

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 131.

WASHINGTON, D. C.

January 21, 1902.

MANUFACTURES.

MARYLAND.

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There were 7 cities and towns in the state withdrawn from the enumerators and their manufacturing statistics collected by special agents, in accordance with the further provision of section 7 of the Census Act. Wherever the phrase "urban manufactures" is used in this bulletin, it applies only to those cities and towns which were withdrawn from the enumerators and committed to special agents, and only to manufacturing establishments within the corporate limits of such places.

The presentation of the manufacturing statistics of cities by specified industries at the present census is confined to cities having a population of 20,000 or over, and for this reason detailed statistics are presented only for the city of Baltimore.

Mr. Richard H. Edmonds, of Baltimore, president of the Manufacturers' Record Publishing Company, rendered valuable assistance in the preparation of the text for the accompanying report.

The statistics of Maryland 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 a governmental establishment, 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 14 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the city of Baltimore at the censuses of 1880, 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 towns 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 city of Baltimore by specified industries; and Table 9 showing the totals for all industries in each of the cities and towns withdrawn from the enumerators (exclusive of the city of Baltimore).

Table 1 shows the growth of manufactures in Maryland 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 Maryland 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 \$163,422,260 invested in manufactures and mechanical industries in the 9,880 establishments reporting for the state of Maryland. 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 \$242,752,990, to produce which involved an outlay of \$7,383,263 for salaries of officials, clerks, etc.; \$38,761,551 for wages; \$17,226,623 for miscellaneous expenses, including rent, taxes, etc.; and \$144,539,680 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 Maryland, \$242,752,990, 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 Maryland, the gross value of products for 1900 was \$242,752,990. The value of materials purchased in a partly manufactured form was \$103,620,042. The difference, \$139,132,948, is the net or true value of products, and represents the increase in the value of raw materials resulting from the various processes of manufacture.

Very respectfully,


Chief Statistician for Manufactures.

MARYLAND.

Table 1 shows the manufacturing and mechanical industries of the state of Maryland 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 manufacturing establish-

ments, 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 1880	1880 to 1870	1870 to 1860	1860 to 1850	1850 to 1840
Number of establishments	9,880	7,485	6,787	5,812	3,083	3,725	32.0	10.3	16.8	88.5	117.2
Capital	\$103,422,260	\$119,607,316	\$58,742,384	\$36,438,729	\$23,230,608	\$14,934,460	36.6	103.7	61.2	56.9	55.6
Salaried officials, clerks, etc., number	7,589	9,246	(3)	(3)	(3)	(3)	17.9				
Salaries	\$7,388,263	\$7,085,418	(3)	(3)	(3)	(3)	4.2				
Wage-earners, average number	108,361	97,808	74,945	44,860	28,408	30,212	10.8	30.5	57.1	57.9	16.0
Total wages	\$38,701,551	\$34,441,414	\$18,904,965	\$12,682,817	\$7,190,672	\$7,408,832	12.5	82.2	49.1	76.4	12.9
Men, 16 years and over	72,860	67,261	40,698	34,061	21,630	22,729	8.3	44.0	37.1	57.5	14.8
Women, 16 years and over	\$31,885,361	\$20,049,820	(3)	(3)	(3)	(3)	9.8				
Wages	29,617	26,432	21,700	3,278	5,778	7,488	12.0	21.8	102.1	22.2	19.5
Children, under 16 years	\$6,112,187	\$5,009,548	(3)	(3)	(3)	(3)	22.0				
Wages	\$764,003	\$382,046	(3)	2,521	(3)	(3)	43.0	137.1	159.7		
Miscellaneous expenses	\$17,226,023	\$10,616,347	(4)	(4)	(4)	(4)	100.0				
Cost of materials used	\$144,539,680	\$92,059,390	\$66,937,846	\$46,897,032	\$25,494,007	\$17,690,886	62.3				
Value of products, including custom work and repairing	\$242,752,990	\$171,842,593	\$106,780,563	\$76,593,613	\$41,735,157	\$33,043,892	57.0	37.5	42.7	84.0	44.1
Total population	1,188,044	1,042,390	934,943	780,894	687,049	583,034	14.0	11.5	19.7	13.7	17.8
Wage-earners engaged in manufactures	108,361	97,808	74,945	44,860	28,408	30,212	10.8	30.5	57.1	57.9	16.0
Per cent of total population	9.1	9.4	8.0	5.7	4.1	5.2					
Assessed value of real estate	\$616,719,782	\$411,900,246	\$368,442,918	\$286,910,382	\$65,341,438	\$189,026,610	49.7	11.8	28.4	339.1	153.0
Value of land and buildings invested in manufactures ¹	\$45,804,854	\$31,268,516	(2)	(2)	(2)	(2)	46.5				
Per cent of assessed value	7.4	7.6									

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 As given in the Maryland Manual for 1900.

⁶ Does not include value of rented property.

Although Maryland is not preeminently a manufacturing state, Table 1 shows that there has been a steady growth in its manufacturing and mechanical industries during the half century. The population during these years increased from 583,034 to 1,188,044, or 103.8 per cent, while the average number of wage-earners employed in manufacturing establishments increased from 30,212 to 108,361, or 258.7 per cent, embracing, in 1900, 9.1 per cent of the entire population, compared with 5.2 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 149,069, or 12.5 per cent of the total population of the state. The industries of the province of Maryland were localized largely in and near the city of Baltimore, which was founded in 1729, and the same localization is shown at the present census.

Table 2 divides the industries of the state between the hand trades and the manufactures proper. This table also gives the statistics for a governmental establishment, 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.

TABLE 2.—SUMMARY FOR ALL ESTABLISHMENTS.

CLASSES.	Num- ber of estab- lish- ments.	Capital.	Propri- etors and firm mem- bers.	WAGE-EARNERS.		Miscella- neous expenses.	COST OF MATERIALS USED.				Value of products, including custom work and repairing.
				Aver- age num- ber.	Total wages.		Total.	Purchased in raw state.	Purchased in partially manufac- tured form.	Fuel, freight, etc.	
Total	11,529	\$164,422,926	13,085	108,887	\$38,821,476	\$17,306,196	\$144,809,911	\$36,474,217	\$103,839,576	\$4,496,118	\$243,503,056
Hand trades ¹	4,550	9,639,941	4,920	11,518	5,221,050	2,274,333	9,951,381	101,225	9,710,938	139,218	23,054,608
Governmental establishment	1	169,100	—	13	4,689	—	8,463	—	7,763	700	13,652
Eleemosynary and penal institu- tions	6	280,973	—	270	43,402	17,142	111,131	30,152	75,273	5,706	215,293
Establishments with a product of less than \$500	1,612	550,593	1,910	243	11,834	62,431	150,637	13,968	136,498	176	521,121
All other establishments	5,330	153,782,319	6,205	96,843	33,540,501	14,952,290	134,588,299	36,328,877	93,909,104	4,350,318	219,698,382

¹ Includes bicycle and tricycle repairing, 71; blacksmithing and wheelwrighting, 877; boots and shoes, custom work and repairing, 719; carpentering, 393; clothing, men's, custom work and repairing, 408; clothing, women's, dressmaking, 589; dyeing and cleaning, 58; furniture, cabinetmaking, repairing, and uphol-
stering, 136; lock and gun smithing, 50; masonry, brick and stone, 106; millinery, custom work, 235; painting, house, sign, etc., 308; paper hanging, 107; plastering
and stuccowork, 46; plumbing, and gas and steam fitting, 245; sewing machine repairing, 11; watch, clock, and jewelry repairing, 188.

Of the 11,529 establishments of all classes, shown in this table, 6,192, or 53.7 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 \$23,575,729, or only 9.7 per cent of the total products of the state.

In addition to the 11,529 active establishments in the state during the census year, with a capital of \$164,422,926, shown in Table 2, there were 37 idle establishments, with a capital of \$1,226,058, divided as follows:

INDUSTRIES.	Number of idle estab- lishments.	Capital.	INDUSTRIES.	Number of idle estab- lishments.	Capital.
Ammunition	1	\$142,628	Lumber and timber products	10	\$8,975
Dye stuffs and extracts	1	10,965	Paper and wood pulp	2	38,000
Flouring and grist mill products	3	12,405	Pottery, terra cotta, and fire-clay products	2	135,000
Iron and steel	3	247,934	Sugar and molasses, refining	1	75,000
Leather, tanned, curried, and finished	1	8,750	Woolen goods	1	10,000
Liquors, distilled	3	110,000	All other industries	7	16,401
Liquors, malt	2	410,000			

TABLE 3.—COMPARATIVE SUMMARY OF FOURTEEN 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	1,877	\$54,099,994	37,241	\$12,522,561	\$6,882,590	\$54,428,483	\$86,313,509
	1890	1,470	41,767,867	26,110	9,548,433	3,438,593	35,782,390	57,083,323
Increase, 1890 to 1900		407	12,332,127	1,131	2,974,128	3,444,297	18,616,093	28,658,186
Per cent of increase		27.7	29.5	3.1	31.1	100.2	52.1	49.7
Per cent of total of all industries in state	1900	19.0	33.1	34.4	32.3	40.0	37.7	35.6
	1890	19.6	34.9	36.9	27.7	32.4	38.9	33.6
Fertilizers	1900	40	7,003,376	1,016	457,692	354,244	3,643,816	5,481,905
	1890	53	6,935,914	1,051	492,682	459,109	3,984,178	6,208,025
Flouring and grist mill products	1900	407	3,428,996	541	229,335	225,357	6,731,805	8,035,343
	1890	335	3,007,730	625	240,063	236,607	5,778,873	6,904,888
Foundry and machine shop products	1900	113	6,381,676	4,695	2,251,777	456,175	3,322,658	8,443,547
	1890	81	4,669,891	3,352	1,665,907	241,148	1,875,508	4,925,672
Fruits and vegetables, canning and preserving	1900	271	4,459,660	7,505	1,379,131	371,108	8,786,518	11,990,245
	1890	197	2,739,008	13,048	1,416,386	151,496	4,416,352	7,195,109
Furniture, factory product	1900	42	1,584,981	1,869	822,540	155,614	1,212,226	2,976,494
	1890	33	1,296,831	1,376	582,129	77,592	1,053,759	2,110,955
Iron and steel	1900	9	2,892,690	2,138	1,020,733	508,298	6,888,916	8,739,405
	1890	10	4,067,574	1,247	371,993	46,077	2,217,173	2,869,208
Lumber and timber products	1900	367	2,622,928	1,964	476,778	63,004	1,390,357	2,650,082
	1890	217	1,459,896	1,552	335,909	54,928	840,941	1,600,472
Lumber, planing mill products, including sash, doors, and blinds	1900	53	3,534,501	1,323	542,262	153,244	2,452,655	3,753,083
	1890	45	1,990,138	1,174	661,361	131,296	2,005,755	3,332,563
Oysters, canning and preserving	1900	16	799,005	1,444	879,591	70,100	1,771,377	2,417,331
	1890	8	953,232	2,834	559,040	43,301	1,877,353	2,834,400
Paper and wood pulp	1900	21	2,720,577	937	326,474	105,571	1,730,910	2,589,540
	1890	17	919,766	472	171,209	157,569	552,604	1,001,945

TABLE 3.—COMPARATIVE SUMMARY OF FOURTEEN 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.			
Shipbuilding:								
Total	1900	47	\$4,446,023	2,615	\$1,517,705	\$141,565	\$1,798,564	\$4,161,525
	1890	34	1,815,262	1,043	620,483	92,677	737,457	1,737,674
Ship and boat building, wooden	1900	43	623,435	676	331,873	30,649	301,010	862,034
	1890							
Shipbuilding, iron and steel	1900	4	3,822,588	1,939	1,185,832	110,916	1,497,554	3,299,491
	1890							
Slaughtering:								
Total	1900	82	1,548,488	597	276,413	109,017	7,109,079	8,046,350
	1890	17	993,081	389	182,568	76,150	3,969,563	4,670,690
Slaughtering and meat packing, wholesale	1900	47	1,318,917	514	242,089	99,239	5,446,717	6,209,857
	1890	14	958,521	368	171,203	75,232	3,668,147	4,311,412
Slaughtering, wholesale, not including meat packing	1900	35	229,571	83	34,324	9,778	1,662,362	1,836,502
	1890	3	34,560	21	11,360	927	301,416	359,278
Textiles:								
Total	1900	22	9,351,313	6,286	1,526,685	473,178	4,053,682	7,155,722
	1890	32	7,819,324	4,921	1,219,583	378,667	3,890,186	6,218,131
Cotton goods	1900	14	7,709,256	4,727	1,186,014	397,016	3,039,396	5,423,251
	1890	15	7,296,793	4,256	1,055,536	354,478	3,378,016	5,457,792
Hosiery and knit goods	1900	4	311,508	682	119,456	21,981	347,250	514,093
	1890	8	149,656	289	44,566	9,747	87,315	180,823
Woolen goods	1900	4	1,330,549	877	221,215	51,181	667,036	1,218,378
	1890	9	372,875	376	119,481	14,442	424,855	579,516
Tobacco:								
Total	1900	387	3,325,477	4,311	1,306,427	3,631,815	3,565,890	9,806,928
	1890	391	3,600,221	3,026	1,029,120	1,291,967	2,582,688	6,074,591
Chewing, smoking, and snuff	1900	5	1,805,611	2,002	564,272	3,238,812	2,496,107	7,054,159
	1890	6	2,203,619	1,178	335,135	928,023	1,534,205	3,216,247
Cigars and cigarettes	1900	382	1,519,866	2,309	742,155	458,003	1,039,781	2,842,769
	1890	385	1,396,602	1,848	693,985	363,944	1,048,485	2,858,344

¹ Not separately reported in 1890.

The 14 leading industries of the state in 1900, as shown in Table 3, embraced 1,877 establishments, or 19 per cent of the total number in the state; used a capital of \$54,099,994, or 33.1 per cent of the total; gave employment to 37,241 wage-earners, or 34.4 per cent of the total number; and paid \$12,522,561, or 32.3 per cent of the total wages. The value of their products was \$86,343,509, or 35.6 per cent of the total. In the discussion of Table 3, which follows, these industries are ranked with reference to the value of their products.

Table 3 shows that the canning and preserving of fruits and vegetables is the most important industry in the state. The 271 establishments reported in 1900 gave employment to 7,505 wage-earners, or 6.9 per cent of the wage-earners in the state, and their products were valued at \$11,996,245, or 4.9 per cent of the total value of the products of the state. In 1890 there were 197 establishments, with 13,048 wage-earners, and products valued at \$7,196,109. The increase in the value of products during the decade was \$4,800,136, or 66.7 per cent. The reduced number of employees is only apparent, the method of computation adopted at this census giving the average number for the entire year. The canning of fruits and vegetables is an industry restricted to a few months in the year; and during this period the highest number of employees in the industry in Maryland reached 22,907.

