch, clock, and jewelry repairing.....	1,187	1,561,602	192,663	261,610	435,749	671,580	1,260	28	12,064	921	497,239
263	Wheelbarrows.....	3	125,302	6,200	5,400	89,460	24,242	5	4	2,603	22	9,063
264	Whips.....	5	159,765	500	19,500	18,401	121,364	4	9	9,420	112	37,774
265	Window shades.....	23	810,018	45,700	45,600	24,515	194,203	25	30	22,928	147	61,957
266	Wire.....	9	762,482	98,090	161,485	255,942	246,965	6	23	26,756	274	122,422
267	Wirework, including wire rope and cable.	61	2,813,277	118,472	311,511	919,125	1,464,169	67	77	83,492	941	382,576
268	Wood, turned and carved.....	126	1,250,436	103,770	189,665	372,208	584,793	153	67	46,541	1,286	471,818
269	Woodenware, not elsewhere specified.....	21	815,634	26,862	27,820	91,214	169,738	28	26	18,549	321	115,577
270	Wool hats.....	13	750,798	44,500	60,500	75,375	570,423	31	17	8,845	634	255,313
271	Wool pulling.....	7	222,690	20,000	31,700	17,550	153,440	9	4	2,192	85	44,393
272	Woolen goods.....	193	19,405,505	1,051,999	2,576,460	5,612,433	10,164,613	231	353	399,570	13,721	5,091,932
273	Worsted goods.....	51	19,896,558	117,832	1,609,471	6,035,136	12,384,069	35	188	277,081	10,201	3,337,491
274	Zinc, smelting and refining.....	3	1,871,626	59,000	1,150,000	190,000	472,626		9	13,669	448	174,510
275	All other industries ¹	62	13,146,231	796,011	1,515,457	2,413,716	8,421,047	51	365	476,297	5,704	2,758,188

¹ Embraces axle grease, 1; belting and hose, linen, 1; belting and hose, rubber, 1; boots and shoes, rubber, 2; brass, 1; cardboard, 1; cars, street railroad, not including operations of railroad companies, 1; clocks, 2; drug grinding, 2; engravers' materials, 2; firearms, 2; fire extinguishers, chemical, 2; fireworks, 2; fish, canning and preserving, 1; grindstones, 1; hammocks, 1; hones and whetstones, 1; hooks and eyes, 2; horseshoes, factory product, 1; mats and matting, 2;

TABLE 8.—MANUFACTURES IN CITIES

ALLEGHENY.

1	All industries.....	893	\$50,122,503	\$5,698,472	\$6,295,361	\$6,783,766	\$31,445,204	1,040	2,027	\$2,098,121	20,804	\$10,352,502
2	Baskets, and rattan and willow ware.....	3	14,964			785	14,229	5	1	780	25	11,903
3	Bicycle and tricycle repairing.....	6	7,290		3,000	965	3,325	7			3	1,755
4	Blacksmithing and wheelwrighting.....	42	79,675	9,150	14,000	11,447	45,078	53	3	2,050	70	41,774
5	Boots and shoes, custom work and repairing.....	63	24,903	2,250	4,500	5,647	14,506	64			10	3,329
6	Bottling.....	18	104,530	11,700	82,300	14,360	46,170	15	5	2,136	46	27,412

SPECIFIED INDUSTRIES: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.						COST OF MATERIALS USED.				Value of products, including custom work and repairing.
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.			
Average num- ber.	Wages.	Average num- ber.	Wages.	Average num- ber.	Wages.											
29 157 252 6,947 780	\$14,592 79,348 118,619 3,323,216 378,176	4 3 1 5,718	\$1,460 1,560 250 1,288,928	 473 390	 102,010 52,803	\$5,900 21,237 38,628 591,535 371,943	\$5,043 1,020 3,223 2,500 94,098	\$65 1,803 2,251 23,925 3,749	\$882 18,414 8,587 286,774 128,158	 278,336 145,938	\$10,061 96,308 176,498 6,906,703 3,248,666	\$18,180 93,211 171,126 6,903,411 3,209,772	\$881 3,097 2,372 93,262 38,894	\$61,578 210,146 407,763 14,085,395 6,836,928	222 221 224 225 226	
285 73 5,214 54 1,364	126,601 1,718,587 38,586 728,961	80 11,565 12	21,064 2,363,123 3,395	8 4,249 1 7	572 547,916 150 1,576	57,728 6,893 2,451,820 3,810 372,368	11,023 4,256 96,547 1,110 84,842	3,513 521 36,330 737 26,167	40,667 2,116 610,872 1,963 309,074	2,525 1,708,071 2,285	1,069,944 38,850 19,710,481 53,033 15,128,096	1,052,210 37,460 19,710,481 52,083 15,049,815	17,734 1,390 174,888 950 78,281	1,448,886 123,798 31,072,626 178,550 17,826,607	227 228 229 230 231	
282 212 530 163 178	185,506 109,491 239,365 77,684 76,816	1 231 2 176	500 40,584 520 44,384	8 1 47 22	252 336 7,220 3,438	154,604 60,790 482,521 52,409 9,801	96,523 4,541 16,518 9,220 3,280	3,234 2,109 7,717 1,574 666	54,847 51,820 458,286 41,615 5,846	 2,320 	6,473,714 2,063,613 2,093,138 181,000 206,963	6,459,644 2,041,818 2,064,901 179,803 204,980	14,070 21,795 28,237 1,797 1,983	7,412,075 2,519,724 3,613,249 451,102 502,497	232 233 234 235 236	
523 951 232	328,570 392,422 82,828	260 141	120,889 35,390	27 43	5,384 4,508	180,482 74,576 69,374	13,686 10,904 9,055	6,186 5,240 60	180,610 57,582 60,169	 850 100	1,359,690 1,189,411 341,424	1,304,888 1,086,197 338,301	54,802 153,214 3,033	2,535,383 2,274,348 631,534	237 238 239	
962 564	472,073 256,707	15 81	4,056 19,391	15 10	3,523 1,560	141,281 146,544	20,606 13,661	4,962 2,348	115,713 122,862	 7,670	1,001,024 830,378	982,461 805,436	18,563 24,942	2,143,907 1,853,481	240 241	
10 307 1,171 166 5	4,296 173,358 635,231 101,665 1,612	1 60 92	500 8,911 27,359	20 18 9	3,816 3,450 1,412	1,770 81,203 604,871 58,133 1,823	1,422 15,796 11,009 9,630 932	166 23 25,038 1,788 130	182 14,571 561,578 33,705 261	 810 3,000 13,000 	5,762 144,772 33,658,410 182,068 5,231	5,700 136,398 41,459 178,918 5,203	63 8,374 243,951 3,150 31	31,217 517,369 36,163,817 575,383 17,010	242 243 244 245 246	
1,284 4,454	736,818 2,250,145	288 79	75,760 19,921	146	1,114 25,978	82,169 451,007	1,175 162,718	11,202 25,795	69,792 237,773	 25,421	10,364,084 4,866,702	10,323,583 4,833,213	40,501 63,489	12,530,991 9,455,892	247 248	
107 13,660 94	58,208 5,605,101 24,141	148 10,085 60	43,918 2,631,713 12,085	2 1,300 27	269 167,873 2,440	451,243 6,448,701 11,742	2,051 228,844 1,295	5,772 34,963 698	443,420 6,181,967 9,809	 2,927	423,245 11,570,888 502,733	419,155 11,505,930 502,204	4,090 64,958 529	1,247,397 31,483,141 625,394	249 250 251	
1,081 219 277 2 326	591,953 105,744 131,813 1,326 178,647	13 80 20 2	2,500 21,805 5,831 300	25 129 11	5,749 17,910 1,927	68,627 37,623 51,056 413 50,172	15,142 2,456 18,381 388 5,915	9,527 1,227 675 951	43,908 32,230 25,600 25 43,306	50 1,710 6,500 	1,061,493 152,530 274,194 2,312 75,417	1,065,212 148,176 178,370 2,265 74,120	56,281 4,354 1,854 47 1,297	2,528,777 455,225 622,698 7,265 443,069	252 253 254 255 256	
1,002 481 165 118 295	430,459 221,732 119,088 49,394 104,521	1,610 762 1 1 58	414,556 205,973 240 9,236	220 78 1 1 58	39,531 12,588 100 169 9,236	258,589 138,554 201,497 14,805 20,778	42,465 18,440 4,054 3,485 802	2,747 6,415 5,474 1,311 822	213,302 109,755 131,477 10,009 17,504	75 3,941 57,492 1,160	3,445,131 1,828,380 1,391,371 268,805 437,161	3,423,800 1,807,040 1,381,497 260,036 433,556	21,331 21,340 9,874 8,769 3,605	5,873,878 2,881,818 2,161,495 490,877 634,443	257 258 259 260 261	
845 22 85 126 246	483,261 9,063 32,136 54,977 117,512	19 15 18 13	5,942 3,390 6,414 2,250	57 12 3 15	8,033 2,248 566 2,660	209,494 855 22,290 18,622 8,003	137,515 125 1,092 4,094 1,950	7,429 176 65 1,538 1,422	40,676 554 21,133 12,790 5,531	23,814 200 	474,052 35,533 60,838 190,551 378,452	459,606 35,263 60,180 189,333 360,480	14,446 270 618 1,218 17,972	2,134,421 60,445 141,175 375,066 607,415	262 263 264 265 266	
754 1,141 225 366 85	341,947 446,005 98,067 178,238 41,393	136 77 65 195 1	35,006 15,358 13,388 66,932 	51 68 31 73	5,623 10,455 4,122 10,143	90,809 58,575 28,808 19,501 7,323	10,137 15,412 5,846 4,700 2,580	5,321 3,380 650 2,316 840	74,576 38,508 22,372 12,485 3,908	775 1,275 2,764 	1,441,911 590,994 166,166 603,468 9,231	1,421,245 577,389 163,402 618,719 6,321	20,666 13,605 2,764 14,740 2,910	2,280,474 1,467,600 409,378 1,106,076 96,314	267 268 269 270 271	
7,588 3,776 448 4,276	3,305,619 1,708,640 174,510 2,373,245	4,967 4,596 1,167	1,575,655 1,309,610 338,982	1,166 1,829 261	210,658 319,211 45,961	1,444,778 1,686,639 4,869 701,834	117,422 110,023 43,333	43,379 20,749 1,935 15,784	1,014,310 1,133,745 2,934 630,452	289,667 416,172 12,315	15,874,544 14,737,131 896,192 7,515,710	15,595,418 14,553,128 829,601 7,355,893	279,126 181,006 1,521,307 159,907	25,389,344 22,109,392 1,521,307 13,057,452	272 273 274 275	

millstones, 1; nets and seines, 1; oil, essential, 2; oil, lard, 1; oilcloth, enameled, 1; oilcloth, floor, 2; oleomargarine, 1; pens, fountain and stylographic, 2; pens, steel, 1; phonographs and graphophones, 2; photographic apparatus, 2; salt, 1; saws, machine, 2; starch, 1; tinfoil, 2; type founding, 2; vault lights and ventilators, 1; watch and clock materials, 1; watch cases, 2; watches, 1; wood, preserving, 1; wool scouring, 1.

BY SPECIFIED INDUSTRIES: 1900.

ALLUGHENY.

17,820	\$9,753,687	2,467	\$498,848	517	\$99,987	\$5,120,269	\$204,342	\$179,698	\$9,781,492	\$954,737	\$29,473,781	\$28,516,193	\$962,568	\$54,136,967	1
24	11,435	1	468			1,297	1,114	46	137		15,228	15,196	32	36,884	2
3	1,753					991	731	88	222		3,359	3,267	92	11,619	3
70	41,774					8,321	5,896	954	1,156	315	35,496	33,907	1,589	150,253	4
9	3,225			1	104	5,068	4,304	261	503		15,658	15,019	609	55,991	5
45	26,892	1	520			11,847	2,500	3,543	5,299		147,320	146,322	998	254,020	6

TABLE 8.—MANUFACTURES IN CITIES

ALLEGHENY—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES.		Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
7	Boxes, wooden packing	8	\$21,013	\$12,000	\$5,000	\$3,548	\$3,495	3	2	\$498	10	\$8,719
8	Bread and other bakery products.....	42	342,431	76,800	119,025	60,071	86,535	44	35	23,159	207	85,499
9	Brooms and brushes	4	76,540	950	925	5,798	68,867	4	3	3,200	46	14,805
10	Carpentering.....	52	490,505	52,000	48,175	49,044	341,286	66	19	16,311	503	321,141
11	Carriages and wagons.....	19	142,977	41,600	30,250	20,259	50,868	26	1	700	70	42,427
12	Cars and general shop construction and repairs by steam railroad com- panies.....	4	1,213,619	770,000	129,300	92,702	221,617	-----	68	57,716	1,202	701,331
13	Clothing, men's, custom work and re- pairing.....	50	168,723	4,900	42,400	6,542	114,531	59	3	1,373	203	102,700
14	Clothing, women's, dressmaking	46	67,709	2,500	2,500	7,611	55,098	54	14	18,480	172	55,421
15	Confectionery.....	11	270,150	25,000	71,000	37,300	136,850	17	27	23,708	238	75,130
16	Dyeing and cleaning.....	3	25,460	4,000	6,000	5,140	10,320	3	3	1,194	33	15,385
17	Foundry and machine shop products.....	35	6,557,760	730,458	871,533	1,834,137	3,121,632	34	231	211,180	2,935	1,670,132
18	Furniture, cabinetmaking, repairing, and upholstering.....	9	12,030	-----	-----	1,768	10,252	9	2	200	11	4,430
19	Furniture, factory product.....	3	82,547	-----	5,500	1,150	25,897	7	3	2,217	39	21,823
20	Glass, cutting, staining, and ornament- ing.....	3	11,885	-----	-----	2,115	9,770	4	1	800	15	9,348
21	Hardware.....	3	356,025	20,000	50,000	52,000	234,025	4	8	13,500	251	63,516
22	Ice, manufactured	4	516,500	123,000	83,500	320,000	20,000	5	8	10,200	70	43,773
23	Iron and steel.....	6	3,382,800	423,045	418,043	868,194	1,673,513	-----	88	103,186	2,322	1,413,491
24	Ironwork, architectural and orna- mental.....	4	122,950	35,100	17,500	29,538	40,812	5	7	3,972	99	42,941
25	Leather, tanned, curried, and finished.....	9	2,189,995	217,717	320,195	181,279	1,470,804	8	33	51,609	430	185,940
26	Liquors, malt	4	3,412,639	472,888	519,171	532,759	1,837,871	-----	30	43,458	150	91,980
27	Lock and gun smithing	6	4,740	-----	1,000	2,055	1,685	6	-----	-----	1	156
28	Looking-glass and picture frames.....	5	74,258	2,000	3,000	1,140	68,118	8	11	7,000	47	13,073
29	Lumber, planing mill products, includ- ing sash, doors, and blinds.....	9	272,117	39,000	34,900	52,967	145,250	17	7	6,117	143	86,483
30	Marble and stone work.....	5	335,174	101,500	17,586	49,260	166,828	5	15	18,865	354	143,694
31	Masonry, brick and stone.....	24	544,628	72,850	20,908	46,230	404,520	36	20	45,514	1,017	433,077
32	Mattresses and spring beds.....	4	99,363	-----	-----	11,788	87,575	4	17	15,656	119	40,648
33	Millinery, custom work.....	18	96,392	7,200	25,800	7,360	56,032	23	34	8,670	96	23,728
34	Mineral and soda waters.....	4	16,100	3,000	1,200	5,000	6,900	5	-----	-----	15	6,136
35	Monuments and tombstones.....	8	32,861	21,000	5,500	23,159	33,205	8	2	1,518	52	30,979
36	Painting, house, sign, etc.....	48	112,540	9,250	6,770	9,564	86,666	56	6	3,524	291	145,477
37	Paints	3	306,245	37,000	49,000	33,915	186,324	3	20	19,350	48	17,890
38	Paper hanging	3	3,260	300	500	170	2,290	4	-----	-----	7	3,702
39	Photography.....	10	13,627	-----	-----	9,210	4,417	11	-----	-----	12	5,404
40	Pickles, preserves, and sauces.....	5	2,472,552	178,450	451,000	114,072	1,729,030	6	699	672,156	1,444	409,120
41	Plastering and stuccowork	9	41,063	7,950	6,100	4,154	23,769	12	1	1,350	42	32,747
42	Plumbing, and gas and steam fitting.....	48	282,994	27,750	44,457	19,610	191,177	58	25	19,139	223	152,205
43	Printing and publishing, book and job.....	16	79,566	-----	-----	59,844	19,722	20	7	4,728	87	40,394
44	Roofing and roofing materials.....	20	223,101	33,000	37,900	42,340	114,861	23	10	9,254	93	51,305
45	Saddlery and harness.....	10	29,388	2,500	5,300	1,080	20,508	10	-----	-----	13	7,326
46	Slaughtering and meat packing, whole- sale.....	8	1,497,666	238,400	477,276	141,236	640,754	13	52	57,800	438	233,028
47	Soap and candles.....	4	228,503	12,100	35,260	24,113	157,021	6	20	20,573	40	19,726
48	Tinsmithing, coppersmithing, and sheet-iron working.....	15	226,938	26,500	51,981	44,605	103,852	21	10	8,360	165	84,377
49	Tobacco, cigars and cigarettes.....	54	333,523	43,964	71,421	41,481	176,657	56	18	13,753	734	156,669
50	Varnish.....	3	31,834	-----	7,462	6,512	67,830	3	19	27,688	11	9,535
51	Watch, clock, and jewelry repairing.....	20	31,097	1,500	5,420	7,240	19,937	20	-----	-----	24	12,827
52	All other industries ¹	93	22,945,380	1,697,900	2,141,728	1,832,872	17,272,830	110	414	535,414	6,123	3,138,696

¹ Embraces agricultural implements, 1; ammunition, 1; awnings, tents, and sails, 2; axle grease, 1; bookbinding and blank book making, 2; boxes, cigar, 2; boxes, fancy and paper, 1; brass castings and brass finishing, 1; brick and tile, 2; bronze castings, 1; carpets, rag, 2; cars and general shop construction and repairs by street railroad companies, 1; cars, steam railroad, not including operations of railroad companies, 1; chemicals, 1; china decorating, 1; clothing, women's, factory product, 2; Collins, burial cases, and undertakers' goods, 1; coopers, 2; electrical apparatus and supplies, 2; electrical construction and repairs, 2; electroplating, 1; felt goods, 1; flavoring extracts, 1; flouring and grist mill products, 1; food preparations, 2; galvanizing, 1; gas and lamp fixtures, 1; gas and oil stoves, 2; glass, 1; grease and tallow, 1; hairwork, 2; hardware, saddlery, 1; instruments, professional and scientific, 1; iron and steel, bolts, nuts,

ALLENTOWN.

1	All industries.....	491	\$11,996,971	\$819,039	\$2,328,729	\$3,155,260	\$5,693,943	617	390	\$325,762	8,447	\$3,150,970
2	Bicycle and tricycle repairing.....	9	9,600	200	200	7,150	2,050	20	2	928	6	2,726
3	Blacksmithing and wheelwrighting.....	14	34,447	14,400	10,055	8,825	6,167	18	1	208	23	13,717
4	Boots and shoes, custom work and repairing.....	26	5,645	1,100	1,827	1,695	1,023	31			6	2,017
5	Boots and shoes, factory product.....	9	649,410	75,450	98,749	101,601	373,610	14	38	25,301	663	210,372
6	Bread and other bakery products.....	24	148,714	22,224	85,930	18,625	21,885	20	17	7,598	102	39,238
7	Brick and tile.....	5	118,325	32,400	38,900	16,200	30,826	9	2	1,000	95	29,357
8	Brooms and brushes.....	4	9,800	850	3,050	1,250	4,550	4	1	306	22	7,568
9	Carpentering.....	16	89,337	4,260	2,137	2,915	80,025	21			196	122,015
10	Carriages and wagons.....	7	63,500	21,900	22,425	3,250	15,925	10			34	16,945
11	Clothing, men's, custom work and repairing.....	13	24,030			1,595	22,435	19			35	15,394

BY SPECIFIED INDUSTRIES: 1900—Continued.

ALLEGHENY—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
10	\$3,719					\$1,834	\$390	\$300	\$644		\$33,972	\$33,644	\$328	\$15,613	7
147	73,737	56	\$10,872	4	\$890	20,107	8,826	3,699	7,582		287,836	277,979	9,857	502,184	8
20	10,074	25	4,511	1	220	11,908	1,380	22	6,045	\$1,461	56,490	56,126	364	100,028	9
500	320,015	1	520	2	606	853,664	7,432	2,744	12,954	830,534	456,205	453,930	2,275	1,866,970	10
98	42,159			2	268	9,501	3,993	1,637	2,399	1,472	43,788	41,972	1,816	147,599	11
1,190	697,586	7	2,202	5	1,543	45,120		12,278	32,847		372,164	360,989	11,175	1,176,331	12
133	77,977	68	23,905	5	818	18,379	13,283	1,412	2,554	1,130	122,712	121,288	1,424	321,720	13
6	5,125	164	49,966	2	330	10,932	8,483	173	2,226	50	49,684	48,747	937	182,445	14
89	44,778	143	29,426	6	926	15,770	3,130	2,002	10,638		404,205	400,636	3,569	594,359	15
17	10,813	16	4,672			3,481	360	236	2,885		12,660	11,705	955	42,060	16
2,879	1,656,036			56	14,036	802,323	16,868	25,486	259,395	580	3,018,049	2,930,333	87,666	5,662,507	17
9	4,020	1	260	1	150	2,099	1,624	7	568		9,242	8,833	359	23,719	18
39	21,823					3,665	1,045	192	2,428		61,817	61,617	200	107,833	19
15	9,348					2,140	970	32	840	298	6,629	6,373	256	26,508	20
91	41,916	100	14,600	60	7,000	3,710	1,100	1,720	890		195,658	193,780	1,878	355,810	21
70	43,773					13,837	2,400	2,163	9,274		15,380	4,585	10,795	111,212	22
2,301	1,409,908			21	3,583	369,956	1,300	12,789	353,167	2,700	4,196,922	3,693,977	502,945	7,985,673	23
97	42,523			2	418	11,555	622	1,371	9,502		87,784	81,106	3,678	162,792	24
418	183,742	8	1,338	4	860	90,674		8,180	82,494		1,137,677	1,128,173	9,504	1,582,386	25
150	91,980					530,122		21,777	508,345		336,705	319,716	16,989	1,253,205	26
85	11,500			1	156	895	714	13	168		2,641	2,589	52	8,835	27
143	86,483	6	918	6	655	5,862	3,300	134	2,428		75,966	75,853	118	136,760	28
						20,291	4,230	1,717	14,344		197,517	193,418	4,129	376,441	29
353	143,460			1	234	25,433	1,772	1,746	8,008	13,907	148,155	145,673	2,482	385,272	30
1,017	433,077					112,261	3,163	1,663	19,455	87,980	407,249	404,295	2,954	1,234,559	31
84	30,166	33	10,177	2	300	9,088	5,130	103	3,855		173,244	172,432	812	254,346	32
1	208	91	22,690	4	830	18,980	15,041	602	3,337		109,567	108,054	1,513	185,597	33
14	5,980			1	156	1,388	768	83	437		6,789	6,390	399	26,165	34
52	30,979					6,628	830	891	3,857		29,620	29,016	604	81,485	35
284	144,069			7	1,408	8,030	3,863	555	3,612		95,618	95,099	414	335,059	36
44	17,020	2	400	2	470	18,755	1,000	1,755	16,000		245,500	243,870	1,630	348,300	37
7	3,702					228	143	33	52		3,492	3,492		10,157	38
9	4,708	3	696			4,362	3,875	45	442		7,366	7,134	232	20,704	39
766	290,335	666	116,955	12	1,800	1,130,523	1,680	9,193	1,119,750		1,932,242	1,912,220	20,022	4,429,382	40
42	32,747					4,031	456	301	3,721		88,879	88,254	625	154,672	41
223	151,229			5	976	19,298	10,194	1,621	7,383	100	217,000	215,634	1,366	503,338	42
62	33,391	17	5,528	8	1,475	10,800	6,580	107	3,199	914	42,482	41,658	824	129,289	43
91	53,905			2	400	18,057	2,219	2,052	12,099	2,287	198,746	195,908	2,838	338,118	44
13	7,326					2,373	2,008	129	236		15,154	14,925	228	36,434	45
426	229,648	7	2,080	6	1,300	111,546	1,340	11,376	96,645	2,285	3,338,805	3,319,446	19,359	3,996,807	46
35	18,842	1	156	4	728	18,372	409	1,501	16,462		146,617	145,036	1,581	245,230	47
164	84,169			1	203	11,463	1,689	2,055	7,719		171,644	169,426	2,218	325,647	48
112	51,040	525	92,705	97	12,924	272,990	5,097	2,197	265,696		166,923	164,817	2,076	690,210	49
11	9,535					39,872	1,135	290	38,447		167,035	166,258	777	278,797	50
21	12,489			3	838	4,826	3,728	260	538	300	4,551	4,137	414	37,164	51
5,414	2,991,546	525	103,353	184	43,797	897,110	36,377	36,214	819,095	5,424	10,364,415	10,139,779	224,636	16,799,430	52

washers, and rivets, 2; iron and steel, forgings, 2; kaolin and other earth grinding, 1; lamps and reflectors, 1; lead, bar, pipe, and sheet, 1; lime and cement, 2; lumber and timber products, 2; malt, 1; mirrors, 1; models and patterns, 2; nutclage and paste, 2; musical instruments and materials, not specified, 1; oil, linseed, 1; patent medicines and compounds, 2; paving and paving materials, 2; perfumery and cosmetics, 1; petroleum, refining, 1; plumbers' supplies, 2; pottery, terra cotta, and fire-clay products, 1; printing and publishing, newspapers and periodicals, 1; pumps, not including steam pumps, 1; salt, 1; sausage, 1; ship and boat building, wooden, 2; springs, steel, car and carriage, 1; stamped ware, 1; tin andterne plate, 1; tools, not elsewhere specified, 2; trunks and valises, 2; vinegar and cider, 1; washing machines and clothes wringers, 1; wire, 1; wirework, including wire rope and cable, 1; wood, turned and carved, 1; wool pulling, 2.

ALLEGHTOWN.

5,251	\$2,479,054	2,574	\$596,527	622	\$73,389	\$1,310,643	\$79,022	\$28,480	\$338,971	\$364,170	\$9,846,047	\$9,435,081	\$410,966	\$16,947,722	1
5	2,676			1	50	1,227	966	28	233		6,241	5,970	271	16,462	2
26	13,717					819	431	161	177	50	16,272	15,593	679	52,934	3
6	2,017					1,365	1,227	42	96		6,935	6,810	125	22,571	4
378	140,127	206	59,015	79	11,230	18,728	835	3,102	14,625	166	585,998	582,981	3,017	900,976	5
83	36,942	7	1,406	7	890	5,362	2,415	994	1,953		118,931	115,125	3,806	232,229	6
90	28,571			5	786	6,794	3,200	792	2,802		14,798	6,412	8,386	75,714	7
22	7,568					675	86	35	7,576		7,616	7,576	40	24,325	8
196	122,015					23,857	210	154	2,563	25,900	201,339	204,179	160	434,322	9
34	16,945					2,231	60	279	1,592	300	14,898	14,315	583	51,897	10
26	13,394	9	2,000			3,691	2,818		876		39,900	39,568	332	72,414	11

TABLE 8.—MANUFACTURES IN CITIES

ALLENTOWN—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES.		Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
12	Clothing, men's, factory product.....	6	\$203,625	\$32,000	\$42,000	\$7,795	\$121,830	12	20	\$9,714	207	\$78,085
13	Clothing, women's, dressmaking.....	30	16,277	3,450	5,650	2,635	4,542	32	3	731	68	16,644
14	Confectionery.....	7	17,942	500	1,000	6,800	9,582	9	3	731	28	11,805
15	Foundry and machine shop products.....	13	878,895	65,282	106,820	198,270	508,523	22	29	24,596	616	323,232
16	Furniture, factory product.....	6	402,458	39,468	67,500	36,003	258,887	7	35	32,506	398	156,970
17	Hosiery and knit goods.....	5	102,600	100	500	53,900	48,100	8	12	14,920	255	57,078
18	Iron and steel.....	5	3,147,958	160,000	725,000	775,757	1,487,201	25	25	32,652	1,129	615,403
19	Leather, tanned, carried, and finished.....	3	132,088	2,000	3,000	3,700	123,388	7	1	310	21	9,280
20	Liquors, malt.....	4	632,926	90,500	219,315	176,684	146,437	5	10	20,652	47	32,688
21	Looking-glass and picture frames.....	4	2,065			890	1,675	8	1	566	5	2,174
22	Lumber, planing mill products, including sash, doors, and blinds.....	7	157,206	12,786	25,545	48,753	70,122	12	4	2,001	102	46,473
23	Masonry, brick and stone.....	13	112,669	12,700	7,750	11,495	80,724	18	1	500	360	167,431
24	Millinery, custom work.....	29	41,067	2,800	3,600	1,604	33,063	35	10	3,874	61	17,759
25	Monuments and tombstones.....	6	13,892	1,000	200	875	11,817	6			8	4,175
26	Painting, house, sign, etc.....	37	19,971	3,780	2,870	4,006	9,315	45			82	43,519
27	Paper hanging.....	7	15,460	3,300	5,700	850	5,610	7			13	7,064
28	Paving and paving materials.....	3	52,020		600	15,820	35,600	2	4	3,720	31	14,144
29	Photography.....	9	21,235	3,450	6,700	7,500	3,585	10			9	3,682
30	Plastering and stucco work.....	4	2,051	200	30	105	1,719	9			18	9,956
31	Plumbing, and gas and steam fitting.....	14	75,216	4,000	11,000	6,000	54,216	22	4	1,329	47	21,061
32	Printing and publishing, book and job.....	8	66,048	6,000	5,621	32,536	21,888	11	3	1,118	30	11,803
33	Printing and publishing, newspapers and periodicals.....	9	250,600	20,000	81,000	103,600	46,000	13	2	1,700	81	41,052
34	Roofing and roofing materials.....	4	13,122	4,000	1,000	2,012	6,110	6	1	416	19	8,063
35	Saddlery and harness.....	5	23,595	10,000	7,000	2,170	7,425	6	4	2,194	15	8,324
36	Silk and silk goods.....	7	2,149,130	54,400	471,855	697,558	925,317	4	65	67,616	2,380	607,247
37	Tinsmithing, coppersmithing, and sheet-iron working.....	13	88,930	8,700	11,800	29,050	39,880	17	8	4,282	52	24,752
38	Tobacco, cigars and cigarettes.....	48	195,806	8,400	13,740	10,468	158,198	47	20	15,242	308	95,900
39	Watch, clock, and jewelry repairing.....	8	7,600			3,540	4,050	8	1	260	8	4,210
40	All other industries ¹	50	1,998,667	97,339	233,607	756,608	911,113	54	66	49,519	864	247,507

¹ Embraces awnings, tents, and sails, 1; bookbinding and blank book making, 2; boot and shoe uppers, 1; bottling, 1; boxes, cigar, 2; boxes, fancy and paper, 1; brass castings and brass finishing, 2; carpets, rag, 1; cars and general shop construction and repairs by steam railroad companies, 1; china decorating, 2; clothing, women's, factory product, 1; coffins, burial cases, and undertakers' goods, 1; cooperage, 2; cutlery and edge tools, 1; druggists' preparations, not including prescriptions, 1; dyeing and cleaning, 2; electrical construction and repairs, 2; electroplating, 1; flouring and grist mill products, 1; furniture, cabinet-

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1 All industries.....	230	\$8,108,819	\$506,098	\$1,751,119	\$2,682,558	\$3,169,044	267	380	\$266,527	8,090	\$4,619,828
2 Blacksmithing and wheelwrighting.....	12	9,250	3,175	1,475	1,425	3,175	13			9	3,955
3 Boots and shoes, custom work and repairing.....	23	6,500	700	575	2,000	3,135	25			12	4,500
4 Bread and other bakery products.....	11	20,470	3,200	4,500	6,325	6,445	12	6	2,494	40	16,756
5 Carpentering.....	6	104,500	2,100	1,650	2,100	98,650	9	3	3,000	66	42,500
6 Carriages and wagons.....	5	11,645	4,000	3,600	1,610	2,305	7			8	4,520
7 Cars and general shop construction and repairs by steam railroad companies.....	3	5,153,590	257,500	1,181,300	1,561,006	2,153,784		244	169,569	6,500	4,016,877
8 Clothing, men's, custom work and repairing.....	24	50,620	12,000	2,000	3,935	32,685	25			83	30,212
9 Confectionery.....	7	44,600	7,000	8,800	13,300	15,500	8	6	3,018	35	9,786
10 Flouring and grist mill products.....	3	20,900	600	4,500	6,900	8,900	3			6	2,700
11 Liquors, malt.....	3	288,000	41,000	65,000	75,000	107,000	5	6	5,300	31	16,700
12 Lock and gun smithing.....	3	560			460	100	3			1	100
13 Lumber, planing mill products, including sash, doors, and blinds.....	7	153,075	39,700	18,700	35,125	64,550	7	5	2,604	98	52,108
14 Millinery, custom work.....	8	38,900	4,000	2,800	3,800	28,300	8	2	1,200	50	14,300
15 Painting, house, sign, etc.....	15	31,425	4,400	4,150	5,275	17,600	16	5	1,746	61	32,573
16 Paper hanging.....	3	9,160			135	9,025	3			10	5,275
17 Paying and paying materials.....	5	6,350			2,550	3,800	5			16	6,700
18 Photography.....	5	10,850	5,000	1,000	3,900	950	5	1	195	4	996
19 Plumbing, and gas and steam fitting.....	19	47,865	5,950	15,175	4,090	22,650	24	2	780	40	18,585
20 Printing and publishing, newspapers and periodicals.....	6	132,700	15,300	9,400	86,500	21,500	7	12	10,536	136	58,272
21 Roofing and roofing materials.....	5	10,920	250	650	1,720	8,300	4	2	1,050	17	6,796
22 Saddlery and harness.....	4	14,910	5,500	4,500	850	4,060	5			5	2,640
23 Tinsmithing, coppersmithing, and sheet-iron working.....	7	24,350	4,700	5,700	4,300	9,650	8	3	1,392	22	9,384
24 Tobacco, cigars and cigarettes.....	3	10,250			1,150	9,100	3	3	1,700	32	8,995
25 Watch, clock, and jewelry repairing.....	11	5,985	400	800	3,125	1,660	16			4	3,450
26 All other industries ¹	32	1,896,544	89,623	414,844	855,857	536,220	46	80	61,913	804	251,258

¹ Embraces bicycle and tricycle repairing, 2; brick and tile, 1; brooms and brushes, 1; carpets, rag, 2; china decorating, 1; clothing, men's, factory product, 1; coffins, burial cases, and undertakers' goods, 1; cooperage, 1; dyeing and cleaning, 1; electrical construction and repairs, 1; foundry and machine shop products, 2; furniture, cabinetmaking, repairing, and upholstering, 1; furniture, factory product, 1; gas, illuminating and heating, 1; glass, 1; ice, manufactured, 2; looking-

BY SPECIFIED INDUSTRIES: 1900—Continued.