There were 9 establishments engaged in the manufacture of iron and steel in 1900, the industry second in rank, with 2,138 wage-earners, and products valued at \$8,739,405. In 1890 there were 10 establishments, with 1,247 wage-earners, and products valued at \$2,869,208. The in-

crease in the value of products during the decade was \$5,870,197, or 204.6 per cent. Iron ore was smelted in Maryland on the lower Patuxent as early as 1649, and the industry was thoroughly established by 1717, small quantities of wrought iron being exported from the colony.¹ Small furnaces were built along a belt of ores in Prince George, Howard, Baltimore, Harford, and Cecil counties, and produced charcoal pig iron of a high grade. One of these plants, the Principio Furnaces, manufactured cannon, cannon balls, and hardware for the United States Government during the War of 1812.² From these older works developed rolling mills, such as the one at Mt. Savage, where were rolled the first heavy rails made in the United States, and establishments for making boiler and plate iron. One of these plants, located at Canton, devoted itself almost exclusively in 1861 to the manufacture of armor plates for the Government vessels, and made the armor for Ericsson's Monitor,³ while other plants, such as the one built in 1870 at Cumberland to make iron rails, bolts, rivets, and fish plates, became manufacturers of steel. With the development of the Lake Superior ore district, the iron and steel interests moved westward, and many of these plants were closed. The revival of the industry in Maryland began in 1887 with the construction of a large iron and steel plant at Sparrow Point, a short distance southeast of the city of Baltimore. Its construction marked an epoch in the manufacture of iron and steel in

¹ Manufactures of Maryland, Spencer, page 14.² Maryland, its Resources, Industries, and Institutions, by members of Johns Hopkins University and others, page 103.³ Ibid., page 107.

the United States. The ores are imported largely from Cuba, though some from Mediterranean ports are used, while the coal and coke are brought chiefly from Pennsylvania and West Virginia. An extensive plant is being built, however, to produce the coke needed, the gas by-product of which will be used as an illuminant and for fuel. A large proportion of the steel rail production finds a market abroad, shipments being made to Asia, Africa, Australia, and even to London.

The manufacture of foundry and machine shop products ranks third among the industries of the state, with 113 establishments, 4,695 wage-earners, and products valued at \$8,443,547. In 1890 there were 81 establishments, with 3,352 wage-earners, and products valued at \$4,925,672. The increase in the value of products during the decade was \$3,517,875, or 71.4 per cent.

There were 407 establishments engaged in the manufacture of flouring and grist mill products in 1900, with 541 wage-earners, and products valued at \$8,035,343. In 1890 there were 335 establishments, with 625 wage-earners, and products valued at \$6,904,888. The increase in the value of products during the decade was \$1,130,455, or 16.4 per cent. This industry is one of the oldest in the state, the mills in the early years of its history turning out more flour than the inhabitants required.

There were 5 establishments engaged in the manufacture of chewing and smoking tobacco and snuff in 1900, with 2,002 wage-earners, and products valued at \$7,054,159. In 1890 there were 6 establishments, with 1,178 wage-earners, and products valued at \$3,216,247. The increase in the value of products during the decade was \$3,837,912, or 119.3 per cent. There were 382 establishments engaged in the manufacture of cigars and cigarettes in 1900, with 2,809 wage-earners, and products valued at \$2,842,769. In 1890 there were 385 establishments, with 1,848 wage-earners, and products valued at \$2,858,344. The decrease in the value of products during the decade was \$15,575, or one-half of 1 per cent.

There were 47 establishments engaged in slaughtering and meat packing in 1900, with 514 wage-earners, and products valued at \$6,209,857. In 1890 there were 14 establishments, with 368 wage-earners, and products valued at \$4,311,412. The increase in the value of products during the decade was \$1,898,445, or 44 per cent. There were 35 establishments engaged in slaughtering, not including meat packing, in 1900, with 83 wage-earners, and products valued at \$1,836,502. In 1890 there were 3 establishments, with 21 wage-earners, and products valued at \$359,278. The increase in the value of products during the decade was \$1,477,224, or 411.2 per cent.

There were 40 establishments engaged in the manufacture of fertilizers in 1900, with 1,016 wage-earners, and products valued at \$5,481,905. In 1890 there were 53 establishments, with 1,051 wage-earners, and products valued at \$6,208,025. The decrease in the value of products during the decade was \$726,120, or 11.7 per cent. The increase of tobacco culture and other forms of agriculture made the importation of fertilizers a necessity, and

in 1832 the first guano from Peru arrived at Baltimore.¹ Not long afterwards the manufacture of crushed bone was begun; this material was subsequently combined with phosphate rock from South Carolina, guano from the island of Navassa, in the West Indies, and kainit from Germany.¹

There were 14 establishments engaged in the manufacture of cotton goods in 1900, with 4,727 wage-earners, and products valued at \$5,423,251. In 1890 there were 15 establishments, with 4,256 wage-earners, and products valued at \$5,457,792. The decrease in the value of products during the decade was \$34,541, or six-tenths of 1 per cent. Linsey-woolsey and osnaburgs were made in Maryland by household servants as early as 1649.² Cotton from the Southern states has been used for nearly eighty years in the factories of the state, and Baltimore cotton duck has become world-famous. This product was, to a certain extent, an outgrowth of Baltimore's importance as a shipbuilding center, and since 1822 it has not only overshadowed the other textile products of Maryland, but has made Baltimore the largest cotton duck manufacturing city in the United States. Woodberry is a flourishing community built up almost entirely by the cotton industry.

There were 4 establishments engaged in the manufacture of woolen goods in 1900, with 877 wage-earners, and products valued at \$1,218,378. In 1890 there were 9 establishments, with 376 wage-earners, and products valued at \$579,516. The increase in the value of products during the decade was \$638,862, or 110.2 per cent. There were 4 establishments engaged in the manufacture of hosiery and knit goods in 1900, with 682 wage-earners, and products valued at \$514,093. In 1890 there were 8 establishments, with 289 wage-earners, and products valued at \$180,823. The increase in the value of products during the decade was \$333,270, or 184.3 per cent.

There were 53 establishments engaged in the manufacture of planing mill products in 1900, with 1,323 wage-earners, and products valued at \$3,753,083. In 1890 there were 45 establishments, with 1,174 wage-earners, and products valued at \$3,332,563. The increase in the value of products during the decade was \$420,520, or 12.6 per cent.

There were 4 establishments engaged in iron and steel shipbuilding in 1900, with 1,939 wage-earners, and products valued at \$3,299,491. There were 43 establishments engaged in wooden ship and boat building in 1900, with 676 wage-earners, and products valued at \$862,034. The two branches of the shipbuilding industry were not shown separately in 1890. In that year 34 establishments were reported for the entire industry, with 1,043 wage-earners, and products valued at \$1,737,674. The increase in the value of products during the decade was \$2,423,851, or 139.5 per cent. As early as 1675, boats and small sailing-vessels were built in Miles River, on the eastern shore of Chesapeake Bay,³ and in 1790, according to one authority,

¹ Maryland, its Resources, Industries, and Institutions, page 345.

² Manufactures of Maryland, page 11.

³ Ibid., page 12.

Maryland built as many vessels as any two of the states of New York, Connecticut, and Rhode Island, and more than the state of New Hampshire.¹ Many of these earlier vessels, known as "Baltimore clippers," attained importance during the second war with Great Britain, and became potent in widening the markets for Maryland flour in the West Indies and Brazil, and in directing the return coffee trade of Brazil. Small boat building was carried on in Allegany and Talbot counties, while large vessels were constructed at Baltimore.² In 1860, 23 establishments were reported, with a capital of \$348,600, and products valued at \$711,372. With the substitution of steam for sailing vessels, and the use of iron or steel instead of wood in their construction, the industry declined, particularly at Baltimore. Between 1885 and 1890 there was a decided revival, and the increase continued through the decade ending in 1900. The largest establishment in the state is located in Baltimore city proper. This has built vessels for the United States Navy. In 1890 it completed an oil-tank steamer, said to be the first of its kind constructed on this side of the Atlantic. At the Sparrow Point works, near the city, was built, as it is claimed, the first "tramp" steamer made entirely in the United States,³ while the floating steel dry dock constructed there for the Algiers naval station at New Orleans is said to be the largest steel dry dock in any country. The same establishment is building two 10,000-ton steamers for the trans-Atlantic trade.

There were 42 establishments engaged in the manufacture of furniture, in 1900, with 1,869 wage-earners, and products valued at \$2,976,494. In 1890 there were 33 establishments, with 1,376 wage-earners, and products valued at \$2,110,955. The increase in the value of products during the decade was \$865,539, or 41 per cent.

There were 367 establishments engaged in the manufacture of lumber and timber products in 1900, with 1,964

wage-earners, and products valued at \$2,650,082. In 1890 there were 217 establishments, with 1,552 wage-earners, and products valued at \$1,600,472. The increase in the value of products during the decade was \$1,049,610, or 65.6 per cent.

There were 21 establishments engaged in the manufacture of paper and wood pulp in 1900, with 937 wage-earners, and products valued at \$2,589,540. In 1890 there were 17 establishments, 472 wage-earners, and products valued at \$1,001,945. The increase in the value of products during the decade was \$1,587,595, or 158.5 per cent.

There were 16 establishments engaged in the canning and preserving of oysters in 1900, with 1,444 wage-earners, and products valued at \$2,417,331. In 1890 there were 8 establishments, 2,834 wage-earners, and products valued at \$2,834,400. The decrease in the value of products during the decade was \$417,069, or 14.7 per cent. The first oyster-packing house was established in Baltimore early in the last century,⁴ and the industry is now also carried on at Annapolis, Cambridge, Oxford, St. Michaels, and Crisfield, the last-named city being built literally upon oyster shells.

In addition to the 14 leading industries, shown in Table 3, attention may be called to the somewhat varied history of sugar refining in the state. Beginning at Baltimore, in 1784,⁵ it advanced so steadily that in 1870 there were 4 refineries in the state, with products valued at \$7,007,857. Before 1890, however, the industry had disappeared, and in 1900 there was but 1 establishment in the state, and this was idle during the census year.

URBAN MANUFACTURES.

Table 4 shows the totals for the manufacturing and mechanical industries of the city of Baltimore as returned at the censuses of 1880, 1890, and 1900, with the percentages of increase.

¹ Manufactures of Maryland, page 29.

² Eighth Census of the United States, 1860, Manufactures, pages 220, 222, and 227.

³ The Manufacturers' Record, vol. 37, page 161.

⁴ Maryland, its Resources, Industries, and Institutions, page 303.

⁵ Manufactures of Maryland, page 25.

TABLE 4.—COMPARATIVE SUMMARY, BALTIMORE, 1880, 1890, AND 1900, WITH PER CENT OF INCREASE FOR EACH DECADE.

	DATE OF CENSUS.			PER CENT OF INCREASE.	
	1900	1890	1880	1890 to 1900	1880 to 1890
Number of establishments	6,361	5,265	3,683	20.8	43.0
Capital	\$117,869,175	\$92,723,677	\$38,586,773	27.1	140.3
Wage-earners, average number	79,084	76,489	56,338	3.4	35.8
Total wages	\$29,304,520	\$29,895,500	\$15,117,489	12.0	97.8
Miscellaneous expenses	\$14,552,397	\$8,771,869	(²)	65.9	
Cost of materials used	\$87,534,743	\$73,770,001	\$47,974,297	18.7	53.8
Value of products, including custom work and repairing	\$161,945,811	\$141,723,599	\$78,417,304	14.3	80.7

¹ Decrease.² Not given.

It appears from Table 4 that there has been an increase during the past decade in the manufactures of the city of Baltimore. The number of establishments increased from 5,265 to 6,361, or 20.8 per cent; the average number of wage-earners from 76,489 to 79,084, or 3.4 per cent; and the value of products from \$141,723,599 to \$161,945,811, or 14.3 per cent. The increase in each of these particulars was smaller in Baltimore than in the state as a whole. The number of establishments, number of wage-earners,

and value of products for this city constituted 64.4, 73, and 66.7 per cent, respectively, of the totals for the entire state.

Table 5 presents the totals for the manufacturing industries of the 7 cities and towns withdrawn from the enumerators, and places them in comparison with the totals for the entire state and the state exclusive of these cities and towns.

TABLE 5.—URBAN MANUFACTURES.

	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 for state.....	9,880	\$163,422,260	11,125	108,361	\$38,761,551	\$17,226,623	\$144,539,680	\$242,752,990
Total for urban manufactures.....	7,032	124,848,603	7,893	85,203	31,358,676	14,975,866	98,471,877	171,907,783
Annapolis.....	91	188,195	91	244	101,608	9,797	170,043	393,086
Baltimore.....	6,361	117,869,175	7,165	79,084	29,304,520	14,552,397	87,531,743	161,945,811
Cumberland.....	140	2,938,219	145	1,963	805,775	218,340	1,999,937	3,494,622
Frederick.....	133	1,217,702	149	1,181	232,383	69,893	1,054,449	1,727,094
Hagerstown.....	203	1,375,281	223	1,873	502,307	92,802	1,454,929	2,465,507
Havre de Grace.....	38	831,464	43	674	332,348	16,491	913,676	1,372,420
Westminster.....	66	428,567	74	234	59,795	16,146	344,100	509,243
Total for state exclusive of urban manufactures.....	2,848	38,573,657	3,232	23,158	7,402,875	2,250,757	51,067,803	70,845,207
Per cent of urban manufactures to total for state.....	71.2	76.4	70.9	78.6	80.9	86.9	64.7	70.8

Of the 9,880 establishments in the state, 7,032, or 71.2 per cent, were located in these 7 cities and towns. They furnished employment to 85,203 wage-earners, or 78.6 per cent of the total number, and the value of their products, \$171,907,783, formed 70.8 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 city of Baltimore by specified industries.

Table 9 shows the totals for the cities and towns withdrawn from the enumerators, exclusive of the city of Baltimore.

TABLE 6.—MANUFACTURES

	COUNTIES AND MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of estab- lish- ments.	CAPITAL.					Propri- etors and firm mem- bers.	SALARIED OF- FICIALS, 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.
1	The State-----	9,880	\$103,422,260	\$14,119,288	\$31,685,566	\$29,228,714	\$88,388,692	11,125	7,589	\$7,883,263	108,861	\$38,761,551
2	Allegany-----	250	6,375,175	400,701	1,410,740	1,983,479	2,580,255	267	244	239,745	4,035	1,526,949
3	Anne Arundel-----	124	3,012,756	475,160	438,053	722,811	1,377,232	120	75	79,714	1,711	596,917
4	Baltimore-----	333	16,812,468	736,439	5,275,898	3,825,563	6,974,568	334	281	374,232	6,404	3,002,891
5	Baltimore city-----	6,361	117,869,175	10,291,700	21,835,101	17,933,978	68,303,896	7,165	6,278	6,207,269	79,084	29,804,520
6	Calvert-----	85	77,721	12,445	14,975	32,775	17,526	88	2	1,100	104	28,809
7	Caroline-----	118	395,577	49,938	54,210	182,578	158,851	132	23	9,714	688	129,666
8	Carroll-----	300	1,672,197	92,866	264,840	373,914	941,077	332	54	27,251	1,118	804,178
9	Cecil-----	150	1,681,081	117,549	298,297	442,587	822,648	169	78	74,755	1,160	411,014
10	Charles-----	40	103,780	45,410	13,005	36,220	9,065	42	1	320	50	14,235
11	Dorchester-----	132	807,546	92,934	90,813	282,090	392,008	155	43	16,391	913	146,977
12	Frederick-----	353	2,386,538	276,787	664,647	511,727	983,897	386	115	67,853	1,833	473,122
13	Garrett-----	110	1,216,655	455,503	79,380	386,753	344,019	148	26	16,228	443	158,616
14	Harford-----	295	2,001,749	335,801	246,428	486,271	938,249	330	43	31,478	1,937	595,072
15	Howard-----	82	1,196,441	107,527	249,669	312,767	526,478	91	27	34,557	967	211,426
16	Kent-----	77	505,151	60,285	86,050	133,752	230,064	86	10	5,500	387	92,796
17	Montgomery-----	131	278,805	28,550	72,085	72,510	100,660	144	4	1,950	109	33,261
18	Prince George-----	87	467,471	54,705	158,324	91,825	167,617	67	12	18,180	426	94,849
19	Queen Anne-----	75	227,692	20,652	48,890	69,260	89,090	87	2	2,400	136	49,269
20	St. Mary-----	8	80,162	10,222	4,950	13,400	51,590	9	6	2,000	38	10,486
21	Somerset-----	93	475,641	67,712	60,400	129,573	217,956	125	15	7,821	819	154,161
22	Talbot-----	114	604,621	44,447	91,684	179,118	289,372	127	33	20,511	611	158,612
23	Washington-----	376	3,107,123	191,249	481,643	704,538	1,723,693	420	133	105,591	2,692	766,316
24	Wicomico-----	165	1,503,231	102,170	190,750	341,168	369,143	218	61	32,260	1,868	341,369
25	Worcester-----	101	568,255	58,056	59,934	125,557	324,708	143	28	11,948	778	161,643

TABLE 7.—MANUFACTURES BY

1	All industries.....	9,880	\$103,422,260	\$14,119,288	\$31,685,566	\$29,228,714	\$88,388,692	11,125	7,589	\$7,888,263	108,861	\$38,761,551
2	Artificial feathers and flowers.....	6	33,065			3,045	30,020	10	5	6,520	237	36,190
3	Awnings, tents, and sails.....	32	78,690	400	1,400	8,890	68,000	41	8	2,860	114	53,006
4	Bags, other than paper.....	7	218,553	3,150	2,800	30,610	182,498	9	8	10,820	121	31,582
5	Baking and yeast powders.....	7	97,668			9,725	87,943	7	43	41,931	106	38,854
6	Baskets, and rattan and willow ware.....	30	81,729	10,800	16,400	12,084	42,995	31	7	4,400	134	81,396
7	Bicycle and tricycle repairing.....	71	688,913	44,550	115,634	184,402	339,277	77	24	46,835	316	119,978
8	Blacking.....	3	12,501			1,417	11,084	3	6	9,794	12	2,982
9	Blacksmithing and wheelwrighting.....	877	919,520	171,937	263,700	139,414	344,469	949	4	8,184	711	295,621
10	Bluing.....	3	890			255	635	3	3		5	1,000
11	Bookbinding and blank book making.....	22	112,395	7,925	20,800	48,370	35,800	25	15	10,089	196	70,977
12	Boot and shoe cut stock.....	3	31,875	400	8,000	2,475	26,000	8	7	3,800	11	4,720
13	Boot and shoe uppers.....	12	23,390	3,700	4,700	2,865	12,125	12			15	5,295
14	Boots and shoes, custom work and repairing.....	719	522,867	127,681	205,845	61,620	127,721	730	7	2,900	841	126,085
15	Boots and shoes, factory product.....	19	499,609	12,500	26,800	167,326	292,983	26	44	50,236	896	239,194
16	Bottling.....	29	370,803	71,900	125,700	35,733	137,470	30	33	30,830	160	71,768
17	Boxes, cigar.....	10	62,352	8,200	10,040	9,265	34,347	10	3	2,232	96	30,362
18	Boxes, fancy and paper.....	11	135,796	8,200	10,200	46,090	71,336	13	32	16,298	356	77,699
19	Boxes, wooden packing.....	26	668,018	62,850	89,541	110,414	405,213	36	30	25,922	1,211	863,001
20	Brass castings and brass finishing.....	7	95,098	10,950	10,450	29,079	44,619	6	11	9,932	98	36,584
21	Brassware.....	3	60,465		475	35,213	24,777	3	11	14,066	39	10,702
22	Bread and other bakery products.....	468	1,944,602	277,436	645,485	655,640	366,041	479	181	118,146	1,624	604,773
23	Brick and tile.....	45	3,992,300	1,586,110	1,002,355	1,001,031	403,244	50	57	52,399	1,601	453,143
24	Brooms and brushes.....	42	338,421	14,775	48,100	58,423	217,123	53	21	18,570	495	135,899
25	Carpentering.....	398	1,808,663	180,651	252,723	221,680	1,153,609	425	49	45,566	2,516	1,265,961
26	Carpets, rag.....	21	45,450	2,058	3,600	13,726	26,066	28	4	3,000	119	30,966
27	Carriage and wagon materials.....	6	188,254	21,400	32,324	32,924	101,606	7	16	13,320	145	44,448
28	Carriages and wagons.....	178	885,342	97,899	173,255	97,466	467,222	223	27	20,355	822	389,949
29	Cars and general shop construction and repairs by steam railroad companies.....	19	2,877,954	298,490	1,547,939	550,609	480,916		134	100,843	3,620	1,849,737
30	Cheese, butter, and condensed milk, factory product.....	88	235,858	13,021	48,840	118,685	55,362	95	18	7,312	113	33,998
31	Chemicals.....	7	1,806,272	551,000	239,182	505,465	510,625	3	33	51,424	475	246,454
32	China decorating.....	5	14,715	1,000	1,500	1,195	11,020	5	5	9,801	18	5,218
33	Clothing, men's, custom work and repairing.....	403	1,681,280	87,408	152,228	51,297	1,390,347	474	187	112,205	1,584	742,559
34	Clothing, men's, factory product.....	139	8,458,116	136,700	356,200	419,434	7,546,782	253	766	719,535	9,725	3,179,069
35	Clothing, men's, factory product, buttonholes.....	8	7,295	400	1,300	4,915	680	9			39	11,384
36	Clothing, women's, dressmaking.....	683	327,052	61,300	97,925	47,630	130,197	616	17	11,022	1,263	303,994
37	Clothing, women's, factory product.....	61	841,345	3,000	12,500	91,052	784,798	100	151	127,941	2,175	562,710
38	Coffee and spice, roasting and grinding.....	11	227,400	3,200	10,300	40,300	173,600	15	63	107,602	97	35,087
39	Confectionery.....	188	1,003,246	85,394	262,675	219,505	485,672	154	147	121,364	1,030	307,510
40	Cooperage.....	46	414,727	75,653	92,420	41,995	204,659	54	18	11,780	415	174,587
41	Corsets.....	4	50,630	10,000	20,000	4,620	16,010	4	14	3,323	37	8,870

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 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.										
72,860	\$31,885,361	29,617	\$6,112,187	5,884	\$764,008	\$17,226,623	\$1,857,642	\$893,085	\$11,886,141	\$2,589,755	\$144,539,680	\$141,311,724	\$3,227,956	\$242,752,990	1
3,629	1,441,538	261	57,128	145	28,283	328,587	35,000	33,229	255,053	5,805	3,964,683	3,801,720	162,963	6,909,342	2
1,620	681,120	62	9,645	89	6,152	113,389	6,607	15,060	91,542	180	2,506,838	2,487,708	69,130	3,774,649	3
5,690	2,876,993	431	89,358	283	37,540	1,348,287	29,818	68,919	1,212,870	36,680	34,636,643	33,238,543	1,398,100	48,873,365	4
51,166	23,558,985	23,810	5,165,824	4,108	679,711	14,552,397	1,654,441	689,271	9,694,343	2,520,342	87,534,743	86,300,108	1,234,635	161,945,811	5
104	28,309					1,666	196	467	503	500	51,856	50,819	1,037	104,124	6
340	91,509	295	33,850	53	4,288	15,931	2,076	2,185	11,670		511,191	503,528	7,663	822,166	7
842	267,704	206	31,206	70	5,263	80,770	11,254	6,181	62,937	398	1,406,237	1,378,765	27,472	2,194,673	8
1,072	397,428	64	10,524	24	3,062	89,747	18,613	10,818	60,816		1,240,175	1,172,826	67,349	2,156,328	9
49	14,156			1	79	1,517	467	374	676		121,977	120,283	1,694	182,378	10
405	94,902	437	47,689	71	4,386	25,931	4,418	3,571	17,912	30	548,543	539,251	9,292	956,381	11
1,294	417,400	342	39,572	197	16,150	102,286	20,384	11,796	70,006	100	1,920,724	1,836,511	84,213	3,108,929	12
436	152,454	4	665	3	497	40,896	2,138	6,415	32,278	70	564,568	562,593	1,975	974,813	13
1,183	471,267	561	107,949	193	15,856	50,594	16,716	5,859	27,719	300	2,218,545	2,192,104	26,441	3,369,295	14
404	115,850	485	85,315	78	10,261	57,312	4,757	4,881	47,674		614,207	607,975	6,232	1,154,211	15
257	79,916	81	9,580	49	3,800	16,491	2,659	1,847	11,635	350	333,144	313,931	19,213	560,190	16
102	32,322	4	524	3	415	13,268	4,532	1,566	7,123	47	362,314	355,007	6,307	539,502	17
178	47,249	166	36,000	82	11,600	24,729	436	4,719	19,524		311,973	296,170	15,863	578,289	18
86	23,755	86	24,142	14	1,372	7,790	3,664	1,130	2,846	150	134,970	132,040	2,930	284,331	19
38	10,486					5,366	135	256	4,965	10	36,984	35,069	1,915	73,848	20
432	104,198	283	41,725	104	8,238	29,992	1,785	3,623	24,319	265	456,561	446,381	10,180	789,194	21
363	117,517	203	37,899	45	3,196	42,975	4,333	2,292	33,992	2,368	500,333	484,402	15,931	910,204	22
1,721	595,672	873	161,832	98	8,754	190,087	24,864	12,069	131,950	21,184	2,832,230	2,788,815	43,415	4,543,980	23
914	231,325	808	99,234	146	10,750	66,880	2,439	9,231	54,310	400	1,077,996	1,067,735	10,261	1,894,600	24
585	134,306	165	22,397	78	4,840	20,235	5,860	3,806	9,983	1,086	652,245	648,440	8,805	1,057,417	25

SPECIFIED INDUSTRIES: 1900.

72,860	\$31,885,361	29,617	\$6,112,187	5,884	\$764,008	\$17,226,623	\$1,857,642	\$893,085	\$11,886,141	\$2,589,755	\$144,539,680	\$141,311,724	\$3,227,956	\$242,752,990	1
12	3,800	158	24,740	67	7,650	6,063	2,400	13	3,560		26,830	26,806	24	114,520	2
83	45,576	29	7,282	2	168	7,863	6,387	222	1,304		112,471	111,838	633	227,033	3
50	11,750	90	19,712	1	120	14,216	3,286	2,379	8,551		364,581	368,334	547	454,095	4
88	25,567	53	8,287			25,772	7,102	878	17,792		219,409	215,095	4,314	345,278	5
110	28,996	22	2,000	2	400	12,249	3,131	323	1,295	7,500	76,166	75,555	611	154,719	6
308	118,872			8	1,106	64,699	9,236	1,437	43,715	311	352,530	343,830	8,700	661,154	7
3	1,270	3	750	6	962	1,087	840	58	189		15,084	14,841	243	30,682	8
693	293,680			18	1,941	54,656	35,244	6,501	11,813	1,098	372,153	350,755	21,398	1,821,283	9
4	850	1	150			406	329		77		3,227	3,219	8	7,320	10
88	48,994	94	20,233	14	1,750	12,656	6,233	829	3,394	2,200	36,282	35,216	1,066	178,376	11
10	4,600			1	120	1,370	650	320	400		71,660	71,410	250	99,500	12
15	5,295					1,508	1,259	56	193		25,247	25,117	130	40,080	13
325	123,174	8	2,380	8	481	81,062	57,008	6,055	8,211	9,788	258,076	248,436	4,640	834,112	14
597	220,030	285	67,264	14	1,900	38,480	8,163	1,351	28,961		676,359	671,038	5,321	1,129,153	15
159	71,593			1	175	52,302	3,196	2,310	45,672	624	508,306	504,784	3,522	774,747	16
38	17,149	50	12,025	8	588	1,910	290	801	1,319		57,329	56,594	785	107,864	17
79	26,431	220	43,792	57	7,478	24,975	9,155	909	18,853	1,058	126,473	124,170	2,303	296,013	18
962	327,093	53	8,405	216	32,503	64,493	11,335	4,709	48,449		1,104,752	1,102,659	2,098	1,497,528	19
95	36,344			1	240	16,042	2,630	823	6,539		140,582	135,891	4,691	243,343	20
80	9,552	2	488	7	662	4,109	1,059	70	2,980		51,821	49,861	1,460	116,547	21
1,341	557,099	220	37,084	63	9,990	152,768	49,303	13,195	85,270		2,369,846	2,283,055	81,791	4,140,692	22
1,484	450,918			17	2,225	51,366	2,763	10,692	37,911		155,934	153,883	113,883	844,335	23
1,362	119,845	55	13,965	18	2,589	17,762	7,009	1,439	8,714		329,976	328,168	1,808	613,973	24
2,510	1,264,906			6	1,055	653,406	23,926	12,182	61,254	556,014	2,687,534	2,675,579	12,255	5,527,710	25
100	27,824	18	2,986	1	156	7,424	3,639	270	3,465		81,989	80,493	1,496	164,934	26
137	41,843	5	2,000	3	600	12,545	565	1,790	10,190		103,469	101,829	1,640	199,821	27
805	337,765			17	2,184	44,896	24,290	5,827	13,301	1,672	877,296	868,598	8,098	1,083,473	28
3,616	1,843,957	4	780			55,193		8,252	46,911		2,539,496	2,530,017	28,469	4,573,229	29
109	33,205	2	602	2	191	11,242	4,213	1,097	5,897	30	559,018	549,453	9,565	695,915	30
472	245,648	3	806			103,383	4,037	8,284	91,067		781,909	691,846	90,063	1,271,410	31
6	2,690	11	2,424	1	104	1,196	828	141	227		13,251	12,809	442	35,556	32
1,176	650,757	324	87,848	34	3,954	458,526	110,410	10,881	67,302	269,933	1,339,764	1,328,642	11,122	3,354,684	33
3,929	1,921,588	5,202	1,191,837	594	65,644	1,502,530	166,588	82,465	511,617	791,860	10,241,708	10,215,252	26,456	17,327,825	34
16	6,406	21	4,782	2	196	1,637	1,134	88	520		4,374	4,478	396	26,382	35
76	43,654	1,174	258,692	13	1,648	65,923	52,846	2,766	9,999	312	306,715	299,427	7,238	1,107,219	36
392	214,974	1,742	342,937	41	4,799	162,851	46,032	2,340	78,829	35,650	1,373,980	1,366,451	7,529	2,685,576	37
59	29,082	38	6,005			22,774	7,119	600	15,055		1,000,158	993,024	7,129	1,271,787	38
637	235,900	351	66,716	42	4,894	119,145	36,249	8,586	74,310		1,330,552	1,313,777	16,775	2,323,206	39
413	174,300			2	287	29,232	6,324	3,057	18,411	1,500	379,999	378,607	1,392	694,512	40
8	1,370	34	7,500			2,936	1,940	256	740		5,217	4,800	417	28,982	41