ALLENTOWN—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
90	\$45,883	114	\$31,875	3	\$327	\$14,697	\$5,600		\$9,097		\$270,197	\$268,296	\$1,901	\$456,290	12
17	336	67	16,308			3,115	2,217	\$89	800		2,777	2,369	408	45,055	13
1	8,205	11	3,600			1,652	1,295	12	405		37,665	36,965	700	60,629	14
616	328,232					21,333	4,871	1,243	15,219		630,681	612,478	18,203	1,242,589	15
369	151,999	10	1,841	19	3,130	22,659	1,900	1,227	20,732		147,022	144,201	2,821	398,607	16
28	10,342	198	43,290	29	3,446	7,699	2,200	121	5,878		189,075	187,462	1,613	325,847	17
1,129	615,403					441,633	6,724	3,176	431,733		2,955,300	2,627,430	327,870	4,443,782	18
21	9,280					3,040	300	395	2,345		90,908	90,571	837	110,850	19
47	32,688					113,804		6,291	107,513		87,175	82,158	5,017	310,725	20
5	2,174					411	300		51		2,911	2,841	70	8,145	21
101	46,317			1	156	5,826	402	531	4,893		92,155	89,180	2,975	188,653	22
360	167,431					13,825	235	190	6,854	\$6,516	270,429	270,074	355	563,400	23
8	4,175	59	17,524	2	235	11,013	9,174	80	1,789		69,850	69,012	808	141,162	24
82	43,519					326	221	11	94		7,837	7,789	48	17,766	25
						913	610	110	193		14,158	14,050	108	193,280	26
13	7,064					439	268	81	90		9,838	9,741	97	24,404	27
31	14,141					289	74	191	24		9,595	9,575	20	29,371	28
6	2,766	3	916			2,383	1,356	140	887		6,998	6,896	102	23,773	29
18	9,596					13	5	3	5		2,463	2,463		20,186	30
47	21,061					4,144	2,139	253	1,702	50	75,695	75,331	364	130,270	31
24	10,153	3	588	3	562	5,116	1,593	112	3,411		15,195	14,188	1,007	44,885	32
79	40,658	1	260	1	134	17,518	2,552	771	12,825	1,400	28,419	26,767	1,652	129,234	33
19	8,063					1,197	422	75	700		25,073	24,985	88	42,500	34
15	8,324					2,906	1,444	204	1,348		10,392	10,283	109	29,670	35
655	254,041	1,405	316,722	320	36,484	372,061	5,150	4,212	31,908	327,791	2,007,977	1,995,664	12,313	3,467,792	36
52	24,752					4,256	2,540	204	1,512		38,264	37,730	534	110,012	37
142	58,980	163	36,446	3	474	69,212	6,450	357	62,405		234,027	232,963	1,064	464,348	38
8	4,210					849	741	108	1,976		2,052	1,976	76	11,400	39
397	165,286	318	66,736	149	15,485	98,412	7,191	2,814	86,440	1,967	1,495,991	1,483,081	12,907	2,114,200	40

making, repairing, and upholstering, 1; gas, illuminating and heating, 1; grease and tallow, 1; hats and caps, not including fur hats and wool hats, 1; ice, manufactured, 1; iron and steel, pipe, wrought, 1; ironwork, architectural and ornamental, 2; jute and jute goods, 1; kaolin and other earth grinding, 1; lime and cement, 1; lock and gun smithing, 1; marble and stone work, 2; mattresses and spring beds, 1; paints, 2; pottery, terra cotta, and fire-clay products, 2; shirts, 1; slaughtering and meat packing, wholesale, 2; tools, not elsewhere specified, 1; window shades, 1.

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7,458	\$1,494,347	432	\$95,013	200	\$30,468	\$350,501	\$39,385	\$10,887	\$242,741	\$57,488	\$8,376,488	\$3,182,520	\$103,968	\$14,250,656	1
9	3,955					1,944	658	74	312		5,549	5,144	405	21,715	2
12	4,500					2,186	1,704	20	412	50	10,974	10,754	220	32,699	3
36	16,310	1	100	3	346	4,153	2,770	115	1,268		49,236	47,869	1,367	97,608	4
66	42,500					29,192	122	137	933	28,000	142,066	142,036	30	259,548	5
8	4,520					910	700	85	175		4,634	4,489	145	16,398	6
6,470	4,009,674	8	3,831	22	3,372	83,134		2,400	80,734		6,216,222	6,070,486	145,736	10,485,802	7
38	20,620	45	9,592			7,239	4,478	225	2,163	373	52,149	51,223	926	121,926	8
15	6,760	14	2,482	6	544	6,153	4,168	245	1,740		19,915	19,240	675	48,850	9
6	2,700					1,980	650	210	220		24,980	24,880	600	32,035	10
31	16,700					80,516	2,200	600	77,716		57,000	51,600	5,400	185,550	11
92	51,250			1	100	757	720		87		435	435		2,400	12
				6	853	12,994	754	1,074	3,166	8,000	138,803	136,283	2,520	234,353	13
60	32,477	48	14,108	2	192	4,167	2,700	100	1,307		61,812	61,520	292	91,380	14
10	6,275	1	96			2,515	1,378	94	1,073		36,410	36,320	90	94,730	15
						1,808	1,200		548		6,148	6,078	70	17,375	16
16	6,700					625	180		95	850	7,799	7,789	10	19,350	17
2	600	2	396			1,076	856	50	170		2,831	2,831		10,525	18
40	18,535					4,172	1,967	199	901	1,105	46,181	45,797	384	94,185	19
127	56,584	4	1,068	5	620	8,308	1,596	743	5,554	410	32,567	30,239	2,328	143,552	20
16	6,700			1	96	641	276	32	333		13,913	13,796	117	28,050	21
5	2,640					417	192	115	110		3,894	3,675	159	10,199	22
17	8,244			5	1,140	1,550	923	90	537		11,555	11,300	255	34,110	23
8	4,260	24	4,675			8,607	960		7,547		12,670	12,545	125	33,750	24
4	3,450					1,648	1,431	12	205		1,647	1,632	15	12,550	25
370	169,893	285	58,665	149	23,200	85,684	6,682	4,317	55,485	19,200	1,417,158	1,385,059	32,099	2,089,011	26

glass and picture frames, 2; marble and stone work, 1; mattresses and spring beds, 1; mineral and soda waters, 2; monuments and tombstones, 2; plastering and stucco work, 2; silk and silk goods, 1; washing machines and clothes wringers, 1.

TABLE 8.—MANUFACTURES IN CITIES

CHESTER.

1	MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and imple- ments.	Cash and sundries.		Num- ber.	Salaries.	Total.	
											Average number.	Wages.
1	All industries	315	\$18,977,710	\$1,565,692	\$3,044,227	\$5,838,218	\$8,520,573	827	324	\$194,821	7,682	\$3,462,196
2	Bicycle and tricycle repairing	4	2,510			1,100	1,410	4			1	410
3	Blacksmithing and wheelwrighting	17	26,440	5,980	5,300	4,175	10,975	20			23	11,040
4	Boots and shoes, custom work and re- pairing.	22	11,050	800	2,300	3,660	4,290	22			14	5,256
5	Bottling	13	88,685	21,460	28,000	11,225	27,900	14	1	780	34	21,190
6	Bread and other bakery products	15	58,125	9,950	24,150	10,775	13,250	17			41	20,061
7	Brick and tile	3	51,600	10,000	10,000	15,500	16,100	3	1	1,200	56	21,000
8	Carpentering	10	200,400	8,440	10,900	4,625	176,535	12			133	74,100
9	Carriages and wagons	6	47,150	12,100	12,900	3,675	13,475	7			26	15,440
10	Clothing, men's, custom work and re- pairing.	13	25,775			2,725	23,050	13			42	17,400
11	Clothing, women's, dressmaking	6	1,355			478	877	6			5	1,075
12	Confectionery	10	38,550	8,500	13,000	3,750	13,300	12			26	10,378
13	Cotton goods	11	3,441,091	170,824	540,666	1,411,142	1,321,459	9	66	106,714	1,906	676,023
14	Foundry and machine shop products	12	1,218,428	124,980	200,000	293,303	540,145	17	27	34,092	523	247,043
15	Furniture, cabinetmaking, repairing, and upholstering.	4	18,100	2,000	2,000	1,150	12,950	5			14	6,250
16	Iron and steel	7	4,577,318	291,799	1,092,519	1,503,810	1,684,190		63	110,197	1,435	782,169
17	Lumber, planing mill products, includ- ing sash, doors, and blinds.	4	106,800	17,000	14,000	20,300	55,000	5	4	4,040	74	33,000
18	Marble and stone work	3	16,270	4,300	750	1,020	10,200	3			20	8,900
19	Masonry, brick and stone	9	34,757			1,857	33,400	10			95	45,600
20	Millinery, custom work	13	44,215	9,500	7,000	5,505	27,150	15			33	8,795
21	Models and patterns	3	25,750	3,700	5,400	4,000	12,650	5			29	19,572
22	Painting, house, sign, etc	11	91,239	23,500	24,300	5,254	38,185	11	5	1,492	83	37,905
23	Paper hanging	3	3,450			400	3,050	3			8	3,500
24	Paving and paving materials	4	12,362	150	700	2,650	8,862	5			39	12,182
25	Photography	6	10,930	500	2,250	5,350	2,890	6			8	2,941
26	Plumbing, and gas and steam fitting	12	74,764	10,800	24,150	8,500	25,314	13	1	375	42	23,185
27	Printing and publishing, book and job	4	14,250			10,700	3,550	5			5	1,800
28	Printing and publishing, newspapers and periodicals.	4	177,621	15,000	86,000	82,121	44,500	4	3	5,500	81	43,697
29	Roofing and roofing materials	4	66,700	7,500	17,500	3,400	38,300	6			34	13,950
30	Saddlery and harness	5	7,210			1,110	6,100	5			6	3,280
31	Ship and boat building, wooden	3	13,550	600	1,900	2,050	9,000	3			10	6,450
32	Tinsmithing, coppersmithing, and sheet-iron working.	9	29,935	6,000	8,900	2,725	12,310	10			14	8,300
33	Tobacco, cigars and cigarettes	8	40,765	7,500	13,500	3,477	16,288	8	2	1,300	37	12,125
34	Watch, clock, and jewelry repairing	9	10,350	1,500	4,000	2,200	2,650	9			7	2,725
35	Woolen goods	3	520,991	41,683	54,000	157,794	267,514	2	13	16,002	385	133,698
36	Worsted goods	3	454,494	3,000	10,400	166,301	274,793	3	5	11,250	369	146,517
37	All other industries ¹	42	7,412,270	740,616	817,712	2,080,951	3,772,961	35	133	201,879	2,024	980,258

¹ Embraces artists' materials, 1; awnings, tents, and sails, 1; belting and hose, leather, 1; brass castings and brass finishing, 2; carpets, rug, 2; cars and general shop construction and repairs by street railroad companies, 1; chemicals, 1; coffins, burial cases, and undertakers' goods, 1; cutlery and edge tools, 1; dyeing and cleaning, 1; dye stuffs and extracts, 1; electrical construction and repairs, 1; gas, illuminating and heating, 1; grease and tallow, 1; ice, manufactured, 1; iron and steel, pipe, wrought, 2; ironwork, architectural and ornamental, 1; lime and cement, 1; liquors, malt, 1; lock and gun smithing, 2; looking-glass and picture

EASTON.

1	All industries	285	\$4,829,879	\$375,530	\$1,108,706	\$1,362,023	\$1,983,620	323	180	\$130,082	3,912	\$1,516,525
2	Bicycle and tricycle repairing	6	3,585	300	200	2,200	885	6			3	1,205
3	Blacksmithing and wheelwrighting	11	20,205	8,800	4,200	2,605	4,700	13			11	4,728
4	Boots and shoes, custom work and repairing	11	2,385	1,300	370	755	460	11			2	747
5	Bread and other bakery products	20	42,150	7,800	15,600	8,830	9,920	21	1	208	52	22,630
6	Brick and tile	3	51,545	18,200	13,520	6,225	13,600	4	2	2,000	35	9,490
7	Carpentering	13	90,103	5,300	2,950	6,025	75,918	15	1	700	161	90,627
8	Clothing, men's, custom work and repairing	17	74,185	7,000	14,000	1,890	51,295	20	1	322	73	32,053
9	Clothing, women's, dressmaking	3	8,900			800	8,100	3			19	8,400
10	Confectionery	9	17,135	2,400	3,900	4,275	6,610	11	2	1,200	21	6,850
11	Electrical construction and repairs	5	10,190			835	9,355	4	3	1,316	12	5,415
12	Flouring and grist mill products	3	82,050	5,000	10,000	16,000	51,050	3			16	8,880
13	Furniture, cabinetmaking, repairing, and upholstering	7	16,760	150	100	750	15,760	7	1	500	12	6,403
14	Kaolin and other earth grinding	3	82,000	4,000	9,000	27,000	42,000	2	2	2,040	35	16,060
15	Liquors, malt	3	489,213	33,000	190,000	125,000	141,213	4	15	9,714	75	33,765
16	Looking-glass and picture frames	3	4,725			625	4,100	3	4	940	5	2,012
17	Lumber, planing mill products, including sash, doors, and blinds	3	56,300	8,150	8,500	19,500	20,150	4	3	1,746	43	21,521
18	Marble and stone work	3	32,940	15,300	2,110	3,230	12,300	9			14	8,400
19	Masonry, brick and stone	5	44,654	800	700	7,151	36,003	8	5	1,264	100	49,330
20	Millinery, custom work	12	61,115	10,000	18,600	990	32,125	14	7	1,751	31	7,899
21	Monuments and tombstones	4	42,826	12,500	1,700	3,850	24,776	9			23	11,050

BY SPECIFIED INDUSTRIES: 1900—Continued.

CHESTER.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average num- ber.	Wages.	Average num- ber.	Wages.	Average num- ber.	Wages.										
5,935	\$2,941,151	1,451	\$469,662	296	\$51,383	\$1,222,400	\$87,265	\$11,250	\$802,561	\$291,315	\$9,261,886	\$8,782,471	\$479,415	\$16,421,725	1
1	410					587	480	7	100		2,860	2,775	85	6,000	2
23	11,040					2,163	1,436	289	488		8,976	8,537	439	36,190	3
14	5,256					3,443	2,941	88	414		10,216	9,933	283	26,610	4
34	21,190					9,857	2,260	5,423	2,174		99,176	98,379	797	161,250	5
37	19,049	4	1,012			5,294	2,447	404	2,443		53,854	51,777	2,077	113,715	6
56	21,000					1,213	500	288	425		6,297	2,842	3,455	37,600	7
133	71,100					116,584	132	239	3,013	113,200	161,840	161,695	145	391,560	8
26	15,440					1,937	460	227	1,250		19,239	18,819	420	48,480	9
26	13,850	16	3,550			4,397	3,619	26	752		23,356	22,698	668	55,200	10
		5	1,075			764	632	4	118		2,200	2,105	95	6,275	11
16	8,624	9	1,650	1	104	6,876	3,116	270	3,490		23,444	22,800	644	56,845	12
793	343,555	926	300,038	187	32,430	214,880	12,800	7,337	115,720	79,023	1,422,744	1,354,208	68,536	2,711,049	13
523	247,043					30,603	1,736	3,851	25,516		452,479	441,003	11,476	832,238	14
13	6,100	1	150			3,219	1,320	69	1,830		28,975	28,765	210	45,300	15
1,435	782,169					277,604	10,000	7,722	259,882		1,535,101	1,288,898	246,203	2,938,450	16
74	33,000					5,417	1,800	217	3,400		76,725	76,150	575	155,000	17
20	8,900					372	12	180	180		15,910	15,845	65	28,300	18
95	46,600					7,148	108	50	1,090	5,900	45,785	45,745	40	124,450	19
		33	8,795			5,775	4,343	227	1,205		34,362	34,037	325	64,100	20
29	19,572					884	150	138	476	120	8,510	7,980	530	36,000	21
83	37,905					3,787	654	557	2,576		54,650	54,293	357	113,000	22
8	3,500					599	366	13	210		3,060	3,007	53	8,450	23
39	12,182					787	88	24	675		19,715	19,715		39,390	24
6	2,285	2	656			1,405	971	34	400		3,987	3,787	200	12,000	25
42	28,185					3,500	936	418	2,006	200	49,805	49,564	331	99,800	26
3	1,544			2	256	746	640		106		3,548	3,390	158	15,900	27
69	39,827	7	2,920	5	950	6,833	967	477	5,389		21,255	19,325	1,930	102,914	28
34	13,950					1,144	272	276	596		24,047	23,922	125	60,750	29
6	3,260					1,662	928	19	715		4,642	4,569	73	11,400	30
8	6,000			2	450	617	170	47	400		6,175	6,175		17,775	31
14	8,300					1,667	901	228	538		19,474	19,269	205	44,900	32
12	6,126					6,840	1,356	247	5,237		22,639	22,235	404	58,112	33
7	2,725			5	800	1,423	1,008	99	316		3,990	3,735	255	15,350	34
228	92,021	125	40,737	32	5,940	34,319	4,760	1,549	21,310	3,700	398,333	391,279	7,054	701,569	35
130	61,216	209	79,499	40	5,802	52,289	200	11,988	38,181	1,920	607,416	601,027	6,389	916,369	36
1,908	951,227	91	24,380	22	4,651	403,725	10,968	10,565	296,940	87,252	3,984,011	3,859,188	124,823	6,288,894	37

frames, 2; mattresses and spring beds, 1; mineral and soda waters, 1; monuments and tombstones, 1; musical instruments, pianos and materials, 1; patent medicines and compounds, 1; petroleum, refining, 1; plastering and stuccowork, 2; pottery, terra cotta, and fire-clay products, 1; refrigerators, 1; shipbuilding, iron and steel, 1; shirts, 1; shoddy, 2; slaughtering and meat packing, wholesale, 1; wirework, including wire rope and cable, 1.

EASTON.

2,684	\$1,266,156	945	\$199,747	283	\$50,622	\$485,029	\$33,398	\$12,102	\$183,383	\$256,146	\$3,794,496	\$3,725,688	\$68,808	\$6,746,078 1
3	1,205					484	394	5	85		1,796	1,703	93	5,425 2
11	4,728					686	534	118	34		4,802	4,447	355	17,550 3
2	747					550	514	16	20		3,059	2,942	117	9,112 4
45	21,654			7	976	2,386	1,582	287	467		39,592	37,133	2,459	159,334 5
32	9,108			3	382	603		178	425		6,087	1,160	4,927	24,000 6
160	90,211			1	416	90,938		78	528	89,774	122,592	122,358	234	340,260 7
59	28,938	12	2,780	2	335	4,074	3,316	29	729		51,139	50,539	600	118,254 8
6	3,600	13	4,500			1,392	1,240		152		9,845	9,575	270	21,500 9
14	5,861	5	626	2	360	2,985	2,279	101	605		23,912	23,320	592	44,987 10
11	5,265			1	150	886	696		190		5,517	5,403	114	16,398 11
16	8,880					2,598	1,251	297	1,050		97,079	96,544	535	117,226 12
11	6,211	1	192			1,074	948	3	123		13,582	13,410	172	26,588 13
85	16,960					1,577	300	147	1,130		50,331	47,220	3,111	80,931 14
74	33,657			1	108	81,308		2,660	78,648		56,686	53,821	2,865	210,640 15
4	1,837			1	175	919	598		321		2,927	2,805	122	15,600 16
43	21,521					1,378	150	168	1,060		36,388	35,923	465	71,040 17
14	8,100					1,037	100	92	845		10,000	9,839	161	23,500 18
100	49,330					149	12	15	122		23,437	23,307	130	88,238 19
		29	7,634	2	265	3,484	2,069	235	1,180		43,230	42,790	440	79,842 20
23	11,050					4,783		93	1,690	3,000	12,300	12,085	215	42,500 21

TABLE 8.—MANUFACTURES IN CITIES

EASTON—Continued.

	MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
22	Painting, house, sign, etc.	11	\$7,695	\$100	\$100	\$1,090	\$6,405	13			28	\$14,011
23	Paper hanging	8	31,495	2,000	1,000	1,145	27,350	8	7	\$2,796	33	14,506
24	Photography	3	5,400			3,400	2,000	3	1	84	1	432
25	Plumbing, and gas and steam fitting	15	35,370	100	200	3,680	31,390	17			32	17,814
26	Printing and publishing, newspapers and periodicals.	6	164,711	10,500	26,000	79,396	48,815	7	4	1,986	108	46,623
27	Roofing and roofing materials	3	12,600	2,700	3,650	750	5,500	6			13	5,975
28	Saddlery and harness	3	42,900	11,000	16,000	2,900	13,000	3	1	600	12	5,876
29	Tinsmithing, coppersmithing, and sheet-iron working.	13	89,525	4,900	7,750	6,305	20,570	15			28	12,614
30	Tobacco, cigars and cigarettes	17	29,359	1,600	1,650	868	25,241	15			48	19,479
31	Watch, clock, and jewelry repairing	12	14,730	4,000	1,500	6,305	2,925	11			12	4,761
32	All other industries	50	3,212,488	198,630	755,406	1,018,348	1,240,104	54	120	100,912	2,854	1,026,639

¹ Embraces awnings, tents, and sails, 1; bookbinding and blank book making, 1; boots and shoes, factory product, 1; bottling, 2; boxes, cigar, 2; boxes, fancy and paper, 1; brass castings and brass finishing, 1; brooms and brushes, 2; carpets, rag, 2; carriages and wagons, 2; cars and general shop construction and repairs by steam railroad companies, 1; clothing, men's, factory product, 2; coffins, burial cases, and undertakers' goods, 1; cordage and twine, 1; dyeing and cleaning, 1; flags and banners, 1; foundry and machine shop products, 2; gas, illuminating and heating, 1; hosiery and knit goods, 1; ice, manufactured, 1; iron

ERIE.

1 All industries	644	\$20,418,016	\$1,361,284	\$3,483,998	\$5,543,480	\$10,020,254	718	679	\$702,343	9,339	\$4,574,625
2 Awnings, tents, and sails	3	3,935	1,200	950	535	1,250	3			2	610
3 Bicycle and tricycle repairing	14	19,000	800	300	8,275	10,225	16			19	8,370
4 Bicycles and tricycles	3	436,110	9,300	87,080	180,579	159,151	1	42	27,119	258	142,386
5 Blacksmithing and wheelwrighting	25	34,120	12,600	9,875	5,800	6,345	29			24	14,706
6 Boots and shoes, custom work and repairing.	65	33,285	6,450	7,550	6,710	12,575	65			16	8,983
7 Bottling	5	24,854			12,063	12,191	5	2	900	18	11,696
8 Brass castings and brass finishing	3	63,236	7,000	7,500	16,228	32,508	4			27	18,061
9 Bread and other bakery products	28	187,513	27,300	49,500	68,856	41,887	27	13	12,134	103	43,182
10 Carpentry	21	242,748	35,463	37,900	31,380	134,455	24	11	13,292	255	153,947
11 Carpets, rag	8	5,640	1,150	1,500	1,490	1,500	8			1	1,000
12 Carriages and wagons	3	35,922	14,550	9,400	2,140	9,832	6	1	500	22	11,592
13 Clothing, men's, custom work and repairing.	51	124,700	10,300	12,350	9,940	92,110	60	6	3,200	175	86,339
14 Clothing, women's, dressmaking	13	4,265			1,340	2,925	14			35	12,230
15 Confectionery	16	43,650	10,200	9,250	8,475	15,625	16	7	2,828	24	11,092
16 Cooperage	5	108,310	16,400	21,000	21,010	49,900	4	7	8,680	112	34,448
17 Dyeing and cleaning	3	5,700	700	2,500	2,150	850	3			4	2,375
18 Flouring and grist mill products	7	242,633	46,500	49,000	86,653	60,500	12	10	12,112	40	21,095
19 Foundry and machine shop products	41	9,075,309	511,717	1,075,912	1,606,360	5,881,320	28	259	293,911	3,702	1,969,136
20 Furniture, cabinetmaking, repairing, and upholstering.	14	28,762	5,000	5,100	3,135	15,527	17	1	600	14	7,010
21 Hairwork	4	1,785			185	1,600	4			2	599
22 Liquors, malt	5	1,100,467	79,090	357,778	387,568	276,081		30	46,240	115	90,440
23 Lock and gun smithing	4	10,400	1,500	2,500	2,350	4,050	5			3	1,500
24 Looking-glass and picture frames	7	16,270	1,100	1,100	810	13,260	7			6	2,800
25 Lumber, planing mill products, including sash, doors, and blinds.	11	726,629	86,588	108,343	123,421	408,277	19	32	31,386	297	120,526
26 Masonry, brick and stone	3	6,075			575	5,500	4			32	21,900
27 Millinery, custom work	19	79,506	18,400	13,300	2,295	45,511	24	10	2,800	63	28,291
28 Models and patterns	3	10,870	1,000	2,000	3,552	4,318	5			6	3,766
29 Monuments and tombstones	6	65,505	21,000	8,580	11,675	24,250	7	6	2,300	28	26,750
30 Optical goods	3	3,300			1,550	1,750	4			2	625
31 Painting, house, sign, etc.	34	37,780	1,900	2,100	5,950	27,630	39	1	260	95	57,231
32 Patent medicines and compounds	7	54,924	6,200	4,800	3,187	40,737	6	7	4,422	17	5,225
33 Photography	10	15,175	2,050	3,500	7,100	2,525	10			5	2,860
34 Plumbing, and gas and steam fitting	15	102,718	8,000	11,000	9,171	74,542	19	16	8,620	83	46,723
35 Printing and publishing, book and job.	10	106,512	5,000	14,474	61,908	25,130	16	2	624	71	33,652
36 Printing and publishing, newspapers and periodicals.	9	212,350			168,449	43,901	11	19	14,086	131	72,972
37 Roofing and roofing materials	9	31,700	5,300	6,200	4,350	18,850	14	2	1,500	34	18,247
38 Saddlery and harness	7	16,375	2,000	4,300	1,475	8,600	8			11	6,146
39 Sewing machine repairing	4	1,475			375	1,100	5			2	1,200
40 Tinsmithing, coppersmithing, and sheet-iron working.	8	26,170	3,400	5,100	3,557	14,118	10			19	10,046
41 Tobacco, cigars and cigarettes	26	82,096	7,200	11,200	4,320	59,376	32	2	1,275	90	45,054
42 Watch, clock, and jewelry repairing	24	34,885	5,000	8,000	7,985	13,900	24	2	1,092	19	12,153
43 All other industries	85	6,951,712	389,826	1,533,056	2,654,903	2,378,927	103	192	212,462	3,352	1,412,111

¹ Embraces babbit metal and solder, 1; belting and hose, rubber, 1; bookbinding and blank book making, 1; boxes, cigar, 2; boxes, fancy and paper, 1; boxes, wooden packing, 1; brick and tile, 2; brooms and brushes, 1; buttons, 2; carriage and wagon materials, 2; carriages and sleds, children's, 1; cars and general shop construction and repairs by steam railroad companies, 2; cars, steam railroad, not including operations of railroad companies, 1; cheese, butter, and condensed milk, factory product, 2; chemicals, 1; clothing, men's, factory product, 2; clothing, women's, factory product, 1; coffee and spice, roasting and grinding, 1; coffins, burial cases, and undertakers' goods, 1; cutlery and edge tools, 1; electrical apparatus and supplies, 1; electrical construction and repairs, 2; electroplating, 2; engraving, steel, including plate printing, 1; engraving, wood, 1; fertilizers, 1; fur goods, 1; furniture, factory product, 1; gas and lamp fixtures, 1; gas and oil stoves, 2; gas, illuminating and heating, 1; gas machines and meters, 1; hand stamps, 1; hardware, 1; hats and caps, not including fur hats

BY SPECIFIED INDUSTRIES: 1900—Continued.

EASTON—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average num- ber.	Wages.	Average num- ber.	Wages.	Average num- ber.	Wages.										
28	\$14,011					\$603	\$518	\$2	\$33		\$6,069	\$6,025	\$14	\$32,235	22
33	14,506					2,455	1,593	25	837		15,140	14,975	165	48,279	23
1	432					1,015	725		290		2,885	2,723	112	8,200	24
32	17,814					1,900	1,583	23	289		48,789	48,337	452	95,880	25
92	43,896	7	\$1,850	9	\$877	9,062	1,275	267	7,520		21,474	10,969	1,605	110,351	26
12	5,800			1	175	975	200	60	715		16,102	15,990	112	33,500	27
12	5,876					775	400	205	170		8,405	8,315	90	21,500	28
28	12,644					1,514	1,146	95	273		16,957	16,526	431	41,930	29
42	18,215	2	432	4	832	10,808	1,380	27	8,901		31,186	30,930	256	69,794	30
11	4,605			1	166	2,258	1,983	75	200		8,540	8,310	230	18,830	31
1,730	799,491	876	181,733	218	45,415	250,923	6,054	6,796	74,701	\$163,372	2,959,698	2,912,264	47,434	4,721,669	32

and steel, 1; ironwork, architectural and ornamental, 1; leather, tanned, curried, and finished, 1; lime and cement, 1; lumber and timber products, 1; malt, 1; mattresses and spring beds, 1; musical instruments, organs and materials, 1; oil, not elsewhere specified, 1; paints, 1; paving and paving materials, 2; printing and publishing, book and job, 2; shirts, 1; silk and silk goods, 2; slaughtering and meat packing, wholesale, 1; steam fittings and heating apparatus, 2; surgical appliances, 1; watch and clock materials, 1; wire, 1.

ERIE.

8,889	\$4,348,584	699	\$183,811	251	\$47,230	\$1,197,411	\$106,948	\$64,153	\$916,462	\$109,848	\$9,107,305	\$8,796,402	\$310,903	\$19,053,202	1
1	310	1	800			77	10	32	85		3,441	3,430	11	0,000	2
19	8,370					2,708	2,177	12	519		17,498	16,738	755	44,980	3
258	142,336					20,938	1,000	657	28,281		239,839	237,703	2,136	466,223	4
24	14,706					2,177	1,466	302	409		12,910	12,099	811	61,688	5
16	8,938					5,434	4,931	182	321		20,009	18,933	1,076	72,205	6
18	11,696					6,554	2,331	35	4,188		82,412	81,960	452	89,673	7
26	12,816			1	245	2,493	260	166	1,867	200	30,425	29,494	931	60,125	8
81	39,771	21	3,288	1	123	5,666	2,170	824	2,572		142,612	137,490	5,122	237,734	9
255	153,947					71,912	416	952	8,525	62,019	258,934	258,387	547	568,904	10
1	1,000					465	304	49	112		2,055	1,925	130	9,500	11
22	11,592					1,480	505	225	700		11,131	10,400	781	32,211	12
187	74,859	37	11,376	1	101	23,504	15,114	318	7,672	400	95,804	93,636	1,668	308,130	13
18	9,342	35	12,230			1,511	1,448		63		5,733	5,425	308	28,450	14
52	24,448	6	1,750			4,053	2,711	305	1,037		26,507	25,512	995	66,425	15
				60	10,000	8,666	219	408	3,039		82,060	81,597	463	192,294	16
3	2,175	1	200			189	24	40	125		1,090	850	240	8,200	17
40	21,695					9,261	241	1,805	7,215		628,694	622,181	6,563	717,432	18
3,641	1,954,126			61	15,010	319,759	9,375	16,157	267,703	26,524	2,854,320	2,734,015	120,305	6,541,349	19
14	7,010					2,204	1,456	135	613		12,635	12,403	232	34,345	20
		2	599			811	766		45		1,196	1,000	106	4,700	21
115	90,440					256,959		12,585	244,374		138,092	122,975	15,117	696,745	22
8	1,500					1,319	1,084	25	210		1,375	1,170	205	8,700	23
6	2,800					2,706	2,396	40	339		17,877	17,607	290	34,975	24
297	120,526					52,388	6,300	2,196	24,897	18,995	420,781	425,126	4,655	768,549	25
32	21,900					250	250				38,820	38,820		73,000	26
		62	28,201	1	90	9,293	6,292	439	2,562		93,412	92,562	850	172,715	27
6	8,766					398	160	25	213		1,587	1,372	215	12,704	28
28	26,750					1,900	542	448	910		55,745	54,835	910	109,625	29
2	625					1,087	904		183		2,483	2,322	161	10,706	30
95	57,231					4,998	4,113	52	893		34,467	34,085	882	145,431	31
8	3,995	8	1,064	1	166	8,514	906	228	7,480		20,639	20,699	140	48,302	32
4	2,434	1	426			2,016	1,468	85	463		5,011	5,496	485	21,970	33
88	46,723					7,366	3,212	315	3,189	650	89,487	88,413	1,074	189,462	34
44	27,935	24	5,252	3	465	3,644	2,084	130	1,430		28,180	26,319	1,361	108,904	35
104	66,062	27	6,910			13,867	5,163	153	8,036	460	57,432	54,297	3,135	198,584	36
34	18,247					2,175	1,460	133	532		36,915	36,585	330	74,800	37
11	6,146					2,047	1,676	65	306		10,392	10,186	256	28,600	38
2	1,200					722	637		85		918		30	4,400	39
19	10,046					1,487	872	133	432		16,634	16,319	315	44,500	40
80	43,468	1	260	9	1,326	19,289	1,618	202	17,469		61,878	61,364	514	155,705	41
18	11,933	1	220			7,165	5,211	142	1,812		11,060	10,420	640	55,608	42
2,767	1,280,675	472	111,735	113	19,701	303,949	13,676	24,148	265,525	600	3,475,615	3,339,359	136,256	6,495,699	43

and wool hats, 1; house furnishing goods, not elsewhere specified, 1; ice, manufactured, 1; iron and steel, forgings, 1; ironwork, architectural and ornamental, 1; leather, tanned, curried, and finished, 2; lime and cement, 1; lithographing and engraving, 1; marble and stone work, 2; mattresses and spring beds, 1; mineral and soda waters, 2; mucilage and paste, 1; musical instruments, organs and materials, 2; musical instruments, pianos and materials, 2; paper and wood pulp, 2; paving and paving materials, 2; photolithographing and photoengraving, 1; pickles, preserves, and sauces, 1; plastering and stucco work, 2; plumbers' supplies, 1; pumps, not including steam pumps, 2; regalia and society banners and emblems, 1; rubber and elastic goods, 1; ship and boat building, wooden, 1; show cases, 1; slaughtering, wholesale, not including meat packing, 2; springs, steel, car and carriage, 1; stereotyping and electrotyping, 1; tools, not elsewhere specified, 1; typewriter repairing, 1; washing machines and clothes wringers, 1.

TABLE 8.—MANUFACTURES IN CITIES

HARRISBURG.

MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and imple- ments.	Cash and sundries.		Num- ber.	Salaries.	Total.	
										Average num- ber.	Wages.
1 All industries.....	446	\$8,749,516	\$941,464	\$1,316,977	\$2,177,204	\$4,313,871	464	404	\$391,086	7,362	\$2,949,544
2 Bicycle and tricycle repairing.....	7	16,910		500	8,750	12,600	6			11	5,573
3 Blacksmithing and wheelwrighting.....	18	7,945	1,700	3,465	1,700	1,080	20			12	5,099
4 Boots and shoes, custom work and re- pairing.	29	6,009	1,690	1,855	1,792	672	29			4	1,747
5 Boots and shoes, factory product.....	5	612,196	19,200	67,472	86,968	478,556	5	75	58,441	713	179,401
6 Bottling.....	4	47,815	1,500	2,300	14,500	29,515	5	1	780	17	7,980
7 Bread and other bakery products.....	44	92,060	23,550	46,000	10,910	11,600	48	2	936	75	35,745
8 Brick and tile.....	3	270,028	30,453	80,500	76,672	82,403	4	7	5,240	123	38,749
9 Carpentering.....	17	41,566	4,250	7,600	3,885	25,831	22			88	48,755
10 Carriages and wagons.....	8	85,220	22,500	29,350	8,983	24,387	7	5	4,020	46	21,653
11 Clothing, men's, custom work and re- pairing.	32	96,284	20,550	22,200	3,480	50,004	34	2	1,174	110	46,065
12 Clothing, women's, dressmaking.....	5	4,050	1,200	1,000	625	1,225	5			14	3,082
13 Confectionery.....	17	43,881	1,350	3,250	19,655	19,626	21	1	240	127	26,161
14 Dyeing and cleaning.....	3	13,390	6,000	4,800	2,090	500	3	1	216	7	2,380
15 Foundry and machine shop products.....	6	1,271,225	161,878	223,259	340,715	545,373	4	42	56,876	579	260,600
16 Furniture, cabinetmaking, repairing, and upholstering.	11	9,840	900	300	915	7,725	12	1	312	13	4,778
17 Iron and steel.....	7	3,065,702	409,000	415,000	521,968	1,719,784		74	101,276	1,701	821,547
18 Liquors, malt.....	3	260,725	65,000	81,000	54,600	60,125	3	4	2,365	32	20,882
19 Looking-glass and picture frames.....	6	10,075	700	900	975	7,500	7			6	1,804
20 Lumber, planing mill products, includ- ing sash, doors, and blinds.	4	128,720	17,020	29,600	28,600	53,500	3	6	4,750	82	41,814
21 Marble and stone work.....	8	7,850		350	2,475	5,025	5			24	13,254
22 Masonry, brick and stone.....	4	36,800	1,150	2,500	2,150	31,000	5			64	35,100
23 Millinery, custom work.....	9	20,095			650	19,445	12	7	2,490	41	12,516
24 Painting, house, sign, etc.....	19	17,055	1,850	2,350	4,197	8,658	19	1	284	86	33,492
25 Paper hanging.....	3	9,100	300	400	1,375	7,025	3	2	468	14	6,950
26 Patent medicines and compounds.....	5	23,133	300	500	1,683	20,650	6	1	1,000	5	2,360
27 Photography.....	5	10,500		700	5,800	4,000	5	3	566	13	4,900
28 Plumbing, and gas and steam fitting.....	32	81,680	7,700	8,635	19,540	45,705	34	11	6,249	117	47,709
29 Printing and publishing, book and job.....	14	219,921	13,000	23,000	141,189	42,732	16	9	8,009	198	89,891
30 Printing and publishing, newspapers and periodicals.	5	398,039	28,500	27,000	217,999	125,140	1	25	27,543	145	70,201
31 Roofing and roofing materials.....	5	8,050	200	1,000	1,600	5,850	6			18	8,770
32 Saddlery and harness.....	7	8,820			745	8,075	7			9	8,950
33 Tinsmithing, coppersmithing, and sheet-iron working.	13	32,166	4,650	4,500	5,875	17,140	15	5	2,908	47	17,548
34 Tobacco, cigars and cigarettes.....	25	89,351	7,200	12,400	5,905	68,846	28	9	4,251	609	131,800
35 Watch, clock, and jewelry repairing.....	13	14,065	1,000	500	5,130	7,435	14			18	8,364
36 All other industries.....	55	1,658,201	87,173	222,791	578,108	770,129	51	110	100,636	2,195	888,959

¹ Embraces awnings, tents, and sails; 2, baking and yeast powders; 1, baskets, and rattan and willow ware; 1, bookbinding and blank book making; 2, boxes, cigar; 1, boxes, fancy and paper; 2, brass castings and brass finishing; 1, brooms and brushes; 2, carpets, rug; 2, cars and general shop construction and repairs by steam railroad companies; 2, cars and general shop construction and repairs by street railroad companies; 1, clothing, men's, factory product; 1, clothing, women's, factory product; 1, coffee and spice, roasting and grinding; 1, coffins, burial cases, and undertakers' goods; 1, electrical construction and repairs; 2, electroplating; 2,

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1 All industries.....	248	\$16,940,450	\$929,865	\$3,065,682	\$6,944,427	\$6,000,476	316	394	\$449,183	6,116	\$3,213,189
2 Blacksmithing and wheelwrighting.....	9	7,155	1,800	2,240	1,800	1,315	12			12	7,215
3 Boots and shoes, custom work and repairing.....	17	1,940		395	1,055	490	18			1	416
4 Bread and other bakery products.....	11	31,651	8,500	12,700	5,371	5,080	13			35	16,944
5 Carpentering.....	24	188,840	24,950	16,725	36,965	110,200	36	12	6,800	181	90,709
6 Carriages and wagons.....	3	5,800	1,000	1,000	1,900	2,900	4			9	4,634
7 Clothing, men's, custom work and repairing.....	14	11,250	1,100	1,800	1,725	6,625	14			35	13,888
8 Clothing, women's, dressmaking.....	5	475			435	40	5			5	1,081
9 Confectionery.....	7	13,100	2,000	1,800	5,100	4,200	8	2	820	8	3,822
10 Foundry and machine shop products.....	6	2,526,591	223,775	249,112	1,185,416	918,288	6	90	100,231	668	396,780
11 Furniture, cabinetmaking, repairing, and upholstering.....	5	2,167			1,555	602	8			3	1,686
12 Iron and steel.....	4	11,382,627	514,000	2,291,339	4,821,444	4,255,844		219	290,056	3,871	2,100,145
13 Liquors, malt.....	4	524,795	58,100	178,280	143,457	149,958	3	12	12,199	69	41,920
14 Masonry, brick and stone.....	11	10,910	700	500	1,810	7,900	16			52	26,083
15 Millinery, custom work.....	3	30,010	4,000	6,000	380	19,630	9	8	754	28	7,953
16 Mineral and soda waters.....	8	6,400	2,000	1,100	2,400	900	4			4	708
17 Monuments and tombstones.....	3	11,350	600	400	700	9,650	3			6	2,833
18 Painting, house, sign, etc.....	17	23,570	3,100	5,880	2,010	12,680	19			49	27,920
19 Photography.....	8	7,150		10	5,650	1,490	8			6	1,227
20 Plastering and stucco work.....	3	3,470			270	3,200	5			7	4,400
21 Plumbing, and gas and steam fitting.....	10	66,050	2,500	750	2,925	59,875	12	5	3,132	43	20,584
22 Pottery, terra cotta, and fire-clay products.....	3	345,625	25,500	145,600	89,912	84,614	13	12	10,346	611	260,999
23 Printing and publishing, book and job.....	5	14,500			10,700	3,800	6			16	3,827
24 Printing and publishing, newspapers and periodicals.....	5	181,222	6,000	20,300	59,500	46,422	6	1	1,000	58	26,804

BY SPECIFIED INDUSTRIES: 1900—Continued.

HARRISBURG.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not including internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
5,435	\$2,598,264	1,812	\$342,986	115	\$13,294	\$646,950	\$141,425	\$24,365	\$380,105	\$101,055	\$9,402,516	\$3,992,718	\$409,798	\$16,064,597	1
11	5,578					2,499	1,252	19	1,228		29,143	23,899	334	51,960	2
11	4,839			1	260	857	742	76	39		5,178	4,801	877	22,280	3
4	1,747					1,896	1,331	84	31		7,319	6,999	320	23,348	4
326	108,184	358	68,964	29	2,253	20,864	478	558	19,828		465,838	463,119	2,719	748,798	5
17	7,980					2,713	1,380	226	1,107		35,663	34,973	690	62,620	6
63	33,161	6	1,692	6	892	6,915	4,187	933	1,795		116,052	111,420	4,632	225,713	7
122	38,541			1	208	6,194	2,000	694	3,500		18,661	3,031	15,630	87,667	8
88	48,755					41,646	690	120	1,045	39,791	114,364	114,170	194	280,575	9
45	21,658					2,093	75	646	1,872		24,698	23,877	821	62,708	10
69	36,627	38	9,118	3	325	6,839	4,496	671	1,172		56,836	55,890	946	147,732	11
1	820	13	2,762			722	664	18	40		4,093	3,929	164	11,493	12
57	19,519	66	6,133	4	509	6,856	5,456	156	1,244		98,521	96,455	2,066	164,701	13
4	1,755	3	625			406		131	275		812	680	132	9,500	14
504	257,157	9	2,877	6	1,066	48,174	744	2,456	44,974		373,529	362,546	10,983	840,914	15
10	4,445			3	328	1,660	1,258	25	377		8,332	8,237	95	22,293	16
1,701	821,547					105,728	43,620	8,684	53,424		5,050,689	4,718,058	332,631	7,602,404	17
32	20,882					70,862		1,924	63,438		41,819	38,699	3,120	186,009	18
4	1,634	2	270			1,095	1,036	28	81		4,653	4,433	120	12,050	19
82	41,814					3,960	1,422	708	1,830		88,782	82,147	1,635	150,875	20
23	18,072			1	182	615	390	5	120	100	10,082	10,007	75	29,550	21
64	35,100					18,744	295	54	195	18,200	129,600	129,575	25	217,600	22
83	32,838	41	12,516			5,796	3,984	91	1,721		56,195	55,910	285	90,700	23
14	6,950			3	624	1,948	1,152	71	725		20,254	20,022	232	76,600	24
3	2,000	2	360			297	216	19	62		9,170	9,115	55	20,750	25
						1,610	328	25	1,257		9,465	9,364	91	20,080	26
9	3,920	3	876	1	104	3,080	2,585	45	450		10,108	9,986	122	29,409	27
114	47,345			3	364	5,558	3,236	188	1,939	225	89,851	89,093	758	220,392	28
130	75,003	66	14,628	2	260	24,047	3,498	270	11,271	9,008	57,836	53,887	3,449	210,155	29
130	66,003	13	3,886	2	312	17,340	4,710	886	11,696	48	56,093	51,274	4,819	236,126	30
18	8,770					248	208	17	23		24,088	24,001	87	41,150	31
9	3,950					1,289	1,213	3	73		10,364	10,264	100	20,880	32
47	17,548					2,016	1,382	100	534		36,122	35,770	352	72,659	33
98	34,593	508	96,894	3	813	80,751	3,755	280	76,716		269,035	266,358	2,677	536,013	34
18	8,864					2,745	1,523	44	1,173		5,750	5,435	312	31,200	35
1,464	761,775	684	121,890	47	5,294	150,357	42,114	4,160	70,400	33,633	2,069,181	2,050,381	18,750	8,517,672	36

fertilizers, 1; food preparations, 1; furnishing goods, men's, 2; gas, illuminating and heating, 1; glass, cutting, staining, and ornamenting, 1; hand stamps, 1; hosiery and knit goods, 1; ice, manufactured, 1; lock and gun smithing, 2; mattresses and spring beds, 1; mineral and soda waters, 2; models and patterns, 1; monuments and tombstones, 2; paving and paving materials, 2; pottery, terra cotta, and fire-clay products, 1; shirts, 2; silk and silk goods, 1; slaughtering and meat packing, wholesale, 2; soap and candles, 1; tin and tene plate, 1; typewriters and supplies, 1; umbrellas and canes, 1; wheelbarrows, 1.

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5,918	\$3,166,856	98	\$26,129	100	\$20,704	\$1,922,030	\$245,423	\$62,923	\$1,543,800	\$69,934	\$14,445,126	\$13,066,833	\$1,378,243	\$22,559,890	1
12	7,215					723	618	40	65		7,226	7,062	164	28,888	2
1	416					1,166	1,026	6	134		3,201	3,201		12,903	3
28	15,976	3	412	4	556	3,678	922	276	2,480		39,729	38,814	915	78,577	4
181	90,709					75,814	2,475	898	4,490	67,981	214,631	213,049	1,532	405,609	5
9	4,634					902	418	4	890	100	8,544	8,244	300	20,760	6
24	11,266	11	2,622			4,240	2,377	31	1,507	825	17,658	17,618	40	46,116	7
6	3,414	4	961	1	120	512	452		60		535	535		4,280	8
634	387,992	1	808	1	100	1,736	924	67	745		19,029	18,486	553	35,496	9
3	1,686	8	2,847	21	5,941	66,890	459	5,294	61,137		1,140,123	1,105,468	34,665	1,960,255	10
						337	327		30		3,953	3,947	6	8,834	11
3,850	2,095,049			21	5,096	1,521,707	220,168	48,867	1,252,672		12,216,364	10,928,725	1,287,639	17,834,705	12
62	40,646			4	844	156,361		3,243	153,113		88,235	84,204	4,031	394,972	13
52	26,083	3	480			1,818		243	735	840	43,058	43,053		85,671	14
		27	7,849	1	104	3,422	2,289	50	1,083		43,101	43,081	20	68,828	15
1	300			3	408	371	70	27	274		570	570		3,820	16
6	2,833					631	370	10	251		6,840	6,840		13,380	17
49	27,920					1,280	445	263	576		19,513	19,493	20	64,338	18
2	505	2	328	2	304	1,516	1,267	75	249		3,373	3,373		14,173	19
7	4,400					502	167		260		5,482	5,400	32	14,317	20
41	20,244			2	340	5,936	2,121	231	3,584		69,085	68,860	225	110,633	21
605	258,519	1	480	5	2,000	7,422		1,311	6,111		137,142	105,437	31,705	459,202	22
5	1,718	4	721	7	883	1,123	726		367	30	7,117	6,821	296	19,497	23
53	25,651	4	1,075	1	78	14,231	989	890	12,218	634	10,038	9,011	1,027	74,199	24

TABLE 8.—MANUFACTURES IN CITIES

JOHNSTOWN—Continued.

	MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
25	Saddlery and harness	5	\$18,275	\$2,000	\$2,350	\$3,113	\$10,812	5	2	\$600	13	\$5,131
26	Tinsmithing, coppersmithing, and sheet-iron working.	14	30,465	5,100	4,190	4,220	16,955	19			38	18,345
27	Watch, clock, and jewelry repairing	11	6,450	500	1,000	2,175	2,775	13			9	5,281
28	All other industries ¹	34	1,038,021	48,640	122,211	602,439	265,331	51	36	23,695	289	122,364

¹ Embraces awnings, tents, and sails, 1; bicycle and tricycle repairing, 2; brick and tile, 1; brooms and brushes, 1; carpets, rag, 1; clothing, men's, factory product, 1; dyeing and cleaning, 1; enameling and enameled goods, 1; flouring and grist mill products, 1; furniture, factory product, 1; gas, illuminating and heating, 1; glass, cutting, staining, and ornamenting, 1; ice, manufactured, 1; lock and gun smithing, 2; looking-glass and picture frames, 2; lumber, planing mill

LANCASTER.

1	All industries	738	\$10,803,461	\$772,515	\$1,901,955	\$3,132,296	\$4,996,698	855	427	\$308,934	9,349	\$3,323,748
2	Bicycle and tricycle repairing	10	7,170	100	100	2,715	4,255	13	1	500	13	3,933
3	Blacksmithing and wheelwrighting	27	20,485	7,570	5,040	3,245	4,630	32			19	9,632
4	Boots and shoes, custom work and repairing.	30	10,267	1,950	2,200	3,330	2,787	29			13	4,562
5	Bottling	11	54,800	9,350	15,000	24,600	5,950	15	1	600	34	14,092
6	Boxes, cigar	6	95,445	5,100	11,700	34,945	43,700	5	9	5,816	197	47,911
7	Boxes, wooden packing	3	7,985	3,500	2,300	135	2,050	4	1	800	8	2,220
8	Bread and other bakery products	45	75,344	17,650	37,700	6,615	13,379	49	3	2,107	97	40,391
9	Brick and tile	3	66,660	20,600	14,800	10,010	21,250	4			69	22,970
10	Brooms and brushes	3	1,355	150	350	270	685	4			3	820
11	Carpentering	41	126,895	16,775	31,000	7,805	71,315	42	10	6,013	234	124,148
12	Carpets, rag	5	21,625	4,100	5,900	3,325	8,100	9	3	1,580	22	7,266
13	Carriage and wagon materials	7	113,978	22,200	34,550	28,500	28,728	8	4	2,400	50	22,947
14	Carriages and wagons	12	372,746	43,015	55,100	62,513	212,118	13	22	11,201	275	131,336
15	Clothing, men's, custom work and repairing.	23	116,615	34,300	23,375	5,400	53,540	23	9	7,500	145	62,763
16	Clothing, women's, dressmaking	99	23,745	2,625	5,250	7,145	8,725	104			136	31,707
17	Coffee and spice, roasting and grinding	3	7,800	500	300	5,700	1,300	3			3	1,091
18	Confectionery	25	922,216	29,750	244,450	200,350	357,666	27	16	31,304	712	148,716
19	Dyeing and cleaning	4	975	100	400	320	155	4			1	300
20	Foundry and machine shop products	19	445,087	54,350	89,350	140,590	160,797	16	33	25,003	232	92,935
21	Furniture, cabinetmaking, repairing, and upholstering.	15	71,413	9,800	24,700	2,618	34,895	16			23	9,970
22	Hardware	3	61,850	10,000	10,000	13,550	23,300	3	4	2,450	78	30,250
23	Leather, tanned, curried, and finished	3	180,575	17,000	23,500	18,000	122,075	3	9	10,050	85	32,000
24	Liquors, malt	4	645,000	30,000	274,000	214,600	127,000	6	11	13,500	65	32,764
25	Lock and gun smithing	4	199,570	21,000	32,000	35,400	75,170	5	6	4,700	204	39,500
26	Lumber, planing mill products, including sash, doors, and blinds.	3	139,500	16,000	40,000	19,500	64,000	3	7	4,048	75	41,826
27	Marble and stone work	4	23,950	300	200	11,650	11,800	6	1	1,000	15	9,300
28	Masonry, brick and stone	16	94,565	2,300	5,750	52,270	34,245	29	6	4,812	232	98,280
29	Millinery, custom work	18	92,756	33,300	21,400	2,856	35,700	23	1	750	63	19,729
30	Monuments and tombstones	5	14,660	325	175	2,660	11,500	6			14	7,080
31	Painting, house, sign, etc	35	22,170	2,250	5,550	5,233	9,137	44	1	700	114	55,221
32	Paints	3	48,175	8,500	5,500	7,876	31,299	6	5	3,830	12	4,800
33	Paper hanging	5	7,780			480	7,300	6			13	6,001
34	Paving and paving materials	11	21,955	7,300	1,750	7,475	5,430	13	7	3,865	156	58,642
35	Photography	9	20,050	1,500	2,000	14,350	2,200	10	1	416	10	4,736
36	Plastering and stuccowork	7	1,460			140	1,320	10			18	9,130
37	Plumbing, and gas and steam fitting	16	49,305	3,000	6,900	7,550	31,855	21	2	1,092	56	25,168
38	Printing and publishing, book and job	9	149,110	27,250	21,300	76,474	24,086	9	3	3,500	71	31,265
39	Printing and publishing, newspapers and periodicals.	8	365,150	40,000	65,000	170,300	89,850	11	19	12,516	201	91,901
40	Roofing and roofing materials	3	5,825	1,000	500	1,025	3,300	5			6	2,630
41	Saddlery and harness	10	52,537	4,100	5,100	13,170	37,217	11	8	4,416	57	20,710
42	Tinsmithing, coppersmithing, and sheet-iron working.	11	82,050	11,800	28,300	19,950	22,000	13	9	4,960	70	28,404
43	Tobacco, cigars and cigarettes	69	1,063,230	30,005	155,235	94,488	733,502	84	61	79,183	1,765	692,322
44	Tools, not elsewhere specified	5	71,200	12,600	7,500	41,700	9,400	6			25	13,574
45	Umbrellas and canes	6	629,500	20,000	40,000	83,000	486,500	10	47	39,872	1,187	328,255
46	Watch, clock, and jewelry repairing	17	75,710	5,000	800	33,560	36,350	19	1	550	39	20,643
47	All other industries ¹	63	4,143,575	139,500	545,930	1,542,908	1,870,237	68	106	107,240	2,432	783,882

¹ Embraces awnings, tents, and sails, 1; bags, paper, 1; bookbinding and blank book making, 2; boots and shoes, factory product, 2; boxes, fancy and paper, 1; chocolate and cocoa products, 1; coffins, burial cases, and undertakers' goods, 1; combs, 1; cooperage, 1; cork, cutting, 2; cotton goods, 1; druggists' preparations, not including prescriptions, 1; electrical apparatus and supplies, 1; electrical construction and repairs, 1; electroplating, 1; emery wheels, 1; engraving and desinking, 2; engraving, wood, 1; fancy articles, not elsewhere specified, 1; fertilizers, 1; files, 1; flouring and grist mill products, 2; furniture, factory product, 1; gas, illuminating and heating, 1; glue, 2; hand stamps, 1; ice, manufactured, 1; iron and steel, 1; ironwork, architectural and ornamental, 2; jewelry, 1; kaolin

McKEESPORT.

1	All industries	180	\$17,876,016	\$2,066,593	\$3,106,296	\$6,178,573	\$6,524,554	199	523	\$497,822	7,605	\$4,370,381
2	Bicycle and tricycle repairing	4	16,250		2,300	1,825	11,625	5			4	1,662
3	Blacksmithing and wheelwrighting	11	12,026	4,400	2,550	1,663	3,423	13			5	3,275
4	Boots and shoes, custom work and repairing.	11	2,733			1,105	1,633	11			3	940
5	Bottling	10	137,190	7,063	7,600	26,650	95,877	10	7	4,036	42	21,638
6	Bread and other bakery products	7	43,455	17,500	15,900	3,680	6,375	8	2	682	17	11,609

BY SPECIFIED INDUSTRIES: 1900—Continued.

JOHNSTOWN—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.						COST OF MATERIALS USED.			Value of products, including custom work and repairing.
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
7	\$3,883	6	\$1,248	1	\$90	\$886	\$288	\$66	\$582		\$18,851	\$18,681	\$170	\$30,721	25
28	16,315	4	1,940			2,046	1,137	181	764	\$24	29,604	29,529	135	68,013	26
7	4,835	1	280	1	166	1,777	1,374	75	328		3,888	3,868	20	17,507	27
245	114,057	19	4,628	25	8,669	45,053	4,061	1,315	89,674		288,221	273,523	14,698	629,693	28

products, including sash, doors, and blinds, 1; mattresses and spring beds, 1; paints, 1; paper hanging, 2; paving and paving materials, 2; roofing and roofing materials, 2; soap and candles, 1; steam fittings and heating apparatus, 1; tin and terne plate, 1; tobacco, cigars and cigarettes, 1; tools, not elsewhere specified, 1; window shades, 2.

LANCASTER.

5,585	\$2,416,060	2,954	\$774,801	810	\$182,887	\$1,193,997	\$74,312	\$33,164	\$924,791	\$161,730	\$8,342,709	\$8,187,475	\$155,234	\$16,370,281	1
10	8,643			3	340	1,832	1,252	5	850	225	7,451	7,156	295	21,398	2
19	9,632					1,779	1,493	191	95		7,523	7,077	446	42,304	3
18	4,562					2,592	2,402	58	132		8,946	9,547	399	30,395	4
34	14,092					2,106	1,052	229	825		68,783	68,391	342	125,097	5
81	25,740	90	19,844	26	2,327	1,619	640	429	550		136,392	134,911	1,481	222,131	6
8	2,220					1,044	600	19	425		60,060	60,085	25	68,090	7
92	39,377	4	910	1	104	5,762	2,571	871	2,320		108,597	103,538	5,059	219,177	8
69	22,970					3,741		341	3,400		10,702	202	10,500	52,275	9
1	800	1	260	1	260	158	144	4	10		1,798	1,780	18	5,004	10
234	124,148					121,939	885	802	2,017	118,235	441,106	440,223	883	786,369	11
17	6,074	5	1,192			1,065	450	190	425		12,818	12,472	346	32,480	12
50	22,947					1,781	174	507	1,100		40,341	45,287	1,054	99,775	13
274	181,070	1	266			14,221	2,050	876	11,295		157,055	154,903	2,152	408,173	14
117	56,619	27	6,019	1	180	6,862	3,637	757	2,318	150	94,996	93,999	997	237,434	15
		186	31,707			5,284	4,985	115	184		44,141	42,434	1,707	136,999	16
8	1,091					211	186	8	17		5,000	4,670	330	8,290	17
173	58,368	276	50,288	263	40,060	46,221	2,847	2,638	40,736		515,921	503,064	12,857	885,446	18
1	300					731	423	7	24		359	302	57	3,264	19
230	92,678			2	277	12,394	2,074	1,418	9,077	325	153,396	146,278	7,118	362,394	20
23	9,970					1,723	971	349	403		12,023	11,660	363	84,955	21
71	27,250	7	3,000			1,913	198	315	1,400		68,377	62,475	902	132,000	22
85	32,900					2,404		904	1,500		240,923	237,423	3,500	306,021	23
65	32,764					147,328	1,200	1,480	144,648		101,356	83,790	17,566	358,247	24
174	85,000			30	4,500	3,925	140	500	3,265		81,393	77,365	4,018	248,100	25
76	41,826					2,136		481	1,655		52,359	49,971	2,388	115,450	26
15	9,300					4,071	276	50	445		31,059	30,641	418	54,200	27
232	98,280					4,373	137	103	803	3,300	546,155	545,653	472	694,573	28
14	7,080	62	19,651	1	75	8,024	4,571	560	2,793	100	77,054	76,306	748	132,903	29
113	54,921			1	300	1,376	990	6	381		23,263	23,233	30	44,563	30
12	4,800					3,230	600	180	2,500		29,166	28,953	203	122,306	31
13	6,001					1,085	793	1	230		68,575	67,475	1,100	97,950	32
153	58,138			3	504	1,204	542	61	601		6,363	6,336	27	15,150	33
8	4,654			2	182	2,780	1,740	275	715		91,953	91,783	170	198,300	34
18	9,130					40	40				8,350	8,141	209	26,375	35
55	25,012			1	156	1,690	1,281	93	315		4,849	4,849		19,398	36
58	28,523	11	2,486	2	256	5,914	1,833	584	3,934		49,520	49,010	510	104,698	37
196	90,957	3	610	2	334	18,366	2,650	1,021	14,515	180	17,546	16,083	863	73,075	38
6	2,680					190	50	20	120		63,649	60,770	2,879	239,260	39
55	20,246			2	464	2,018	1,399	112	507		12,040	12,000	40	20,185	40
69	28,250										47,700	45,422	2,278	111,233	41
826	392,940	804	269,319	135	30,063	3,267	330	739	2,098	100	72,741	72,243	498	124,630	42
25	13,574														
411	148,950	630	158,605	146	25,700	514,348	9,765	1,531	503,052		951,782	942,683	9,099	2,557,787	43
37	20,414			2	229	1,867	520	110	1,237		12,495	11,972	523	44,840	44
1,350	546,769	897	215,644	185	26,469	57,912	3,450	1,497	52,965		1,552,110	1,548,030	4,080	2,694,200	45
						6,431	3,672	182	2,577		31,163	30,727	441	95,819	46
						160,823	7,369	12,395	106,177	34,882	2,215,515	2,159,877	55,838	3,865,478	47

and other earth grinding, 1; looking-glass and picture frames, 2; mattresses and spring beds, 1; millinery and lace goods, 1; models and patterns, 1; paper goods, not elsewhere specified, 1; patent medicines and compounds, 2; perfumery and cosmetics, 1; pottery, terra cotta, and fire-clay products, 2; sewing machine repairing, 1; shirts, 2; silk and silk goods, 1; slaughtering and meat packing, wholesale, 1; soap and candles, 1; sporting goods, 1; surgical appliances, 1; tobacco, chewing, smoking, and snuff, 2; tobacco, stemming and rehandling, 1; watches, 1; window shades, 1; wirework, including wire rope and cable, 1.

McKEESPORT.

7,331	\$4,802,201	96	\$24,269	178	\$43,911	\$428,226	\$20,594	\$37,797	\$300,886	\$59,949	\$22,809,161	\$21,007,172	\$1,301,989	\$37,074,136	1
3	1,494			1	168	763	397	40	326		2,737	2,614	123	7,701	2
5	3,275					1,115	855	108	152		3,926	3,658	268	19,348	3
2	784			1	156	1,183	1,046	19	118		2,689	2,680	9	9,567	4
42	21,038					20,376	4,320	733	15,323		230,564	230,176	388	329,033	5
15	11,033	1	283	1	288	4,416	1,020	499	2,897		87,405	36,395	1,010	65,909	6

TABLE 8.—MANUFACTURES IN CITIES

McKEESPORT—Continued.

	MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
7	Brick and tile	4	\$57,500	\$5,400	\$15,000	\$14,800	\$22,300	7	5	\$1,275	47	\$21,604
8	Clothing, men's, custom work and repairing.	17	44,490	2,000	2,000	1,930	38,560	21	3	1,475	53	30,572
9	Clothing, women's, dressmaking	6	1,623			563	1,060	9			5	936
10	Foundry and machine shop products	5	38,987	2,400	5,000	15,345	16,242	6	3	3,922	36	14,985
11	Iron and steel	7	14,109,342	1,791,385	2,628,420	4,496,897	5,192,680		427	431,581	6,753	8,937,808
12	Lumber, planing mill products, including sash, doors, and blinds.	6	145,000	30,250	12,800	12,050	89,900	8	3	800	53	33,904
13	Millinery, custom work	7	31,710	4,000	2,250	2,470	22,990	10	2	1,700	23	7,498
14	Painting, house, sign, etc	8	2,150			700	1,450	4			9	6,024
15	Photography	9	9,810		200	2,975	6,835	10	16	9,560	5	3,256
16	Plumbing, and gas and steam fitting	9	35,936	6,600	1,900	2,050	25,386	12	3	1,286	40	22,040
17	Printing and publishing, newspapers and periodicals.	6	107,886	16,500	23,800	46,400	16,186	4	8	6,507	63	34,949
18	Roofing and roofing materials	3	9,000		150	1,650	7,200	3			13	8,081
19	Saddlery and harness	3	6,920			660	6,260	3			5	8,016
20	Tinsmithing, coppersmithing, and sheet-iron working.	5	24,806	7,000	8,950	2,175	11,681	6			12	9,402
21	Tobacco, cigars and cigarettes	11	6,667	800	1,100	925	4,842	11			20	8,716
22	Watch, clock, and jewelry repairing	8	9,829	500	800	1,584	6,945	8	1	130	7	4,903
23	All other industries ¹	28	3,022,701	171,345	375,076	1,540,486	935,794	80	43	84,868	390	188,518

¹ Embraces awnings, tents, and sails, 1; bookbinding and blank book making, 1; brass castings and brass finishing, 1; carriages and wagons, 2; confectionery, 1; dyeing and cleaning, 1; electrical construction and repairs, 1; furniture, cabinetmaking, repairing, and upholstering, 2; gas, illuminating and heating, 1; ice, manufactured, 1; iron and steel, pipe, wrought, 1; ironwork, architectural and ornamental, 1; liquors, distilled, 1; liquors, malt, 1; lock and gun smithing, 1;

NEWCASTLE.

1	All industries	216	\$13,308,220	\$722,356	\$2,287,442	\$6,934,933	\$3,363,480	252	198	\$243,689	4,992	\$3,226,669
2	Blacksmithing and wheelwrighting	18	18,000	4,300	3,100	3,070	7,530	20			11	6,463
3	Boots and shoes, custom work and repairing.	9	2,915	800	1,200	640	275	9			1	475
4	Bread and other bakery products	6	13,848	5,000	4,500	2,350	1,998	6	1	156	22	12,422
5	Carpentering	10	90,350	7,200	4,300	7,850	71,000	16	3	1,420	144	80,685
6	Clothing, men's, custom work and repairing.	16	86,020	700	400	2,030	32,890	21	1	480	81	44,595
7	Clothing, women's, dressmaking	8	1,265			730	535	9			18	3,467
8	Confectionery	5	35,135	5,000	8,000	8,280	13,855	8	8	3,150	20	5,794
9	Dyeing and cleaning	4	8,650	2,900	3,700	1,750	300	4			5	1,866
10	Foundry and machine shop products	6	620,319	64,400	124,325	253,176	188,418	10	16	13,618	312	175,190
11	Furniture, cabinetmaking, repairing, and upholstering.	3	8,934	3,000	1,500	1,450	2,984	3	2	700	18	5,902
12	Iron and steel	10	9,042,734	414,000	1,355,000	5,246,511	2,027,223		91	148,114	3,320	2,226,385
13	Lumber, planing mill products, including sash, doors, and blinds.	7	145,182	13,500	11,945	17,686	102,051	14	8	6,312	71	35,103
14	Marble and stone work	3	8,325	1,350	1,050	725	5,200	5			5	8,750
15	Millinery, custom work	11	37,660	7,900	5,800	660	23,800	15			35	11,675
16	Mineral and soda waters	3	12,250	1,500		8,500	2,400	3			6	3,120
17	Painting, house, sign, etc.	12	3,880	850	700	757	1,573	15			13	8,200
18	Paving and paving materials	3	88,825	21,000	12,000	28,125	27,700	3	5	5,004	42	22,350
19	Photography	3	9,900	4,700	1,900	2,250	1,050	3			3	2,284
20	Plumbing, and gas and steam fitting	9	57,067	10,000	3,000	5,108	38,959	14	5	1,259	44	28,682
21	Printing and publishing, book and job.	3	18,950			15,100	3,850	6	1	150	8	3,150
22	Printing and publishing, newspapers and periodicals.	4	87,298			40,800	41,998	1	3	4,300	48	22,408
23	Roofing and roofing materials	4	11,700	600	800	1,925	8,375	5			16	7,530
24	Saddlery and harness	5	14,775	3,000	3,000	975	7,800	6			4	2,244
25	Tinsmithing, coppersmithing, and sheet-iron working.	5	5,050			1,250	3,800	7			13	6,700
26	Tobacco, cigars and cigarettes	4	3,590			215	3,375	4			11	4,699
27	Watch, clock, and jewelry repairing	11	14,770			4,825	9,945	14			10	5,178
28	All other industries ¹	34	2,910,828	160,656	736,872	1,278,695	734,605	31	54	68,966	711	495,457

¹ Embraces awnings, tents, and sails, 1; bicycle and tricycle repairing, 2; bookbinding and blank book making, 1; bottling, 2; brick and tile, 1; carpets, rag, 1; carriage and wagon materials, 1; carriages and wagons, 1; cooperage, 1; electrical construction and repairs, 1; fireworks, 1; flouring and grist mill products, 2; gas, illuminating and heating, 1; glass, 1; ice, manufactured, 1; iron and steel, pipe, wrought, 1; liquors, malt, 2; lock and gun smithing, 1; masonry, brick and

NORRISTOWN.

1	All industries	210	\$4,069,449	\$331,393	\$770,690	\$1,258,400	\$1,699,965	227	168	\$132,100	3,429	\$1,168,942
2	Blacksmithing and wheelwrighting	11	13,890	2,500	4,500	3,800	3,090	12			14	6,291
3	Boots and shoes, custom work and repairing.	20	13,351	3,000	6,050	2,935	1,866	20			9	3,593
4	Bread and other bakery products	10	48,435	5,500	27,500	10,685	4,750	10	5	1,912	31	16,167
5	Carpentering	8	11,195	250	1,050	2,875	7,020	10			63	30,628

BY SPECIFIED INDUSTRIES: 1900—Continued.

McKEESPORT—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average num- ber.	Wages.	Average num- ber.	Wages.	Average num- ber.	Wages.										
43	\$20,474			4	\$1,130	\$2,554	\$514	\$117	\$1,923		\$3,305	\$370	\$2,935	\$35,261	7
37	24,763	16	\$5,809			6,392	4,771	130	1,491		34,861	34,830	31	100,475	8
		5	936			982	942		40		2,889	2,889		8,565	9
36	14,985					1,954	1,200	160	594		37,431	36,198	1,233	69,774	10
6,588	3,896,588			165	41,265	209,608		29,298	180,310		20,706,228	19,439,900	1,266,328	84,339,612	11
52	33,744			1	160	62,224	100	418	3,181	\$58,525	128,178	127,385	793	240,555	12
		28	7,498			4,507	3,096	141	1,270		26,254	26,254		52,669	13
9	6,024					318	216	10	92		3,532	3,532	7	13,322	14
3	2,850	2	416			2,562	1,732	36	794		7,904	7,881	23	32,818	15
40	22,040					2,370	1,071	80	1,210		37,230	36,932	298	79,028	16
60	34,272	1	469	2	208	9,610	954	364	7,208	1,090	15,635	14,985	650	80,541	17
13	8,091					1,804	440	7	1,357		12,270	12,176	94	29,180	18
5	3,016					1,441	963	18	460		11,923	11,914	9	19,898	19
12	9,402					1,123	360	145	618		13,278	13,193	85	35,419	20
4	1,058	14	2,304	2	354	9,976	1,091	65	8,820		7,257	7,249	8	22,393	21
7	4,903					1,262	834	81	397		3,679	3,679		14,892	22
355	181,817	34	6,549	1	182	81,680	3,672	5,369	72,805	334	979,986	952,289	27,697	1,468,216	23

marble and stone work, 1; mineral and soda waters, 1; monuments and tombstones, 2; patent medicines and compounds, 2; printing and publishing, book and job, 2; regalia and society banners and emblems, 1; ship and boat building, wooden, 1; tin and terne plate, 1.