TABLE 7.—MANUFACTURES BY

			CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
MANUFACTURING AND MECHANICAL INDUSTRIES.			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
Number of establishments.											Average number.	Wages.
42	Cotton goods.....	14	\$7,709,256	\$515,513	\$1,355,603	\$1,951,133	\$3,887,007	7	84	\$133,338	4,727	\$1,186,014
43	Cutlery and edge tools.....	3	16,200	2,200	4,100	2,700	7,200	3			15	7,164
44	Druggists' preparations, not including prescriptions.....	11	401,775	13,000	45,000	174,775	169,000	15	220	256,044	441	123,574
45	Dyeing and cleaning.....	58	162,315	32,650	68,038	35,332	26,295	61	22	8,260	146	56,406
46	Electrical apparatus and supplies.....	6	236,710	8,000	51,125	54,717	122,868	1	26	26,925	155	54,303
47	Electrical construction and repairs.....	25	112,891	5,500		13,166	94,225	30	13	7,151	134	63,628
48	Electroplating.....	6	12,825			5,700	7,125	10	1	900	27	9,857
49	Enameling and enameled goods.....	4	1,437,214	148,192	191,394	334,779	762,849	2	74	60,517	1,136	316,417
50	Engraving and die sinking.....	8	9,668			5,518	4,150	9	3	1,200	14	6,900
51	Engraving, steel, including plate printing.....	8	14,323			4,075	10,250	7	6	3,500	38	15,575
52	Fancy articles, not elsewhere specified.....	5	238,072	25,000	55,000	33,045	125,027	6	16	15,060	324	69,834
53	Fertilizers.....	40	7,003,376	713,011	965,287	1,108,947	4,216,131	37	212	245,628	1,016	457,692
54	Fish, canning and preserving.....	3	65,600	7,500	8,900	7,400	41,800	8	6	2,880	442	63,500
55	Flavoring extracts.....	12	38,544	1,650	4,000	3,007	29,887	15	10	2,900	25	8,803
56	Flouring and grist mill products.....	407	3,428,996	296,633	775,281	918,016	1,439,066	461	85	80,275	541	229,335
57	Food preparations.....	17	154,610	23,450	37,850	27,950	65,860	16	11	11,260	104	38,146
58	Foundry and machine shop products.....	113	6,381,676	618,701	957,454	1,188,832	3,616,689	124	317	349,283	4,695	2,251,777
59	Fruits and vegetables, canning and preserving.....	271	4,459,660	378,148	430,586	633,234	3,017,697	344	231	213,080	7,505	1,379,131
60	Fur goods.....	11	67,677	3,333	6,500	1,594	56,250	14	6	3,700	48	23,500
61	Furnishing goods, men's.....	18	625,702	2,000	5,200	63,452	555,050	26	105	90,925	2,033	492,280
62	Furniture, cabinetmaking, repairing, and upholstering.....	136	241,099	22,193	39,417	16,898	162,591	167	19	9,105	213	102,356
63	Furniture, factory product.....	42	1,584,984	88,515	180,208	176,972	1,139,289	55	141	118,433	1,869	822,540
64	Gas, illuminating and heating.....	11	18,554,361	1,018,185	744,980	1,824,934	14,966,262	84	31	38,976	287	136,980
65	Glass.....	7	581,086	49,618	144,576	66,559	320,333	4	31	38,976	742	339,518
66	Glass, cutting, staining, and ornamenting.....	9	68,015	8,500	12,300	8,005	44,210	10	4	2,800	68	22,995
67	Gloves and mittens.....	3	50,541	100	500	5,434	44,507	5	8	6,175	89	14,276
68	Grease and tallow.....	5	48,208	4,250	4,016	8,015	31,927	7	6	6,300	24	11,540
69	Hand stamps.....	4	89,156			28,650	40,506	5	3	2,818	82	31,250
70	Hardware.....	10	107,640	15,300	22,200	12,104	58,036	13	3	92,888	65	21,161
71	Hats and caps, not including fur hats and wool hats.....	20	1,124,599	60,500	242,000	164,323	657,776	32	67		1,117	335,935
72	Hosiery and knit goods.....	4	311,508	3,000	8,083	94,789	205,636	2	28	14,518	682	119,456
73	Ice, artificial.....	18	649,692	93,191	100,100	421,425	34,976	6	19	14,545	138	74,633
74	Instruments, professional and scientific.....	7	56,820	5,000	5,500	14,502	31,618	9	8	6,779	39	16,966
75	Iron and steel.....	2,892,690	39,000	1,236,966	980,609	586,115	77,147	55	5	4,800	2,138	1,023,753
76	Iron and steel, nails and spikes, cut and wrought, including wire nails.....	3	48,500			19,500	29,000	4	5		87	17,050
77	Ironwork, architectural and ornamental.....	10	481,661	60,600	57,300	51,700	312,061	12	15	20,808	232	247,629
78	Jewelry.....	9	170,121			11,721	158,400	9	4	2,930	76	43,254
79	Kaolin and other earth grinding.....	8	162,075	28,650	38,700	55,075	39,650	8	6	3,800	78	26,136
80	Knifing wood.....	3	7,750	250	750	6,250	600	3	2	909	60	10,950
81	Leather, tanned, curried, and finished.....	22	1,088,725	60,980	172,720	148,295	706,730	28	18	17,429	455	156,182
82	Lime and cement.....	38	660,006	113,824	190,809	101,465	253,908	34	27	20,414	557	182,639
83	Liquors, distilled.....	26	2,326,272	135,035	690,924	313,310	1,135,963	19	43	74,216	186	95,172
84	Liquors, malt.....	16	13,857,323	589,246	9,952,309	1,484,183	1,831,585	9	161	262,916	752	434,318
85	Lithographing and engraving.....	6	490,413			197,821	293,094	16	35	22,540	281	127,801
86	Lock and gun smithing.....	59	64,418	11,562	13,400	10,580	28,576	59	2	1,092	62	27,977
87	Looking-glass and picture frames.....	32	316,195	56,775	53,000	29,422	176,998	37	43	39,156	300	110,383
88	Lumber and timber products.....	367	2,622,928	888,988	147,049	787,642	849,249	474	78	38,687	1,961	476,776
89	Lumber, planing mill products, including sash, doors, and blinds.....	58	3,534,501	380,982	365,130	339,712	2,448,677	83	97	78,261	1,323	542,262
90	Mantels, slate, marble, and marbleized.....	4	81,820	6,100	3,100	520	22,100	6	2	1,200	18	11,924
91	Marble and stone work.....	38	743,645	150,275	62,245	178,591	352,584	45	55	69,016	1,231	569,273
92	Masonry, brick and stone.....	106	755,681	132,180	119,800	33,475	470,226	115	35	41,736	1,297	814,531
93	Mattresses and spring beds.....	21	208,605	21,200	32,850	20,230	134,325	21	23	17,178	128	47,254
94	Millinery and lace goods.....	11	186,790	17,400	16,500	25,700	127,190	17	23	14,802	266	81,088
95	Millinery, custom work.....	235	680,327	98,919	151,750	14,705	414,533	280	147	45,940	648	178,100
96	Mineral and soda waters.....	36	254,340	19,584	26,740	76,121	181,895	35	15	13,988	156	65,134
97	Models and patterns.....	7	17,341	1,666	1,300	7,500	6,875	10	6	6,077	29	15,524
98	Monument and tombstones.....	71	311,367	54,604	57,875	28,050	210,838	80	6	5,462	249	118,884
99	Musical instruments, organs and materials.....	5	68,100	6,000	19,000	9,650	39,450	6	10		76	40,608
100	Musical instruments, pianos and materials.....	4	1,184,650	91,342	166,000	76,635	850,673	4	31	41,980	447	222,748
101	Oil, not elsewhere specified.....	7	83,840	7,500	13,500	4,275	58,565	8	20	9,420	20	7,038
102	Optical goods.....	9	41,569			5,735	35,844	12	16	14,080	31	16,616
103	Oysters, canning and preserving.....	16	799,005	51,650	135,793	77,748	533,814	15	79	81,048	1,444	379,591
104	Painting, house, sign, etc.....	308	372,128	63,177	85,293	36,140	187,518	350	27	18,016	986	435,792
105	Paints.....	13	290,222	18,000	28,000	78,760	165,462	21	26	25,900	110	45,273
106	Paper and wood pulp.....	21	2,720,877	127,142	715,896	1,147,920	730,419	11	35	58,793	937	326,474
107	Paper hanging.....	107	242,896	40,115	66,250	6,513	130,018	115	20	13,408	325	151,284
108	Paper patterns.....	3	510			50	460	4			1	300
109	Patent medicines and compounds.....	52	1,016,822	51,200	119,150	80,484	765,988	54	119	177,759	441	136,082
110	Paving and paving materials.....	26	444,305	38,206	57,250	165,344	183,505	25	15	25,216	478	169,752
111	Perfumery and cosmetics.....	12	86,389	4,300	2,300	18,945	60,854	10	16	14,440	91	23,545

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.											
1,446	\$509,356	2,165	\$510,001	1,116	\$166,657	\$397,016	\$8,155	\$34,517	\$354,344		\$3,039,396	\$2,981,314	\$55,082	\$5,423,251	42	
14	7,000			1	104	842	516	134	192		4,138	3,488	650	16,022	43	
154	64,175	286	59,269	1	130	137,864	20,010	4,761	113,090		689,191	684,054	5,137	1,311,844	44	
88	39,228	52	16,380	6	798	33,543	9,233	1,830	10,780	\$11,700	18,422	14,186	4,236	179,693	45	
137	50,967	13	2,736	5	600	28,156	1,510	583	22,563	3,500	112,461	110,336	2,078	266,811	46	
131	63,306			3	232	11,805	6,183	229	5,393		167,191	165,363	1,828	350,635	47	
21	8,889			6	968	1,604	1,420	10	174		5,444	4,046	1,358	28,038	48	
931	274,714	205	41,703			29,540	300	6,470	22,770		769,472	738,738	30,734	1,390,493	49	
14	6,900					2,169	1,314	105	750		11,409	11,023	386	35,870	50	
27	13,175	11	2,400			1,951	1,252	20	679		8,698	8,574	124	42,400	51	
118	40,093	192	27,831	14	2,000	81,688	9,651	1,795	20,242		184,312	182,358	1,984	369,817	52	
1,010	455,576	6	2,116			354,344	34,846	35,054	284,444		3,648,846	3,586,984	56,862	5,481,905	53	
207	36,900	179	22,600	56	4,000	11,020		770	10,250		154,605	151,370	3,235	248,100	54	
10	5,793	12	2,350	3	600	6,184	2,997	150	3,037		22,410	22,335	75	83,844	55	
532	228,009	5	883	4	443	225,357	30,754	20,252	173,518	838	6,731,805	6,663,941	67,864	8,035,348	56	
54	23,740	46	8,800	4	606	9,573	3,685	2,114	3,774		135,826	133,492	2,334	274,046	57	
4,663	2,245,062	6	1,300	26	5,415	456,175	41,699	38,244	354,925	18,307	3,322,658	3,201,946	120,712	8,443,547	58	
2,980	744,516	3,712	559,310	813	75,305	371,108	33,560	20,139	316,949	460	8,786,518	8,735,149	51,369	11,996,245	59	
17	13,430	31	10,070			7,759	4,625	1,085	2,049		72,038	71,661	372	137,820	60	
89	57,880	1,898	426,217	46	8,183	58,351	20,374	2,136	35,841		1,060,154	1,054,195	5,959	1,930,688	61	
187	97,707	18	3,737	8	912	39,647	26,989	1,897	10,576	185	142,408	140,969	1,439	450,436	62	
1,753	801,897	19	4,450	97	13,193	155,614	48,062	9,419	95,763	2,370	1,212,226	1,199,151	13,075	2,976,494	63	
237	136,980					238,369	6,025	121,212	141,132		481,018	434,792	46,221	1,796,507	64	
562	313,920	54	8,673	126	16,925	26,065		2,040	24,025		151,500	163,520	47,980	557,805	65	
43	18,272	20	4,150	5	573	3,722	1,947	154	1,621		62,953	61,844	1,109	115,164	66	
23	5,300	63	8,751	3	225	3,936	850	225	2,861		51,098	54,059	39	86,675	67	
23	11,300			1	240	6,793	1,064	170	5,559		69,700	68,371	1,329	100,359	68	
61	27,800	21	3,450			9,292	5,260	177	3,825		45,530	44,426	1,104	149,883	69	
60	20,565	2	450	3	146	3,220	1,465	415	1,340		92,234	84,178	8,056	173,512	70	
468	199,112	622	131,043	37	5,780	127,367	16,967	4,710	105,690		839,146	832,068	7,078	1,619,825	71	
60	28,715	526	89,754	96	5,987	21,981	1,300	851	16,943	2,887	347,250	344,083	3,167	514,093	72	
137	74,313			1	320	24,490	185	5,972	18,333		84,070	27,062	56,978	358,618	73	
37	16,576	2	300			6,491	2,990	500	3,001		25,445	24,875	570	72,746	74	
2,101	1,019,428	12	3,000	25	7,425	508,298	6,080	22,340	479,878		6,888,916	5,757,014	1,131,902	8,739,405	75	
17	12,600	20	4,450			4,900	3,060	400	1,500		36,820	35,320	1,500	84,000	76	
229	247,149			3	480	8,856	1,894	1,202	3,940	1,820	523,509	519,175	4,334	867,868	77	
71	42,276	3	750	2	228	8,770	4,978	900	2,892		108,062	106,734	1,268	212,450	78	
78	26,136					8,420	2,953	902	4,505		18,475	13,100	5,375	74,790	79	
12	2,700	48	8,250			945	60	85	800		22,000	21,950	50	45,200	80	
442	152,716	8	2,496	5	970	40,800	1,531	4,059	35,270		1,411,457	1,402,648	8,800	1,754,102	81	
543	180,935			14	1,701	43,606	6,184	2,880	32,612	1,930	226,568	157,672	68,891	549,360	82	
181	94,212			5	980	172,785	3,779	28,607	140,399		815,381	761,425	50,956	1,616,302	83	
751	484,162			1	156	1,568,108	2,914	25,839	1,539,355		878,983	805,992	72,911	4,133,797	84	
203	112,437	50	12,244	28	3,060	51,326	9,960	735	35,783	4,818	180,682	178,850	1,826	499,851	85	
58	27,297	1	416	3	264	9,679	5,610	380	3,689		29,041	27,748	1,293	115,104	86	
276	107,477	21	2,300	3	606	40,296	18,698	2,040	19,558		232,411	228,983	3,428	542,226	87	
1,718	456,820	143	13,778	103	6,178	63,004	3,571	12,285	47,148		1,890,357	1,890,157	200	2,650,082	88	
1,265	531,099			58	11,168	158,244	18,204	22,016	117,814	120	2,462,655	2,440,347	12,308	3,753,083	89	
18	11,924					1,762	1,332	200	230		12,927	12,900	27	39,744	90	
1,224	568,123	1	300	6	850	69,075	9,098	4,942	54,945	90	494,910	478,826	16,084	1,545,616	91	
1,279	810,911			18	3,620	576,195	8,839	2,798	20,428	544,130	2,277,045	2,275,288	1,757	4,111,800	92	
106	42,806	16	3,564	6	584	16,101	8,076	1,450	6,575		150,557	149,111	1,446	287,937	93	
53	21,555	207	58,749	6	784	12,262	6,085	707	4,810		138,450	136,848	1,602	297,847	94	
7	2,439	625	173,113	16	2,648	85,881	61,315	4,765	19,739	2	773,390	770,390	3,110	1,411,564	95	
146	53,744	2	500	7	890	22,801	4,817	737	17,247		109,266	107,754	1,512	269,868	96	
27	15,214			2	310	2,421	1,610	811	6,828		6,828	5,742	1,086	37,146	97	
247	118,304			2	620	14,995	5,256	8,441	6,068	230	218,694	216,984	1,710	480,081	98	
76	40,608					4,829	1,150	454	2,975	250	45,251	44,540	711	114,916	99	
444	222,410			3	338	33,697	450	12,280	70,967		353,630	354,618	4,012	822,371	100	
20	7,038					7,526	1,619	544	5,113	250	99,086	98,548	538	152,640	101	
30	16,376	1	240			11,294	3,668	166	2,460		29,556	28,666	890	98,465	102	
712	247,117	618	114,000	114	18,474	70,100	5,770	4,870	59,460		1,771,377	1,758,635	12,742	2,417,331	103	
973	434,119			13	1,073	39,027	25,166	2,655	9,165	2,041	279,083	277,866	1,217	1,116,906	104	
94	41,688	9	2,585	7	1,000	22,172	5,407	1,349	15,416		265,743	259,066	6,677	442,744	105	
839	308,543	98	17,931			105,571	1,933	9,621	91,830	2,137	1,730,910	1,602,639	128,271	2,589,540	106	
310	148,330	5	1,470	10	1,484	24,308	14,607	2,234	7,462		144,334	143,950	384	455,043	107	
182	88,156	1	300			566	564	2	2		102	90	12	3,185	108	
477	169,547	250	48,906	9	1,020	482,415	9,856	11,857	410,692	10	481,035	476,012	5,027	1,749,655	109	
81	12,486	60	11,110	1	205	25,083	4,467	1,901	10,715	8,000	157,548	154,316	3,232	487,850	110	
						40,916	5,432	1,576	33,888		98,710	98,259	451	228,304	111	

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.
112	Photography	74	\$133,428	\$2,830	\$15,090	\$63,325	\$52,183	82	8	\$2,630	104	\$46,560
113	Pickles, preserves, and sauces	25	129,146	15,016	23,765	40,528	47,837	30	15	10,250	77	22,989
114	Plastering and stuccowork	46	91,350	23,050	16,025	3,880	48,995	49	4	8,346	187	114,981
115	Plumbers' supplies	4	1,094,095	72,111	77,000	274,722	670,262	2	71	70,794	685	240,568
116	Plumbing, and gas and steam fitting	245	795,307	118,186	158,110	82,790	446,221	264	47	33,938	820	407,845
117	Pottery, terra cotta, and fire-clay products	18	1,081,463	64,200	214,479	262,684	540,100	15	47	44,243	1,082	884,655
118	Printing and publishing, book and job	156	1,364,894	25,783	43,750	697,837	597,524	191	152	139,790	1,304	535,907
119	Printing and publishing, newspapers and periodicals	141	2,473,094	259,263	391,838	1,025,707	793,236	145	388	333,027	1,520	758,836
120	Printing materials	4	12,000			9,500	2,500	5	2	400	21	7,295
121	Pumps, not including steam pumps	6	17,780		100	2,075	15,690	7	1	168	11	3,836
122	Regalia and society banners and emblems	6	50,215	500	900	13,305	30,510	6	14	11,690	67	20,605
123	Roofing and roofing materials	17	461,449	284,779	18,788	38,779	114,103	14	13	7,680	203	73,054
124	Saddlery and harness	150	834,152	57,067	110,170	84,887	602,028	170	60	46,240	541	174,802
125	Sausage	5	18,966	5,565	8,850	1,900	2,650	5	5		13	5,802
126	Sewing machine repairing	11	23,815	4,900	7,400	4,365	7,150	7	2	3,500	22	13,242
127	Ship and boat building, wooden	43	623,435	197,750	54,525	150,994	220,166	58	25	20,320	676	331,873
128	Shipbuilding, iron and steel	4	3,822,588	103,000	250,000	945,000	2,524,588	8	70	85,122	1,939	1,185,832
129	Shirts	65	1,504,968	15,597	59,119	276,270	1,153,982	100	108	142,676	8,998	788,157
130	Silverware	5	231,336	35,000	3,000	34,400	148,936	11	15	15,710	116	67,479
131	Slaughtering and meat packing, wholesale	47	1,313,917	100,009	301,500	188,660	728,748	72	63	46,824	514	242,089
132	Slaughtering, wholesale, not including meat packing	35	229,571	63,306	101,000	30,175	35,090	36	5	1,980	88	34,324
133	Soap and candles	6	209,232	9,913	30,000	27,690	141,629	2	32	28,074	127	58,688
134	Stamped ware	3	1,334,591	70,000	150,350	129,975	1,004,266	1	29	33,740	826	220,984
135	Stencils and brands	3	8,725			5,250	3,475	8	1	600	6	2,386
136	Tinsmithing, coppersmithing, and sheet-iron working	319	3,218,696	195,265	491,431	643,820	1,888,180	368	162	102,795	2,852	1,039,005
137	Tobacco, chewing, smoking, and snuff	5	1,805,611	107,034	356,333	536,371	805,873	8	120	259,624	2,002	564,272
138	Tobacco, cigars and cigarettes	382	1,519,866	171,694	238,010	76,413	1,033,749	436	155	105,809	2,366	742,155
139	Tools, not elsewhere specified	6	51,185	1,000	6,500	7,235	36,450	6	2	800	17	9,736
140	Toys and games	3	11,505			3,505	8,000	6			98	10,786
141	Trunks and valises	13	53,593	4,333	3,000	5,010	41,250	17	7	3,300	56	22,109
142	Umbrellas and canes	11	392,792	12,000	19,000	12,750	349,042	23	84	61,110	401	109,772
143	Upholstering materials	6	673,609	14,833	50,250	21,625	586,901	12	27	24,985	698	209,800
144	Varnish	3	48,604		9,000	9,450	30,148	3	9	7,204	12	5,488
145	Vinegar and cider	16	58,522	4,855	14,848	13,855	24,964	20	2	2,436	30	14,615
146	Watch, clock, and jewelry repairing	188	267,310	38,035	69,285	43,993	115,997	193	2	1,280	131	64,388
147	Window shades	4	58,065	1,000	1,000	2,300	53,765	3	9	9,890	33	14,540
148	Wirework, including wire rope and cable	13	216,545	26,950	16,300	75,114	98,181	20	15	14,225	151	59,293
149	Wood, turned and carved	9	54,025	3,225	26,000	15,425	9,375	10	7	5,412	93	28,452
150	Woolen goods	4	1,330,549	28,630	169,177	171,663	961,079	6	25	35,625	877	221,215
151	All other industries	123	8,709,237	473,275	967,290	2,049,829	5,218,843	111	365	406,622	3,984	1,556,136

¹ Embraces agricultural implements, 2; artificial limbs, 2; axle grease, 1; babbitt metal and solder, 2; bags, paper, 2; belting and hose, linen, 2; bridges, 1; buttons, 2; card cutting and designing, 1; carriages and sleds, children's, 2; cars, steam railroad, not including operations of railroad companies, 1; charcoal, 1; cleansing and polishing preparations, 2; cloth, sponging and refinishing, 2; coffins, burial cases, and undertakers' goods, 1; copper, smelting and refining, 1; cordage and twine, 1; cordials and sirups, 1; cork, cutting, 1; cotton waste, 1; drug grinding, 2; dyeing and finishing textiles, 2; engraving, wood, 1; files, 2; firearms, 1; fire extinguishers, chemical, 1; fireworks, 2; galvanizing, 2; gas and lamp fixtures, 2; gas machines and meters, 2; glue, 1; gold and silver, leaf and foil, 2; gold and silver, reducing and refining, not from the ore, 1; hairwork, 2; hammocks, 1; hand knit goods, 2; horseshoes, factory product, 1; house furnishing goods, not elsewhere specified, 2; ink, printing, 1; ink, writing, 2; iron and steel, forgings, 1; japanning, 1; jewelry and instrument cases, 1; labels and tags, 2;

TABLE 8.—MANUFACTURES IN BALTIMORE

		6,801	\$117,869,175	\$10,291,700	\$21,335,101	\$17,933,978	\$68,308,396	7,165	6,278	\$6,207,269	79,084	\$29,304,520
1 All industries												
2 Artificial feathers and flowers	5	33,005				3,005	30,000	9	5	6,520	237	36,190
3 Awnings, tents, and sails	21	67,890				7,640	60,250	28	8	2,860	97	47,316
4 Bags, other than paper	6	217,603	3,000	1,900		30,610	182,093	8	8	10,820	120	31,842
5 Baking and yeast powders	7	97,668				9,725	87,943	7	43	41,984	106	39,554
6 Baskets, and rattan and willow ware	26	46,109	3,950	7,150		5,429	29,580	25	2	2,400	85	12,930
7 Bicycle and tricycle repairing	41	36,920	3,700	1,600		5,880	25,740	43	4	2,700	49	16,280
8 Blacking	3	12,501				1,417	11,084	3	6	9,794	12	2,982
9 Blacksmithing and wheelwrighting	206	288,313	91,340	92,536		32,044	72,393	231	3	2,824	352	183,142
10 Bluing	3	890				255	635	3			5	1,000
11 Bookbinding and blank book making	21	110,695	7,925	20,800		46,970	35,000	24	15	10,089	195	70,802
12 Boot and shoe cut stock	3	31,875	400	3,000		2,475	26,000	3	7	3,800	11	4,720
13 Boot and shoe uppers	12	23,390	3,700	4,700		2,865	12,125	12			15	5,395
14 Boots and shoes, custom work and repairing	612	473,714	120,201	185,270		52,407	115,836	620	7	2,900	318	119,595
15 Boots and shoes, factory product	18	463,880	12,500	26,800		153,786	275,794	26	37	45,986	346	209,950
16 Bottling	17	322,542	62,800	113,700		28,133	117,909	17	28	28,526	134	69,153
17 Boxes, cigar	6	57,062	6,850	9,200		7,565	33,447	6	3	2,232	89	27,932
18 Boxes, fancy and paper	11	135,796	3,200	10,200		46,060	71,336	13	32	16,268	356	77,699
19 Boxes, wooden packing	16	505,764	51,400	70,590		81,141	302,633	21	28	25,022	929	294,398
20 Brass castings and brass finishing	6	80,098	8,950	6,950		39,619	89,619	6	7	7,032	66	27,844
21 Bread and other bakery products	389	1,743,655	238,396	544,425		626,775	334,059	395	177	116,756	1,460	559,164

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 number.	Wages.	Average number.	Wages.	Average number.	Wages.										
79	\$40,386	23	\$5,933	2	\$242	\$23,127	\$22,572	\$466	\$4,789	\$300	\$61,768	\$60,145	\$1,623	\$236,021	112
62	19,131	13	3,694	2	164	9,675	3,796	1,113	4,766		204,379	201,507	2,872	297,898	113
187	114,981					7,070	3,767	391	1,512	1,400	64,058	63,833	225	251,807	114
648	226,960	35	12,164	7	1,429	35,760	1,585	9,985	24,190		371,593	360,536	11,057	755,236	115
794	404,177			26	3,668	58,794	29,948	5,053	22,093	1,100	816,731	810,216	6,515	1,780,507	116
842	327,958	80	31,287	100	25,410	41,580	8,199	8,590	21,980	2,811	196,865	144,042	52,323	834,581	117
1,015	478,568	214	47,268	75	10,071	201,606	61,593	3,900	82,329	53,784	839,567	817,020	22,547	2,252,490	118
1,427	735,469	43	16,488	59	5,378	349,663	52,607	14,968	210,047	72,041	873,563	847,853	25,710	2,618,799	119
17	6,620	2	400	2	275	1,385	850	60	425		11,175	11,050	125	28,000	120
11	8,836					2,481	1,120	45	1,316		9,774	9,764	10	27,650	121
19	10,000	28	7,780	20	2,825	12,842	3,000	424	9,418		56,251	55,590	661	122,690	122
199	72,471			4	583	8,589	2,936	619	5,034		87,793	83,867	3,926	229,565	123
503	165,725	26	6,950	12	2,127	58,062	19,365	6,150	27,533	14	670,801	667,374	3,427	1,156,279	124
13	5,802					1,272	231	1,041	302		82,078	81,190	888	45,656	125
22	18,242					1,628	1,200	126			20,959	20,672	287	53,247	126
676	331,707			1	166	30,649	5,225	7,651	16,793	980	301,010	296,944	4,066	862,034	127
1,904	1,178,297	1	482	34	7,053	110,916	27,875	12,715	67,325	3,000	1,497,551	1,459,393	38,161	3,299,491	128
768	238,517	3,114	543,577	116	11,063	312,747	47,635	8,873	144,968	116,271	2,576,892	2,561,821	15,071	4,215,220	129
112	66,729	1	400	3	350	17,789	7,150	2,026	6,613	2,000	76,828	75,229	1,599	200,172	130
502	230,945	9	1,668	3	470	99,239	12,427	7,810	78,002	1,500	5,446,717	5,400,542	46,175	6,209,557	131
82	33,874	1	450			9,778	1,330	2,820	5,628		1,662,362	1,657,152	5,210	1,836,502	132
92	46,803	80	6,785	5	600	19,003	1,970	1,124	15,026	883	168,628	161,906	6,722	285,623	133
525	154,482	170	42,750	181	23,752	41,705		3,945	37,760		601,569	597,400	4,169	1,059,800	134
6	2,286			1	100	1,239	1,020	12	207		2,591	2,518	78	11,842	135
2,416	965,014	172	38,990	264	35,601	160,901	38,866	12,662	108,939	934	4,454,632	4,409,701	44,931	6,723,505	136
584	243,979	1,232	298,489	186	21,804	3,233,312	2,836	13,629	3,216,847		2,496,107	2,484,933	11,124	7,054,159	137
1,558	594,253	640	134,966	111	12,936	453,003	50,199	10,793	397,011		1,039,783	1,035,362	4,421	2,842,769	138
17	9,786					1,894	697	118	1,079		10,141	9,656	485	41,491	139
24	3,066	45	4,320	20	2,800	1,819	492		1,327		10,695	10,675	20	48,507	140
44	20,399			12	1,710	9,403	7,172	401	1,830		28,878	28,313	565	84,952	141
110	42,416	291	67,356			20,125	6,815	982	12,128	200	747,859	746,716	1,143	1,098,161	142
525	175,160	86	17,700	87	17,000	27,579	8,538	2,416	16,625		682,313	674,263	8,050	1,057,550	143
11	5,254	1	234			3,994	740	197	3,037		34,734	34,120	614	64,521	144
28	14,147	2	468			4,532	395	472	3,653	12	36,656	35,251	1,405	80,203	145
110	63,099			12	1,289	30,294	21,519	2,090	6,260	425	73,728	71,727	2,001	319,239	146
21	10,600	10	3,680	2	260	8,092	2,894	238	4,960		119,132	118,922	210	193,300	147
107	51,513	10	2,100	34	5,680	19,570	3,186	1,454	12,430	2,500	85,075	82,444	2,631	196,162	148
81	28,172			12	280	1,711		802	221		44,268	40,260	4,008	103,375	149
576	173,152	204	38,011	97	10,052	54,181		5,940	48,241		667,036	653,538	13,193	1,218,378	150
8,280	1,427,252	517	107,879	137	21,005	557,771	47,026	77,457	389,343	45,945	29,646,886	29,416,634	230,252	36,157,685	151

lamps and reflectors, 1; hard, refined, 1; lead, bar, pipe, and sheet, 1; leather goods, 1; malt, 1; millstones, 1; mirrors, 2; mucilage and paste, 2; musical instruments and materials, not specified, 2; needles and pins, 1; nets and seines, 2; oakum, 1; paper hangings, 1; pens, gold, 1; petroleum, refining, 1; photographic materials, 1; photolithographing and photoengraving, 2; pipes, tobacco, 2; plated and britannia ware, 2; printing and publishing, music, 1; refrigerators, 1; rubber and elastic goods, 2; safes and vaults, 1; saws, 2; scales and balances, 1; shoe cases, 1; silk and silk goods, 2; silverware, 1; starch, 1; stationery goods, not elsewhere specified, 2; steam packing, 1; stereotyping and electrotyping, 2; sugar and molasses, refining, 2; surgical appliances, 2; tin andterne plate, 2; tobacco, stemming and rehandling, 2; type founding, 1; washing machines and clothes wringers, 1; watch cases, 1; whips, 1; woodenware, not elsewhere specified, 1.

BY SPECIFIED INDUSTRIES: 1900.