NEWCASTLE.

4,754	\$3,157,196	174	\$53,623	64	\$15,850	\$491,336	\$30,377	\$58,691	\$399,043	\$8,225	\$13,646,648	\$12,245,897	\$1,400,751	\$21,046,842	1
11	6,463					1,627	1,255	163	209		10,360	9,750	610	34,780	2
1	475					544	517	9	18		2,842	2,716	126	7,657	3
20	11,952	2	470			487	196	205	86		32,202	31,144	1,058	60,553	4
144	80,695					16,539	470	243	8,326	7,500	164,396	164,123	270	344,816	5
42	81,688	38	12,782	1	125	7,022	6,013	80	979		51,164	50,600	564	133,640	6
		18	3,467			910	904		6		223	100	128	10,156	7
11	4,158	9	1,676			6,000	922	191	5,187	800	23,625	23,032	593	50,797	8
3	1,270	2	590			715	205	80	430		2,225	1,875	350	6,470	9
812	176,190					34,586		2,291	32,595		364,138	351,918	12,320	673,325	10
12	4,390	6	1,512			1,814	444	180	740		4,487	4,119	368	21,125	11
3,264	2,211,855			56	14,480	275,090		27,690	247,400		9,735,362	8,438,324	1,297,038	15,123,468	12
71	35,103					3,455	1,075	538	1,242		168,616	167,586	1,030	246,435	13
5	8,750					859	180	21	158		5,951	5,870	72	12,471	14
		35	11,676			3,119	1,710	190	1,219		44,733	43,787	946	73,000	15
5	2,780			1	340	188	25	65	48		5,830	5,276	55	19,309	16
13	8,200					948	853	37	58		9,299	9,097	142	28,925	17
42	22,350					17,288		243	16,965		85,492	82,287	3,205	144,928	18
3	2,284					581	180	77	299	25	3,354	3,232	122	10,500	19
43	28,422	1	260			2,946	1,862	229	855		63,214	62,923	291	118,473	20
7	3,000	1	150			887	763		124		5,172	5,101	71	17,929	21
41	20,258	6	2,000	1	150	2,705	1,664		1,141		15,468	14,620	848	84,390	22
16	7,530					670	466	15	189		29,694	29,547	147	45,253	23
4	2,244					670	490	128	52		7,076	6,900	86	13,362	24
13	6,700					1,075	898	8	169		14,066	13,990	76	28,250	25
7	4,279	2	320	2	100	4,728	750	38	3,940		3,776	3,712	64	15,845	26
10	5,178					4,255	3,060	85	1,110		5,827	5,427	400	20,904	27
654	475,982	54	18,820	3	655	101,828	4,975	20,985	75,468	400	2,788,611	2,708,840	79,771	3,695,056	28

stone, 2; models and patterns, 1; monuments and tombstones, 2; paper and wood pulp, 1; patent medicines and compounds, 1; shirts, 1; sugar and molasses, refining, 1; tin and terne plate, 2; wirework, including wire rope and cable, 1.

NORRISTOWN.

1,744	\$742,063	1,468	\$391,559	227	\$35,820	\$418,854	\$39,878	\$8,738	\$362,918	\$7,820	\$2,467,861	\$2,410,549	\$57,012	\$4,821,745	1
14	6,291					776	668	47	60		9,553	9,121	432	27,787	2
9	3,598					1,196	1,077	91	28		7,773	7,563	210	20,862	3
29	15,554	2	613			3,189	2,556	366	267		37,858	36,490	1,368	71,745	4
63	30,628					247	207	12	28		67,165	67,138	27	127,700	5

TABLE 8.—MANUFACTURES IN CITIES

NORRISTOWN—Continued.

	MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
6	Clothing, men's, custom work and re- pairing.	9	\$28,065	\$1,000	\$6,000	\$1,140	\$14,925	8	1	\$350	30	\$14,612
7	Clothing, women's, dressmaking -----	11	4,290	100	250	1,890	2,550	12			49	9,455
8	Confectionery -----	4	8,310			615	7,725	4			10	8,752
9	Foundry and machine shop products -----	9	322,601	22,504	69,050	109,000	122,047	9	14	15,276	237	115,263
10	Furniture, cabinetmaking, repairing, and upholstering.	4	3,575	300	900	925	1,450	4			3	1,678
11	Hosiery and knit goods -----	5	488,458	27,689	67,984	145,415	247,370	6	21	10,064	678	190,247
12	Lumber, planing mill products, includ- ing sash, doors, and blinds.	3	154,684	10,000	21,000	14,350	109,334	5	7	4,486	54	23,941
13	Masonry, brick and stone -----	3	1,750			700	1,050	6			22	8,420
14	Millinery, custom work -----	8	44,711	13,000	14,000	11	17,700	8	5	1,340	16	5,216
15	Monuments and tombstones -----	3	27,650	7,000	4,000	2,650	14,000	4	1	936	9	5,600
16	Painting, house, sign, etc -----	6	8,460	300	750	1,185	6,225	9	1	125	18	10,218
17	Photography -----	5	6,500			4,700	1,800	5			1	875
18	Plumbing, and gas and steam fitting -----	8	65,838	4,000	1,000	8,225	52,613	9	4	2,126	41	20,909
19	Printing and publishing, newspapers and periodicals.	4	189,450	27,000	55,000	80,250	21,200	2	8	5,720	53	21,078
20	Saddlery and harness -----	4	10,230	1,500	1,800	380	6,550	4			6	2,787
21	Tinsmithing, coppersmithing, and sheet-iron working.	5	9,000	1,000	2,200	2,000	3,800	4			9	4,670
22	Tobacco, cigars and cigarettes -----	10	263,480	5,700	22,500	9,025	226,255	15	9	14,516	598	168,537
23	Watch, clock, and jewelry repairing --	7	5,215	800	1,200	2,575	1,140	7			9	4,026
24	Woolen goods -----	4	540,881	24,800	85,425	162,022	268,634	1	11	14,054	465	158,222
25	All other industries ¹ -----	49	1,804,400	173,950	387,631	685,647	567,372	53	81	61,245	1,004	343,861

¹ Embraces belting and hose, leather, 1; bicycle and tricycle repairing, 2; bottling, 2; carpets and rugs, other than rag, 2; carpets, rag, 1; carriages and wagons, 1; coffins, burial cases, and undertakers' goods, 1; cotton goods, 1; dyeing and cleaning, 1; flouring and grist mill products, 2; fur hats, 1; gas, illuminating and heating, 1; glass, 1; hats and caps, not including fur hats and wool hats, 2; ice, manufactured, 2; ink, writing, 1; iron and steel, 1; iron and steel, nails and spikes, cut and wrought, including wire nails, 1; liquors, malt, 1; lock and gun smithing, 1; looking-glass and picture frames, 1; marble and stone work, 2;

PHILADELPHIA.

All industries	15,887	\$176,529,407	\$43,725,855	\$64,859,709	\$113,918,281	\$254,024,662	18,062	19,113	\$20,154,836	246,445	\$111,847,076
2 Agricultural implements	3	536,731	42,500	138,063	63,415	291,850	4	49	55,956	204	111,271
3 Artificial leathers and flowers	24	544,251	42,700	33,500	49,675	418,376	34	42	62,948	873	208,509
4 Artificial limbs	6	9,710			4,055	5,655	6	1	1,300	6	2,975
5 Awnings, tents, and sails	36	152,625	900	600	30,110	121,615	50	6	6,225	190	88,471
6 Babbitt metal and solder	3	19,723			500	19,223	3	1	400	13	5,703
7 Bags, other than paper	3	41,250			9,250	32,000	6	2	2,020	29	10,425
8 Bags, paper	7	53,627			19,152	34,475	7	7	6,921	88	31,041
9 Baking and yeast powders	5	32,550	1,200	5,000	8,150	18,200	5	1	780	17	8,325
10 Baskets, and rattan and willow ware	28	22,042	2,800	2,704	1,086	16,452	29	1	520	33	11,166
11 Belting and hose, leather	5	340,055	6,000	20,670	35,448	278,637	8	15	9,225	60	35,300
12 Bicycle and tricycle repairing	191	180,812	6,750	8,585	64,037	101,490	209	19	11,031	179	78,240
13 Bicycles and tricycles	11	165,850	6,000	6,000	21,000	136,850	18	10	7,430	72	41,774
14 Billiard tables and materials	5	47,435	4,000	3,000	1,985	38,500	6	2	1,560	17	9,986
15 Blacking	10	379,204	20,000	35,638	43,125	280,391	10	57	57,674	141	48,055
16 Blacksmithing and wheelwrighting	414	776,264	225,775	185,886	118,605	215,988	456	5	4,286	706	430,138
17 Bluing	6	35,175	6,800	8,200	4,575	15,600	7			17	5,491
18 Bookbinding and blank book making	66	1,122,895	1,500	1,000	462,148	658,247	82	75	75,498	1,281	536,064
19 Boot and shoe cut stock	4	114,555			5,505	109,050	7	10	7,600	21	8,050
20 Boot and shoe uppers	13	31,880	11,950	10,150	1,915	7,365	14			25	12,538
21 Boots and shoes, custom work and repairing.	1,018	439,283	74,150	113,135	102,837	149,131	1,033	15	9,704	483	190,375
22 Boots and shoes, factory product	63	2,658,489	97,700	203,420	586,112	1,771,257	97	214	215,965	3,782	1,574,054
23 Bottling	218	1,666,976	269,900	290,044	167,259	939,773	234	72	65,435	579	304,236
24 Boxes, cigar	10	190,404	10,000	15,000	35,115	120,289	14	9	5,500	202	66,328
25 Boxes, fancy and paper	50	1,597,911	110,000	190,020	437,615	810,270	55	110	98,797	2,709	708,565
26 Boxes, wooden packing	29	663,499	59,800	108,500	146,054	319,145	33	35	27,819	582	259,713
27 Brass castings and brass finishing	33	1,805,055	188,500	191,878	353,765	1,065,912	40	95	108,712	704	345,376
28 Brassware	17	516,639	43,600	49,000	188,018	236,121	20	29	22,150	400	124,516
29 Bread and other bakery products	1,299	4,992,196	1,059,333	1,550,681	1,095,338	1,285,944	1,320	458	349,696	3,273	1,569,163
30 Brick and tile	37	2,448,668	541,496	590,913	417,874	898,385	40	47	53,593	1,451	678,201
31 Bridges	6	224,700	1,100	1,100	113,500	109,000	8	16	17,700	570	293,800
32 Bronze castings	3	223,692	27,000	26,000	40,200	136,492	3	18	26,468	105	67,093
33 Brooms and brushes	69	406,076	35,500	38,250	35,380	357,916	80	45	40,476	472	199,541
34 Buttons	17	376,982	21,500	27,580	140,478	187,424	26	25	26,992	626	215,666
35 Calcium lights	3	12,039			4,700	7,339	3	1	1,000	7	2,886
36 Card cutting and designing	16	99,132	3,000	2,600	40,779	52,753	21	1	520	113	54,540
37 Carpentering	731	5,048,584	331,720	376,148	456,626	3,884,040	838	210	172,775	4,337	2,747,800
38 Carpets and rugs, other than rag	88	10,866,764	916,375	2,627,265	4,774,463	8,648,671	102	296	330,155	12,190	5,092,252
39 Carpets, rag	55	149,901	22,675	51,100	18,637	57,489	63	4	2,380	227	72,531
40 Carpets, wood	4	38,699			6,050	32,649	9	10	5,430	57	24,634
41 Carriage and wagon materials	9	399,363	57,000	52,000	80,275	210,088	13	12	20,617	118	64,664

BY SPECIFIED INDUSTRIES: 1900—Continued.

NORRISTOWN—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average num- ber.	Wages.	Average num- ber.	Wages.	Average num- ber.	Wages.										
16	\$10,920	13	\$3,484	1	\$208	\$2,878	\$1,812	\$40	\$526		\$23,095	\$22,779	\$316	\$50,334	6
8	8,572	49	9,456			1,089	1,074	5	10		6,640	6,450	190	23,475	7
236	115,045	1	100	1	80	1,590	1,410		180		9,516	9,211	305	18,784	8
2	1,314	1	208			7,943	929	582	6,282	\$150	165,055	156,812	8,243	848,323	9
		1	864			194	167	11	16		5,270	5,145	125	10,890	10
109	43,814	404	181,409	106	15,024	29,265	700	711	27,854		456,344	458,934	2,410	798,698	11
54	23,941					3,670	600	477	2,593		39,027	39,027		91,100	12
22	8,420										1,586	1,586		16,483	13
9	5,500	16	5,216			1,474	1,234	205	85		21,261	21,011	250	35,156	14
						1,190	620	51	525		18,762	18,555	197	23,253	15
18	10,218					888	274	13	51		7,850	7,670	180	27,288	16
		1	875			592	484		198		4,208	4,100	108	7,784	17
41	20,009					3,058	2,024	46	988		72,757	72,489	268	125,230	18
48	19,486	5	1,592			6,887	1,600	424	3,863		14,119	12,479	1,640	58,961	19
6	2,787					644	512	30	102		5,717	5,670	47	11,640	20
9	4,670					502	444	42	16		5,301	5,200	101	15,033	21
128	55,487	421	105,550	49	7,500	125,356	1,500	275	123,581		225,783	224,289	1,494	562,078	22
9	4,026					719	655	21	43		1,730	1,670	60	13,600	23
253	96,248	180	56,075	82	5,904	32,451		660	31,791		385,858	376,270	9,588	630,579	24
661	259,640	304	77,117	39	6,604	195,101	19,331	4,629	163,971	7,170	880,643	851,190	29,453	1,649,772	25

mineral and soda waters, 1; oilcloth, enameled, 1; optical goods, 1; paper hanging, 2; patent medicines and compounds, 2; paving and paving materials, 1; plastering and stuccowork, 2; pottery, terra cotta, and fire-clay products, 1; printing and publishing, book and job, 1; roofing and roofing materials, 2; shirts, 1; slaughtering, wholesale, not including meat packing, 1; steam packing, 1; tobacco, chewing, smoking, and snuff, 1; wire, 1; wood, turned and carved, 1.

PHILADELPHIA.

172,011	\$91,540,077	61,688	\$18,151,177	12,746	\$2,155,822	\$55,575,685	\$5,607,283	\$1,222,710	\$23,978,408	\$19,767,279	\$326,877,441	\$320,684,140	\$6,193,301	\$603,466,526	1
204	111,271					44,329		1,486	42,843		177,453	166,573	10,880	416,930	2
84	40,135	521	137,021	268	81,713	53,790	17,508	1,018	84,264	1,000	466,724	464,350	2,374	948,763	3
5	2,975					1,599	1,075		524		4,627	4,574	53	21,747	4
119	70,435	69	17,706	2	330	20,229	12,203	46	7,980		228,762	222,573	1,189	468,926	5
13	5,703					1,199	1,130	22	47		45,509	44,914	595	63,310	6
8	4,650	21	5,775			2,446	1,924	45	477		85,220	84,970	250	130,208	7
48	22,381	40	8,060			4,826	3,272	144	1,410		111,814	111,079	735	215,240	8
17	8,326					2,395	1,450	70	875		37,525	36,723	802	70,001	9
28	10,426	1	208	4	532	3,054	2,455	101	493		24,119	24,021	98	58,678	10
58	34,940			2	360	8,109	2,930	308	4,871		299,402	297,719	1,633	427,964	11
168	76,284			11	1,956	36,164	28,951	356	5,687	1,170	138,339	134,042	4,297	407,771	12
72	41,774					20,878	5,015	103	10,760	5,000	193,603	191,398	2,205	289,900	13
17	9,986					2,185	1,088	80	1,037		24,565	24,485	80	51,837	14
46	22,117	85	24,191	10	1,747	46,674	9,652	1,144	35,578		229,552	226,600	2,952	491,278	15
695	423,093	11	2,045	11	2,045	65,405	51,368	5,342	8,195	500	278,365	258,106	20,259	1,281,850	16
7	2,941	3	800	7	1,750	1,136	390	231	515		18,699	18,377	322	37,694	17
635	358,247	579	107,752	67	9,065	104,851	59,003	507	35,908	8,433	539,408	529,798	9,615	1,571,502	18
21	8,050					1,142	898		244		368,224	366,895	1,329	406,000	19
20	10,266	5	2,272			1,988	654	246	923	150	32,004	31,781	223	57,641	20
464	184,697	16	5,245	3	433	124,104	95,455	3,138	16,171	9,340	342,689	336,065	6,624	1,216,926	21
2,194	1,095,170	1,303	399,810	285	70,074	343,545	37,815	3,434	298,123	4,173	3,360,157	3,334,815	25,342	5,931,045	22
573	302,582	2	624	4	1,030	287,881	42,360	125,697	119,408	416	5,247,663	5,238,927	8,736	6,548,004	23
130	47,287	71	18,841	1	200	23,974	1,766	450	21,758		194,671	192,877	1,794	338,696	24
578	249,252	1,825	415,896	306	43,417	134,045	46,722	3,660	83,663		1,005,931	989,509	16,422	2,412,687	25
572	251,834			10	1,884	32,928	9,284	2,599	21,045		890,441	881,074	9,367	1,411,781	26
700	343,326	4	2,050			123,128	14,120	5,262	103,179	567	1,682,196	1,654,887	27,309	2,554,629	27
256	97,737	59	13,863	85	12,916	29,336	10,047	850	18,239	200	218,685	212,691	5,944	490,063	28
2,825	1,454,688	876	101,716	72	12,759	440,127	166,834	39,564	244,060	119	5,709,048	5,542,153	166,895	10,464,689	29
1,480	673,236			21	4,905	195,100	49,088	6,433	139,579		283,085	278,281	204,804	1,497,304	30
570	293,300					77,110	1,420	15	6,325	69,350	470,880	464,430	6,450	1,022,390	31
105	67,093					82,530	1,800	592	28,608	1,530	284,816	279,325	5,491	470,042	32
358	176,340	83	18,058	31	5,143	35,358	19,609	1,081	14,593	175	476,504	472,669	3,835	938,245	33
289	139,132	277	67,454	60	8,980	15,556	6,823	810	7,743	180	830,600	826,685	3,915	728,805	34
7	2,886					1,432	1,004		423		3,286	2,768		17,774	35
106	51,620	3	2,400	4	620	6,877	3,030	128	2,183	1,536	37,244	36,446	798	150,414	36
4,327	2,744,818			10	2,982	10,596,845	77,614	11,307	120,221	10,387,703	5,072,603	5,059,009	13,594	21,751,145	37
6,157	3,095,414	5,268	1,876,093	765	120,745	1,448,363	95,074	33,946	1,039,697	279,646	13,223,263	13,015,652	207,711	21,986,062	38
201	60,808	25	5,554	1	169	13,034	4,776	3,510	3,778		116,979	115,979	991	269,080	39
57	24,634					10,618	3,710		6,908		76,273	74,856	1,417	165,148	40
112	63,294			6	1,370	18,469	3,102	1,884	11,483	2,000	122,855	116,420	6,435	219,773	41

TABLE 8.—MANUFACTURES IN CITIES

PHILADELPHIA—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES.		Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
42	Carriages and sleds, children's.....	6	\$104,341			\$4,669	\$99,672	9	16	\$8,844	109	\$59,634
43	Carriages and wagons.....	133	2,126,886	\$515,534	\$511,195	191,025	908,632	167	63	70,359	1,400	746,395
44	Cars and general shop construction and repairs by steam railroad companies.	10	1,433,997	422,759	491,440	216,320	303,478		81	71,945	2,780	1,609,055
45	Cheese and butter, urban dairy products.	3	9,500	2,500	4,500	1,850	650	4			2	775
46	Cheese, butter, and condensed milk, factory product.	3	32,989	2,500	4,000	13,000	13,489	4	1	525	10	5,371
47	Chemicals.....	24	13,400,479	1,156,405	2,130,151	2,612,832	7,501,091	4	248	391,014	1,917	1,026,013
48	China decorating.....	12	26,905	12,050	6,550	2,523	5,782	12			16	7,809
49	Cleansing and polishing preparations.....	10	83,350	300	700	4,155	23,195	10	22	12,594	12	4,167
50	Cloth, sponging and refinishing.....	3	51,339	8,000	5,000	19,484	18,855	3	4	3,990	50	21,750
51	Clothing, horse.....	6	135,650			13,450	122,200	10	13	11,940	144	41,003
52	Clothing, men's, custom work and repairing.	750	2,685,896	196,740	179,545	118,879	2,190,732	844	198	159,497	2,576	1,297,082
53	Clothing, men's, factory product.....	397	8,141,180	187,640	188,000	228,213	7,537,327	535	587	647,912	6,463	3,301,070
54	Clothing, men's, factory product, buttonholes.	18	16,495			12,190	4,305	19	1	760	140	47,763
55	Clothing, women's, dressmaking.....	482	647,935	49,775	85,400	68,013	444,747	522	39	27,885	2,070	675,635
56	Clothing, women's, factory product.....	191	3,384,850	8,000	13,500	399,501	2,993,849	233	510	427,558	6,233	2,122,028
57	Coffee and spice, roasting and grinding.	43	1,167,821	83,500	110,400	178,808	795,113	60	135	176,686	303	137,379
58	Coffins, burial cases, and undertakers' goods.	4	40,760	800	1,600	560	43,800	5			21	9,693
59	Combs.....	4	86,515	12,000	5,000	20,044	49,471	9			156	55,350
60	Confectionery.....	338	3,235,945	502,050	623,680	727,339	1,382,876	381	414	330,781	2,622	870,441
61	Cooperage.....	68	1,097,893	209,980	179,333	51,740	656,805	67	15	14,936	331	167,129
62	Cordage and twine.....	9	3,906,458	229,900	312,700	796,050	2,567,208	12	59	73,255	1,168	898,905
63	Cork, cutting.....	6	161,345	10,800	23,164	35,688	86,693	8	9	10,604	161	34,745
64	Corsets.....	13	74,970	2,300	1,500	16,465	54,705	13	10	12,100	149	50,852
65	Cotton goods.....	122	12,541,083	661,011	1,582,915	4,342,514	5,954,613	174	361	457,239	9,334	3,573,536
66	Cotton small wares.....	21	1,839,258	107,500	215,500	578,734	937,524	32	39	55,674	1,361	435,807
67	Cotton waste.....	9	235,405	13,500	29,100	36,925	155,880	11	7	9,230	62	32,450
68	Crucibles.....	4	582,074	30,000	105,601	100,780	345,693	10	7	12,049	66	38,008
69	Cutlery and edge tools.....	11	261,303	25,500	53,800	90,350	88,658	14	15	13,078	115	59,500
70	Dentists' materials.....	17	1,278,171	120,000	217,000	202,028	739,143	20	66	64,134	590	314,017
71	Druggists' preparations, not including prescriptions.	15	4,513,682	193,700	459,406	421,717	3,438,859	18	312	352,200	1,172	408,289
72	Dyeing and cleaning.....	100	270,520	59,050	69,770	81,778	56,922	106	27	11,908	228	103,485
73	Dyeing and finishing textiles.....	91	4,981,389	690,662	908,848	1,757,929	1,623,950	143	164	172,043	3,455	1,578,434
74	Dye stuffs and extracts.....	3	53,912	10,000	15,000	13,150	15,762	4			17	7,975
75	Electrical apparatus and supplies.....	40	3,662,910	60,000	131,846	613,732	2,857,332	33	143	196,385	1,253	490,921
76	Electrical construction and repairs.....	66	304,632	9,000	2,000	55,485	238,147	80	47	45,625	885	218,820
77	Electroplating.....	34	106,151	5,000	1,000	58,250	41,901	45	6	4,976	141	63,708
78	Enameling and enameled goods.....	8	49,350	9,000	8,600	22,540	9,210	9	4	1,415	22	7,635
79	Engraving and diesinking.....	45	51,387			33,530	17,857	52	1	1,040	67	35,257
80	Engraving, steel, including plate printing.	30	369,567	18,760	28,000	186,245	136,572	43	79	50,800	530	257,110
81	Engraving, wood.....	16	53,850	5,500	3,000	2,950	42,400	20	1	1,000	24	12,964
82	Envelopes.....	5	176,084			78,498	97,586	9	19	13,858	139	47,707
83	Fancy articles, not elsewhere specified.	26	254,917	2,500	7,500	53,200	191,717	30	32	13,231	326	81,942
84	Fertilizers.....	6	2,330,918	371,838	347,753	253,443	1,357,884	3	96	136,657	443	218,943
85	Files.....	3	1,201,810	106,324	154,676	422,218	518,592	10	33	51,106	918	350,229
86	Flags and banners.....	3	9,268	1,000	1,200	606	6,462	3	2	1,352	10	4,028
87	Flavoring extracts.....	17	144,592	9,000	13,500	12,729	109,363	22	16	12,328	38	14,749
88	Flouring and grist mill products.....	17	340,595	58,400	53,809	62,700	165,686	22	15	15,510	71	40,398
89	Food preparations.....	34	638,985	65,400	69,558	113,780	390,247	43	120	73,087	368	138,362
90	Foundry and machine shop products.....	370	45,935,567	5,191,017	6,123,678	10,705,850	23,915,022	427	1,575	1,807,479	19,643	11,176,259
91	Fur goods.....	45	545,646	5,450	10,820	23,326	506,050	52	53	26,916	229	126,882
92	Fur hats.....	12	5,051,084	793,690	1,285,152	619,602	2,352,640	11	159	248,552	2,116	893,494
93	Furnishing goods, men's.....	32	642,568	8,500	7,500	78,028	548,540	46	123	131,791	988	301,437
94	Furniture, cabinetmaking, repairing, and upholstering.	351	727,119	72,850	108,725	76,499	474,045	389	34	29,965	880	469,969
95	Furniture, factory product.....	77	3,102,995	369,850	433,596	392,891	1,906,658	102	162	201,185	2,391	1,240,940
96	Galvanizing.....	4	133,560	30,000	17,000	17,826	68,734	6	9	11,956	122	51,448
97	Gas and lamp fixtures.....	22	1,597,531	52,500	74,230	292,058	1,178,793	22	105	116,480	937	462,754
98	Gas, illuminating and heating.....	3	21,745,611	1,437,948	1,391,539	17,042,515	1,873,609		291	285,093	2,560	1,201,347
99	Gas machines and meters.....	5	553,146	75,000	45,000	69,100	364,046	8	18	16,446	405	217,746
100	Glass.....	8	1,258,450	225,000	286,831	144,678	601,941	8	66	85,307	1,529	618,047
101	Glass, cutting, staining, and ornamenting.	41	246,190	8,500	9,300	53,212	170,178	48	43	32,298	385	197,663
102	Glue.....	3	1,911,949	105,000	140,000	135,200	1,531,749	6	17	32,000	437	171,089
103	Gold and silver, leaf and foil.....	8	408,894	53,900	92,900	47,602	214,492	12	6	5,268	189	87,730
104	Gold and silver, reducing and refining, not from the ore.	6	38,565	6,000	10,000	14,163	8,412	4	3	2,094	7	4,216
105	Grease and tallow.....	11	1,213,007	122,300	294,000	359,703	437,004	9	34	42,240	278	145,500
106	Hairwork.....	27	103,125	34,500	16,500	8,885	43,240	30	2	1,000	83	30,912
107	Hand knit goods.....	8	15,795	1,075	1,200	2,770	10,750	9			44	8,400
108	Hand stamps.....	18	176,877	11,000	7,500	78,161	80,216	19	14	15,425	101	50,480
109	Hardware.....	22	2,369,320	449,000	358,779	569,623	991,922	25	81	60,520	1,273	595,482
110	Hardware, saddlery.....	3	14,500	1,000	1,000	2,400	10,100	3	3	2,166	16	7,594
111	Hat and cap materials.....	6	88,200	12,000	8,000	5,600	62,600	8	2	1,500	27	11,350

BY SPECIFIED INDUSTRIES: 1900—Continued.

PHILADELPHIA—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.	
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.									
96	\$55,884	9	\$3,150	4	\$600	\$30,475	\$5,980	\$71	\$24,424		\$108,953	\$103,153	\$800	\$239,442
1,396	745,710	2	450	2	235	150,483	33,936	11,810	98,773		607,331	585,807	21,524	1,960,779
2,717	1,596,045	63	13,010			24,631		6,972	17,659	\$5,964	1,945,770	1,920,320	25,450	3,651,401
2	775					40		86	4		6,432	6,237	195	7,588
10	5,371					4,274	2,150	72	2,052		76,264	75,103	1,156	96,409
1,701	965,483	208	58,702	8	1,828	454,636	13,525	26,125	414,986		4,333,716	4,077,927	255,789	7,810,456
12	6,317	4	1,402			2,153	1,584	323	246		7,806	6,895	911	32,760
8	2,957	4	1,210			9,483	1,227	63	8,193		17,614	17,290	324	60,598
49	21,650			1	100	7,431	2,280	170	4,981		2,568	1,265	1,293	62,548
25	10,618	92	25,526	27	5,459	29,920	5,550		1,870	22,500	248,779	247,726	1,053	383,760
2,043	1,125,347	483	164,021	50	7,714	591,295	237,536	5,819	146,782	201,208	2,034,858	2,018,415	16,443	5,616,886
4,177	2,593,569	2,121	677,175	165	30,326	1,998,753	213,176	5,050	320,154	1,460,373	9,029,915	9,597,511	32,404	18,802,867
76	31,212	49	14,456	15	2,095	3,959	2,614		1,345		16,883	15,579	804	102,181
218	132,844	1,834	540,568	18	2,223	112,179	38,435	2,247	21,973	1,524	792,929	786,234	6,645	2,240,090
1,803	978,808	4,367	1,183,231	63	9,989	465,679	133,363	5,608	230,216	96,492	5,039,999	5,009,491	30,508	9,452,259
223	116,209	79	21,014	1	156	80,918	20,259	3,108	57,551		1,905,633	1,885,666	19,967	2,642,080
13	7,564	8	2,134			2,718	1,560	18	1,140		15,133	15,057	76	40,680
117	47,112	24	5,326	15	2,912	5,044	1,492	245	3,307		100,406	98,124	2,282	185,143
1,182	561,323	1,288	288,602	152	20,516	329,087	93,516	15,806	219,495		3,423,298	3,367,690	55,608	6,000,815
331	167,129					127,670	20,420	4,889	18,663	33,698	1,025,142	1,019,378	5,764	1,490,119
535	255,958	529	127,955	104	14,992	65,032	2,100	3,572	59,860		4,210,942	4,197,714	13,228	5,291,289
75	21,262	47	8,250	39	5,233	29,650	2,064	304	27,282		102,922	101,595	1,287	195,907
11	7,118	123	41,799	15	1,935	5,134	4,356	40	738		67,404	67,124	320	178,090
4,383	2,086,936	4,055	1,843,190	896	143,410	1,871,465	123,714	26,295	754,507	467,039	8,249,823	8,050,137	199,686	15,723,654
295	137,064	970	281,583	96	17,160	196,405	20,562	4,222	81,211	90,410	862,620	841,218	21,402	1,896,644
58	31,360	4	1,090			13,865	4,188	688	8,239		479,317	474,735	4,582	583,894
66	38,008					10,446	1,200	1,588	7,658		495,408	487,265	8,138	689,307
115	59,600					6,030	1,130	726	4,174		38,647	31,946	6,701	182,124
368	224,680	219	88,817	3	520	55,460	11,446	5,102	38,912		937,764	927,333	10,431	1,736,976
384	206,336	781	200,723	7	1,230	525,623	25,981	3,898	435,734	60,000	2,000,476	1,979,291	21,185	3,900,189
143	74,668	32	28,296	3	521	41,697	13,761	2,329	24,132	1,375	59,618	62,787	6,881	348,200
3,037	1,433,556	200	54,662	213	40,216	411,749	67,182	25,293	316,869	2,905	2,440,916	2,165,715	275,201	5,562,099
11	6,600	5	1,250	1	125	260	176	176	3,930	61	27,249	26,459	790	49,200
991	434,341	139	84,697	123	21,883	461,266	37,576	7,467	247,611	168,612	2,198,146	2,157,594	40,552	4,230,619
377	216,475			8	2,345	63,402	20,092	145	16,915	26,290	435,960	433,534	2,426	945,522
129	60,345	8	2,751	4	612	13,157	10,608	42	2,507		40,440	36,016	4,424	189,808
14	6,087	8	1,548			2,311	1,068	165	910	168	10,252	9,656	566	39,485
62	84,326	1	300	4	631	8,500	7,125	11	1,364		13,883	12,561	1,322	123,261
321	197,654	194	57,336	15	2,120	51,098	18,297	649	31,152	1,000	176,492	171,922	4,570	768,526
23	12,808			1	156	7,203	1,665	148	890	4,500	3,781	3,729	52	46,631
33	14,930	100	31,841	6	936	14,169	7,720	132	6,317		101,916	99,083	2,833	243,486
111	42,101	203	38,474	7	1,367	21,003	11,203	167	8,633	1,000	170,739	168,618	2,121	417,828
443	218,943					162,851	13,114	6,823	134,186	8,723	1,755,111	1,727,832	27,779	2,375,750
661	291,230	117	34,692	140	24,307	97,668	3,850	4,091	89,677	50	372,900	342,106	30,794	1,013,598
6	3,073	4	955			925	520	41	364		2,465	2,450	15	12,811
31	12,709	7	2,040			17,813	5,097	303	10,363	2,050	116,759	116,391	368	242,250
71	40,393					21,660	7,240	1,193	13,227		1,215,265	1,204,505	10,760	1,380,063
255	110,807	106	26,505	7	1,050	105,932	10,804	1,792	98,356		750,024	742,069	7,955	1,232,722
19,438	11,134,969	40	12,381	165	28,909	2,083,940	223,205	101,738	1,628,236	130,771	18,551,390	18,042,312	509,078	38,372,971
77	68,997	146	56,879	6	1,006	60,267	32,083	213	27,761	210	317,139	315,291	1,848	752,285
1,515	743,035	504	135,293	97	15,166	305,104	7,316	5,574	272,329	19,885	1,090,428	1,064,674	25,754	3,075,470
162	77,980	797	219,233	29	4,224	57,180	20,736	393	36,051		1,308,985	1,304,933	4,052	2,057,686
727	420,166	145	48,372	8	1,431	158,243	68,963	2,860	32,448	53,977	635,629	629,607	6,022	1,905,494
2,342	1,229,623	18	5,820	31	5,497	233,359	55,481	9,954	165,124	2,800	1,912,327	1,885,462	26,865	4,416,703
122	51,448					11,409	2,064	489	8,856		146,406	141,416	4,990	296,326
897	452,435	27	7,095	13	3,224	132,496	37,154	2,843	88,999	3,500	793,693	774,881	18,812	1,748,198
2,560	1,201,347					694,339	351,469	3,498	339,372		2,681,482	2,680,728	30,754	5,578,737
339	213,900	13	3,800	3	546	8,073	3,215	1,248	3,910	300	299,615	292,982	6,633	715,185
1,100	545,781	102	24,340	327	47,926	62,423	1,114	6,014	53,795	1,500	387,750	305,903	81,847	1,347,011
336	186,787	23	7,583	21	3,193	35,333	17,489	353	16,886	605	163,104	156,355	6,749	544,801
409	163,809	3	780	25	6,500	159,022	108	12,314	146,600		901,940	849,918	52,022	1,291,204
137	73,794	44	12,304	8	1,632	4,072	729	1,792	1,551		341,634	339,879	1,055	483,192
6	3,956	1	260			3,240	1,894	31	1,325		90,679	90,255	424	114,109
278	145,500	68	21,686	1	182	130,404	7,760	4,832	117,812		1,466,694	1,429,469	37,225	1,978,545
14	9,034					7,416	4,620	813	1,643	340	39,509	38,831	628	119,329
81	46,706	44	8,400			1,600	856	42	178	524	7,650	7,605	45	33,863
1,193	572,051	11	2,200	9	1,574	12,060	5,436	280	6,344		39,360	37,454	1,906	151,427
14	7,324	43	15,630	37	7,801	145,882	6,557	13,570	125,295	460	594,225	567,052	27,173	1,761,875
17	8,966	7	1,760	2	260	651	435	37	179		10,700	9,972	728	27,555
				3	624	4,282	2,870	360	1,052		99,586	99,460	126	136,821