51,166	\$23,558,985	23,810	\$5,165,824	4,108	\$579,711	\$14,552,397	\$1,654,441	\$683,271	\$9,694,343	\$2,520,342	\$87,534,743	\$86,300,108	\$1,234,635	\$161,945,811	1
12	3,800	158	24,740	67	7,650	5,863	2,430	13	3,420		26,725	26,701	24	114,020	2
66	39,886	29	7,202	2	163	7,089	5,755	179	1,155		99,403	98,842	561	198,058	3
29	11,550	90	19,712	1	120	14,210	8,286	2,373	8,551		863,970	863,423	547	452,970	4
63	25,567	63	8,287			25,772	7,102	373	17,792		219,409	215,095	4,814	345,278	5
84	12,580			1	350	11,163	3,089	207	367		49,484	49,333	101	99,802	6
44	15,506			5	774	8,652	6,787	196	1,393	276	32,065	31,631	434	86,810	7
3	1,270	3	750	6	962	1,087	840	58	189		15,084	14,841	243	30,682	8
340	181,099			12	1,333	28,433	19,177	3,144	5,519	593	132,442	125,367	7,075	549,294	9
4	850	1	150			406	329		77		3,227	3,219	8	7,320	10
88	48,994	93	20,058	14	1,750	12,451	6,103	829	8,819	2,200	36,026	35,005	1,021	172,126	11
10	4,600			1	120	1,370	650	320	400		71,060	71,410	250	99,500	12
15	5,295					1,608	1,259	56	193		25,247	25,117	180	40,030	13
302	115,534	8	2,880	8	481	75,174	52,869	5,698	7,439	9,068	224,800	221,039	3,761	741,808	14
568	205,064	266	63,255	12	1,640	35,823	7,268	1,280	27,280		635,464	630,787	4,727	1,065,507	15
183	62,978			1	175	50,032	2,856	2,203	44,349	624	424,076	420,993	3,083	689,932	16
33	15,144	48	12,200	8	588	1,740	180	279	1,281		54,649	53,949	700	98,764	17
79	26,431	220	48,792	57	7,476	24,975	9,155	909	13,858	1,058	126,473	124,170	2,303	296,013	18
760	265,668	9	1,305	160	27,425	57,485	10,668	4,241	42,526		954,440	952,611	1,829	1,559,298	19
66	27,844					6,542	2,630	323	3,589		121,382	118,691	2,691	203,333	20
1,200	509,194	201	34,296	59	9,674	142,776	44,582	16,230	81,964		2,198,091	2,123,756	74,335	3,811,524	21

TABLE 8.—MANUFACTURES IN BALTIMORE

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.
22	Brooms and brushes	37	\$245,982	\$9,700	\$24,200	\$27,738	\$184,344	47	17	\$10,850	359	\$112,882
23	Carpentering	319	1,666,832	164,266	227,918	201,119	1,073,529	344	46	43,353	2,227	1,159,109
24	Carpets, rag	13	39,216	1,533	2,250	12,438	22,995	18	4	3,000	113	29,596
25	Carriages and wagons	92	476,561	69,423	93,885	65,721	247,532	120	19	14,750	553	242,666
26	Cars and general shop construction and repairs by steam railroad companies.	6	2,236,388	258,700	1,257,033	381,955	338,700		93	72,974	2,438	1,267,920
27	Cheese, butter, and condensed milk, factory product.	6	25,700	3,980	3,070	5,495	13,155	6	1	600	11	3,325
28	Chemicals	5	1,371,272	271,000	219,182	395,465	485,625	3	26	41,471	375	205,929
29	China decorating	4	8,715	1,000	1,500	1,195	5,020	5	2	1,200	7	1,024
30	Clothing, men's, custom work and repairing.	350	1,542,908	80,633	138,128	42,687	1,281,410	400	176	109,365	1,287	659,918
31	Clothing, men's, factory product	137	8,434,586	135,600	355,200	418,004	7,525,782	252	759	715,907	9,690	3,174,172
32	Clothing, men's, factory product, button holes.	8	7,295	400	1,300	4,915	680	9			39	11,384
33	Clothing, women's, dressmaking	570	323,757	51,175	97,825	46,580	128,177	601	17	11,022	1,240	300,696
34	Clothing, women's, factory product	58	828,620	3,000	12,500	79,452	733,668	96	150	127,641	1,879	505,475
35	Coffee and spice, roasting and grinding	11	227,400	3,200	10,300	40,300	173,600	13	63	107,602	97	35,087
36	Confectionery	113	936,401	79,034	238,700	205,570	413,097	128	147	121,364	991	297,055
37	Cooperage	36	395,821	73,883	87,470	39,110	195,358	41	14	10,780	340	153,617
38	Corsets	4	50,630	10,000	20,000	4,620	16,010	4	14	3,328	37	8,870
39	Cutlery and edge tools	3	16,200	2,200	4,100	2,700	7,200	3			15	7,164
40	Druggists' preparations, not including prescriptions.	10	389,276	10,000	40,000	174,275	165,000	14	214	253,380	439	122,799
41	Dyeing and cleaning	53	125,795	22,650	58,038	19,922	25,185	55	5	2,232	115	46,010
42	Electrical apparatus and supplies	5	149,803	3,000	23,000	33,935	89,868	1	16	15,616	64	29,603
43	Electrical construction and repairs	25	112,891	5,500		13,166	94,225	30	13	7,154	134	63,628
44	Electroplating	6	12,825			5,700	7,125	10	1	900	27	9,857
45	Enameling and enameled goods	4	1,437,214	148,192	191,394	334,779	762,849	2	74	60,547	1,136	316,417
46	Engraving and die-sinking	7	9,368			5,218	4,150	8	3	1,200	14	6,900
47	Engraving, steel, including plate printing.	8	14,325			4,075	10,250	7	6	3,500	38	15,575
48	Fancy articles, not elsewhere specified	5	238,072	25,000	55,000	33,045	125,027	6	16	15,060	324	69,834
49	Fertilizers	17	4,449,798	490,844	532,948	534,783	2,841,133	9	149	186,850	705	320,388
50	Flavoring extracts	12	38,544	1,650	4,000	3,007	29,887	15	10	2,900	25	8,803
51	Flouring and grist mill products	4	678,500	85,000	214,000	203,125	174,375	3	33	48,378	131	69,140
52	Food preparations	16	154,010	23,450	37,350	27,350	65,860	15	11	11,260	101	32,546
53	Foundry and machine shop products	74	4,971,434	427,150	732,696	877,513	2,934,075	83	237	270,711	3,375	1,805,271
54	Fruits and vegetables, canning and preserving.	23	2,862,467	263,816	237,524	351,213	2,009,914	32	148	172,326	4,360	905,397
55	Fur goods	11	67,677	3,333	6,500	1,594	56,250	14	6	3,700	48	23,500
56	Furnishing goods, men's	16	617,002		2,700	57,752	555,050	23	103	88,625	1,801	456,052
57	Furniture, cabinetmaking, repairing, and upholstering.	114	193,634	16,533	25,392	9,423	142,286	141	18	8,930	189	95,320
58	Furniture, factory product	36	1,417,378	83,375	145,736	147,501	1,040,766	48	129	111,959	1,627	745,364
59	Glass	3	218,550	32,672	80,633	11,192	94,053	4	6	4,200	266	139,384
60	Glass, cutting, staining, and ornamenting.	8	29,315	500	300	3,005	25,510	9	4	2,300	42	16,895
61	Grease and tallow	4	28,637	3,000	2,500	6,900	16,237	6			21	10,022
62	Hand stamps	3	69,000			28,500	40,500	4	6	6,300	82	31,250
63	Hardware	9	96,518	15,000	19,500	11,982	50,636	11	2	2,468	60	19,511
64	Hats and caps, not including fur hats and wool hats.	20	1,124,599	60,500	242,000	164,323	657,776	32	67	92,888	1,117	335,935
65	Ice, artificial	5	342,233	66,867	53,000	214,500	7,871	2	4	4,860	63	44,191
66	Instruments, professional and scientific.	7	56,620	5,000	5,500	14,502	31,618	9	8	6,779	39	16,906
67	Iron and steel, nails and spikes, cut and wrought, including wire nails.	3	48,500			19,500	29,000	4	5	4,800	37	17,050
68	Ironwork, architectural and ornamental.	9	478,261	60,600	57,300	51,550	308,811	10	15	20,808	229	246,829
69	Jewelry	9	170,121			11,721	158,400	9	4	2,030	76	43,254
70	Leather, tanned, curried, and finished.	10	140,950	23,550	24,950	7,950	84,500	13	6	6,100	142	58,716
71	Lime and cement	6	39,592	3,500	4,950	11,275	19,867	6	2	850	70	27,477
72	Liquors, distilled	7	1,633,875	99,000	412,875	168,000	354,000	2	24	28,636	83	49,708
73	Liquors, malt	12	9,689,087	473,246	6,030,307	1,000,629	1,284,905	7	120	186,978	538	351,062
74	Lithographing and engraving	6	490,415			197,321	293,094	16	35	22,540	281	127,801
75	Lock and gun smithing	57	62,268	10,962	12,400	10,330	28,576	57	2	1,092	62	27,977
76	Looking-glass and picture frames	27	304,392	56,775	50,500	26,407	170,620	31	43	39,156	296	109,078
77	Lumber, planing mill products, including sash, doors, and blinds.	22	2,193,534	295,113	210,909	148,019	1,449,493	39	59	48,890	739	353,206
78	Mantels, slate, marble, and marbleized.	4	31,820	6,100	3,100	520	22,100	6	2	1,200	18	11,924
79	Marble and stone work	29	531,818	121,000	40,100	113,200	257,518	35	40	49,715	828	437,252
80	Masonry, brick and stone	96	740,351	180,880	115,350	31,920	402,401	106	33	39,400	1,230	782,509
81	Mattresses and spring beds	18	194,905	20,200	28,350	19,430	126,925	17	22	16,678	112	43,928
82	Millinery and lace goods	11	186,790	17,400	16,500	25,700	127,190	17	23	14,802	266	81,088
83	Millinery, custom work	127	509,442	66,934	108,000	10,784	823,724	152	128	42,388	522	152,724
84	Mineral and soda waters	24	218,449	16,524	21,500	59,675	120,750	21	15	13,988	135	48,816
85	Models and patterns	7	17,341	1,666	1,300	7,500	6,875	10			29	15,524
86	Monuments and tombstones	39	262,066	40,000	42,950	23,500	149,616	46	4	5,000	187	94,927
87	Musical instruments, organs and materials.	4	37,100	5,000	12,000	4,650	15,450	5	3	2,180	21	13,108
88	Musical instruments, pianos and materials.	4	1,184,650	91,342	166,000	76,635	850,673	4	31	41,980	447	222,748
89	Oil, not elsewhere specified	7	83,840	7,500	13,500	4,275	58,565	8	20	9,420	20	7,038
90	Optical goods	9	41,569			5,725	35,844	12	16	14,080	31	16,616
91	Oysters, canning and preserving	15	784,271	51,650	135,048	74,649	622,924	14	77	80,248	1,416	376,591

BY 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.										
286	\$96,828	55	\$13,905	18	\$2,589	\$14,687	\$7,547	\$1,260	\$5,890		\$265,192	\$263,870	\$1,322	\$499,885	22
2,221	1,158,054			6	1,055	643,631	28,016	11,167	57,458	\$551,800	2,374,609	2,362,936	11,673	4,997,636	23
96	26,704	16	2,786	1	156	7,138	3,598	226	3,314		76,087	74,666	1,421	154,362	24
539	240,757			14	1,909	33,488	20,402	3,819	8,645	622	211,779	206,156	5,623	690,950	25
2,437	1,267,740	1	180			88,551		2,220	36,331		2,150,514	2,133,594	16,920	8,529,959	26
11	3,325					701	220	125	356		42,707	42,441	266	51,142	27
372	205,123	3	806	1	104	81,546	3,912	7,299	70,335		661,297	588,686	72,611	1,078,800	28
3	896	3	624			780	528	75	177		12,673	12,481	192	26,601	29
1,051	590,954	204	65,268	32	3,696	446,350	102,549	9,978	64,500	259,823	1,208,832	1,197,081	9,751	3,061,014	30
3,929	1,921,588	5,168	1,186,977	593	65,607	1,500,903	165,688	32,414	510,941	791,860	10,228,686	10,197,305	26,381	17,290,825	31
16	6,406	21	4,782	2	196	1,687	1,184	33	520		4,874	4,478	396	26,382	32
74	48,552	1,153	255,496	13	1,648	65,221	52,225	2,760	9,924	312	304,330	297,182	7,148	1,092,988	33
385	212,764	1,453	287,912	41	4,799	162,051	45,607	2,315	78,479	35,650	1,261,120	1,254,331	6,789	2,506,635	34
59	29,082	38	6,005			22,774	7,119	600	15,055		1,000,153	993,021	7,129	1,271,787	35
610	227,628	342	65,116	39	4,311	114,566	38,848	8,019	72,699		1,296,558	1,280,512	16,046	2,249,858	36
338	153,880			2	287	27,963	5,935	2,977	18,051	1,000	348,040	316,098	1,342	628,801	37
3	1,370	34	7,500			2,936	1,940	256	740		5,217	4,800	417	28,982	38
14	7,000			1	104	842	516	134	192		4,138	3,488	650	16,022	39
152	68,400	286	59,269	1	180	137,164	20,010	4,614	112,540		683,891	678,904	4,987	1,298,344	40
77	35,612	32	9,600	6	798	27,469	8,698	1,635	5,486	11,700	14,228	10,513	3,715	148,742	41
56	28,467	7	1,036	1	100	14,518	1,510	415	9,088	3,500	85,210	83,787	1,423	150,781	42
131	63,396			3	232	11,805	6,183	229	5,393		167,191	165,363	1,828	350,635	43
21	8,889			6	968	1,604	1,420	10	174		5,414	4,016	1,398	28,038	44
931	274,714	205	41,703			29,510	300	6,470	22,770		769,472	738,738	30,734	1,390,493	45
14	6,900					2,133	1,278	105	750		11,384	11,023	361	34,870	46
27	13,175	11	2,400			1,951	1,252	20	679		8,098	8,574	124	42,400	47
118	40,003	192	27,831	14	2,000	31,688	9,651	1,795	20,242		184,842	182,358	1,984	860,817	48
699	318,272	6	2,116			243,185	32,618	26,859	183,708		2,479,052	2,442,559	36,498	3,762,329	49
10	5,793	12	2,850	3	600	6,184	2,997	150	3,037		22,410	22,335	75	83,844	50
128	68,540	3	600			127,005	9,905	5,445	112,255		2,048,003	2,031,429	16,574	2,321,998	51
53	23,440	44	8,500	4	606	9,513	3,625	2,114	3,774		133,915	131,606	2,309	268,166	52
3,948	1,800,415	6	1,800	21	3,556	403,105	38,361	30,608	315,829	18,307	2,148,408	2,074,593	73,816	6,119,973	53
1,044	467,226	2,388	400,446	328	37,725	309,985	25,600	14,123	270,282		6,432,415	6,408,891	23,524	8,477,178	54
17	13,480	81	10,070			7,759	4,625	1,085	2,049		72,033	71,661	372	137,820	55
85	56,480	1,779	394,697	27	4,875	57,344	19,974	2,019	35,351		916,222	910,495	5,727	1,729,676	56
167	91,071	15	3,427	7	822	38,262	26,417	1,635	10,025	185	125,495	124,318	1,177	411,216	57
1,514	728,130	19	4,460	94	12,784	145,996	47,190	8,878	87,558	2,370	1,096,784	1,086,200	10,584	2,690,610	58
190	129,384			76	10,000	9,419	1,027	8,392	34,097		57,459	54,097	23,362	220,295	59
33	15,472	4	850	5	573	2,902	1,947	34	921		13,803	13,144	659	55,104	60
20	9,782			1	240	6,479	1,064	135	5,280		44,412	43,821	1,091	68,981	61
61	27,800	21	3,450			9,150	5,160	174	3,825		45,450	44,350	1,100	149,000	62
57	19,365			3	146	3,053	1,465	348	1,240		86,176	78,160	8,016	156,112	63
458	199,112	622	131,043	37	5,780	127,367	16,967	4,710	105,690		889,146	882,068	7,078	1,619,825	64
63	44,191					12,205	50	2,440	9,715		52,499	51,121	41,378	237,632	65
37	16,576	2	390			6,491	2,990	500	3,001		25,445	24,875	570	72,746	66
17	12,600	20	4,450			4,960	3,060	400	1,500		36,820	35,320	1,500	84,000	67
226	246,349			3	480	8,170	1,858	1,202	3,790	1,320	520,009	515,075	4,884	862,368	68
71	42,276	3	750	2	228	8,770	4,978	900	2,892		108,002	106,784	1,268	212,450	69
130	55,388	8	2,496	4	832	3,977	1,296	400	2,281		474,371	471,440	2,922	593,600	70
69	27,973			1	104	5,651	3,929	74	1,648		76,176	67,950	11,226	128,109	71
78	48,748			5	960	63,017	679	23,113	39,225		424,124	398,133	25,991	918,580	72
537	950,906			1	156	1,130,913	1,779	20,630	1,108,504		622,401	609,592	52,569	2,984,025	73
203	112,497	50	12,244	28	3,060	51,326	9,969	785	35,783	4,818	180,682	178,856	1,826	499,851	74
58	27,297	1	416	3	264	9,569	5,586	362	3,621		28,641	27,378	1,268	113,804	75
272	106,172	21	2,300	3	606	39,920	18,438	2,002	19,480		228,598	225,195	3,403	582,969	76
707	345,756			32	7,450	97,140	15,904	10,650	70,586		1,266,948	1,257,525	9,423	2,009,068	77
18	11,924			5	700	1,762	1,332	200	280		12,927	12,900	27	89,744	78
822	436,252	1	300	5	3,620	39,398	6,536	3,487	29,345	30	472,478	459,701	12,777	1,829,275	79
1,212	778,889			8	832	576,086	8,839	2,750	20,367	544,130	2,238,109	2,236,352	1,757	4,025,888	80
95	40,160	11	2,884	6	884	15,414	7,926	1,867	6,121		138,332	136,920	1,412	266,590	81
58	21,555	207	58,749	6	784	12,262	6,685	767	4,810		138,450	136,843	1,607	297,847	82
7	2,439	499	147,737	16	2,548	20,363	50,954	3,538	15,869	2	611,490	639,616	1,874	1,157,944	83
127	47,029	2	500	6	690	21,702	4,264	488	16,950		98,374	97,006	1,368	231,957	84
27	15,214			2	810	2,421	1,610	811	811		6,828	5,742	1,086	37,146	85
185	94,407			2	620	12,158	4,123	3,012	5,023		139,412	138,037	1,875	336,909	86
21	13,108					2,551	1,150	230	921	250	13,006	12,856	150	44,440	87
444	222,410			3	338	83,697	450	12,280	70,967		358,630	354,618	4,012	827,371	88
20	7,038					7,526	1,619	544	5,113	250	99,086	98,548	538	152,640	89
30	16,376	1	240			11,294	8,668	166	2,460		29,556	28,066	890	98,465	90
698	245,117	601	113,000	114	18,474	67,988	5,720	4,835	57,433		1,724,513	1,711,996	12,517	2,364,968	91

TABLE 8.—MANUFACTURES IN BALTIMORE

	MANUFACTURING AND MECHANICAL INDUSTRIES AND CITIES AND TOWNS.	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.
92	Painting, house, sign, etc.	272	\$356,170	\$61,782	\$82,508	\$32,786	\$179,144	295	27	\$18,016	909	\$411,119
93	Paints	12	290,177	18,030	28,000	78,730	165,447	20	26	25,900	110	45,273
94	Paper hanging	104	230,471	40,115	66,250	6,113	117,993	111	20	13,408	309	145,530
95	Paper patterns	3	510			50	460	4			1	800
96	Patent medicines and compounds	48	990,864	50,150	114,050	77,698	748,966	50	114	176,054	435	184,530
97	Paving and paving materials	21	402,165	33,166	55,900	151,244	158,855	20	15	25,216	384	139,252
98	Perfumery and cosmetics	10	75,714			18,710	57,004	8	16	14,440	90	23,245
99	Photography	47	105,348	2,220	18,500	49,525	40,108	53	7	2,058	88	41,800
100	Pickles, preserves, and sauces	23	125,346	14,866	24,765	37,928	47,787	28	15	10,250	74	22,509
101	Plastering and stuccowork	37	90,158	23,050	16,025	3,718	47,365	38	4	3,346	170	109,421
102	Plumbers' supplies	3	1,065,095	72,111	60,000	267,722	665,262	235	68	68,204	602	234,053
103	Plumbing, and gas and steam fitting	218	739,208	111,356	149,510	75,080	403,252	8	42	32,048	756	381,929
104	Pottery, terra cotta, and fire-clay products	9	422,339	36,100	149,629	62,664	173,946	8	26	25,793	501	199,177
105	Printing and publishing, book and job	142	1,285,980	25,733	43,600	659,209	557,438	175	148	133,600	1,178	505,903
106	Printing and publishing, newspapers and periodicals	40	1,885,181	238,513	330,238	601,497	624,938	32	334	354,112	1,158	626,135
107	Printing materials	4	12,000			9,500	2,500	5	2	400	21	7,295
108	Pumps, not including steam pumps	3	16,100			950	15,150	4	1	168	8	3,166
109	Regalia and society banners and emblems	6	50,215	500	900	18,305	30,510	6	14	11,690	67	20,605
110	Roofing and roofing materials	8	32,492	3,025	7,000	3,250	19,217	9	5	2,910	55	27,052
111	Saddlery and harness	78	706,622	47,682	80,000	54,245	524,695	93	59	46,215	481	150,942
112	Sausage	4	16,766	4,566	7,850	1,800	2,550	4			10	4,662
113	Sewing machine repairing	11	23,815	4,900	7,400	4,365	7,150	7	2	3,500	22	13,242
114	Ship and boat building, wooden	14	469,015	186,100	33,975	110,000	138,940	16	17	16,716	413	233,532
115	Shipbuilding, iron and steel	3	1,219,588	100,000	50,000	345,000	724,588	3	42	46,031	982	521,224
116	Shirts	34	1,173,989	4,000	8,000	164,005	997,984	56	128	125,651	2,476	528,750
117	Silverware	5	221,336	35,000	3,000	34,400	148,936	11	15	15,710	116	67,479
118	Slaughtering and meat packing, wholesale	40	1,121,507	81,909	244,100	147,950	647,548	63	54	43,424	437	204,004
119	Slaughtering, wholesale, not including meat packing	33	223,446	62,806	99,500	30,050	31,090	34	3	1,800	71	20,801
120	Soap and candles	5	207,332	9,913	30,000	26,690	140,729	32	32	28,074	126	53,388
121	Stamped ware	3	1,354,591	70,000	150,350	129,975	1,004,266	1	29	33,740	826	220,984
122	Stencils and brands	3	8,725			5,250	3,475	3	1	600	6	2,380
123	Tinsmithing, coppersmithing, and sheet-iron working	218	2,609,793	163,055	353,481	480,205	1,613,052	243	133	89,940	2,227	738,605
124	Tobacco, chewing, smoking, and snuff	5	1,805,611	107,034	356,833	536,371	805,873	8	120	250,624	2,002	564,272
125	Tobacco, cigars and cigarettes	316	1,365,496	158,694	219,540	65,570	921,692	360	150	104,141	2,023	664,578
126	Tools, not elsewhere specified	5	32,685	500	1,500	4,235	26,450	5	1	200	10	6,036
127	Trunks and valises	13	53,593	4,333	3,000	5,010	41,250	17	7	3,800	56	22,109
128	Umbrellas and canes	10	390,592	12,000	19,000	12,550	347,042	18	83	60,510	398	109,172
129	Upholstering materials	4	661,209	13,333	43,150	17,125	582,601	8	27	24,985	686	206,060
130	Varnish	3	48,604		9,000	9,456	30,148	3	9	7,264	12	5,488
131	Vinegar and cider	4	50,568	4,450	13,013	9,178	23,927	6	2	2,436	27	13,973
132	Watch, clock, and jewelry repairing	130	214,900	33,050	57,000	28,585	96,325	133	2	1,230	96	53,233
133	Window shades	4	58,065	1,000	1,000	2,300	53,765	3	9	9,890	33	14,540
134	Wirework, including wire rope and cable	12	216,840	26,900	16,200	75,094	98,146	20	15	14,225	150	59,180
135	Wood, turned and carved	7	29,950	2,500	17,000	6,325	4,125	8	4	2,512	23	8,952
136	All other industries	119	32,529,814	3,185,775	3,303,852	4,831,585	21,208,602	104	461	535,853	7,022	2,195,956

¹ Embraces agricultural implements, 1; artificial limbs, 2; axle grease, 1; babbitt metal and solder, 2; bags, paper, 2; belting and hose, linen, 2; brassware, 2; brick and tile, 1; bridges, 1; buttons, 2; card cutting and designing, 1; carriage and wagon materials, 2; carriages and sleds, children's, 2; cleansing and polishing preparations, 2; cloth, sponging and refinishing, 2; coffins, burial cases, and undertakers' goods, 1; cordage and twine, 1; cordials and sirups, 1; cork, cutting, 1; cotton goods, 2; cotton waste, 1; drug grinding, 2; dyeing and finishing textiles, 1; engraving, wood, 1; files, 2; firearms, 1; fire extinguishers, chemical, 1; fireworks, 2; galvanizing, 2; gas and lamp fixtures, 2; gas, illuminating and heating, 2; gas machines and meters, 2; glue, 1; gold and silver, leaf and foil, 2; gold and silver, reducing and refining, not from the ore, 1; hairwork, 2; hammocks, 1; hand knit goods, 2; horseshoes, factory product, 1; house furnishing goods, not elsewhere specified, 1; ink, printing, 1; ink, writing, 1; iron and steel, 1; iron and steel, forgings, 1; japanning, 1; jewelry and instrument cases, 1; labels and

TABLE 9.—MANUFACTURES IN CITIES AND

1	Total for cities and towns	671	\$6,979,428	\$524,918	\$1,370,888	\$1,677,957	\$3,405,665	728	406	\$269,453	6,119	\$2,054,156
2	Annapolis	91	188,195	23,435	51,019	77,897	35,844	94	12	7,120	244	101,608
3	Cumberland	140	2,938,219	268,134	724,617	643,895	1,301,573	145	174	129,785	1,963	806,775
4	Frederick	133	1,217,702	101,135	248,203	294,004	574,360	149	77	51,968	1,131	252,883
5	Hagerstown	203	1,375,281	85,604	169,489	355,804	764,824	228	96	52,279	1,873	502,307
6	Havre de Grace	38	831,464	17,500	111,850	215,115	488,999	43	21	17,150	674	332,848
7	Westminster	66	428,567	29,050	65,710	91,742	242,065	74	26	11,151	234	59,735

BY 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 number.	Wages.	Average number.	Wages.	Average number.	Wages.										
896	\$409,446			13	\$1,673	\$37,729	\$24,194	\$2,593	\$8,901	\$2,041	\$258,415	\$257,414	\$1,001	\$1,046,680	92
94	41,688	9	\$2,585	7	1,000	22,148	5,395	1,349	15,404		265,238	268,566	6,672	441,744	93
294	142,576	5	1,470	10	1,484	23,010	13,671	2,177	7,162		128,490	128,171	319	427,043	94
		1	300			566	564		2		102	90	12	8,185	95
179	85,060	247	48,450	9	1,020	427,288	9,574	11,797	405,907	10	467,915	462,998	4,917	1,707,336	96
383	139,047			1	205	16,025	4,392	1,793	9,840		146,956	144,789	2,167	409,802	97
30	12,135	60	11,110			37,669	5,452	1,569	30,648		98,066	97,675	391	220,446	98
70	36,785	17	4,953	1	152	23,049	19,088	345	8,416	200	47,583	46,502	1,081	187,127	99
60	18,771	13	3,694	1	104	9,511	8,652	1,103	4,756		203,234	200,662	2,572	294,898	100
170	109,421					7,050	3,747	391	1,512	1,400	61,781	61,556	225	237,010	101
620	220,460	35	12,161	7	1,429	33,743	985	9,805	22,953		337,793	329,036	8,757	709,236	102
733	378,538			23	3,391	53,919	26,503	4,790	21,526	1,100	722,023	715,898	6,125	1,620,222	103
339	157,725	80	31,287	82	10,165	26,281	4,167	3,728	16,378	2,011	100,191	77,935	22,256	446,706	104
949	458,139	165	38,095	64	9,069	196,111	58,096	3,395	80,836	53,784	690,446	670,006	20,440	2,037,037	105
1,122	612,646	21	10,506	15	1,983	317,436	42,178	12,298	191,084	71,876	487,181	466,449	20,682	2,160,520	106
17	6,620	2	400	2	275	1,335	850	60	425		11,175	11,050	125	28,000	107
8	3,166					2,393	1,048	35	1,310		8,981	8,975	6	25,000	108
19	10,000	28	7,780	20	2,825	12,842	3,000	424	9,418		56,251	55,590	661	122,690	109
55	27,052					1,519	494	124	901		71,487	71,392	95	137,360	110
450	148,492	21	6,460	10	2,000	45,808	14,999	5,195	25,600	14	617,736	615,334	2,402	1,024,787	111
10	4,662					817		191	626		29,548	28,680	868	40,976	112
22	13,242					1,628	1,200	126	302		20,959	20,672	287	53,247	113
413	239,532					25,445	8,993	6,987	14,408		164,437	160,926	3,511	555,852	114
982	521,224					66,907	27,875	1,471	34,561	8,000	537,456	523,986	13,500	1,468,901	115
602	181,099	1,833	344,050	40	3,601	300,066	46,528	2,872	136,828	114,438	2,362,502	2,353,314	9,188	3,666,675	116
112	66,729	1	400	3	350	17,789	7,150	2,026	6,613	2,000	76,828	75,229	1,599	200,172	117
428	202,574	6	1,044	3	476	90,707	12,352	6,558	70,357	1,600	4,655,006	4,620,631	34,375	5,308,394	118
70	29,354	1	450			8,779	1,330	2,725	4,724		1,602,552	1,597,502	5,050	1,758,127	119
91	46,003	30	6,785	5	600	18,967	1,970	1,098	15,016	883	165,753	159,108	6,645	279,887	120
525	154,482	170	42,750	131	23,752	41,705		3,945	87,760		601,569	597,400	4,169	1,059,800	121
5	2,286			1	100	1,239	1,020	12	207		2,591	2,513	78	11,812	122
1,897	678,990	130	28,800	200	30,725	141,765	32,209	10,375	98,291	890	3,618,208	3,578,981	39,227	5,420,980	123
584	243,079	1,232	298,489	183	21,804	3,233,312	2,835	13,629	8,216,847		2,496,107	2,484,983	11,124	7,054,160	124
1,327	523,042	615	130,704	81	10,832	396,133	45,869	10,216	340,048		922,724	919,221	3,503	2,622,296	125
10	6,036					1,429	697	78	654		7,126	6,753	373	23,491	126
44	20,399			12	1,710	9,403	7,172	401	1,330		28,875	28,313	565	84,952	127
110	42,416	288	66,756			20,047	6,775	982	12,090	200	745,024	743,881	1,143	1,032,761	128
513	171,360	86	17,700	87	17,000	27,294	8,528	2,391	16,375		676,000	668,800	7,200	1,044,160	129
11	5,254	1	234			3,994	740	197	3,057		34,734	34,120	614	64,521	130
25	13,505	2	408			4,392	300	440	3,652		31,619	30,440	1,179	68,821	131
87	52,265			9	968	22,829	16,775	1,585	4,260	200	54,369	53,101	1,268	246,260	132
21	10,600	10	3,680	2	260	8,092	2,894	238	4,960		119,132	118,922	210	193,300	133
106	51,400	10	2,100	34	5,680	19,566	3,186	1,450	12,430	2,500	84,755	82,124	2,631	195,649	134
22	8,822			1	130	1,296	802	101	393		16,718	15,710	1,008	42,575	135
4,140	1,588,826	1,908	454,332	974	152,798	932,610	40,295	213,404	717,089	2,822	7,785,301	7,552,979	232,322	13,877,089	136

tags, 2; lard, refined, 1; lead, bar, pipe, and sheet, 1; leather goods, 1; lumber and timber products, 1; malt, 1; millstones, 1; mirrors, 2; mucklage and paste, 2; musical instruments and materials, not specified, 2; needles and pins, 1; nets and seines, 2; oakum, 1; paper and wood pulp, 1; pens, gold, 1; photographic materials, 1; photolithographing and photoengraving, 2; pipes, tobacco, 2; plated and britannia ware, 2; printing and publishing, music, 1; refrigerators, 1; rubber and elastic goods, 2; safes and vaults, 1; saws, 2; scales and balances, 1; show cases, 1; silversmithing, 1; starch, 1; stationery goods, not elsewhere specified, 1; steam packing, 1; stereotyping and electrotyping, 2; surgical appliances, 2; tin andterne plate, 1; toys and games, 2; type founding, 1; washing machines and clothes wringers, 1; watch cases, 1; woolen goods, 2.