TABLE 8.—MANUFACTURES IN CITIES

PHILADELPHIA—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
Hats and caps, not including fur hats and wool hats.	66	\$489,147	\$27,800	\$22,200	\$91,522	\$347,625	83	62	\$56,935	772	\$291,411
Hosiery and knit goods.	142	10,024,606	465,582	1,098,599	3,426,783	5,033,642	171	364	388,426	11,944	3,567,087
House furnishing goods, not elsewhere specified.	11	465,278	28,000	83,000	80,057	264,221	16	29	18,761	261	79,470
Ice, manufactured.	20	3,158,914	455,850	644,551	1,653,575	404,938	3	117	71,435	345	191,465
Ink, printing.	7	471,006	73,000	47,000	74,099	276,907	7	29	60,824	78	47,947
Ink, writing.	3	17,003	250	750	1,175	14,828	4	2	2,500	9	3,492
Instruments, professional and scientific.	32	700,443	33,000	65,720	236,903	364,820	49	42	31,049	555	291,649
Iron and steel.	8	6,069,871	829,594	484,119	1,242,239	3,518,659	6	213	298,804	2,815	1,866,572
Iron and steel, bolts, nuts, washers, and rivets.	7	1,802,546	368,600	172,080	604,105	668,061	9	35	50,750	1,178	868,387
Iron and steel, forgings.	7	196,664	6,000	8,500	78,146	104,018	10	12	14,400	184	127,080
Ironwork, architectural and ornamental.	46	1,493,811	157,400	181,120	363,290	792,001	54	86	82,342	876	476,269
Ivory and bone work.	6	89,190	1,000	3,000	24,500	60,690	6	6	7,000	107	39,454
Japanning.	6	26,680	2,000	8,000	3,870	12,810	7	1	800	23	8,753
Jewelry.	19	679,287	15,000	5,000	116,473	542,814	25	58	37,027	402	183,493
Jewelry and instrument cases.	6	54,750			13,300	41,450	8	5	2,560	76	28,928
Jute and jute goods.	4	926,800	128,700	131,844	120,500	545,756	4	9	7,948	619	168,455
Kaolin and other earth grinding.	5	178,598	48,500	42,264	30,238	57,591	4	10	19,840	57	28,433
Kindling wood.	6	30,400	6,500	7,250	6,600	10,050	7	1	780	32	12,918
Labels and tags.	7	45,595			23,200	22,395	9	8	7,116	62	12,507
Lamps and reflectors.	9	161,066			28,860	127,206	12	20	21,810	154	79,945
Lapidary work.	3	3,800			700	3,100	3	5		4	3,000
Laths.	5	100,676	18,000	19,922	21,494	41,260	6	4	4,134	72	36,914
Lead, bar, pipe, and sheet.	5	550,736	118,000	73,000	131,625	223,111	9	11	11,145	71	43,681
Leather goods.	19	827,001	60,400	44,300	90,459	631,842	29	98	103,762	1,168	390,868
Leather, tanned, curried, and finished.	44	9,105,989	475,294	1,506,212	965,098	6,158,785	65	169	184,746	5,781	2,629,120
Lime and cement.	4	371,991	106,761	92,554	87,008	85,678	2	16	13,257	80	23,136
Liquors, malt.	50	27,636,289	3,118,209	9,638,933	4,876,147	10,003,000	50	303	652,148	1,791	1,229,248
Lithographing and engraving.	22	1,022,113	18,000	24,000	654,737	325,381	25	40	57,234	609	264,407
Lock and gun smithing.	126	120,139	17,620	32,177	32,274	47,068	132	1	156	70	36,094
Looking-glass and picture frames.	74	363,813	3,300	3,200	52,145	310,198	93	65	41,934	309	142,379
Lumber and timber products.	4	289,200	65,000	40,000	53,100	130,500	5	10	1,380	100	44,936
Lumber, planing-mill products, including sash, doors, and blinds.	37	2,670,749	441,750	324,358	328,076	1,576,565	44	112	114,361	1,005	807,418
Malt.	3	644,000	70,000	110,000	21,000	443,000	2	11	22,950	33	18,652
Mantels, slate, marble, and marbleized.	5	59,473	3,500	7,500	2,835	45,638	4	12	9,570	35	20,220
Marble and stone work.	78	2,126,726	597,560	130,330	260,584	1,137,972	108	53	51,982	1,028	652,395
Masonry, brick and stone.	264	4,910,820	537,850	721,500	403,426	3,248,544	319	142	133,872	4,897	2,906,682
Mattresses and spring beds.	37	835,773	11,700	15,000	54,177	254,896	35	43	25,307	389	139,131
Millinery and lace goods.	37	606,802	97,000	48,500	63,897	397,495	48	52	44,612	759	275,061
Millinery, custom work.	211	723,867	164,280	118,475	13,731	427,381	241	69	29,228	742	254,704
Mineral and soda waters.	51	403,296	26,800	53,700	196,649	126,647	70	39	26,952	169	80,330
Mirrors.	4	56,210			5,060	51,150	3	4	4,250	42	21,126
Models and patterns.	40	273,264	3,000	9,500	70,760	190,004	49	8	7,920	270	160,890
Monuments and tombstones.	41	337,256	84,550	39,010	19,040	194,356	50	9	7,076	214	145,862
Mucilage and paste.	12	263,088			31,857	231,231	12	84	36,084	80	28,483
Musical instruments and materials, not specified.	16	152,008	11,900	15,600	20,990	97,518	22	7	8,830	70	40,703
Musical instruments, organs and materials.	6	40,822			3,575	37,247	9	1	780	52	33,850
Musical instruments, pianos and materials.	7	375,042	50,000	25,000	32,427	267,615	7	27	34,650	184	119,716
Needles and pins.	3	9,565			5,500	4,065	4	1	720	15	6,926
Oil, not elsewhere specified.	8	216,097	51,000	12,000	46,150	107,947	10	22	19,870	27	16,075
Optical goods.	49	422,468	76,000	30,000	88,979	227,489	58	54	37,057	387	141,461
Painting, house, sign, etc.	594	1,151,808	131,260	138,695	149,388	732,465	655	76	66,185	2,364	1,433,451
Paints.	30	7,531,243	1,202,950	887,203	2,326,366	3,114,724	18	278	296,485	1,071	602,925
Paper and wood pulp.	7	2,671,431	224,378	948,422	1,217,614	881,017	5	45	60,876	933	388,617
Paper goods, not elsewhere specified.	14	568,266	63,000	78,749	62,950	368,567	15	27	29,850	279	105,088
Paper hanging.	302	747,209	107,400	139,242	27,032	473,535	332	51	28,585	931	553,339
Paper hangings.	11	1,472,171	45,000	151,250	597,749	678,172	8	70	103,023	663	316,047
Patent medicines and compounds.	78	2,116,874	118,800	127,300	241,950	1,628,824	80	219	186,839	659	255,285
Paving and paving materials.	63	3,227,092	166,279	410,665	278,577	2,373,571	68	113	109,890	3,111	1,522,765
Perfumery and cosmetics.	21	296,106	15,000	11,250	20,485	249,371	26	54	44,252	162	47,389
Photographic materials.	13	225,805	11,400	19,500	57,400	137,505	14	24	23,276	119	48,024
Photography.	129	494,048	30,100	38,000	244,441	181,507	150	69	47,475	353	156,354
Photolithographing and photoengraving.	9	257,975	15,000	31,000	127,100	84,875	8	37	31,787	218	141,111
Pickles, preserves, and sauces.	17	392,490	40,500	88,825	61,110	202,055	20	59	28,796	236	89,364
Pipes, tobacco.	6	150,368	10,000	13,000	34,175	93,188	7	4	3,754	229	99,077
Plastering and stucco work.	79	181,973	29,525	38,025	31,758	82,665	90	8	5,380	352	207,951
Plated and britannia ware.	3	24,000			18,000	6,000	3	1	624	29	11,037
Plumbers' supplies.	12	1,270,913	143,550	174,450	220,400	732,513	15	90	84,368	457	229,952
Plumbing, and gas and steam fitting.	685	2,381,553	265,720	372,330	284,915	1,458,588	772	158	120,070	2,629	1,527,427
Pocketbooks.	5	98,050			5,864	92,186	8	10	8,810	104	32,518
Pottery, terra cotta, and fire-clay products.	16	986,511	300,219	281,800	108,080	296,412	18	37	41,138	494	228,887

BY SPECIFIED INDUSTRIES: 1900—Continued.

PHILADELPHIA—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.				Value of products, including custom work and repairing.
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average num- ber..	Wages.	Average num- ber.	Wages.	Average num- ber.	Wages.										
810	\$168,351	453	\$121,769	9	\$1,294	\$48,604	\$22,240	\$350	\$22,774	\$2,740	\$607,296	\$601,842	\$5,454	\$1,364,100	112
2,243	1,035,051	7,542	2,193,999	2,159	338,037	1,447,055	86,691	15,590	686,090	658,684	6,174,278	6,062,085	112,193	13,040,905	113
84	28,895	168	48,947	9	1,628	41,416	5,350	1,625	25,590	8,850	403,876	399,728	4,148	586,949	114
845	191,465	1	200	1	260	118,795	8,826	12,991	97,478		204,085	74,752	129,333	894,502	115
76	47,427					33,477	2,705	1,072	29,700		204,482	199,089	5,393	407,066	116
6	2,156	4	1,336			3,438	900	13	2,520		15,770	15,662	108	23,238	117
537	286,187	11	4,394	7	1,068	61,375	18,677	1,887	41,811		182,527	172,306	10,221	733,544	118
2,806	1,864,672			9	1,900	671,868	1,365	10,408	214,985	445,110	8,564,526	8,227,103	337,423	7,208,948	119
1,032	342,037			146	26,250	66,362	3,410	6,430	56,522		982,620	949,785	32,835	1,885,494	120
184	127,080					17,284	7,649	680	8,955		209,494	196,858	12,636	455,903	121
874	475,653			2	616	94,595	16,515	3,036	43,776	31,218	1,282,381	1,214,234	18,147	2,118,622	122
92	35,154	12	3,790	8	510	2,416	1,673	55	688		70,537	69,622	915	156,719	123
19	7,973	1	280	3	500	2,636	1,812	45	779		6,649	5,859	790	28,752	124
299	167,046	82	22,981	21	3,466	36,719	11,936	355	22,723	1,705	244,478	239,879	4,699	647,559	125
34	18,941	36	9,073	6	914	4,498	3,085	15	1,393		52,400	51,575	915	109,712	126
226	91,481	236	49,117	157	27,857	37,509	300	685	14,127	22,397	523,121	517,763	5,358	870,306	127
57	28,433					13,238	1,500	1,270	10,468		100,064	94,118	5,946	182,536	128
32	12,918					3,444	643	199	2,602		28,384	28,200	184	64,577	129
19	7,690	41	4,500	2	317	4,040	2,956		834	250	36,878	36,348	530	71,253	130
145	78,065	5	1,287	4	593	22,164	6,830	37	15,297		98,226	94,844	3,382	274,486	131
4	8,000					338	312		26		1,101	1,020	81	8,500	132
67	35,659	2	720	3	535	5,130	1,616	494	3,020		20,273	18,567	1,706	87,330	133
71	43,681					24,619	2,000		19,985		885,031	878,743	7,188	990,809	134
524	249,073	533	98,872	111	12,923	102,019	20,694	1,894	70,431		732,125	737,922	8,203	1,768,894	135
5,318	2,402,022	253	70,680	210	50,418	685,050	32,904	29,209	618,999	3,938	13,420,241	13,332,841	96,400	18,187,231	136
80	23,136	1	468			13,297	2,200	2,187	8,910		114,246	104,216	10,030	194,910	137
1,790	1,228,780					6,062,010	20,566	119,606	5,921,638		2,876,982	2,622,915	254,067	12,608,551	138
507	241,045	74	19,050	28	4,372	104,889	22,055	490	91,101	20,740	289,212	280,671	8,541	906,478	139
64	34,311	2	1,060	4	723	17,452	13,815	877	1,765	995	37,919	35,285	2,634	176,395	140
274	135,138	17	4,192	18	3,049	50,882	33,766	196	16,895	25	381,915	379,099	2,816	807,212	141
100	44,936					8,763	2,550	1,624	4,589		383,653	383,653		543,492	142
1,495	782,863	66	18,355	44	6,200	168,396	40,255	9,056	116,759	2,326	1,678,773	1,660,822	17,951	3,200,142	143
33	13,652					8,755	3,700	1,955	3,400		214,691	211,311	3,380	300,300	144
35	20,220					3,912	1,530	204	2,178		57,464	57,452	12	131,017	145
1,026	651,744	1	495	1	156	125,376	24,477	9,485	82,594	8,820	801,179	785,247	15,932	1,937,949	146
4,896	2,906,442			1	240	2,066,178	24,062	26,243	144,147	1,871,726	5,978,692	5,964,129	14,568	13,565,550	147
235	105,526	99	32,565	5	1,040	40,364	20,362	435	25,555	12	515,658	511,734	3,919	881,898	148
102	56,604	645	217,009	8	1,443	78,090	29,673	2,635	45,782		743,043	737,563	5,480	1,445,984	149
9	8,062	714	244,014	19	2,628	64,513	41,171	5,120	13,222		787,366	784,936	2,380	1,535,868	150
165	79,490	1	290	3	550	51,329	9,676	1,715	39,938		131,793	128,637	3,156	435,945	151
41	20,918			1	208	3,325	1,438		1,887		90,543	89,193	1,350	140,999	152
265	159,967	2	458	3	465	19,044	11,968	237	6,709	130	90,531	86,161	4,370	377,788	153
213	145,644			1	208	15,273	8,508	1,364	5,181	5,225	162,947	161,546	1,401	443,287	154
46	17,772	33	5,555	1	156	33,232	6,152	1,183	26,897		350,805	348,230	2,575	519,149	155
69	40,838	1	365			5,855	1,675	401	2,998	781	32,645	31,529	1,116	120,188	156
51	33,550	1	300			5,944	2,739	5	1,904	1,296	18,550	17,149	1,401	74,411	157
176	118,716			8	1,000	86,047	4,402	1,008	30,642		138,791	131,333	7,458	446,108	158
10	5,824	2	572	3	530	606	474		132		1,570	1,300	270	16,300	159
24	15,575			3	500	6,453	1,700	310	4,443		164,893	162,188	2,705	250,984	160
187	96,541	183	42,762	17	2,158	62,360	30,926	1,631	28,678	1,125	254,315	248,920	5,395	704,177	161
2,350	1,430,604			14	2,847	135,327	65,093	4,141	40,763	25,330	913,151	909,106	4,045	3,559,437	162
1,001	484,345	67	18,086	3	494	372,274	22,356	13,370	288,657	47,891	3,180,684	3,072,074	108,610	5,923,930	163
735	343,342	193	44,275	5	1,000	217,104	5,800	8,121	201,223	1,960	1,511,057	1,344,447	166,610	2,635,749	164
174	79,143	104	25,745	1	150	20,374	9,130	1,503	9,241	500	547,112	542,848	4,264	944,991	165
922	551,719	2	520	7	1,100	76,976	41,690	3,456	26,418	5,412	483,632	481,888	1,744	1,608,821	166
447	269,566	89	26,310	127	20,171	147,545	36,707	4,800	106,038		1,424,441	1,404,513	19,928	2,062,339	167
326	168,845	328	85,735	5	705	760,607	39,105	3,051	717,639	812	973,389	958,673	14,716	3,013,034	168
3,109	1,522,515			2	250	429,852	19,568	5,434	394,732	10,118	1,909,337	1,887,416	21,921	4,868,975	169
33	15,641	115	29,810	14	1,938	90,701	14,004	652	76,045		254,100	252,663	1,437	531,291	170
78	36,398	35	10,708	6	918	27,288	8,560	386	18,342		140,851	138,484	2,367	319,232	171
228	119,644	106	33,306	19	3,404	97,802	68,003	1,026	24,968	3,805	205,699	203,447	2,252	759,061	172
198	136,180	11	3,655	9	1,866	30,455	5,138	602	22,615	2,200	44,139	39,892	4,247	296,357	173
159	67,054	77	22,310			38,195	8,172	1,443	28,580		425,630	420,462	5,168	691,524	174
195	91,047	19	5,840	15	2,630	8,217	1,380	417	6,420		107,131	104,778	2,353	234,715	175
351	207,795			1	156	44,881	8,374	1,017	6,445	29,045	136,672	136,251	421	533,705	176
22	9,376	6	1,505	1	156	2,305	1,560		745		5,318	4,863	455	25,325	177
428	222,410	18	5,236	11	2,906	85,194	12,322	4,165	17,982	725	449,260	436,772	12,488	873,150	178
2,593	1,521,101			36	6,326										

TABLE 8.—MANUFACTURES IN CITIES

PHILADELPHIA—Continued.

	MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
182	Printing and publishing, book and job.	401	\$11,539,833	\$281,955	\$561,411	\$4,659,078	\$6,037,389	458	844	\$775,094	5,327	\$2,508,317
183	Printing and publishing, music.	12	479,288	25,000	20,000	180,142	254,146	19	38	47,840	233	93,354
184	Printing and publishing, newspapers and periodicals.	209	11,011,212	1,465,425	1,631,064	3,692,143	4,232,580	190	1,986	1,939,881	3,397	2,111,009
185	Printing materials.	9	86,927			15,998	20,929	10	5	1,845	30	10,692
186	Pumps, not including steam pumps.	4	46,259	13,500	16,050	870	14,839	4	2	2,004	8	4,354
187	Refrigerators.	3	27,500	1,000	3,000	15,700	7,800	4	1	500	55	40,500
188	Regalia and society banners and emblems.	11	141,906	10,500	10,500	36,655	84,250	15	15	9,960	114	48,462
189	Roofing and roofing materials.	105	600,653	48,750	72,400	176,132	803,371	112	66	57,321	542	272,321
190	Rubber and elastic goods.	6	219,675	22,000	11,500	20,325	165,750	9	7	4,720	86	83,100
191	Saddlery and harness.	169	435,408	44,200	56,400	36,742	298,061	173	14	11,172	298	161,115
192	Safes and vaults.	4	479,421	5,000	35,207	103,432	335,782	3	33	43,108	211	110,978
193	Sausage.	11	31,365	9,800	9,900	7,180	4,485	13	1	1,000	21	10,847
194	Saws.	4	4,231,103	304,051	425,231	566,041	2,935,777	4	69	75,289	1,310	681,582
195	Scales and balances.	5	160,300	4,000	14,000	33,900	108,400	9	8	5,820	116	64,898
196	Sewing machine repairing.	19	21,714			9,379	12,335	17	1	1,040	29	14,272
197	Ship and boat building, wooden.	10	51,955	8,400	9,000	12,630	21,925	14			69	38,184
198	Shirts.	60	2,124,862	61,750	90,250	197,605	1,775,257	98	213	208,485	2,829	915,523
199	Shoddy.	21	823,083	78,050	130,600	207,688	406,145	12	32	23,186	324	132,226
200	Show cases.	3	27,000			5,000	22,000	3	2	1,300	35	20,800
201	Silk and silk goods.	28	3,813,532	46,666	220,000	898,404	2,648,462	49	184	179,253	2,506	826,456
202	Silverware.	4	165,600	32,000	10,000	65,000	58,600	7	10	6,412	55	38,736
203	Slaughtering and meat packing, wholesale.	22	1,417,002	106,700	251,092	245,400	723,810	36	118	86,637	353	198,110
204	Slaughtering, wholesale, not including meat packing.	36	465,730	59,000	123,000	43,884	239,846	50	23	25,288	264	174,500
205	Smelting and refining, not from the ore.	7	382,209	16,500	33,600	22,587	304,522	9	56	26,871	98	48,338
206	Soap and candles.	33	2,307,478	165,950	235,914	247,125	1,608,489	43	116	111,986	499	198,430
207	Soda water apparatus.	3	589,867			34,464	555,403	5	35	60,960	165	78,204
208	Sporting goods.	11	276,800	9,200	54,600	39,520	172,980	11	14	24,420	371	123,560
209	Springs, steel, car and carriage.	3	937,075	74,943	79,860	88,849	693,423	6	24	57,302	280	172,632
210	Stamped ware.	9	524,600	21,800	43,800	140,400	318,600	7	26	37,301	606	227,210
211	Stationery goods, not elsewhere specified.	4	11,300			4,500	6,800	6	6	5,010	20	5,200
212	Steam fittings and heating apparatus.	11	797,296	74,000	95,900	111,957	515,439	10	58	70,172	231	158,691
213	Steam packing.	17	386,990	4,000	11,562	88,465	282,963	20	68	78,813	238	96,088
214	Stencils and brands.	8	23,875	6,500	2,500	10,650	4,225	12			10	4,296
215	Stereotyping and electrotyping.	11	246,434			120,134	126,300	17	17	15,844	256	149,696
216	Sugar and molasses, refining.	7	23,992,552	2,750,000	2,050,000	2,649,719	16,542,833	15	119	185,078	1,249	647,592
217	Surgical appliances.	23	554,635	34,600	85,900	133,185	300,950	27	43	47,447	253	128,628
218	Taxidermy.	3	6,510	2,000	1,500	200	2,750	3			2	664
219	Tin andterne plate.	4	795,697	47,000	72,684	91,736	584,277	5	101	59,281	340	105,838
220	Tinsmithing, coppersmithing, and sheet-iron working.	437	2,636,063	295,865	370,649	545,375	1,424,674	502	172	137,317	2,304	1,218,139
221	Tobacco, chewing, smoking, and snuff.	6	852,379	76,447	216,442	189,255	370,235	5	9	4,230	48	21,063
222	Tobacco, cigars and cigarettes.	550	4,042,502	127,350	231,837	112,078	3,571,237	602	264	324,882	6,032	2,571,808
223	Tools, not elsewhere specified.	14	434,091	52,500	37,500	65,467	278,624	15	24	29,450	251	135,886
224	Toys and games.	13	243,427	24,300	60,400	42,323	116,401	13	9	17,924	232	76,000
225	Trunks and valises.	32	280,923	4,000	9,500	23,370	244,053	48	19	12,102	234	108,317
226	Umbrellas and canes.	36	1,245,056	30,750	40,147	193,044	981,115	57	135	157,745	1,628	550,874
227	Upholstering materials.	22	2,579,897	169,900	346,300	386,188	1,677,509	40	75	90,084	1,282	416,333
228	Varnish.	16	1,526,329	182,580	194,654	141,658	1,067,437	9	78	115,136	129	91,018
229	Vinegar and cider.	5	101,450	15,900	10,200	32,750	42,000	7	11	5,776	38	23,016
230	Washing machines and clothes wringers.	3	4,360	600	1,500	160	2,100	3			4	1,876
231	Watch, clock, and jewelry repairing.	354	476,027	45,830	68,355	123,937	238,355	375	11	6,080	337	188,443
232	Whips.	4	8,823			1,115	7,708	4	2	1,500	9	4,500
233	Window shades.	16	299,248	45,700	45,600	23,400	184,548	17	29	22,328	131	54,858
234	Wire.	3	110,137	20,000	15,158	30,049	44,980	4	3	2,850	65	29,953
235	Wirework, including wire rope and cable.	26	333,464	15,400	53,000	122,508	147,556	31	19	17,132	330	130,388
236	Wood, turned and carved.	54	315,730	36,400	87,400	76,485	165,445	67	11	10,284	858	149,697
237	Woodenware, not elsewhere specified.	10	85,856			20,805	64,551	13	9	6,280	99	48,197
238	Woolen goods.	98	12,874,265	151,762	1,528,003	3,515,721	7,078,779	126	216	252,655	9,438	3,622,765
239	Wool pulling.	5	178,740	75,000	26,700	15,400	121,640	7	4	2,192	69	36,203
240	Worsted goods.	36	14,079,859	332,334	1,148,926	3,529,729	9,065,870	23	138	200,954	7,407	2,429,603
241	All other industries ¹ .	80	43,651,745	4,177,774	7,523,115	10,422,745	21,528,111	73	701	939,906	14,624	7,257,704

¹ Embraces artists' materials, 2; bells, 1; belting and hose, linen, 1; bone, ivory, and lamplblack, 1; boots and shoes, rubber, 1; brass, 1; cardboard, 1; cars and general shop construction and repairs by street railroad companies, 2; cars, steam railroad, not including operations of railroad companies, 1; cars, street railroad, not including operations of railroad companies, 1; chocolate and cocoa products, 2; clocks, 1; drug grinding, 2; emery wheels, 2; engravers' materials, 2; felt goods, 1; firearms, 2; fire extinguishers, chemical, 2; fireworks, 1; fish, canning and preserving, 1; foundry supplies, 1; fruits and vegetables, canning and preserving, 2; furs, dressed, 2; gloves and mittens, 1; graphite and graphite refining, 1; grindstones, 1; hammocks, 1; hooks and eyes, 2; iron and steel, nails and

BY SPECIFIED INDUSTRIES: 1900—Continued.

PHILADELPHIA—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.						COST OF MATERIALS USED.			Value of products, including custom work and repairing.
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not including internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
3,856	\$2,107,542	1,207	\$359,882	264	\$10,893	\$1,626,292	\$241,850	\$3,888	\$552,127	\$822,918	\$2,948,999	\$2,863,897	\$85,102	\$10,066,740	182
165	77,816	66	15,632	2	406	45,038	11,752	585	17,643	16,058	107,590	105,319	2,271	365,295	183
2,882	1,940,581	426	155,911	89	14,517	2,374,571	184,191	40,961	1,474,766	674,653	3,040,590	3,541,068	99,522	13,076,840	184
17	8,873	12	2,130	1	189	4,099	3,373		1,326		21,912	21,248	664	59,019	185
8	4,354					5,067	135	267	4,470	195	22,617	22,617		42,587	186
55	40,500					4,863	2,016	27	2,820		37,040	36,500	540	100,367	187
20	14,126	92	83,946	2	890	13,600	3,606	296	7,698	2,000	70,133	69,296	837	196,592	188
541	272,171			1	150	98,768	18,316	1,383	79,069		551,378	548,151	3,227	1,226,257	189
80	81,370	6	1,730			3,049	483	344	2,102	120	282,825	281,994	831	407,110	190
282	157,049	9	2,762	7	1,304	38,811	28,547	1,539	8,355	820	272,594	270,306	2,288	709,689	191
211	110,978					56,677	3,170	683	12,824	40,000	165,024	158,820	6,204	565,138	192
21	10,847					1,781	1,041	426	314		47,278	46,197	1,081	75,475	193
1,139	942,832	46	12,250	125	26,500	64,504	1,510	2,529	60,465		917,601	890,873	26,728	2,286,471	194
116	64,808					10,631	1,656	225	8,250	500	66,295	64,363	1,932	178,000	195
25	12,812	4	1,460			4,401	3,776	3	682		16,374	15,601	773	51,141	196
67	37,784			2	400	4,143	1,804	173	1,483	683	21,342	20,964	878	91,957	197
496	267,333	2,236	633,604	97	14,586	315,916	71,500	2,591	103,033	133,783	1,937,664	1,919,819	17,745	3,979,408	198
253	113,928	69	17,934	2	361	42,965	6,103	2,633	31,704	2,525	900,181	950,944	15,237	1,285,411	199
35	20,800					5,091	4,256	19	816		25,700	25,010	690	66,500	200
676	307,079	1,628	487,794	202	31,583	299,965	55,878	2,563	94,451	147,073	2,291,674	2,255,038	35,986	4,591,794	201
54	38,586			1	150	3,810	1,110	737	1,963		53,033	52,033	950	178,550	202
353	198,110					73,903	12,116	5,347	56,440		4,317,472	4,290,873	26,599	5,128,823	203
261	173,848	1	500	2	152	147,771	95,999	2,570	49,202		6,003,593	5,990,843	12,750	6,891,639	204
98	48,888					38,942	2,385	1,251	35,306		912,183	904,387	7,796	1,092,352	205
340	162,286	143	33,129	16	3,015	433,544	12,762	4,885	415,197	700	1,564,511	1,534,996	19,515	2,716,357	206
163	77,684	2	520			52,409	9,220	1,574	41,615		181,600	179,803	1,797	454,102	207
177	76,446	173	43,844	21	3,270	8,372	8,145	656	6,171		203,720	201,924	1,796	495,765	208
280	172,632					131,762	10,000	1,850	119,912		701,131	727,981	33,150	1,375,521	209
406	123,037	194	103,289	6	834	13,751	3,126	1,365	8,410	850	235,394	227,837	7,507	578,220	210
9	2,660	7	1,872	4	668	8,563	1,795		1,668	100	13,607	13,220	387	47,000	211
255	152,432	11	2,736	15	3,523	70,143	6,880	2,259	61,004		382,781	378,435	4,346	809,225	212
203	87,378	85	8,710			52,916	12,330	413	39,073	500	385,866	378,613	7,243	769,116	213
10	4,296					1,770	1,422	166	132		5,762	5,700	62	31,217	214
246	147,696			10	2,000	23,970	12,100		11,069	810	117,269	110,890	6,379	404,319	215
1,171	635,231	60	8,911	18	3,450	604,871	11,000	25,693	594,578	3,000	33,658,440	33,414,459	243,981	36,183,317	216
100	101,833	84	25,383	9	1,412	54,015	8,628	1,758	30,620	13,000	160,944	157,871	3,073	530,190	217
2	664					633	444	56	133		3,490	3,490	10	9,750	218
264	86,743	76	19,095			88,202	375	1,628	36,199		1,378,664	1,371,712	6,852	1,761,986	219
2,206	1,194,412	43	11,231	55	12,496	247,195	80,559	9,792	148,855	12,689	2,140,642	2,126,643	19,994	4,731,473	220
34	16,894	14	4,169			117,133	602	1,339	115,192		102,939	101,113	1,826	303,246	221
4,163	2,038,973	1,751	511,471	128	21,364	1,258,818	114,209	6,552	1,137,979	78	3,321,261	3,312,938	8,323	8,687,349	222
232	131,928	13	2,500	6	953	13,825	4,794	1,546	7,435		292,776	281,950	10,816	657,928	223
103	51,156	42	13,945	87	10,899	26,702	2,106	920	22,166	1,510	74,452	72,829	1,623	240,040	224
210	101,933	16	5,281	8	1,148	45,427	16,091	224	22,612	6,500	220,731	219,465	1,266	462,730	225
579	276,881	976	259,707	73	13,736	198,216	37,090	1,061	159,990	75	1,879,852	1,862,309	17,047	3,145,446	226
442	197,772	762	205,973	78	12,583	133,680	16,980	5,791	106,965	3,944	1,771,336	1,754,586	16,750	2,769,758	227
127	90,673	1	240	1	100	115,273	2,600	4,707	55,971	52,000	1,027,619	1,020,056	7,593	1,523,259	228
33	23,018					7,781	2,500	430	4,851		142,380	139,985	2,395	214,075	229
4	1,876					384	204	20	160		3,190	3,180	10	8,650	230
294	180,073	10	3,726	33	4,644	80,893	47,161	1,950	10,064	21,713	178,264	174,053	4,211	326,389	231
9	4,500					1,397	1,092		905		13,333	13,173	160	28,675	232
116	43,303	12	4,989	3	566	16,237	2,912	1,538	11,637	200	164,144	163,069	1,135	332,350	233
65	29,953					2,040	600	406	1,034		158,503	151,812	6,696	218,390	234
239	116,094	55	10,994	36	3,250	11,901	5,742	603	4,956	600	199,842	195,316	4,526	496,056	235
325	145,389			33	4,303	24,077	10,431	1,033	12,113	450	155,127	149,330	5,797	427,538	236
77	44,332	4	611	18	2,754	17,621	5,740	29	11,852		79,905	78,466	1,439	132,194	237
5,102	2,307,245	3,579	1,177,305	757	133,215	1,098,240	89,365	29,022	725,934	253,419	11,751,083	11,551,911	199,177	13,340,012	238
69	36,203					6,568	2,400	690	3,478		7,703	5,243	2,460	75,206	239
2,799	1,278,239	3,300	917,067	1,308	234,297	1,408,925	88,404	15,189	891,080	414,252	10,518,700	10,376,616	142,084	16,242,250	240
12,907	6,336,642	859	259,720	858	161,402	1,657,420	100,502	66,636	1,283,833	206,399	32,693,939	32,058,103	635,836	49,557,878	241

spikes, cut and wrought, including wire nails, 2; iron and steel, pipe, wrought, 1; liquors, distilled, 2; mats and matting, 2; nets and seines, 1; oil, lard, 1; oil, linseed, 2; oilcloth, floor, 2; pens, fountain and stylographic, 1; pens, steel, 1; petroleum, refined, 2; phonographs and graphophones, 2; photographic apparatus, 2; sand and emery paper and cloth, 1; screws, machine, 2; sewing machines and attachments, 2; shipbuilding, iron and steel, 2; silversmithing, 2; tin foil, 1; type founding, 2; typewriter repairing, 2; typewriters and supplies, 1; vault lights and ventilators, 1; watch cases, 2; wood, preserving, 1; wool scouring, 1.

TABLE 8.—MANUFACTURES IN CITIES

PITTSBURG.

MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
1 All industries	1,938	\$193,162,900	\$19,612,219	\$23,001,802	\$41,161,172	\$109,387,707	2,253	5,064	\$5,457,443	69,977	\$36,684,563
2 Artificial limbs	8	20,085			8,585	11,500	4	11	4,212	33	13,994
3 Awnings, tents, and sails	7	57,875		300	4,925	52,650	8	10	5,965	61	27,452
4 Bicycle and tricycle repairing	13	13,135		100	4,715	8,320	17			5	2,114
5 Blacksmithing and wheelwrighting	83	301,186	75,100	45,060	33,883	147,643	97	5	2,580	170	110,794
6 Bookbinding and blank book making	7	40,808			25,000	15,808	8	8	3,000	87	32,692
7 Boots and shoes, custom work and repairing	126	53,338	8,170	10,840	15,045	19,283	129	3	1,500	51	22,491
8 Bottling	22	219,078	46,800	46,500	26,240	99,538	26	12	12,458	105	60,403
9 Boxes, fancy and paper	4	48,929			13,116	30,813	6	1	225	137	31,711
10 Brass castings and brass finishing	5	199,894	24,000	14,000	35,437	126,457	2	21	15,666	87	53,003
11 Bread and other bakery products	83	2,122,318	109,850	312,536	1,100,845	530,037	88	219	198,374	1,108	424,123
12 Brick and tile	21	1,232,110	502,600	306,633	188,274	234,603	33	31	28,295	671	300,963
13 Brooms and brushes	4	243,965	4,000	5,000	28,245	206,720	10	2	1,800	131	42,200
14 Carpentering	68	1,344,493	140,970	105,296	72,033	1,026,194	94	41	33,510	895	549,071
15 Carpets, rug	5	6,350	1,000	1,160	2,200	2,000	5			15	4,456
16 Carriages and wagons	23	382,700	44,000	75,950	39,657	223,093	35	17	14,288	292	171,286
17 Cars and general shop construction and repairs by steam railroad companies.	4	170,035	16,500	67,500	50,115	46,520		43	36,823	921	417,505
18 Chemicals	4	650,324	121,200	94,000	238,253	146,871	1	23	19,007	88	50,920
19 China decorating	3	12,610			1,910	10,700	3	6	1,494	5	2,650
20 Clothing, men's, custom work and repairing	142	756,271	66,400	74,000	22,845	593,026	173	67	54,242	728	375,927
21 Clothing, men's, factory product	12	926,304	150,000	100,000	29,500	646,804	28	55	44,228	735	247,158
22 Clothing, women's, dressmaking	55	137,516	500	700	14,180	122,136	61	14	8,516	331	107,444
23 Clothing, women's, factory product	9	1,010,840			11,240	999,600	17	28	31,766	325	133,232
24 Confectionery	11	334,878	18,000	22,000	39,432	255,446	15	129	56,810	322	76,075
25 Cooperage	10	214,121	54,400	37,040	10,629	112,052	13	3	3,000	252	131,261
26 Dyeing and cleaning	18	92,380	36,000	39,600	6,290	10,490	22	5	5,112	54	27,656
27 Electrical apparatus and supplies	8	16,070,738	221,345	1,888,427	2,023,537	11,937,426	7	431	562,431	5,938	3,302,790
28 Electrical construction and repairs	12	85,628	20,300	5,800	9,216	50,312	21	3	1,796	63	35,524
29 Engraving and diesinking	3	315			95	220	4				
30 Engraving, steel, including plate printing	5	14,044			6,983	7,061	8	4	2,550	26	11,897
31 Food preparations	3	55,000	6,500	18,000	18,500	12,000	4	1	780	39	12,232
32 Foundry and machine shop products	83	14,897,525	2,656,636	2,206,332	3,611,596	6,422,961	82	448	564,233	6,359	3,009,721
33 Fur goods	4	119,075	27,000	8,000	4,275	79,800	4	7	2,566	26	7,796
34 Furniture, cabinetmaking, repairing, and upholstering.	9	9,345	1,600	3,650	1,305	2,790	12			8	5,272
35 Furniture, factory product	6	59,429	6,000	8,000	14,850	30,579	14	26	5,500	71	41,964
36 Galvanizing	3	68,026		7,000	9,746	51,280	3	2	980	66	22,975
37 Gas and lamp fixtures	5	75,263			15,400	59,863	6	17	17,156	66	31,307
38 Gas, illuminating and heating	3	11,751,033	350,471	343,000	3,273,200	7,784,362	22	22	19,143	123	81,285
39 Glass	16	3,538,202	835,274	748,444	631,786	1,372,698	5	107	136,971	2,104	1,132,985
40 Glass, cutting, staining, and ornamenting	9	153,384	13,500	14,600	22,500	103,384	12	12	13,160	191	81,308
41 Hand stamps	5	24,720			8,000	16,120	8	10	6,118	29	14,603
42 Iron and steel	36	75,149,146	7,192,910	10,176,168	19,355,578	38,425,490	37	915	1,183,227	24,418	13,837,501
43 Iron and steel, bolts, nuts, washers, and rivets.	3	408,062	37,720	25,500	196,625	143,217	6	16	20,450	344	100,998
44 Ironwork, architectural and ornamental.	9	4,412,379	512,845	238,381	553,875	3,077,278	6	158	173,545	2,043	1,042,760
45 Leather goods	3	7,735			85	7,650	5	1	52	1	300
46 Liquors, malt	7	18,419,671	1,068,264	1,231,886	1,523,973	9,595,618		70	159,861	383	312,102
47 Lithographing and engraving	3	53,000	8,500	8,500	25,500	15,500	9	3	4,100	22	9,156
48 Lock and gun smithing	9	63,790	50,000	5,000	8,340	5,450	13	2	366	10	5,641
49 Looking-glass and picture frames	16	105,556	6,500	2,100	3,694	93,262	17	14	8,544	62	30,602
50 Lumber, planing mill products, including sash, doors, and blinds.	13	740,333	99,136	108,487	90,616	442,094	24	33	30,082	296	174,368
51 Marble and stone work	15	3,622,627	224,507	24,498	190,711	3,182,911	22	103	132,881	3,409	1,392,496
52 Masonry, brick and stone	32	1,444,900	90,500	100,520	71,814	1,182,066	46	60	57,550	1,231	707,850
53 Mattresses and spring beds	3	172,110	30,000	50,000	13,298	78,812	4	7	6,900	79	34,152
54 Millinery, custom work	38	345,899	43,800	30,000	5,319	266,750	44	124	46,356	198	61,253
55 Mineral and soda waters	10	137,785	21,000	11,200	48,010	57,575	10	22	16,622	52	23,408
56 Mirrors	4	64,417		3,238	21,204	39,975	7	7	6,368	90	32,853
57 Models and patterns	7	51,226		1,500	23,775	25,951	10	5	5,900	54	41,946
58 Monuments and tombstones	11	131,289	50,250	15,050	13,122	52,867	14	3	2,540	75	58,036
59 Oil, not elsewhere specified	8	134,644	46,515	15,701	7,575	64,853	2	16	27,778	12	5,942
60 Optical goods	7	94,400	20,000	10,000	8,490	55,910	10	19	8,302	24	17,247
61 Painting, house, sign, etc	47	823,421	48,000	53,100	18,463	203,858	59	15	10,286	325	194,757
62 Paints	6	1,024,114	137,500	155,100	147,525	583,989	3	43	62,409	184	73,293
63 Patent medicines and compounds	9	226,388		8,000	47,049	171,339	9	66	39,639	105	42,852
64 Petroleum, refining	4	1,183,609	252,628	25,489	869,687	535,805	2	30	48,745	140	74,714
65 Photography	27	49,468	400	1,200	18,675	29,188	30	9	4,103	42	21,829
66 Photolithographing and photoengraving.	6	34,075			17,500	16,575	11	6	3,692	50	27,518

BY SPECIFIED INDUSTRIES: 1900—Continued.

PITTSBURG.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
62,881	\$34,809,175	5,873	\$1,542,689	1,723	\$332,699	\$15,293,017	\$929,081	\$699,025	\$11,045,033	\$2,619,878	\$116,833,174	\$110,858,518	\$5,974,656	\$203,261,251	1
30	13,884	1	812	2	298	4,750	3,420	—	1,830	—	10,955	10,580	375	55,702	2
33	18,666	28	8,786	—	—	6,426	3,840	20	2,566	—	62,949	62,509	440	140,725	3
4	1,924	—	—	1	190	3,282	2,924	5	353	—	8,529	8,333	191	20,550	4
169	110,616	—	—	1	178	18,056	12,031	2,456	3,569	—	115,833	109,798	6,035	375,832	5
40	20,888	45	11,417	2	387	7,212	3,457	62	1,393	2,800	16,629	14,755	874	76,028	6
50	22,335	—	—	1	156	19,301	17,488	412	1,451	—	49,718	48,626	1,092	158,184	7
104	60,199	—	—	1	204	30,280	10,445	3,446	16,389	—	308,731	307,666	1,065	486,539	8
26	12,050	87	16,725	24	2,936	6,421	3,816	170	2,435	—	46,833	45,233	600	102,100	9
87	53,093	—	—	—	—	32,685	1,550	641	30,504	—	299,331	295,443	3,888	418,425	10
594	332,831	332	65,628	182	25,664	276,068	39,996	10,473	225,599	—	1,359,423	1,327,389	32,034	2,709,293	11
632	291,666	—	—	39	9,297	81,845	9,348	8,045	24,452	40,000	149,195	25,150	124,045	729,632	12
95	35,218	37	6,732	2	250	10,798	6,492	278	4,023	—	164,856	163,979	877	248,033	13
893	548,825	—	—	2	246	1,875,075	11,082	5,223	33,083	1,825,679	1,145,623	1,140,915	4,678	4,115,033	14
10	3,256	5	1,200	—	—	1,082	697	75	310	—	2,280	2,138	151	11,034	15
291	171,086	—	—	1	200	30,076	15,588	4,197	9,691	600	147,587	143,539	4,048	447,601	16
866	401,087	65	16,413	—	—	2,890	—	537	2,353	—	253,001	241,341	8,660	710,219	17
87	50,821	—	—	1	99	49,093	294	3,098	45,701	—	143,799	137,609	6,190	317,711	18
4	2,450	1	200	—	—	1,769	938	42	654	135	10,351	9,991	360	20,892	19
568	826,514	147	46,986	18	2,477	145,462	87,936	3,095	26,656	27,775	586,338	582,043	4,295	1,472,053	20
169	91,810	556	153,824	10	1,524	45,136	17,758	8,754	10,624	13,000	801,772	794,490	7,282	1,270,717	21
27	20,093	301	86,843	3	508	26,875	20,683	93	6,099	—	152,750	152,475	1,275	389,371	22
72	38,611	253	94,621	—	—	68,985	7,750	175	61,060	—	388,195	385,775	2,420	691,000	23
73	87,798	167	27,467	82	10,820	90,742	25,340	1,743	68,659	—	261,217	258,134	3,083	565,341	24
238	124,363	—	—	14	6,898	7,214	2,791	2,024	2,396	—	424,242	422,707	1,535	605,845	25
41	23,440	11	3,772	2	444	8,991	2,970	1,664	2,752	1,605	7,252	5,831	1,421	79,930	26
5,269	3,096,580	641	200,148	28	6,062	1,113,783	4,436	21,861	1,009,075	78,411	8,838,186	8,744,533	93,608	14,013,450	27
60	34,968	—	—	3	556	5,683	2,746	309	2,428	200	93,293	92,749	544	177,905	28
20	10,663	5	1,130	1	104	2,354	1,390	60	904	—	9,237	9,033	169	39,114	29
24	9,268	15	2,964	—	—	1,729	—	629	1,100	—	52,925	51,525	1,400	80,717	30
6,290	3,593,094	15	5,099	54	11,628	755,411	67,874	98,376	578,391	10,860	8,165,696	7,879,939	285,757	15,545,561	31
9	4,950	17	2,846	—	—	4,263	1,700	760	1,763	40	79,525	79,093	432	113,500	32
7	5,152	1	120	—	—	1,384	1,146	126	112	—	9,644	9,595	49	26,988	33
69	41,340	2	624	—	—	7,373	3,825	318	3,080	150	42,718	40,905	1,813	136,645	34
66	22,975	—	—	—	—	7,700	2,072	1,278	4,350	—	74,025	70,969	3,056	108,206	35
53	28,764	12	2,361	1	182	15,180	6,940	179	8,061	—	69,945	69,080	865	155,850	36
128	81,295	—	—	—	—	70,759	1,200	23,456	46,103	—	79,361	77,017	2,344	667,241	37
1,461	972,562	175	43,857	468	116,566	136,944	2,920	20,739	113,285	—	741,562	559,751	181,811	2,429,686	38
87	51,949	97	27,859	7	1,500	12,734	4,365	781	7,588	—	168,873	162,925	5,948	349,161	39
27	14,291	—	—	2	312	5,659	2,870	87	2,702	—	10,933	10,491	492	51,945	40
23,821	13,765,044	290	58,580	307	63,877	4,505,421	66,820	218,619	4,184,461	35,521	59,322,561	54,785,332	4,537,229	90,798,086	41
289	82,360	21	8,750	34	9,883	9,937	2,250	2,100	4,587	—	371,265	359,969	11,296	573,121	42
2,028	1,038,939	—	—	15	3,821	183,659	4,765	14,621	163,230	1,043	4,896,141	4,362,646	33,495	6,111,943	43
1	300	—	—	—	—	407	291	29	87	—	4,702	4,701	1	6,525	44
383	312,102	—	—	—	—	1,525,061	—	62,012	1,463,049	—	677,672	626,110	51,562	3,586,893	45
20	8,740	1	260	1	156	2,652	1,300	627	725	—	13,205	12,990	215	31,600	46
8	5,111	1	286	1	144	3,022	1,665	1,008	349	—	9,427	9,285	192	25,633	47
53	28,710	2	662	7	1,230	13,199	11,142	668	1,389	—	78,508	77,889	619	162,030	48
296	174,368	—	—	—	—	28,816	6,168	4,867	17,781	—	474,749	468,023	6,726	827,059	49
3,409	1,392,496	—	—	—	—	213,949	4,665	10,570	48,119	150,595	886,864	877,627	9,237	3,189,631	50
1,231	707,350	—	—	—	—	368,098	9,686	4,877	23,241	825,294	1,468,650	1,465,018	3,632	2,921,294	51
60	28,026	19	6,126	—	—	23,450	3,780	914	13,756	—	157,959	157,209	750	245,597	52
7	3,643	185	56,491	6	1,014	62,050	32,503	1,658	27,189	700	287,411	286,447	964	574,256	53
45	22,008	2	600	5	800	19,320	1,967	1,805	16,018	—	41,119	40,629	490	139,816	54
63	26,717	27	6,136	—	—	11,309	3,707	407	7,195	—	52,776	50,708	2,068	117,465	55
53	41,746	1	200	—	—	5,003	3,310	172	1,527	—	22,897	21,520	1,377	100,818	56
76	58,036	—	—	—	—	15,729	1,520	1,487	1,562	11,160	59,626	58,740	886	168,908	57
12	5,942	—	—	—	—	4,486	1,375	840	2,271	—	252,467	252,182	275	322,556	58
22	16,822	—	—	—	—	7,926	5,600	212	2,114	—	27,992	27,140	852	85,690	59
819	193,433	1	480	5	844	21,670	13,364	1,593	6,713	—	150,322	149,743	579	489,903	60
170	69,543	14	3,750	—	—	50,847	1,495	4,751	42,801	1,800	797,190	782,947	14,243	1,402,038	61
58	29,776	47	12,576	—	—	133,030	9,441	2,390	121,253	—	289,287	287,537	1,750	885,143	62
140	74,714	—	—	—	—	56,600	840	8,708	44,223	2,859	1,051,617	1,021,887	29,730	1,315,040	63
27	17,725	14	3,974	1	130	21,317	12,096	281	6,272	2,158	30,901	30,458	443	182,009	64
46	26,582	3	624	2	312	7,031	3,935	17	1,196	1,883	13,966	12,433	1,533	73,757	65

TABLE 8.—MANUFACTURES IN CITIES

PITTSBURG—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES.		Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
67	Plumbing, and gas and steam fitting.	107	\$638,693	\$57,875	\$68,600	\$56,796	\$455,422	139	38	\$24,954	481	\$313,851
68	Pottery, terra cotta, and fire-clay products.	8	2,774,471	462,939	935,279	158,503	1,217,750	143	143	136,964	1,995	509,035
69	Printing and publishing, book and job.	67	1,100,015	134,500	98,347	533,824	333,844	91	96	75,076	886	434,481
70	Printing and publishing, newspapers and periodicals.	45	3,849,792	380,500	612,150	1,147,855	1,759,287	29	444	390,857	1,229	966,818
71	Roofing and roofing materials	15	194,899	28,000	29,175	12,175	125,549	22	9	6,437	147	74,228
72	Saddlery and harness	32	141,389	10,700	18,650	13,630	98,409	37	9	7,400	99	53,255
73	Shirts	3	52,416			9,473	42,943	12	27	15,243	155	42,259
74	Slaughtering and meat packing, wholesale.	5	786,810	130,118	44,832	28,040	584,295	6	47	42,713	150	93,950
75	Smelting and refining, not from the ore.	5	347,350	48,000	83,500	22,250	248,600	1	10	18,830	87	49,781
76	Steam fittings and heating apparatus	9	956,158			63,250	292,908	47	47	55,590	205	99,345
77	Stereotyping and electrotyping	4	53,690			15,900	37,796	2	15	14,868	28	11,288
78	Tin andterne plate	4	374,336	65,000	32,000	112,709	164,636	4	19	20,130	215	115,647
79	Tinsmithing, coppersmithing, and sheet-iron working.	54	547,818	73,100	63,832	106,282	304,604	76	33	29,405	490	211,836
80	Tobacco, cigars and cigarettes	147	714,730	151,407	164,165	85,580	313,578	157	61	45,081	1,365	460,739
81	Tools, not elsewhere specified	6	545,903	47,000	44,000	123,513	331,390	5	34	42,802	317	189,279
82	Trunks and valises.	3	15,917	2,000	3,000	320	10,597	4	2	850	12	5,680
83	Watch, clock, and jewelry repairing	68	130,375	14,250	17,100	37,710	61,316	71	9	3,152	131	78,577
84	Wirework, including wire rope and cable.	4	193,470			32,100	161,370	4	2	4,200	13	5,870
85	Wood, turned and carved.	3	3,190			2,100	1,090	3	2	700	2	858
86	All other industries	100	19,377,062	2,477,741	1,943,666	4,094,955	10,860,700	105	437	543,653	5,655	2,787,017

¹ Embraces artists' materials, 1; babbitt metal and solder, 2; baking and yeast powders, 1; baskets, and rattan and willow ware, 1; belting and hose, leather, 1; bicycles and tricycles, 1; boots and shoes, factory product, 1; boxes, wooden packing, 2; brassware, 2; bridges, 2; cars and general shop construction and repairs by street railroad companies, 1; cars, steam railroad, not including operations of railroad companies, 2; cleansing and polishing preparations, 1; coffee and spice, roasting and grinding, 2; coffins, burial cases, and undertakers' goods, 1; coke, 2; cork cutting, 2; cotton waste, 1; cutlery and edge tools, 1; druggists' preparations, not including prescriptions, 1; electroplating, 2; explosives, 1; fancy articles, not elsewhere specified, 1; fertilizers, 2; flavoring extracts, 2; flouring and grist mill products, 2; foundry supplies, 2; fruits and vegetables, canning and preserving, 1; fur hats, 2; furnishing goods, men's, 2; gas and oil stoves, 2; gas machines and meters, 1; grease and tallow, 1; hairwork, 1; hats and caps, not including fur hats and wool hats, 2; house furnishing goods, not elsewhere specified, 2; ice,

READING.

1 All industries	843	\$27,975,628	\$2,458,523	\$4,469,370	\$6,090,595	\$14,018,140	989	1,073	\$924,551	19,165	\$7,544,950
2 Bicycle and tricycle repairing	7	7,276			3,585	3,691	9	2	500	7	2,508
3 Bicycles and tricycles	4	650,816	54,880	87,602	137,346	397,428	37	37	28,722	407	165,106
4 Blacksmithing and wheelwrighting	27	21,610	8,000	4,385	3,950	5,305	30	3		27	12,721
5 Bookbinding and blank book making	3	27,100	5,000	7,000	10,574	4,526	3	2	780	33	10,671
6 Boots and shoes, custom work and repairing.	52	21,065	6,000	6,065	4,510	8,890	51	2	900	15	6,642
7 Bottling	6	63,150	11,250	17,700	20,300	13,900	6	3	1,449	28	12,478
8 Boxes, cigar	3	57,030	4,500	15,000	8,000	39,530	5	1	68	74	19,892
9 Boxes, fancy and paper	5	66,109	6,450	15,000	24,225	20,434	9	2	1,500	111	27,444
10 Brass castings and brass finishing	3	31,763	13,000	7,000	8,400	8,363	4	5	3,250	15	9,170
11 Bread and other bakery products	51	284,713	50,000	82,825	95,388	56,500	59	31	18,666	217	104,412
12 Brick and tile	3	9,750	1,000	3,200	1,800	4,250	3	5		24	7,887
13 Brooms and brushes	7	27,550	2,050	3,675	2,875	18,950	11	5	1,018	43	12,805
14 Carpentering	47	194,492	4,150	3,010	7,935	179,397	55	6	4,470	267	132,190
15 Carpets, rug	8	11,425	3,800	5,200	905	1,520	9	1	312	5	1,910
16 Carriages and wagons	12	443,721	55,000	76,359	75,678	236,734	11	21	9,737	203	83,115
17 Cars and general shop construction and repairs by steam railroad companies.	4	2,069,203	48,043	465,000	323,141	1,233,019	46	46	45,845	1,962	1,045,675
18 Clothing, men's, custom work and repairing.	41	236,094	41,700	34,800	8,190	151,404	43	23	14,743	315	111,504
19 Clothing, men's, factory product	4	185,292	23,500	26,000	3,900	131,892	9	11	13,911	172	52,583
20 Clothing, women's, dressmaking	11	9,850	2,300	2,800	3,025	1,725	17	5		54	15,109
21 Clothing, women's, factory product	5	18,465			5,325	13,140	9			49	12,013
22 Coffee and spice, roasting and grinding	3	12,158	1,000	1,600	2,050	7,608	4	1	700	3	1,728
23 Confectionery	21	164,101	30,500	40,588	51,087	42,016	25	41	32,224	328	71,076
24 Dyeing and finishing textiles	4	86,771			17,495	19,276	5	3	1,000	23	9,050
25 Electrical construction and repairs	6	15,311	100	75	400	14,736	6	1	230	13	6,805
26 Foundry and machine shop products	27	2,799,240	274,245	436,176	567,304	1,521,514	30	99	90,705	1,572	681,574
27 Fur hats	3	623,408	48,000	66,055	101,130	408,223	6	20	19,767	731	283,000
28 Furniture, cabinetmaking, repairing, and upholstering.	14	23,326	3,000	3,100	8,710	18,516	17	3	750	18	9,272
29 Hardware	4	1,734,544	86,000	185,488	516,657	946,449	4	119	93,284	1,587	600,861
30 Hosiery and knit goods	21	710,128	33,950	82,904	238,832	309,442	24	50	33,315	1,667	390,857
31 Iron and steel	7	8,132,019	586,460	1,395,829	1,925,228	4,275,102	1	108	157,689	3,769	1,612,011
32 Ironwork, architectural and ornamental.	4	50,663			7,679	42,984	4	3	3,640	49	21,299
33 Lime and cement	3	950	100	800	55	495	4	4		5	1,605
34 Liquors, malt	6	1,032,510	133,200	290,434	213,340	395,536	3	19	25,732	119	66,361
35 Looking-glass and picture frames	4	9,675	325	325	900	8,365	4			7	2,778
36 Lumber, planing mill products, including sash, doors, and blinds.	5	178,949	15,675	25,050	38,376	99,848	7	6	4,666	146	69,467

BY SPECIFIED INDUSTRIES: 1900—Continued.

PITTSBURG—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
478	\$318,426			3	\$425	\$52,014	\$26,566	\$3,099	\$22,236	\$113	\$632,144	\$627,491	\$4,653	\$1,297,816	67
1,978	505,801	16	\$3,084	1	200	86,252	2,806	15,588	65,360	12,500	839,158	726,475	112,678	2,118,902	68
581	359,924	249	66,537	56	8,020	116,728	45,483	8,239	41,778	21,278	513,228	498,839	14,384	1,396,292	69
1,124	926,640	96	38,506	9	1,672	457,182	78,196	21,046	309,919	47,991	835,581	812,361	23,167	3,217,809	70
146	73,916			1	312	9,297	3,934	1,882	3,481		288,964	288,386	578	427,625	71
97	52,999			2	256	15,504	10,308	875	4,321		83,960	83,362	598	229,895	72
6	4,976	147	36,997	2	286	5,892	2,492	50	3,295	55	76,808	74,581	1,222	157,579	73
148	93,525	2	425			28,001	4,650	2,876	20,175		1,779,600	1,774,137	5,468	2,054,521	74
87	49,731					17,583	1,640	810	14,613	520	1,005,020	997,008	8,012	1,239,309	75
201	98,025	4	1,320			32,178	10,120	1,007	21,051		344,466	340,011	4,455	644,180	76
20	9,776			8	1,512	4,143	2,222		1,921		17,151	16,386	765	70,437	77
191	110,451	24	5,196			10,534	500	3,321	6,713		1,451,335	1,444,296	7,039	1,837,926	78
410	208,239	5	1,535	15	2,062	47,815	19,464	2,872	21,856	3,623	378,395	372,124	6,271	861,476	79
474	229,621	790	225,722	101	5,396	708,689	14,789	5,672	688,228		371,666	368,283	3,883	1,757,499	80
302	185,488			15	3,791	25,249	5,050	5,199	15,000		307,449	289,189	18,200	666,258	81
12	5,680					1,607	850	126	631		7,260	7,255	5	19,890	82
123	77,840			8	1,237	16,165	10,811	1,132	4,222		77,824	76,409	1,415	251,378	83
12	5,714			1	156	8,699	1,947	49	6,603		31,637	31,127	510	59,831	84
2	858					578	470	36	72		1,470	1,259	211	7,335	85
4,586	2,585,822	906	176,043	163	25,152	1,368,558	69,703	59,735	1,234,120		11,499,483	11,213,242	256,246	20,717,239	86

manufactured, 2; ink, writing, 1; iron and steel, forgings, 2; iron and steel, nails and spikes, cut and wrought, including wire nails, 1; iron and steel, pipe, wrought, 1; lamps and reflectors, 2; lead, bar, pipe, and sheet, 1; lime and cement, 1; liquors, distilled, 1; millinery and lace goods, 1; oil, linseed, 1; oleomargarine, 1; paper hanging, 2; perfumery and cosmetics, 1; photographic materials, 1; plastering and stucco work, 1; plated and britannia ware, 1; plumbers' supplies, 1; printing and publishing, music, 1; printing materials, 1; refrigerators, 1; regalia and society banners and emblems, 1; sand and emery paper and cloth, 1; saws, 1; ship and boat building, wooden, 2; show cases, 1; soap and candles, 2; springs, steel, car and carriage, 2; stamped ware, 2; surgical appliances, 1; taxidermy, 1; tobacco, chewing, smoking, and snuff, 2; umbrellas and canes, 1; upholstering materials, 1; varnish, 1; wheelbarrows, 1; window shades, 1.

READING.

14,351	\$6,449,203	3,786	\$958,704	1,028	\$136,983	\$5,085,456	\$169,140	\$92,480	\$1,570,746	\$3,253,090	\$19,086,332	\$18,301,154	\$788,178	\$36,902,511	1
7	2,508					763	678		85		7,948	7,782	166	16,306	2
354	154,565	26	6,410	27	4,131	55,091	4,182	363	50,549		525,133	518,674	6,459	816,332	3
27	12,721					2,152	1,816	177	134	25	12,770	12,012	758	48,318	4
14	6,044	19	4,627			1,286	430	123	733		7,180	6,572	608	26,071	5
12	5,966	3	676			3,104	2,127	162	291	524	23,282	22,866	366	57,526	6
28	12,478					10,330	460	480	9,390		51,941	51,009	932	83,541	7
35	11,909	35	7,489	4	494	3,684	960	245	2,479		71,037	70,307	730	104,456	8
26	11,082	66	13,852	19	2,510	4,513	840	330	3,343		39,125	37,794	1,331	99,544	9
15	9,170					926	220	280	426		14,577	13,682	895	34,503	10
212	103,405	2	551	3	456	21,985	4,578	2,292	15,005		233,547	223,409	10,138	501,197	11
19	6,687			5	1,200	1,262	830	52	880		2,903	588	2,315	17,525	12
35	11,460	5	936	3	409	1,937	336	70	1,531		44,697	44,582	115	73,604	13
267	132,190					197,403	1,345	718	3,179	192,161	365,226	361,885	841	782,571	14
5	1,910					419	174	89	156		6,647	6,582	65	13,529	15
203	83,115					13,262	1,855	962	9,945	500	104,685	101,499	3,186	307,859	16
1,962	1,045,675					2,968,665		8,584	9,742	2,950,330	2,254,943	2,242,323	12,620	6,315,128	17
129	62,422	185	48,978	1	101	21,905	10,453	844	8,830	1,778	180,228	178,747	1,461	407,149	18
46	20,780	114	29,987	12	1,816	6,629	1,674	486	4,469		241,139	240,741	398	359,771	19
4	1,620	50	13,489			1,258	1,150	43	60		9,703	9,402	301	30,869	20
4	1,425	39	9,562	6	1,026	1,618	914	44	660		29,726	29,246	480	55,841	21
3	1,728					1,189	240	316	633		19,206	18,865	341	24,761	22
191	46,300	111	20,448	26	4,328	16,977	5,600	845	10,532		249,146	244,358	4,788	420,169	23
21	8,660			2		1,618	879		731		15,921	13,097	2,824	32,942	24
13	6,805					1,798	1,146	2	650		42,070	42,050	20	61,163	25
1,565	679,822			7	1,752	123,718	7,848	8,220	107,650		1,269,309	1,215,633	53,776	2,437,355	26
498	233,939	198	44,473	35	4,588	40,806	1,200	1,280	38,346		765,247	749,046	16,201	1,183,688	27
18	9,272					1,987	1,384	88	515		14,812	14,391	421	37,010	28
1,280	551,125	80	17,262	227	32,474	39,237	60	4,625	34,552		562,569	535,301	27,268	1,611,268	29
183	75,674	1,184	279,337	300	35,846	53,266	5,420	1,887	40,307	5,632	696,527	681,639	14,833	1,326,397	30
3,732	1,606,460			37	5,551	344,793	250	14,061	330,482		6,320,660	5,816,234	504,425	9,530,285	31
49	21,299					5,807	1,092		4,715		66,227	65,572	655	113,267	32
5	1,605					785	350	5	90	340	1,922	752	1,170	6,100	33
119	66,861					393,600	13,520	17,066	363,014		139,777	176,212	13,565	881,665	34
7	2,778					513	328	10	175		5,791	5,731	60	11,195	35
146	69,467					7,280	581	680	6,019		184,636	182,596	2,070	802,339	36

TABLE 8.—MANUFACTURES IN CITIES

READING—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES.		Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and imple-ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
37	Marble and stone work	8	\$86,635	\$17,800	\$8,300	\$15,685	\$44,850	13	2	\$936	49	\$22,063
38	Masonry, brick and stone	14	87,902	2,900	3,420	17,175	64,407	22	9	3,050	275	120,945
39	Millinery, custom work	11	64,547	8,100	7,650	48,215	48,215	14	29	7,080	81	26,136
40	Models and patterns	4	7,517	1,800	1,200	2,802	1,715	4			5	1,728
41	Monuments and tombstones	7	82,410	12,300	2,350	5,025	62,735	11	4	2,500	59	33,725
42	Optical goods	3	268,090	10,000	25,000	173,000	60,090	3	20	15,289	154	34,640
43	Painting, house, sign, etc	42	84,423	12,725	18,925	8,751	44,022	55	3	860	156	70,399
44	Paints	5	154,776	29,500	25,000	23,600	76,676	1	12	13,716	23	9,484
45	Paper and wood pulp	3	549,913	93,000	84,000	165,000	207,913	13	13	23,787	129	52,021
46	Paper hanging	3	14,760	400	600	1,350	12,400	3	1	380	11	5,272
47	Paving and paving materials	9	11,910	4,975	1,875	1,170	3,890	9			57	19,353
48	Photography	9	49,287	17,500	12,000	8,975	10,812	10	5	1,134	37	16,254
49	Plastering and stucco work	8	12,170	1,050	1,050	1,015	9,015	10			40	18,179
50	Plumbing, and gas and steam fitting	25	125,583	14,600	14,825	9,006	87,152	27	6	3,240	128	58,808
51	Pottery, terra cotta, and fire-clay prod-ucts.	8	240,815	51,000	60,000	21,000	108,815	3	7	6,804	86	27,011
52	Printing and publishing, book and job	17	121,607	6,350	11,200	70,400	33,057	26			63	27,485
53	Printing and publishing, newspapers and periodicals.	10	391,723	79,500	65,500	105,000	141,063	5	31	21,025	176	88,999
54	Roofing and roofing materials	8	24,945	5,700	4,700	1,595	12,950	9	1	78	43	19,995
55	Saddlery and harness	7	25,235	8,000	3,500	1,710	12,025	8	1	500	15	6,116
56	Shirts	5	41,456	9,000	3,000	3,279	26,177	9	8	4,580	74	16,905
57	Tinsmithing, coppersmithing, and sheet-iron working.	38	158,281	43,830	33,600	18,160	57,691	45	9	2,920	83	37,585
58	Tobacco, cigars and cigarettes	76	750,497	58,775	154,848	29,747	507,127	91	62	53,078	1,107	421,775
59	Watch, clock, and jewelry repairing	22	34,326	8,400	5,400	10,451	9,675	22			26	15,735
60	Wool hats	4	450,149	33,000	38,000	42,300	336,849	8	1	600	295	126,558
61	All other industries ¹	67	4,154,734	419,639	512,972	1,789,062	1,432,461	84	178	137,720	1,928	585,200

¹Embraces artificial feathers and flowers, 1; bags, paper, 2; baskets, and rattan and willow ware, 2; boots and shoes, factory product, 1; boxes, wooden packing, 1; brassware, 1; carriage and wagon materials, 1; cars and general shop construction and repairs by street railroad companies, 2; cheese and butter, urban dairy products, 2; cheese, butter, and condensed milk, factory product, 1; cordage and twine, 1; cotton goods, 1; cotton small wares, 1; cutlery and edge tools, 1; dyeing and cleaning, 1; electroplating, 1; fancy articles, not elsewhere specified, 1; flouring and grist mill products, 1; food preparations, 1; furnishing goods, men's, 2; gas, illuminating and heating, 1; glass, 1; glass, cutting, staining, and ornamenting, 1; grease and tallow, 1; hairwork, 1; hand stamps, 1; hats and caps, not including fur hats and wool hats, 2; house furnishing goods, not elsewhere specified, 2; ice, manufactured, 2; iron and steel, bolts, nuts, washers,

SCRANTON.

1	All industries	710	\$19,954,525	\$2,308,113	\$3,768,815	\$5,227,697	\$8,654,900	771	661	\$791,589	12,669	\$5,191,522
2	Bicycle and tricycle repairing	7	19,615	3,000	3,975	8,190	4,450	10			24	10,565
3	Blacksmithing and wheelwrighting	48	58,300	18,400	9,565	10,870	19,465	52	1	1,300	52	22,221
4	Boots and shoes, custom work and repairing	71	18,160	2,700	1,075	7,870	6,515	71			16	7,155
5	Bottling	10	19,100	2,400	1,800	3,210	11,780	12	3	1,130	19	7,824
6	Bread and other bakery products	27	191,711	33,500	55,282	46,022	56,907	30	28	17,918	132	55,453
7	Brick and tile	3	60,161	19,500	9,500	10,500	20,661	11	2	1,620	67	22,820
8	Carpentering	18	198,433	42,968	41,105	13,202	101,160	22	15	14,520	207	112,563
9	Carpets, rug	8	5,395	2,200	1,500	895	800	8			2	404
10	Carriages and wagons	9	344,396	137,700	74,700	25,334	106,162	13	8	4,296	129	65,333
11	Clothing, men's, custom work and repairing	56	87,670	9,300	9,500	10,410	58,460	57	1	1,040	165	68,582
12	Clothing, women's, dressmaking	18	13,345			3,350	9,995	18			60	12,682
13	Clothing, women's, factory product	3	35,500			17,500	18,000	4	6	3,320	322	59,950
14	Dyeing and cleaning	7	10,775	2,000	2,500	4,300	9,975	8			15	5,600
15	Electrical construction and repairs	4	7,175			2,175	5,000	4	3	5,000	9	6,270
16	Flavoring extracts	5	22,775	6,400	4,625	2,600	9,150	5	5	3,664	7	3,530
17	Flouring and grist mill products	4	335,000	107,000	73,000	48,000	107,000	5	8	11,940	35	17,722
18	Foundry and machine shop products	13	3,953,580	842,784	888,644	841,663	1,380,489	10	52	90,994	1,381	706,787
19	Furniture, cabinetmaking, repairing, and upholstering	8	6,595	700	900	1,485	3,510	9			5	2,100
20	Hats and caps, not including fur hats and wool hats	3	1,855			780	1,075	3			5	2,080
21	Iron and steel	5	4,400,779	140,000	500,215	909,322	2,851,242	1	60	144,094	2,315	1,227,788
22	Liquors, malt	6	1,431,012	186,625	490,634	457,425	296,328		29	92,077	181	116,666
23	Looking-glass and picture frames	3	4,100			800	3,300	3			3	1,038
24	Lumber, planing mill products, including sash, doors, and blinds	11	592,507	166,050	73,131	80,959	272,867	12	21	20,430	277	119,994
25	Marble and stone work	7	235,648	49,100	22,594	100,214	72,740	6	6	6,160	90	46,041
26	Masonry, brick and stone	13	182,080	33,800	21,300	38,990	87,990	19	15	13,440	528	279,299
27	Mattresses and spring beds	3	69,313	12,000	22,489	9,000	25,824	3	5	3,725	28	12,284
28	Millinery, custom work	21	75,582	4,750	10,500	5,436	54,896	24	42	16,375	104	21,395
29	Mineral and soda waters	4	36,200	10,500	7,500	11,800	6,400	7	2	1,520	22	8,604
30	Painting, house, sign, etc.	61	57,462	12,500	14,850	7,619	22,502	70	2	900	172	91,374
31	Paper hanging	10	4,970	1,700	1,200	995	1,075	11			13	6,266
32	Patent medicines and compounds	6	3,925	1,000	400	1,300	1,225	7	1	400	6	1,780
33	Photography	11	35,727	2,000	1,000	16,699	16,028	12	6	8,400	27	8,909
34	Plastering and stucco work	3	865			375	490	3			3	1,200
35	Plumbing, and gas and steam fitting	40	158,502	13,225	16,400	10,709	112,218	51	16	9,746	169	86,128
36	Printing and publishing, book and job	13	74,898	5,575	5,000	53,462	10,861	16	3	1,280	50	22,715

BY SPECIFIED INDUSTRIES: 1900—Continued.

READING—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, in- terest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
49	\$22,063					\$1,167	\$389	\$108	\$720		\$31,024	\$80,542	\$482	\$68,996	37
275	129,945					63,191	1,612	141	2,093	\$59,345	78,616	77,724	792	314,184	38
5	1,728	81	\$26,180			9,915	5,848	194	3,878		89,849	88,925	924	163,102	39
59	33,725					521	356	30	185		2,547	2,287	260	7,617	40
						1,518	956	157	405		21,717	21,114	603	79,521	41
14	8,400	126	23,240	14	\$3,000	4,322	560	400	3,362		96,140	95,500	640	184,770	42
156	70,399					6,960	3,549	407	2,629	375	59,721	59,387	334	190,636	43
21	8,808	2	676			5,195	90	1,418	3,637		117,524	116,608	921	168,846	44
90	45,104	39	6,917			52,106		3,001	49,105		214,041	198,114	20,927	429,205	45
11	5,272					1,040	800	15	225		8,245	8,205	40	18,150	46
57	19,353					655	25	105	525		28,164	28,159	5	57,837	47
20	11,000	17	4,654			4,289	1,758	420	1,711	400	14,866	13,642	724	52,116	48
40	18,179					1,000		32	90	878	18,210	18,210		43,966	49
128	58,808					5,973	3,248	466	2,259		132,794	132,269	525	249,163	50
84	26,911			2	100	1,770		733	1,037		28,688	24,678	4,010	105,128	51
54	26,441			9	1,044	7,062	2,328	257	4,477		35,020	32,872	2,148	99,447	52
147	84,070	14	8,090	15	1,839	50,360	4,635	1,190	40,058	4,477	49,483	45,950	3,533	309,266	53
43	19,995					1,748	247	137	1,364		39,678	39,583	95	73,725	54
15	6,116					2,550	1,904	170	476		12,275	12,091	184	28,261	55
8	1,225	71	15,680			1,387	490	174	723		39,541	39,226	315	76,155	56
82	37,416			1	169	10,039	3,238	1,128	5,478	200	102,072	101,018	1,054	200,746	57
526	235,725	540	180,254	41	5,796	260,252	6,297	2,239	251,701	15	784,094	781,404	2,630	1,038,466	58
25	15,631			1	104	3,760	2,402	156	1,142		11,041	10,529	512	46,327	59
157	80,273	104	41,299	34	4,986	6,769	300	1,672	4,707		293,860	288,813	5,047	528,130	60
1,050	403,649	675	158,681	197	22,870	230,393	53,183	12,316	128,813	86,081	2,150,515	2,095,210	55,305	3,638,006	61

and rivets, 1; iron and steel, forgings, 1; lamps and reflectors, 1; leather, tanned, curried, and finished, 2; lock and gun smithing, 1; malt, 1; mattresses and spring beds, 1; mirrors, 1; patent medicines and compounds, 1; photolithography and photoengraving, 1; regalia and society banners and emblems, 2; sewing machine repairing, 1; silk and silk goods, 1; slaughtering and meat packing, wholesale, 1; soap and candles, 1; stereotyping and electrotyping, 1; tobacco, chewing, smoking, and snuff, 2; toys and games, 1; trunks and valises, 1; umbrellas and canes, 1; washing machines and clothes wringers, 2; window shades, 1; wirework, including wire rope and cable, 1; wood, turned and carved, 1; woolen goods, 2.

SCRANTON.

8,776	\$4,509,263	2,863	\$525,849	1,030	\$156,410	\$1,837,881	\$154,034	\$91,394	\$1,159,672	\$452,781	\$18,411,022	\$17,340,548	\$1,070,474	\$27,646,418	1
24	10,565					3,211	1,420	295	1,496		7,702	7,321	381	26,286	2
51	22,077			1	141	6,606	5,489	300	817		28,964	26,806	2,068	99,702	3
16	7,155					7,458	6,773	90	585		26,320	26,008	312	73,873	4
19	7,824					5,105	1,992	169	2,944		78,170	77,923	247	121,524	5
88	46,940	28	6,513	16	2,000	14,518	7,176	632	6,660		207,973	203,131	4,842	357,666	6
66	22,220			1	300	3,103	1,275	270	1,558		3,653	650	8,003	42,000	7
207	112,563					47,940	1,121	888	2,591	43,340	194,947	194,334	613	426,906	8
2	404					435	872	39	23		2,051	2,001	50	5,994	9
124	64,412			5	921	7,960	2,444	1,280	4,236		81,895	80,422	1,473	220,708	10
94	47,792	71	20,790			21,487	11,878	191	8,958	460	74,806	73,886	920	216,992	11
7	3,150	60	12,682			4,654	3,814		840		25,925	25,830	95	57,087	12
8	3,920	294	53,000	21	3,800	3,478	2,820		370	288	50,420	49,720	700	133,270	13
9	6,270	7	1,770			2,890	2,600	25	265		1,847	1,437	410	16,685	14
5	2,930	2	550			6,509	632		877	5,000	47,525	47,410	115	89,316	15
85	17,722					1,396	396	75	925		9,101	8,951	150	23,780	16
1,368	2,100					11,175	720	2,233	8,222		394,608	392,275	2,333	461,790	17
5	2,100			13	2,405	217,320	1,920	18,718	196,682		853,604	819,807	33,797	1,755,909	18
4	1,780	1	300			1,229	1,008	16	205		9,105	9,067	38	18,970	19
2,315	1,227,788					1,641	1,316		325		2,026	1,945	81	9,080	20
181	116,666					57,258		23,659	33,599		9,363,721	8,418,542	945,179	10,231,139	21
2	960			1	78	550,427		15,322	585,105		220,250	212,384	7,866	1,196,105	22
277	119,994					1,430	1,200		280		7,833	7,808	25	17,600	23
90	46,041					12,369	404	1,819	10,116		378,948	375,212	3,706	610,201	24
528	279,299					5,357	376	812	4,169		53,220	52,657	563	123,090	25
22	10,724					117,254	4,520	1,242	3,309	108,183	193,014	192,544	470	716,571	26
22	8,604	6	1,560			3,356	240	381	2,735		33,233	32,907	326	75,500	27
168	90,374	104	21,395			16,110	13,165	197	2,778		66,489	65,976	513	148,661	28
13	6,266			4	1,000	2,281	264	321	1,696		16,691	16,559	132	52,696	29
2	1,020					5,843	4,556	352	935		67,012	66,927	85	222,510	30
11	5,802					779	533	61	165		3,790	3,780	10	19,770	31
3	1,200					2,019	924	30	1,065		4,305	4,260	45	11,470	32
167	85,760			2	368	7,251	4,901	10	2,840		16,990	16,870	120	53,150	33
42	21,434			8	1,281	328	308		20		970	955	35	3,945	34
						21,472	9,966	448	9,108	1,950	215,126	213,817	1,309	415,747	35
						5,715	3,668	150	1,897		21,404	20,099	1,365	66,717	36

TABLE 8.—MANUFACTURES IN CITIES

SCRANTON—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES.		Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
37	Printing and publishing, newspapers and periodicals.	23	\$919,093	\$26,800	\$59,700	\$243,456	\$589,637	23	74	\$51,889	819	\$155,797
38	Saddlery and harness	10	25,270	1,300	2,200	3,515	18,255	12	2	1,500	20	9,316
39	Silk and silk goods	5	1,611,251	59,000	359,290	683,792	589,169	6	50	77,077	2,318	363,476
40	Tinsmithing, coppersmithing, and sheet-iron working.	7	29,474	2,800	2,700	3,875	20,099	12	2	490	45	16,790
41	Tobacco, chewing, smoking, and snuff	3	183,933	88,000	44,291	16,240	90,402	6	19	16,785	102	36,672
42	Tobacco, cigars and cigarettes	24	84,785	4,200	6,400	5,855	65,330	23	8	4,868	108	42,291
43	Watch, clock, and jewelry repairing	23	15,560			5,461	10,099	24			17	8,476
44	All other industries ¹	73	4,296,908	310,138	929,350	1,646,551	1,511,899	63	186	163,741	3,100	1,317,792

¹ Embraces artificial limbs, 2; bookbinding and blank book making, 2; boot and shoe cut stock, 1; boxes, cigar, 1; brass castings and brass finishing, 1; brassware, 1; brooms and brushes, 1; buttons, 2; carriages and wagon materials, 2; cars and general shop construction and repairs by steam railroad companies, 2; cars and general shop construction and repairs by street railroad companies, 1; cheese, butter, and condensed milk, factory product, 2; china decorating, 1; clothing, men's, factory product, 1; coffee and spice, roasting and grinding, 1; coffins, burial cases, and undertakers' goods, 1; confectionery, 2; cotton goods, 1; electroplating, 1; emery wheels, 1; explosives, 1; food preparations, 1; fur goods, 1; furniture, factory product, 1; gas and lamp fixtures, 1; gas, illuminating and heating, 1; glass, cutting, staining, and ornamenting, 1; grease and tallow, 1; hones and whetstones, 1; hostelry and knit goods, 1; ice, manufactured, 1; ink,

SHENANDOAH.

1 All industries	78	\$374,057	\$41,125	\$143,865	\$98,644	\$90,423	88	13	\$13,544	210	\$88,555
2 Blacksmithing and wheelwrighting	5	8,725	1,900	4,900	1,500	1,025	5	1	600	14	5,672
3 Boots and shoes, custom work and repairing.	7	1,570	400	300	705	165	7			6	1,925
4 Bread and other bakery products.	5	4,615	1,000	2,000	610	1,005	5			10	3,961
5 Clothing, men's, custom work and repairing.	13	8,463	750	665	1,350	5,693	16			34	12,277
6 Millinery, custom work.	8	1,699	500	475	29	695	10			7	933
7 Painting, house, sign, etc.	3	1,005	125	500	175	205	3			4	2,520
8 Printing and publishing, newspapers and periodicals.	4	18,000	500	500	15,500	1,500	9			17	7,287
9 Tinsmithing, coppersmithing, and sheet-iron working.	3	2,140	100	75	1,150	815	4				
10 Tobacco, cigars and cigarettes.	3	2,500			350	2,150	4			6	3,334
11 Watch, clock, and jewelry repairing.	5	1,975			1,375	600	5			4	1,440
12 All other industries ¹	22	323,355	36,450	134,450	75,900	76,565	20	12	12,944	108	49,206

¹ Embraces bottling, 2; carpentering, 2; confectionery, 1; dyeing and cleaning, 1; fertilizers, 1; foundry and machine shop products, 1; gas, illuminating and heating, 1; hats and caps, not including fur hats and wool hats, 1; ice, manufactured, 1; liquors, malt, 1; monuments and tombstones, 1; paper hanging, 1;

WILKESBARRE.

1 All industries	438	\$10,501,537	\$325,426	\$1,629,129	\$3,963,148	\$4,083,534	520	340	\$406,823	5,977	\$2,236,476
2 Bicycle and tricycle repairing.	10	11,760			5,700	6,060	12			15	6,145
3 Blacksmithing and wheelwrighting.	26	24,500	7,125	4,850	5,130	7,895	26			34	15,719
4 Boots and shoes, custom work and repairing.	30	7,200	1,400	900	2,920	2,040	29			14	6,080
5 Bottling.	3	6,500			3,100		4			6	2,392
6 Bread and other bakery products.	15	146,354	46,400	19,723	30,060	50,171	18	9	6,011	138	51,166
7 Carpentering.	30	178,887	31,760	23,717	17,922	105,438	37	11	8,940	310	163,885
8 Carriages and wagons.	7	60,100	20,100	14,100	5,800	26,100	8			31	15,150
9 Clothing, men's, custom work and repairing.	40	92,745	8,400	8,550	4,625	71,270	45	2	2,100	112	50,591
10 Clothing, women's, dressmaking.	17	4,585			1,950	2,635	23			59	14,806
11 Clothing, women's, factory product.	3	511,500	13,500	37,500	48,000	407,500	7	21	43,800	636	136,708
12 Coffee and spice, roasting and grinding.	3	19,750	1,200	1,600	3,800	13,150	3			10	5,586
13 Confectionery.	9	14,410			9,150	5,260	10	4	1,712	14	3,930
14 Flouring and grist mill products.	4	121,854	20,100	23,486	22,007	45,291	3	11	7,512	15	7,467
15 Foundry and machine shop products.	5	1,165,209	157,802	163,184	333,571	510,652	7	43	55,455	574	265,200
16 Furniture, cabinetmaking, repairing, and upholstering.	7	12,270	2,500	4,000	2,260	3,510	8			16	6,232
17 Looking-glass and picture frames.	5	8,925			775	8,150	7			8	3,518
18 Lumber, planing mill products, including sash, doors, and blinds.	3	57,500	12,000	6,500	15,500	23,500	5	1	1,000	38	20,522
19 Marble and stone work.	4	5,545	960	25	910	3,650	6			16	7,110
20 Masonry, brick and stone.	9	82,843	3,920	523	9,261	69,039	9	2	1,440	179	74,436
21 Mattresses and spring beds.	3	13,600	500	500	2,600	10,000	5			8	4,184
22 Millinery, custom work.	11	52,720			870	51,850	13	5	2,100	115	23,044
23 Mineral and soda waters.	5	29,100	2,000	1,000	10,800	15,300	6			14	7,550
24 Painting, house, sign, etc.	28	48,565	8,200	7,105	4,880	28,380	32	2	1,080	85	44,524
25 Paving and paving materials.	5	3,477			1,214	2,263	8			10	4,008
26 Photography.	6	15,450			6,100	9,350	8	1	400	10	3,545
27 Plumbing, and gas and steam fitting.	22	101,015	4,200	8,100	14,850	73,865	25	9	5,980	124	70,255
28 Printing and publishing, book and job.	11	147,857	20,000	9,500	72,300	46,057	12	8	5,604	80	40,504
29 Printing and publishing, newspapers and periodicals.	15	222,625	39,000	16,500	101,100	66,025	14	42	31,572	179	77,409
30 Saddlery and harness.	8	26,325	2,200	900	1,975	21,250	10			13	7,642
31 Shirts.	3	12,800			5,000	7,800	5	2	1,850	77	18,720

BY SPECIFIED INDUSTRIES: 1900—Continued.

SCRANTON—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
233	\$138,889	68	\$13,956	18	\$2,952	\$243,104	\$11,862	\$1,004	\$25,370	\$204,868	\$174,852	\$171,071	\$3,181	\$815,375	37
20	9,316					3,142	2,277	70	795		17,777	17,691	86	42,901	38
139	85,574	1,374	205,884	805	122,018	134,746	4,838	4,397	37,079	88,332	2,861,857	2,844,289	17,568	8,616,885	39
28	14,690			17	2,100	1,621	1,870	71	80		15,222	15,006	216	42,167	40
29	18,204	78	18,468			91,401	780	1,032	39,589		140,678	140,041	637	844,593	41
58	30,562	40	10,896	10	833	26,223	6,148	147	19,928		69,025	68,768	257	161,065	42
16	8,326			1	150	6,759	5,788	58	913		3,889	3,853	36	33,409	43
2,278	1,147,514	718	154,614	104	15,661	173,541	20,660	14,510	138,011	360	2,364,024	2,328,908	35,116	4,467,018	44

writing, 1; ironwork, architectural and ornamental, 2; jewelry, 1; lamps and reflectors, 2; lime and cement, 2; lock and gun smithing, 1; lumber and timber products, 1; monuments and tombstones, 2; musical instruments, pianos and materials, 1; oil, not elsewhere specified, 1; optical goods, 2; paints, 1; paving and paving materials, 2; perfumery and cosmetics, 1; pickles, preserves, and sauces, 2; pottery, terra cotta, and fire-clay products, 2; roofing and roofing materials, 1; scales and balances, 1; sewing machine repairing, 1; shirts, 1; slaughtering and meat packing, wholesale, 2; soap and candles, 1; stereotyping and electrotyping, 1; tools, not elsewhere specified, 1; varnish, 1; wirework, including wire rope and cable, 1.

SHENANDOAH.

186	\$83,081	22	\$5,286	2	\$238	\$96,929	\$6,139	\$1,873	\$88,627	\$290	\$180,224	\$176,959	\$3,265	\$179,336	1
14	5,672					331	144	101	86		3,267	3,001	256	15,662	2
6	1,925					504	848	18	138		2,553	2,441	112	7,579	3
10	3,961					325	228	35	62		18,851	18,461	890	27,879	4
26	10,442	8	1,835			1,852	1,248	72	242	290	18,890	18,597	233	41,250	5
		7	983			890	720	26	144		6,186	6,135	51	13,432	6
4	2,520					190	96	8	86		758	742	16	4,900	7
15	6,906	1	288	1	98	800	612	9	179		5,054	4,821	230	18,944	8
						90	76	6	8		1,449	1,401	48	2,835	9
6	3,334					2,312	228		2,084		4,978	4,924	54	14,864	10
4	1,440					807	696		111		1,445	1,389	56	5,760	11
101	46,831	6	2,230	1	145	88,828	1,743	1,598	85,487		110,868	115,044	1,819	326,721	12

photography, 2; plumbing, and gas and steam fitting, 1; regalia and society banners and emblems, 1; saddlery and harness, 2; shirts, 1; wirework, including wire rope and cable, 1.

WILKESBARRE.

3,727	\$1,847,462	1,780	\$379,615	470	\$59,599	\$1,142,358	\$86,479	\$32,194	\$736,454	\$287,231	\$5,167,777	\$5,090,803	\$76,974	\$10,758,348	1
15	6,145					1,935	1,462	4	469		4,112	3,862	250	25,320	2
32	15,344			2	375	2,860	2,551	100	215		16,070	15,048	1,022	56,217	3
13	5,950			1	130	3,093	2,935	56	102		10,164	9,987	177	32,327	4
6	2,392					1,095	410	20	665		10,994	10,878	116	19,600	5
108	44,545	27	6,096	3	525	13,384	6,280	599	6,505		123,226	120,231	2,995	247,230	6
809	163,660			1	225	127,727	2,158	905	3,466	121,203	313,950	313,345	605	754,196	7
31	15,150					2,432	1,090	195	1,147		13,470	12,835	635	45,225	8
89	43,506	22	6,989	1	96	14,633	11,313	368	2,952		55,421	55,054	367	168,332	9
		57	14,706	2	100	2,728	2,637	4	87		7,427	7,389	38	38,842	10
36	22,862	542	106,200	58	7,646	77,410	1,710	625	70,575	4,500	316,508	315,620	838	627,039	11
8	5,236	2	350			1,350	860	70	420		19,882	19,257	625	32,684	12
7	2,420	6	1,410	1	100	3,997	3,402	16	579		17,675	17,068	607	43,884	13
15	7,467					5,830	300		592		119,814	118,976	838	148,177	14
574	205,200					25,115		4,951	20,164		428,116	419,851	8,265	865,726	15
11	4,271	5	961			504	411	45	108		6,205	6,180	25	17,700	16
8	8,518					954	750	4	200		11,020	11,020		20,744	17
38	20,622					3,739	1,800	400	1,539		31,203	30,575	628	71,258	18
16	7,110					643	328	25	90	200	10,843	10,833	10	24,590	19
179	74,436					25,738		110	6,094	19,534	83,023	82,891	132	205,056	20
6	3,092	2	1,092			914	705	19	190		18,860	18,745	115	27,658	21
2	500	112	22,402	1	142	8,461	6,934	75	1,452		69,209	69,084	125	129,293	22
14	7,550					1,136	660	36	440		12,153	11,986	167	36,856	23
84	44,376			1	150	5,049	1,997	206	846		27,301	27,226	75	110,839	24
10	4,008					221	202		19		8,540	8,540		16,335	25
5	2,089	5	1,466			8,606	2,546		1,000		7,658	7,612	46	24,080	26
132	69,930			2	325	31,107	4,066	261	6,115	20,065	86,749	85,943	806	250,488	27
54	33,831	11	8,867	15	2,896	6,031	3,062	348	2,621		31,654	29,957	1,597	103,182	28
103	74,688	3	585	13	2,136	49,468	3,034	470	33,570	7,389	52,301	50,301	1,907	307,467	29
12	7,482	1	160			2,025	1,629	80	366		10,627	10,578	49	30,650	30
5	2,436	67	15,324	5	960	1,300	950		350		69,145	68,720	425	103,940	31

TABLE 8.—MANUFACTURES IN CITIES

WILKESBARRE—Continued.

	MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
32	Slaughtering and meat packing, wholesale.	3	\$184,424	\$10,000	\$15,546	\$6,302	\$152,576	6	14	\$13,610	21	\$10,368
33	Tinsmithing, coppersmithing, and sheet-iron working.	5	95,635	1,100	450	27,500	66,585	7	11	4,680	59	17,620
34	Tobacco, cigars and cigarettes	16	32,530	2,900	1,100	1,685	26,845	20	1	572	38	16,416
35	Watch, clock, and jewelry repairing	15	8,285	1,900	2,200	3,125	1,000	15			10	5,408
36	Wirework, including wire rope and cable.	3	1,281,822	57,800	154,050	493,050	576,913	3	19	19,740	239	124,181
37	All other industries ¹	49	5,686,830	337,459	1,098,920	2,687,447	1,563,004	55	110	191,665	2,660	955,568

¹ Embraces artificial limbs, 1; awnings, tents, and sails, 1; bluing, 1; bookbinding and blank book making, 1; boot and shoe uppers, 1; boots and shoes, factory product, 1; brass castings and brass finishing, 1; brick and tile, 2; carpets, rag, 1; carriage and wagon materials, 1; cars and general shop construction and repairs by steam railroad companies, 1; cars and general shop construction and repairs by street railroad companies, 1; cotton goods, 2; cutlery and edge tools, 2; dyeing and cleaning, 2; electrical construction and repairs, 2; fancy articles, not elsewhere specified, 1; fertilizers, 1; furniture, factory product, 1; gas, illuminating and

WILLIAMSPORT.

1 All industries	396	\$9,863,811	\$912,145	\$977,480	\$2,094,664	\$5,879,522	439	397	\$352,348	5,595	\$2,065,930
2 Bicycle and tricycle repairing	8	20,077	1,600	3,300	4,530	10,647	8	1	468	9	3,431
3 Blacksmithing and wheelwrighting	15	29,005	9,600	7,650	2,325	9,430	19			14	6,625
4 Boots and shoes, custom work and repairing.	18	8,045	3,200	1,800	1,545	1,500	15			10	4,292
5 Bottling	4	24,319	500	1,800	12,718	9,301	4	3	3,420	8	3,639
6 Bread and other bakery products	17	93,131	6,200	14,500	39,347	39,084	18	10	6,923	58	21,749
7 Brick and tile	3	34,825	13,875	3,500	950	16,500	2	2	2,300	19	9,464
8 Carpentering	18	64,674	4,200	9,933	6,675	43,803	25	1	80	115	51,669
9 Carriages and wagons	4	47,292	3,500	3,600	1,300	38,892	5			37	19,088
10 Clothing, men's, custom work and repairing.	27	78,323	6,725	13,100	5,630	52,862	32			132	45,979
11 Clothing, men's, factory product	5	225,800	4,800	24,000	26,000	172,000	8	54	28,770	733	281,860
12 Clothing, women's, dressmaking	23	14,146	900	3,000	2,646	7,600	24			75	11,780
13 Confectionery	6	70,488	10,000	11,200	14,065	35,223	7	8	4,920	35	11,878
14 Foundry and machine shop products	15	608,652	54,100	84,643	197,347	272,562	15	36	28,548	418	186,591
15 Furniture, cabinetmaking, repairing, and upholstering.	6	10,715	2,550	2,150	755	5,260	8			7	3,525
16 Furniture, factory product	8	555,893	53,510	152,043	94,801	255,539	13	35	30,863	373	123,287
17 Leather, tanned, curried, and finished.	3	1,610,352	17,000	49,000	12,200	1,532,152	5	9	4,820	190	78,749
18 Lock and gun smithing	3	7,050	1,500	1,000	2,100	2,450	4			8	1,160
19 Looking-glass and picture frames	4	45,350	6,200	7,500	7,750	23,900	5	5	2,912	61	22,196
20 Lumber and timber products	6	1,601,606	286,578	38,000	81,509	1,195,609	10	22	28,535	374	159,048
21 Lumber, planing mill products, including sash, doors, and blinds.	13	461,698	31,628	46,809	77,566	305,690	21	21	35,070	388	128,593
22 Masonry, brick and stone	3	9,950	600	350	3,650	5,350	3			30	11,985
23 Millinery, custom work	15	40,159	3,000	7,000	2,808	27,351	16	1	1,200	58	11,294
24 Monuments and tombstones	3	19,356	2,200	825	825	15,506	4			5	2,500
25 Painting, house, sign, etc	21	14,155	850	1,760	2,498	9,047	21			46	21,536
26 Photography	10	39,466	5,000	1,750	12,750	18,141	10			12	6,230
27 Plumbing, and gas and steam fitting	12	27,497	1,750	1,600	3,800	20,347	12	2	600	42	21,944
28 Printing and publishing, book and job.	6	29,955	300	200	21,740	7,735	8	2	1,830	27	12,186
29 Printing and publishing, newspapers and periodicals.	4	281,197	9,000	17,417	113,061	141,110	4	44	30,619	95	49,285
30 Roofing and roofing materials	10	10,180	1,300	800	3,145	4,935	10			15	7,021
31 Saddlery and harness	8	177,638	1,500	12,262	46,786	117,090	9	15	15,101	179	49,711
32 Saws	3	12,658	1,000	1,600	4,878	5,180	4	1	144	20	8,325
33 Shirts	3	5,800	500	1,000	1,800	2,500	3			20	7,600
34 Tinsmithing, coppersmithing, and sheet-iron working.	9	34,317	4,000	1,350	3,525	25,442	9	6	1,690	28	14,047
35 Tobacco, cigars and cigarettes	4	9,413			265	9,148	5			14	7,573
36 Watch, clock, and jewelry repairing	14	6,015			2,000	3,415	15			7	8,476
37 All other industries ¹	65	3,533,529	362,979	449,153	1,278,188	1,443,209	68	119	123,535	1,988	707,354

¹ Embraces belting and hose, leather, 1; bookbinding and blank book making, 1; boots and shoes, factory product, 1; boots and shoes, rubber, 1; boxes, cigar, 1; boxes, fancy and paper, 1; boxes, wooden packing, 1; brooms and brushes, 1; carpets, rag, 1; cars and general shop construction and repairs by steam railroad companies, 1; cheese, butter, and condensed milk, factory product, 1; chemicals, 2; corsets, 1; cotton small wares, 1; dyeing and cleaning, 2; electrical construction and repairs, 1; electroplating, 1; engraving, wood, 1; flouring and grist mill products, 2; furnishing goods, men's, 2; furs, dressed, 1; gas, illuminating and heating, 1; grease and tallow, 1; hairwork, 1; ice, manufactured, 1; kindling wood, 2; leather goods, 1; liquors, malt, 2; lithographing and engraving, 1;

YORK.

1 All industries	464	\$9,610,784	\$926,336	\$1,357,971	\$2,240,686	\$5,115,788	564	404	\$438,281	7,785	\$2,679,175
2 Agricultural implements	4	333,410	20,300	28,000	71,000	214,110	3	35	26,278	814	112,141
3 Baskets, and rattan and willow ware	9	5,530	950	2,675	255	1,650	9			8	1,866
4 Bicycle and tricycle repairing	8	10,247	100	200	4,207	5,740	8			11	3,707
5 Blacksmithing and wheelwrighting	16	25,845	7,900	7,250	3,075	7,620	17			14	4,992
6 Boots and shoes, custom work and repairing.	41	17,030	2,300	4,660	3,220	6,860	44			7	1,969
7 Bottling	4	19,500			7,800	11,700	4			13	4,628
8 Boxes, cigar	6	231,711	10,500	25,033	40,191	155,987	12	8	6,136	171	42,904
9 Bread and other bakery products	24	154,820	22,150	37,900	38,990	55,780	26	17	12,749	215	61,312
10 Brick and tile	4	49,600	16,000	10,000	5,600	18,000	7			128	39,154
11 Brooms and brushes	5	3,520	850	1,400	310	960	5			3	1,000

BY SPECIFIED INDUSTRIES: 1900—Continued.

WILKESBARRE—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
21	\$10,363					\$11,813	\$4,500	\$374	\$6,439		\$106,538	\$406,058	\$180	\$474,646	32
48	14,920	12	\$2,200	4	\$500	11,194	1,700	39	1,655	\$7,800	52,893	52,632	266	102,400	33
33	15,732	3	444	2	240	9,769	1,783	59	7,927		28,740	28,704	86	66,747	34
9	5,308			1	100	1,520	775	120	625		2,318	2,295	23	19,003	35
239	124,181					32,910	75	2,560	30,275		610,346	602,581	7,765	810,031	36
1,400	717,242	903	195,373	357	42,953	653,106	11,469	18,508	517,189	105,940	2,073,717	2,028,938	44,779	4,700,936	37

heating, 1; hats and caps, not including fur hats and wool hats, 1; ice, manufactured, 1; ironwork, architectural and ornamental, 2; jewelry, 1; liquors, malt, 2; lock and gun smithing, 2; monuments and tombstones, 2; paper hanging, 1; patent medicines and compounds, 1; plastering and stuccowork, 2; roofing and roofing materials, 2; ship and boat building, wooden, 1; silk and silk goods, 2; steam packing, 1; taxidermy, 1; tools, not elsewhere specified, 1; wood, turned and carved, 1.

WILLIAMSPORT.

3,679	\$1,587,052	1,614	\$484,185	302	\$14,093	\$517,059	\$54,821	\$19,754	\$400,698	\$41,783	\$6,420,337	\$6,349,847	\$70,490	\$11,199,600 1
7	3,119			2	312	941	450	71	420		9,867	9,503	364	19,521 2
14	6,625					1,132	780	182	170		9,305	9,407	398	31,581 3
10	4,292					1,246	1,188	22	86		6,640	6,451	189	18,736 4
8	3,639					4,082	960	560	2,562		39,916	39,563	353	68,825 5
47	19,773	10	1,716	1	260	17,608	1,759	358	15,491		77,404	75,198	2,206	151,563 6
18	9,302			1	162	3,771	1,200	123	2,448		18,040	14,443	3,597	40,882 7
115	51,669					29,200	356	320	1,487	27,037	112,120	111,763	357	225,197 8
37	19,038					2,897	949	62	1,256	130	29,535	29,123	412	70,071 9
69	34,218	63	11,761			3,991	3,052	223	716		72,428	71,478	950	156,714 10
123	46,600	560	177,760	50	7,500	8,748	1,600	125	2,123		624,261	621,470	2,791	977,000 11
		75	11,780			2,040	1,622	58	360		5,845	5,526	319	34,634 12
23	9,725	11	1,945	1	208	2,235	510	334	1,391		53,063	52,310	758	101,105 13
411	185,688			7	903	20,169	1,962	1,816	16,391		429,076	416,773	12,393	747,617 14
7	3,525					2,588	81	123	384	2,000	16,160	15,873	287	27,672 15
351	119,749			22	3,538	20,337	1,605	1,770	16,962		287,667	285,000	2,667	508,223 16
175	75,804			15	2,945	60,983		1,651	68,332		604,244	602,393	1,851	889,876 17
2	1,040			1	120	402	220	78	74	30	879	815	64	4,912 18
41	16,572	11	3,610	9	2,014	2,070	320	183	1,567		29,744	28,762	982	65,224 19
874	159,048					77,084	6,270	2,186	60,413	8,265	734,607	734,607		1,429,028 20
326	126,948			12	1,645	13,742	2,405	849	10,488		367,513	364,593	2,920	637,116 21
30	11,335					1,124	120	16	158	830	8,185	8,185		22,779 22
1	1,000	56	10,198	1	96	5,500	4,574	84	542		44,655	44,491	164	83,895 23
5	2,500					1,982	132	35	315	1,500	9,342	9,342	30	18,014 24
45	21,471			1	65	1,329	652	74	603		11,507	11,435	72	48,242 25
8	4,960	4	1,270			2,415	1,436	117	862		15,036	14,680	356	36,538 26
42	21,944					2,369	1,154	86	1,069	60	36,546	36,382	164	73,204 27
22	11,458	2	390	3	338	2,043	1,200	3	540	300	19,160	18,790	370	44,277 28
92	48,771	2	264	1	260	53,424	2,712	348	50,364		62,686	59,068	3,618	254,498 29
15	7,021					952	539	41	372		11,790	11,705	85	28,694 30
105	35,870	74	13,841			10,050	1,210	289	8,121	430	115,463	113,740	1,723	222,645 31
19	8,200			1	125	572	201	90	281		6,793	6,071	722	20,180 32
3	2,500	17	5,000			568	390	15	163		5,885	5,570	315	18,000 33
28	14,047					2,599	1,491	106	1,002		42,247	41,899	348	70,734 34
11	6,455	3	1,118			3,087	203	29	2,795		10,422	10,341	81	24,000 35
7	3,470					2,090	1,987	10	43		2,887	2,696	191	13,200 36
1,088	489,620	726	193,532	171	21,202	148,189	9,274	7,367	130,347	1,201	2,488,919	2,460,481	28,488	4,074,514 37

marble and stone work, 2; matches, 1; mattresses and spring beds, 1; mineral and soda waters, 2; models and patterns, 1; musical instruments and materials, not specified, 1; optical goods, 1; paints, 2; paper hanging, 2; patent medicines and compounds, 1; paving and paving materials, 2; plastering and stuccowork, 1; sand and emery paper and cloth, 1; sewing machines and attachments, 1; silk and silk goods, 1; steam fittings and heating apparatus, 1; surgical appliances, 1; taxidermy, 2; umbrellas and canes, 1; window shades, 1; wirework, including wire rope and cable, 1; wood, turned and carved, 1; woolen goods, 1.

YORK.

6,802	\$2,283,326	1,501	\$335,093	482	\$60,756	\$798,453	\$50,851	\$19,727	\$654,429	\$73,446	\$6,078,070	\$5,869,260	\$208,810	\$11,961,706 1
310	111,573			4	568	9,721	750	250	8,721		183,506	180,933	2,573	407,417 2
6	1,516			3	350	225	24	52	149		1,681	1,567	114	8,400 3
3	3,312			3	395	1,331	1,044	7	160	120	7,965	7,614	352	18,800 4
14	4,992					925	505	130	290		10,085	9,686	399	20,025 5
6	1,894			1	75	2,436	1,392	117	817	110	12,551	11,937	614	36,294 6
13	4,628					1,350	1,075	10	265		25,927	25,346	581	42,557 7
65	22,446	103	19,990	3	468	4,343	300	794	3,249		140,772	139,448	1,324	228,774 8
100	52,099	17	3,072	38	6,141	19,653	1,883	926	16,844		284,195	274,834	9,361	453,762 9
113	36,588			15	2,566	5,000	1,650	238	3,712		12,373	12,373	9,542	99,750 10
3	1,000					475	108	47	320		4,659	4,542	117	9,981 11

TABLE 8.—MANUFACTURES IN CITIES

YORK—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES AND CITIES AND BOROUGHES.		Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
12	Carpentering.....	3	\$50,700	\$1,100	\$950	\$5,650	\$43,000	5			91	\$39,312
13	Carpets, rag.....	5	29,600	4,200	1,150	5,350	18,900	6			37	10,746
14	Carriage and wagon materials.....	4	113,971	12,000	22,500	17,900	61,571	9	1	\$208	99	36,669
15	Carriages and wagons.....	11	473,925	81,050	76,400	26,525	840,350	12	23	15,724	306	95,090
16	Clothing, men's, custom work and repairing.....	22	108,429	13,600	15,250	8,827	75,752	26	2	875	115	34,394
17	Clothing, women's, dressmaking.....	4	4,010			1,010	3,000	4			19	3,090
18	Confectionery.....	20	178,253	33,710	38,909	65,905	39,729	21	15	24,757	293	58,373
19	Cooperage.....	4	12,375	3,500	4,600	775	3,500	4			8	2,412
20	Flouring and grist mill products.....	8	36,559	3,500	12,500	13,559	7,000	8	3	2,000	6	2,900
21	Foundry and machine shop products.....	11	2,544,619	316,500	274,400	551,056	1,402,663	20	62	63,030	1,591	661,779
22	Furniture, cabinetmaking, repairing, and upholstering.....	6	17,775	5,800	4,400	825	6,750	8			9	4,000
23	Furniture, factory product.....	3	66,357	6,500	6,500	13,000	40,357	9	2	512	81	35,528
24	Iron and steel, nails and spikes, cut and wrought, including wire nails, and cement.....	4	264,941	17,995	22,633	81,200	148,113	8	16	13,582	344	115,061
25	Lime and cement.....	6	34,050	10,500	3,850	7,000	12,700	8			29	9,469
26	Lock and gun smithing.....	4	3,575			1,600	1,975	4			3	1,102
27	Looking-glass and picture frames.....	3	18,150	600	1,500	1,350	14,700	3	4	2,600	18	6,828
28	Lumber, planing mill products, including sash, doors, and blinds.....	6	420,060	88,500	47,600	59,300	224,660	18	8	2,250	281	115,625
29	Marble and stone work.....	3	17,200	600	100	4,700	11,800	5			25	15,224
30	Masonry, brick and stone.....	4	53,750	4,500	3,500	3,050	42,700	4			144	53,820
31	Millinery, custom work.....	11	69,050			5,750	63,300	15	35	8,575	52	14,945
32	Monuments and tombstones.....	3	5,005			725	4,280	3			5	2,320
33	Painting, house, sign, etc.....	12	37,135	2,050	1,700	3,455	29,930	18	4	1,944	84	33,081
34	Paper and wood pulp.....	3	154,358	5,000	28,000	76,905	44,453	7	4	3,176	50	30,862
35	Patent medicines and compounds.....	4	16,300	700	5,000	450	10,150	7	1	1,800	13	5,300
36	Photography.....	5	15,200			4,500	10,400	7			18	6,182
37	Plastering and stucco work.....	4	2,900	350	200	550	1,800	5			23	7,607
38	Plumbing, and gas and steam fitting.....	19	82,270	9,400	11,550	9,175	52,145	21	2	964	71	34,520
39	Printing and publishing, book and job.....	11	59,040	2,700	3,200	21,400	11,740	12			14	6,195
40	Printing and publishing, newspapers and periodicals.....	7	207,208	16,200	9,000	100,986	81,022	11	31	17,283	166	39,385
41	Saddlery and harness.....	8	20,175	1,400	4,000	1,475	13,300	9			21	8,250
42	Shirts.....	4	18,186			9,686	8,500	8	2	1,336	207	40,290
43	Tinsmithing, coppersmithing, and sheet-iron working.....	11	29,925	2,200	850	3,825	23,050	10	1	300	24	10,032
44	Tobacco, cigars and cigarettes.....	48	644,097	24,050	46,200	34,180	539,667	56	23	56,270	1,131	324,539
45	Watch, clock, and jewelry repairing.....	13	53,532	13,000	20,200	4,425	15,307	14			8	2,210
46	All other industries.....	54	2,946,891	212,881	575,224	924,669	1,234,117	64	110	175,932	1,515	538,762

¹ Embraces awnings, tents, and sails, 1; blacking, 1; bookbinding and blank book making, 2; boxes, fancy and paper, 1; boxes, wooden packing, 1; cars and general shop construction and repairs by steam railroad companies, 2; cleansing and polishing preparations, 1; clothing, men's, factory product, 1; clothing, women's, factory product, 1; dentists' materials, 1; dyeing and cleaning, 1; electrical apparatus and supplies, 1; electrical construction and repairs, 2; fertilizers, 1; files, 1; furnishing goods, men's, 1; gas, illuminating and heating, 1; hardware, saddlery, 1; hats and caps, not including fur hats and wool hats, 1; hosiery and knit goods, 1; ice, manufactured, 2; iron and steel, 1; ironwork, architectural and ornamental, 1; kaolin and other earth grinding, 1; liquors, malt, 2; malt, 1;

TABLE 9.—MANUFACTURES IN CITIES AND

1	Total for cities and boroughs.....	7,799	\$236,490,999	\$15,356,430	\$36,633,294	\$57,125,169	\$127,926,106	8,678	6,195	\$6,204,857	118,973	\$51,553,695
2	Ashland.....	54	307,871	16,925	34,375	177,296	78,775	65	7	3,525	163	85,640
3	Athens.....	51	843,719	143,146	161,185	95,276	444,162	54	38	29,107	589	220,250
4	Bangor.....	73	804,517	55,650	61,250	206,301	481,316	81	70	44,700	944	343,687
5	Beaver Falls.....	119	6,867,106	339,305	1,800,458	1,778,327	2,949,106	110	134	161,828	2,231	1,022,075
6	Bellefonte.....	62	874,076	60,025	275,306	207,087	331,658	71	44	38,011	506	219,770
7	Berwick.....	33	2,446,468	86,775	441,050	569,287	1,349,351	28	53	61,882	1,335	730,505
8	Bethlehem.....	106	1,871,072	156,370	348,128	823,150	543,424	117	44	46,480	1,265	326,954
9	Birdsboro.....	26	1,095,356	21,925	203,480	329,025	540,926	30	24	47,226	861	335,450
10	Bloomsburg.....	65	2,035,473	134,756	509,587	608,313	840,823	69	66	63,090	1,029	328,385
11	Bradford.....	121	2,724,303	323,222	389,723	691,145	1,320,213	132	71	60,828	1,437	393,037
12	Bradford.....	149	2,674,380	323,453	283,337	360,603	1,397,427	133	101	97,397	1,965	1,031,949
13	Bridgeport.....	28	1,954,100	55,590	371,747	589,606	937,157	24	22	30,207	833	265,209
14	Bristol.....	72	3,616,181	81,545	189,551	1,288,827	2,056,258	72	57	67,902	2,027	751,033
15	Butler.....	129	1,696,396	154,175	285,422	532,314	724,485	150	40	47,686	1,003	505,468
16	Carbondale.....	92	1,618,034	89,445	373,492	350,108	804,989	103	71	69,552	1,138	387,528
17	Carlisle.....	109	1,125,635	95,265	172,442	254,135	603,793	129	82	92,894	1,385	415,986
18	Carnegie.....	53	465,830	62,540	66,150	120,375	216,759	55	14	15,678	381	231,519
19	Catsaugua.....	68	3,136,958	280,372	1,363,224	555,921	937,441	63	72	94,575	1,513	692,026
20	Chambersburg.....	107	853,037	85,556	91,780	263,297	412,404	124	35	25,425	793	283,676
21	Charleroi.....	62	2,395,082	136,044	725,285	778,141	755,532	65	66	79,673	1,270	671,871
22	Coatesville.....	70	4,772,487	112,543	906,308	878,757	2,874,879	73	113	95,805	1,854	840,322
23	Columbia.....	142	2,403,571	235,475	344,349	751,329	1,072,418	141	86	61,522	2,729	968,288
24	Cornellville.....	121	1,283,570	109,887	174,035	367,000	632,745	149	57	45,230	916	495,761
25	Conshohocken.....	55	3,957,818	205,350	542,275	1,105,919	2,104,274	51	129	178,180	1,951	896,797
26	Coraopolis.....	20	471,294	25,976	80,048	86,881	278,339	19	41	69,436	397	171,916

BY SPECIFIED INDUSTRIES: 1900—Continued.

YORK—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
90	\$39,156			1	\$156	\$23,850	\$650	\$25	\$2,300	\$20,875	\$52,565	\$52,165	\$400	\$140,000	12
31	10,022			6	724	2,954	800	19	622	2,013	23,926	23,820	106	49,487	13
91	35,295			8	1,374	3,151		291	2,860		79,712	78,522	1,190	158,250	14
299	93,740	3	\$625	4	725	19,125	1,215	2,077	1,833	14,000	261,437	259,213	2,224	467,494	15
57	22,431	53	11,531	5	432	6,003	3,400	316	2,212	75	58,009	57,098	913	125,747	16
		17	2,890	2	200	719	444		275		3,202	3,097	105	11,050	17
70	25,394	149	23,126	74	9,853	18,033	1,805	321	16,407		250,631	246,701	3,930	419,397	18
8	2,412					204		39	165		5,410	5,350	90	10,852	19
6	2,900					2,636	400	87	2,149		111,839	110,589	1,250	129,308	20
1,568	658,931			23	2,848	151,026	329	4,079	146,368	250	1,405,645	1,340,324	65,321	2,654,772	21
9	4,000					542	72	82	338		5,295	5,095	200	17,272	22
81	35,528					2,524	20	140	2,364		40,244	39,479	765	158,500	23
334	113,614	1	150	9	1,297	8,755	800	509	7,446		274,915	254,250	20,066	467,669	24
28	9,369			1	100	1,200		200	1,000		12,168	5,711	6,457	31,630	25
3	1,102					734	414	14	306		1,886	1,811	76	6,100	26
13	5,628	5	1,200			7,198	646	42	750	5,760	8,640	8,450	190	32,500	27
278	115,200			3	425	8,786		2,166	6,620		233,430	230,860	2,570	424,250	28
25	15,224					585	320	5	260		17,845	17,690	155	45,200	29
141	53,520					15,416		101	1,315	14,000	86,225	85,875	350	175,100	30
		49	14,435	3	510	9,422	5,940	41	3,441		79,737	78,798	939	145,000	31
6	2,320					574	424		150		4,515	4,470	45	11,100	32
78	32,871			6	810	1,942	1,532	41	369		27,190	26,785	405	87,304	33
49	30,706			1	156	8,090	2,250	110	5,730		103,661	93,246	10,415	183,725	34
8	4,500	5	800			6,096	686	30	5,980		25,352	25,262	90	53,294	35
9	4,102	9	2,080			3,230	1,569	18	1,273	370	10,110	9,925	185	28,000	36
19	7,050			4	557	207	102	5	100		4,736	4,666	70	17,290	37
68	33,980			3	510	2,968	1,507	132	1,329		76,278	75,617	761	162,687	38
12	5,870			2	325	1,370	948	79	843		8,949	8,327	622	27,675	39
76	33,570	2	292	88	4,523	14,365	1,561	318	11,754	732	37,587	35,412	2,175	136,920	40
21	8,250					2,250	1,272	63	915		16,087	15,702	335	84,703	41
8	5,556	185	34,266	14	468	1,210	838	15	312		90,831	89,068	1,163	165,832	42
24	10,032					2,475	1,185	88	1,202		17,576	17,234	312	44,640	43
618	205,372	470	114,248	43	4,919	191,237	3,175	740	187,322		510,026	507,792	2,234	1,190,155	44
7	2,110	1	100			1,914	1,137	202	400	175	6,314	5,772	542	18,293	45
971	413,523	432	106,288	112	18,951	230,973	7,634	4,761	203,612	14,966	1,442,402	1,385,848	56,554	2,794,750	46

mattresses and spring beds, 2; mineral and soda waters, 1; models and patterns, 1; musical instruments, organs and materials, 2; paper hanging, 1; paper hangings, 2; paving and paving materials, 2; pottery, terra cotta, and fire-clay products, 1; safes and vaults, 1; silk and silk goods, 2; soap and candles, 1; steam fittings and heating apparatus, 1; stereotyping and electrotyping, 1; tobacco, chewing, smoking, and snuff, 1; umbrellas and canes, 1; washing machines and clothes wringers, 1; wirework, including wire rope and cable, 2.

BOROUGHES UNDER 20,000 IN POPULATION: 1900.

96,991	\$47,189,000	16,089	\$3,526,426	5,893	\$837,668	\$18,273,118	\$1,618,437	\$555,249	\$13,044,123	\$3,055,309	\$164,196,310	\$152,307,365	\$11,888,946	\$286,751,008	1
156	82,582	11	2,914	1	144	9,779	2,617	776	6,386		132,909	123,551	4,358	274,765	2
517	210,828	48	6,423	24	2,999	54,356	12,280	826	36,413	4,837	618,956	606,767	12,189	1,012,183	3
810	327,062	101	17,975	33	3,650	110,955	61,899	1,017	48,539		552,647	529,839	22,808	1,230,350	4
1,951	964,939	174	38,253	106	18,883	303,189	9,464	10,275	283,450		3,780,051	3,657,751	122,300	6,245,501	5
459	209,364	45	10,242	2	164	46,731	10,632	1,173	34,370	550	652,436	560,480	91,956	1,175,608	6
1,292	721,244	35	8,162	8	1,099	111,067	2,040	3,095	101,845	4,087	2,808,813	2,726,499	82,314	4,872,953	7
631	207,310	439	98,007	195	21,037	240,028	14,443	4,054	122,944	98,587	995,368	974,546	20,822	1,832,219	8
769	312,729	58	15,568	44	7,153	58,240	15,095	2,836	40,309		1,321,674	999,662	321,912	2,026,928	9
635	250,986	308	63,892	86	13,507	106,093	8,615	3,188	44,256	50,039	978,508	960,711	17,797	1,732,559	10
1,374	877,892	37	10,247	26	4,898	875,170	16,632	4,061	462,227	392,250	3,111,916	3,045,666	66,250	5,643,162	11
1,821	985,255	120	38,148	24	8,546	224,962	17,977	5,001	175,034	26,900	2,011,858	1,938,070	73,788	4,101,339	12
402	174,970	333	76,847	98	13,392	66,292	2,484	3,140	60,668		1,358,235	1,343,050	15,185	1,821,585	13
1,135	502,412	664	208,344	228	39,777	332,920	25,478	2,012	303,409	2,021	2,577,508	2,510,090	67,418	4,380,248	14
905	482,462	64	15,593	34	7,413	141,796	8,630	15,040	75,990	45,136	749,216	686,737	62,479	1,877,419	15
735	326,722	210	40,211	193	20,595	100,701	13,939	10,383	76,379		572,101	554,405	17,696	1,394,662	16
858	315,855	495	97,079	32	3,052	33,436	12,583	2,630	62,553	5,670	1,249,456	1,234,789	14,667	2,131,239	17
358	225,875	18	4,994	5	650	67,192	6,914	7,220	27,269	25,789	434,660	415,196	19,464	909,890	18
1,181	527,471	208	42,343	154	22,212	190,598	2,769	11,558	135,015	41,226	1,660,819	1,580,471	279,848	3,197,297	19
600	245,233	165	34,218	28	4,225	62,527	10,829	1,574	34,724	16,400	633,952	623,475	10,477	1,127,423	20
1,011	615,070	48	11,612	211	44,689	278,069	2,133	12,150	229,086	34,700	700,669	614,034	86,635	1,871,505	21
1,674	808,961	128	20,951	52	10,410	219,305	7,809	7,981	150,235	53,230	3,752,364	3,588,226	224,638	6,856,079	22
1,728	797,399	729	135,410	272	35,479	160,051	13,661	4,726	73,943	62,721	2,837,765	2,724,630	113,135	4,729,477	23
831	477,737	65	14,222	20	3,802	50,344	12,616	2,159	28,909	6,660	1,449,333	1,418,301	31,037	2,380,137	24
1,525	773,299	359	113,724	67	9,774	219,482	49,846	7,248	162,001	337	2,303,063	2,200,637	102,426	4,454,230	25
295	141,380	77	23,036	25	7,500	35,336	2,165	341	26,000	6,830	305,093	286,834	18,259	731,840	26

TABLE 9.—MANUFACTURES IN CITIES AND

	CITIES AND BOROUGHES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
27	Corry	109	\$830,727	\$79,540	\$104,457	\$185,073	\$421,657	112	36	\$28,818	585	\$255,129
28	Danville	92	2,836,268	112,179	302,306	1,110,576	1,311,207	107	74	76,998	2,414	855,306
29	Darby	45	1,363,579	59,715	196,708	570,323	536,833	51	21	28,239	744	270,921
30	Dubois	56	1,513,316	80,142	274,689	232,354	926,131	74	40	36,351	893	355,925
31	Dunmore	53	1,336,477	118,869	260,561	341,362	615,685	51	66	60,468	893	354,922
32	Duquesne	19	14,358,059	1,421,000	635,494	5,775,411	6,526,154	24	77	88,877	1,497	1,075,152
33	East Mauch Chunk	21	301,135	9,100	102,656	133,991	55,385	19	3	3,016	383	76,257
34	Ephrata	66	370,198	10,603	52,703	64,027	242,865	74	18	7,876	501	130,323
35	Etna	37	3,701,581	832,400	1,271,644	503,317	1,091,220	37	34	50,190	1,709	865,992
36	Franklin	120	4,523,916	186,600	276,601	854,463	3,706,252	156	156	271,365	758	354,318
37	Greencastle	26	48,526	3,670	7,630	8,665	28,561	29	1	100	61	19,476
38	Greenville	79	1,998,509	69,666	485,743	829,791	613,309	90	48	39,589	999	544,612
39	Hamburg	62	416,757	19,925	69,914	99,524	227,391	77	11	6,704	369	113,516
40	Hannover	85	768,387	29,437	102,270	212,023	422,657	113	38	20,513	849	202,267
41	Hawley	28	716,842	73,550	69,200	114,155	469,937	34	12	11,200	448	140,953
42	Hazleton	141	1,488,290	136,276	368,895	479,125	504,494	156	78	53,241	1,049	341,769
43	Hollidaysburg	38	167,649	22,100	22,775	23,155	99,619	41	11	7,051	197	77,738
44	Homestead	52	2,691,815	617,421	279,935	776,762	1,017,697	63	87	86,113	1,630	439,247
45	Honesdale	71	1,357,399	67,000	225,957	276,142	788,300	81	60	51,694	680	238,684
46	Huntingdon	68	1,002,520	79,200	224,600	325,282	433,438	75	31	23,320	550	208,583
47	Lansford	24	208,116	3,190	35,740	75,273	93,913	22	3	2,550	283	119,815
48	Lebanon	219	7,756,390	638,637	1,853,022	2,607,877	2,656,821	217	201	210,477	5,613	2,243,809
49	Lehighton	42	648,281	42,930	149,104	131,650	324,537	44	30	22,105	380	99,715
50	Lewisburg	36	389,487	13,410	64,810	115,635	205,602	40	11	7,564	260	82,927
51	Lewistown	64	1,011,949	84,050	205,980	209,090	511,629	69	22	21,337	563	233,705
52	McKees Rocks	34	14,990,471	604,550	917,753	1,009,228	12,458,940	32	220	90,188	2,055	1,206,476
53	Mahanoy City	99	607,659	32,950	276,846	148,271	149,432	112	31	20,488	474	131,582
54	Manheim	58	157,490	14,060	41,085	26,179	76,166	59	9	3,634	334	76,903
55	Marietta	37	849,538	24,950	143,560	126,786	554,232	33	30	24,780	674	210,151
56	Mauch Chunk	34	366,370	21,750	68,070	95,671	180,279	35	15	14,312	323	143,714
57	Meadville	135	1,415,733	62,480	255,650	562,069	535,584	151	97	74,532	1,445	648,020
58	Mechanicsburg	68	482,155	42,245	78,580	153,935	207,345	60	25	13,920	444	173,840
59	Media	40	233,937	31,720	66,250	59,076	78,951	44	5	4,410	170	75,309
60	Middletown	60	2,323,876	217,975	460,907	781,820	863,074	49	48	52,099	1,572	556,818
61	Millvale	37	319,149	45,775	80,725	116,217	76,432	38	20	13,862	119	70,609
62	Milton	60	1,950,893	91,360	265,795	580,997	1,012,741	69	57	58,398	1,421	584,674
63	Minersville	36	75,177	8,075	20,075	24,104	22,923	38	1	520	84	25,290
64	Monongahela	68	805,861	64,758	145,770	263,772	331,561	65	30	25,944	438	288,310
65	Nanticoke	73	328,414	27,876	89,103	121,553	89,882	83	12	6,166	207	73,161
66	New Brighton	68	2,903,449	145,241	422,029	1,218,592	1,116,687	77	90	119,447	1,482	599,589
67	New Haven	22	40,401	8,400	11,450	4,910	15,641	25	1	750	46	20,941
68	New Holland	23	76,843	3,900	22,000	16,084	34,859	27	4	3,782	81	23,894
69	Northumberland	16	238,768	7,350	46,796	15,274	169,348	18	13	6,196	267	74,940
70	Oil City	158	4,578,237	323,924	583,501	969,291	2,701,521	189	119	147,572	1,992	1,038,173
71	Orwigsburg	27	268,522	8,200	27,685	63,286	169,351	34	45	19,706	463	133,189
72	Pon Argyll	31	392,615	122,900	27,010	85,460	157,245	58	9	4,660	336	177,873
73	Phoenixville	92	6,482,025	634,180	1,077,277	2,314,024	2,456,544	91	123	134,272	2,556	1,099,719
74	Pittston	95	1,038,797	112,590	198,107	308,768	424,332	100	54	41,309	505	222,340
75	Plymouth	101	579,553	25,072	63,949	242,263	248,269	98	38	20,701	923	213,497
76	Pottstown	144	4,922,856	537,983	887,960	932,000	2,564,873	164	133	148,427	3,059	1,251,229
77	Pottsville	206	3,383,237	395,050	758,975	898,330	1,330,882	232	150	111,198	1,967	671,179
78	Rankin	12	4,962,354	386,659	834,560	1,768,984	2,422,151	8	73	62,535	1,622	983,867
79	Rochester	47	2,228,337	171,019	474,676	436,422	1,146,220	59	40	56,685	1,443	589,516
80	St. Clair	31	94,803	3,750	9,875	14,355	66,883	42	7	3,780	213	47,506
81	Sayre	46	1,341,905	31,627	570,937	349,401	389,940	52	61	47,908	1,261	591,238
82	Schuylkill Haven	53	545,701	47,997	83,300	205,656	203,748	59	15	7,873	702	259,499
83	Shamokin	143	971,130	83,750	141,516	210,671	530,193	154	60	39,807	1,068	313,057
84	Sharon	96	6,140,725	507,000	1,242,637	2,492,506	1,898,582	112	96	131,504	3,145	1,601,748
85	Sharpsburg	103	1,053,416	121,250	128,250	111,531	692,385	117	32	33,358	1,213	669,946
86	Sharpsville	21	3,657,100	92,838	804,286	220,265	2,539,711	22	37	42,002	912	531,309
87	Shippensburg	54	263,081	13,150	40,419	45,578	163,934	70	26	13,809	284	71,437
88	Slatington	54	756,751	46,775	73,775	194,346	441,855	61	43	29,827	926	362,384
89	South Bethlehem	127	8,713,185	126,745	707,745	1,161,995	6,716,700	126	281	342,142	5,544	2,390,100
90	South Williamsport	15	586,673	31,131	78,895	217,870	258,777	14	15	16,164	386	146,218
91	Spring City	47	509,362	45,200	94,800	99,689	269,673	46	20	19,708	482	198,685
92	Steelton	55	6,315,833	99,166	967,815	857,651	4,391,201	51	273	275,189	4,871	2,127,334
93	Stroudsburg	55	461,770	43,775	90,350	171,810	155,835	63	13	12,015	544	232,046
94	Summit Hill	14	34,078	1,375	2,658	26,110	26,110	16	8	6,139	29	11,105
95	Sunbury	76	2,101,602	139,894	353,119	580,335	1,028,254	76	80	55,513	1,140	441,531
96	Susquehanna	82	810,076	69,950	213,948	396,770	129,408	81	18	12,580	1,187	613,508
97	Tamaqua	64	917,124	87,415	260,350	319,276	250,083	65	28	24,635	564	229,728
98	Tarentum	55	2,192,747	216,806	547,150	880,313	548,478	58	59	81,620	1,420	628,233
99	Taylor	12	170,549	6,286	14,615	51,186	98,462	12	8	6,139	197	30,375
100	Titusville	113	2,550,452	121,516	398,740	739,743	1,290,433	127	67	92,408	1,204	522,749
101	Towanda	89	673,021	40,000	83,115	187,220	362,686	111	42	30,220	559	185,477
102	Turtle Creek	14	14,800	3,000	3,250	4,360	4,190	15	40	44,522	15	9,710
103	Tyone	69	1,038,861	63,461	180,387	500,335	351,678	80	37	25,579	560	243,711
104	Uniontown	130	872,549	152,859	171,850	223,069	324,780	157	37	25,579	743	323,863
105	Warren	119	2,869,020	174,169	466,718	1,142,437	1,085,696	138	71	76,602	1,270	585,590
106	Washington	150	2,897,671	185,577	504,823	853,626	1,863,645	174	119	130,468	2,206	1,052,616

BOROUGHES UNDER 20,000 IN POPULATION: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.				Value of products, including custom work and repairing.
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not including internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
524	\$241,089	56	\$12,926	5	\$1,114	\$65,053	\$7,543	\$3,928	\$48,082	\$5,500	\$493,058	\$481,785	\$11,273	\$1,061,464	27
1,968	798,944	209	35,808	237	20,554	227,030	8,715	7,932	208,983	1,400	2,759,707	2,489,451	270,256	4,317,776	28
287	144,369	293	93,237	164	33,315	78,366	5,043	3,290	61,490	5,543	570,333	559,043	11,290	1,152,278	29
846	345,917	35	7,358	12	2,050	89,756	6,709	6,304	76,743		1,229,312	1,216,279	13,033	1,926,391	30
711	322,350	138	25,918	44	6,654	180,467	11,532	3,647	141,788	23,500	662,486	649,592	12,894	1,472,675	31
1,493	1,074,348			4	804	435,881	1,678	34,637	399,566		14,611,842	13,167,490	1,444,352	20,365,667	32
177	45,514	167	26,370	39	4,373	66,965	1,088	597	22,644	42,636	478,844	478,936	4,903	685,994	33
219	75,008	232	49,488	50	5,827	65,227	2,886	759	61,380	10,202	308,958	300,016	8,942	684,350	34
1,651	851,507	8	8,015	50	11,470	64,848	1,263	12,635	60,780	170	2,515,585	2,007,678	507,907	5,655,269	35
685	333,455	62	14,033	11	1,830	1,506,361	10,928	4,997	1,489,186	1,250	1,826,916	1,790,014	36,902	6,046,213	36
39	15,473	17	3,355	5	648	3,989	1,302	123	2,514	50	49,678	48,837	836	94,622	37
916	528,502	70	14,192	13	1,918	65,003	4,775	2,703	37,825	19,700	1,116,066	1,058,722	57,344	1,900,471	38
242	90,391	94	20,674	33	2,450	20,950	3,125	1,041	13,159	3,625	383,291	375,596	7,695	627,209	39
524	203,257	309	56,267	16	2,743	78,399	4,971	1,348	72,080		557,542	540,304	17,238	1,153,492	40
288	112,206	88	18,756	72	9,991	21,825	1,234	1,737	8,404	10,450	587,627	574,638	12,989	809,724	41
557	270,206	396	60,472	96	11,091	166,935	18,513	5,353	123,148	19,921	520,222	511,128	9,094	1,478,508	42
183	75,236	12	2,300	2	200	8,931	1,691	592	6,648		190,979	175,982	14,997	832,022	43
1,006	433,265	16	4,154	8	1,828	59,737	16,180	2,412	41,145		725,729	701,075	24,654	1,444,245	44
350	161,414	270	69,865	60	7,405	90,242	6,299	2,753	59,190	22,000	714,659	704,332	10,327	1,235,425	45
867	165,255	171	41,916	12	1,412	82,972	8,349	2,624	71,999		547,414	530,897	16,517	971,674	46
270	117,215	9	1,956	4	644	3,728	1,511	1,515	702		200,274	197,795	2,479	848,517	47
4,554	1,953,687	846	249,744	213	37,378	350,716	18,082	17,411	312,281	2,942	6,512,892	6,512,645	900,247	10,167,455	48
208	79,021	135	17,707	37	2,987	38,955	4,595	1,988	23,285	9,037	414,945	408,240	6,705	627,705	49
188	68,923	72	14,004			11,286	2,417	997	7,872		310,212	304,603	5,609	469,221	50
523	214,619	81	7,846	9	1,240	41,760	6,036	1,587	24,772	10,365	562,710	542,013	20,697	984,234	51
2,010	1,197,355	2	500	43	8,621	539,720	2,268	5,759	129,695	402,000	2,517,940	2,384,588	133,354	4,288,935	52
270	99,630	180	28,998	24	2,954	119,879	7,416	3,930	108,533		230,275	223,183	7,092	648,645	53
138	42,742	179	31,749	17	2,412	86,158	1,299	816	33,511	1,002	273,015	270,237	2,778	450,938	54
492	173,922	153	33,670	29	2,559	33,986	3,134	897	24,668	5,342	651,529	624,012	127,517	1,125,701	55
294	133,048	28	5,546	1	120	22,802	3,889	1,068	16,445	800	251,282	247,594	6,688	500,252	56
1,250	603,944	194	43,926	1	150	77,057	13,616	1,748	54,481	7,212	1,099,379	1,075,688	23,691	2,150,110	57
358	161,147	71	11,039	15	1,654	22,811	3,160	1,217	18,434		313,820	303,811	10,009	630,483	58
162	73,709	8	1,600			27,418	4,050	1,252	12,416	9,700	37,575	37,575	2,279	279,436	59
1,372	516,625	129	29,533	71	10,660	62,608	3,709	3,424	44,914	561	3,269,223	3,212,432	56,791	5,198,286	60
115	69,967	2	336	2	806	50,649	3,012	2,130	74,477	1,000	174,499	166,686	7,813	466,889	61
1,228	494,917	154	35,446	39	4,311	86,020	7,143	3,520	75,352		1,835,416	1,820,144	65,272	2,912,209	62
35	16,311	46	3,583	3	366	11,821	1,826	224	8,471	1,300	87,705	86,729	976	167,798	63
414	282,864	17	4,320	7	1,126	56,285	4,485	2,270	38,920	10,610	337,720	315,869	21,851	841,155	64
114	61,168	42	6,742	51	5,251	47,646	4,824	857	41,850	135	194,244	190,621	3,623	399,678	65
1,207	589,837	200	40,096	75	10,656	108,677	6,137	5,946	94,047	2,547	1,003,463	956,329	47,134	2,195,552	66
39	19,441	7	1,500			2,208	1,211	320	672		44,473	43,829	644	90,002	67
51	18,232	26	5,531	4	131	86,196	653	125	4,768	30,650	78,425	77,230	1,195	165,687	68
136	53,109	122	21,112	9	719	6,766	378	828	5,560		224,827	218,422	6,405	360,923	69
1,872	1,007,906	117	29,817	3	450	161,223	20,559	9,786	128,933	2,000	4,742,818	4,642,547	100,301	6,710,856	70
248	89,226	177	41,206	28	2,757	15,625	1,563	394	13,608		406,423	404,231	2,192	648,223	71
233	149,613	103	28,260			46,457	40,328	1,220	4,900		219,184	211,823	7,361	537,322	72
2,168	1,018,451	258	66,771	130	14,497	232,963	10,278	7,779	214,906		3,202,965	3,028,984	173,981	4,992,772	73
390	199,216	104	21,565	11	1,559	98,686	12,283	2,988	62,210	21,200	722,800	714,503	8,297	1,261,500	74
276	119,741	418	73,427	229	20,329	95,985	9,053	1,367	81,010	4,500	362,488	356,041	6,447	803,728	75
2,421	1,142,686	459	85,232	179	23,331	386,985	214,608	7,174	163,398	1,805	5,203,759	4,970,052	293,707	8,111,486	76
1,303	571,700	584	85,869	130	13,610	333,317	29,653	8,636	312,531	32,497	3,626,129	3,594,919	31,210	5,354,633	77
1,574	973,963			48	9,904	716,589	634	14,128	701,827		5,437,357	5,492,790	444,567	8,607,680	78
927	501,770	206	61,847	300	25,809	104,262	2,412	3,464	98,386		470,450	384,832	85,618	1,440,567	79
25	10,600	170	34,554	18	2,352	2,225	830	135	1,200		57,678	56,710	968	146,277	80
1,192	579,243	60	9,373	9	2,622	40,754	1,717	8,412	28,625	2,000	1,170,326	1,148,685	21,641	1,945,797	81
413	193,872	270	63,418	19	2,209	15,605	2,012	822	12,771		1,106,426	1,094,883	10,543	1,497,484	82
503	212,976	480	91,741	85	8,340	180,080	20,769	1,575	20,252	78,484	995,421	896,496	8,925	1,656,606	83
3,073	1,586,957	50	12,280	17	2,511	470,574	9,209	19,134	411,839	30,392	6,751,895	6,148,550	603,345	9,865,039	84
1,086	644,207	15	3,982	112	21,757	81,674	15,856	3,986	31,023	30,804	1,854,014	1,732,013	122,001	2,950,668	85
910	531,019	1	250	1	40	229,576									

TABLE 9.—MANUFACTURES IN CITIES AND

CITIES AND BOROUGHS.		Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
107	Watson town.....	21	\$257,571	\$12,250	\$45,860	\$59,678	\$140,283	20	38	\$23,588	\$280	\$91,651
108	Waynesboro.....	61	3,984,774	60,125	271,665	310,535	3,342,449	61	97	98,069	1,103	507,628
109	West Bethlehem.....	17	143,990	14,425	36,630	27,020	65,915	22	6	4,000	69	29,214
110	West Chester.....	112	1,244,188	136,200	222,481	340,007	545,500	127	69	60,783	740	351,087
111	West Pittston.....	35	567,287	22,500	106,887	195,955	241,945	36	31	47,048	299	123,238
112	Wilkesburg.....	131	1,049,083	131,379	122,420	68,896	726,897	150	15	6,048	655	461,107
113	Wilmington.....	10	19,546,553	311,300	2,226,500	653,656	16,355,097	9	109	241,595	2,015	1,353,869
114	Wrightsville.....	34	462,672	22,250	126,746	87,585	226,091	33	30	15,673	427	133,735

BOROUGHES UNDER 20,000 IN POPULATION: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
259	\$87,142	16	\$3,909	5	\$600	\$11,747	\$1,154	\$728	\$9,865	-----	\$298,200	\$293,628	\$4,572	\$459,670	107
1,086	504,872	14	2,311	3	445	265,093	5,604	5,099	211,050	\$43,340	1,072,213	1,055,728	16,485	2,731,059	108
62	28,064	7	1,150			19,923	424	516	3,488	15,500	174,673	172,320	2,253	276,939	109
695	342,332	35	7,062	10	1,693	164,169	10,106	3,423	64,990	85,650	459,559	445,761	18,798	1,378,362	110
206	107,214	86	15,247	7	777	127,441	3,357	1,344	117,898	4,845	212,730	238,457	4,273	621,996	111
623	455,447	31	8,480	1	180	644,594	12,643	1,868	19,165	610,918	897,931	895,769	2,162	2,295,846	112
1,997	1,348,984	14	8,873	4	1,012	636,488	880	51,323	584,185	100	2,592,726	2,546,018	46,708	9,171,384	113
336	118,052	71	14,669	17	1,014	31,909	5,763	935	24,521	700	470,759	345,305	125,451	781,452	114