TOWNS UNDER 20,000 IN POPULATION: 1900.

4,183	\$1,737,014	1,559	\$286,485	377	\$30,657	\$423,469	\$71,504	\$35,841	\$292,519	\$23,605	\$5,937,134	\$5,818,456	\$118,678	\$9,961,972	1
212	95,569	27	5,545	5	494	9,797	5,130	2,156	2,331	180	170,043	165,298	3,745	393,086	2
1,771	766,056	153	33,687	39	6,032	218,340	20,372	17,866	175,597	4,505	1,999,987	1,947,974	51,963	3,494,622	3
654	206,988	314	34,133	163	11,262	69,893	15,901	6,937	46,952	100	1,054,449	1,035,181	19,258	1,727,094	4
929	335,135	859	159,831	85	7,341	92,802	20,689	6,668	47,130	18,320	1,454,929	1,434,649	20,880	2,465,507	5
458	283,025	144	44,545	72	4,778	16,491	5,277	1,278	9,636	360	913,676	908,683	6,988	1,372,420	6
169	50,241	62	8,744	13	750	16,146	3,632	1,441	10,873	200	344,100	328,266	15,834	509,243	7

CENSUS BULLETIN.

No. 132.

WASHINGTON, D. C.

January 24, 1902.

MANUFACTURES.

NEBRASKA.

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 Nebraska 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 10 cities 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 which were withdrawn from the enumerators and committed to special agents, and only to manufacturing establishments within the corporate limits of such places.

Three cities in Nebraska contain a population exceeding 20,000 each: Lincoln, Omaha, and South Omaha. The manufacturing statistics of these 3 cities are presented by specified industries, and the statistics of Lincoln and Omaha are presented in comparison with the returns of the Eleventh Census. The statistics of South Omaha were

not shown separately in 1890, and comparisons with that year are, therefore, not possible in this case.

The statistics of Nebraska 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 educational and eleemosynary institutions, and establishments with a product of less than \$500, which two latter classes were not reported at previous censuses; Table 3 showing the statistics of the 9 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the cities of Lincoln and Omaha 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 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 of Lincoln, Omaha, and South Omaha by specified industries; and Table 9 showing the totals for all industries in each of the cities withdrawn from the enumerators (exclusive of those shown in Table 8).

Table 1 shows the growth of manufactures in Nebraska for the forty years which terminate with the Twelfth Census. 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 Nebraska 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 \$71,982,127 invested in manufactures and mechanical industries in the 5,414 establishments reporting for the state of Nebraska. 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 \$143,990,102, to produce which involved an outlay of \$2,325,038 for salaries of officials, clerks, etc.; \$11,570,688 for wages; \$6,935,399 for miscellaneous expenses, including rent, taxes, etc.; and \$102,197,707 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 Nebraska, \$143,990,102, 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 Nebraska, the gross value of products for 1900 was \$143,990,102. The value of materials purchased in a partly manufactured form was \$28,695,688. The difference, \$115,294,414, is the net or true value of products, and represents the increase in the value of raw materials resulting from the various processes of manufacture.

Very respectfully,



Chief Statistician for Manufactures.

NEBRASKA.

Nebraska was organized as a territory in 1854, and therefore first appeared in census statistics in 1860.

Table 1 shows the manufacturing and mechanical industries of Nebraska as returned at the censuses of 1860 to 1900, inclusive, with the percentages of increase for each decade. This table also presents the average number of

wage-earners employed by manufacturing 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.

TABLE 1.—COMPARATIVE SUMMARY, 1860 TO 1900, WITH PER CENT OF INCREASE FOR EACH DECADE.

	DATE OF CENSUS.					PER CENT OF INCREASE.			
	1900	1890	1880	1870	1860	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870
Number of establishments	5,414	3,014	1,403	670	107	79.6	114.8	109.4	526.2
Capital	\$71,982,127	\$37,569,508	\$4,881,150	\$2,189,963	\$266,575	91.6	664.7	121.9	714.0
Salaries of officials, clerks, etc., number	2,067	18,426	(2)	(2)	(2)	922.4			
Salaries	\$2,825,083	\$2,713,093	(2)	(2)	(2)	314.3			
Wage-earners, average number	24,461	20,450	4,793	2,665	336	19.6	326.7	79.8	693.2
Total wages	\$11,570,688	\$10,271,478	\$1,742,811	\$1,429,913	\$103,332	12.7	489.5	21.8	1,257.6
Men, 16 years and over	21,059	18,263	4,404	2,558	334	15.3	309.1	74.5	665.9
Wages	\$10,749,706	\$9,807,631	(2)	(2)	(2)	9.6			
Women, 16 years and over	2,626	1,473	120	81	2	78.3	1,127.5	48.1	3,950.0
Wages	\$676,278	\$376,960	(2)	(2)	(2)	79.4			
Children, under 16 years	776	714	209	26		8.7	241.6	703.8	
Wages	\$144,704	\$86,887	(2)	(2)	(2)	66.5			
Miscellaneous expenses	\$4,935,399	\$5,395,242	(4)	(4)	(4)	28.5			
Cost of materials used	\$102,197,707	\$67,334,532	\$8,208,478	\$2,902,074	\$237,215	51.8	720.3	182.8	1,123.4
Value of products, including custom work and repairing	\$143,990,102	\$93,037,794	\$12,627,336	\$5,738,512	\$607,328	54.8	636.8	120.0	844.9
Total population	1,066,300	1,058,910	452,402	122,993	28,841	0.7	154.1	267.8	326.5
Wage-earners engaged in manufactures	24,461	20,450	4,793	2,665	336	19.6	326.7	79.8	693.2
Per cent of total population	2.3	1.9	1.1	2.2	1.2				
Assessed value of real estate	\$171,747,593	\$115,181,167	\$55,073,375	\$38,365,999	\$5,732,145	49.1	109.1	43.5	559.3
Value of land and buildings invested in manufactures ^a	\$22,181,411	\$12,131,376	(2)	(2)	(2)	82.8			
Per cent of assessed value	12.9	10.5							

¹ Includes proprietors and firm members, with their salaries; number only reported in 1900. (See Table 7.)

² Not reported separately.

³ Decrease.

⁴ Not reported.

⁵ As given in the Biennial Report of the Auditor of Public Accounts to the Governor of the State of Nebraska, under date of November 20, 1900, page 118.

⁶ Does not include value of rented property.

Although Nebraska is an agricultural and stock-raising state, Table 1 shows that there has been a considerable growth in its manufacturing and mechanical industries during the last forty years. The population during these years increased from 28,841 to 1,066,300, while the average number of wage-earners employed in manufacturing establishments increased from 336 to 24,461, embracing, in 1900, 2.3 per cent of the entire population, compared with 1.2 per cent in 1860. 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 33,845, or 3.2 per cent of the total population of the state. The last decade shows an increase of \$50,952,308, or 54.8 per cent, in the value of products of manufactures. This increase is especially noteworthy because it was not accompanied by any appreciable increase in the population of the state. The greatest absolute increase, \$80,410,458, in the value of products was in the decade 1880 to 1890.

While agricultural and stock-raising products are the basis of a large part of the manufactures of Nebraska, the state possesses other advantages, which are beginning to stimulate manufacturing in different lines. The Missouri River, forming the eastern boundary of the state for

500 miles, and navigable for 200 miles above the city of Omaha, furnishes cheap transportation north and south, while the 15 railroads which enter the city of Omaha afford shipping facilities in other directions. The value of products reported for Douglas and Otoe counties, which border upon the Missouri River and include the cities of Omaha, South Omaha, and Nebraska City, was \$118,212,890, or 82.1 per cent of the total for the entire state. The lack of cheap fuel has been the greatest hindrance to manufacturing in Nebraska, but conditions have improved with the development of the coal fields of Iowa, Kansas, and Missouri.¹ Waterpower is used to some extent for manufacturing purposes at Gothenburg, Kearney, and Loup.

Table 2 divides the industries of the state between the hand trades and the manufactures proper. This table also gives the statistics for educational and eleemosynary 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.

¹ United States Geological Survey: Mineral Resources of the United States, 1899; Metallic Products, Coal, and Coke, pages 358, 359, and 471.

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	6,775	\$72,471,976	7,391	24,641	\$11,582,599	\$6,968,097	\$102,312,958	\$70,644,943	\$28,803,660	\$2,864,355	\$144,339,432
Hand trades ¹	2,703	3,446,478	3,009	4,217	2,013,260	556,322	4,215,777	50,363	4,008,739	156,675	9,510,267
Educational and eleemosynary institutions.....	5	6,200	—	2	695	1,708	3,891	392	3,063	436	8,275
Establishments with a product of less than \$500.....	1,356	483,649	1,449	178	11,216	30,990	111,360	6,451	104,909	—	341,055
All other establishments.....	2,711	68,535,649	2,873	20,244	9,557,428	6,379,077	97,981,930	70,587,737	24,686,949	2,707,244	184,479,835

¹ Includes bicycle and tricycle repairing, 51; blacksmithing and wheelwrighting, 939; boots and shoes, custom work and repairing, 196; carpentering, 296; clothing, men's, custom work and repairing, 193; clothing, women's, dressmaking, 104; dyeing and cleaning, 11; furniture, cabinetmaking, repairing, and upholstering, 55; lock and gun smithing, 16; masonry, brick and stone, 79; millinery, custom work, 318; painting, house, sign, etc., 136; paper hanging, 12; plastering and stuccowork, 34; plumbing, and gas and steam fitting, 81; sewing machine repairing, 3; taxidermy, 2; typewriter repairing, 3; watch, clock, and jewelry repairing, 174.

Of the 6,775 establishments of all classes, shown in this table, 4,059, or 59.9 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 \$9,851,322, or only 6.8 per cent of the total value of the products of the state.

In addition to the 6,775 active establishments in the state during the census year, with a capital of \$72,471,976, shown in Table 2, there were 37 idle establishments, with a capital of \$297,232, divided as follows:

INDUSTRIES.	Number of idle establishments.	Capital.	INDUSTRIES.	Number of idle establishments.	Capital.
Brick and tile.....	10	\$51,715	Lumber, planing mill products, including sash, doors, and blinds.....	1	\$18,000
Cheese, butter, and condensed milk, factory product.....	3	10,960	Slaughtering and meat packing, wholesale.....	2	109,500
Flouring and grist mill products.....	7	50,550	Woolen goods.....	1	16,237
Food preparations.....	1	11,000	All other industries.....	12	29,270

TABLE 3.—COMPARATIVE SUMMARY OF NINE LEADING INDUSTRIES.

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.			
Total for selected industries for state	1900	1,520	\$33,971,417	13,386	\$6,669,681	\$3,144,781	\$75,041,523	\$92,372,460
	1890	1,045	17,534,101	10,467	5,032,540	1,623,867	31,064,210	42,260,093
Increase, 1890 to 1900.....		475	16,437,316	2,919	1,637,141	1,520,914	43,977,283	50,112,367
Per cent of increase.....		45.5	93.7	27.9	32.5	93.7	141.6	118.6
Per cent of total of all industries in state	1900	28.1	47.2	54.7	57.6	45.3	73.4	64.2
	1890	34.7	46.2	51.2	49.0	30.1	46.1	45.4
Brick and tile.....	1900	106	1,275,533	855	327,544	41,334	203,247	339,315
	1890	153	2,791,774	2,586	780,386	188,257	484,918	2,173,632
Cars and general shop construction and repairs by steam railroad companies.....	1900	23	3,635,267	2,458	1,421,284	92,946	1,009,830	2,624,461
	1890	9	1,245,519	2,041	1,146,206	(¹)	900,825	2,067,908
Cheese, butter, and condensed milk, factory product.....	1900	93	952,185	333	146,522	38,823	1,854,228	2,253,893
	1890	58	339,165	428	151,126	49,563	868,330	1,183,000
Flouring and grist mill products.....	1900	305	4,335,934	698	363,687	171,948	6,385,719	8,100,794
	1890	185	3,586,090	690	323,308	204,134	5,031,858	6,365,492
Liquors, malt.....	1900	19	2,678,593	200	131,455	635,031	311,783	1,433,501
	1890	14	1,464,211	172	125,330	219,854	357,266	1,079,805
Lumber, planing mill products, including sash, doors, and blinds.....	1900	21	378,966	293	129,441	18,428	561,731	886,333
	1890	24	561,076	497	339,147	37,060	484,663	1,112,412
Printing and publishing:								
Total.....	1900	554	2,885,593	1,883	882,673	459,278	949,404	3,431,582
	1890	443	2,517,133	1,771	949,302	469,338	732,139	3,222,368
Printing and publishing, book and job.....	1900	62	633,028	549	256,076	81,612	324,032	878,531
	1890	31	373,645	316	172,083	36,799	162,219	546,185
Printing and publishing, newspapers and periodicals.....	1900	492	2,252,555	1,334	626,597	377,666	624,472	2,553,051
	1890	412	2,143,488	1,455	777,219	432,539	569,920	2,676,133
Saddlery and harness.....	1900	391	1,340,511	583	280,247	95,915	926,819	1,733,742
	1890	151	723,433	419	221,352	62,111	486,405	1,028,540
Slaughtering and meat packing, wholesale.....	1900	8	16,488,845	6,083	2,983,828	1,591,078	62,838,762	71,013,339
	1890	6	4,805,700	1,863	1,016,383	448,550	21,717,327	24,026,376

¹ Not reported.

The 9 leading industries of the state in 1900, as shown by Table 3, embraced 1,520 establishments, or 28.1 per cent of the total number in the state; used a capital of \$33,971,417, or 47.2 per cent of the total; gave employment to 13,386 wage-earners, or 54.7 per cent of the total number; and paid \$6,669,681, or 57.6 per cent of the total wages. The value of their products was \$92,372,460, or 64.2 per cent of the total. In the discussion of Table 3, which follows, these industries are ranked with reference to the value of their products. This table reveals the close relation existing between the manufactures of Nebraska and its agricultural and stock-raising interests. Four industries dependent upon agriculture and stock raising are the manufacture of cheese, butter, and condensed milk, of flouring and grist mill products, of malt liquors, and of slaughtering and meat packing. The combined value of the products of these 4 industries was \$82,806,527, or 89.6 per cent of the total value of the products of the leading industries shown in Table 3.

Table 3 shows that slaughtering and meat packing is the most important industry in the state. The 8 establishments reported in 1900 gave employment to 6,083 wage-earners, or 24.9 per cent of the wage-earners employed in the state, and the products were valued at \$71,018,339, or 49.3 per cent of the total value of the products of the state. In 1890 there were 6 establishments, 1,863 wage-earners, and products valued at \$24,026,876. The increase in the value of products during the decade was \$46,991,463, or 195.6 per cent. The development of the industry in Nebraska during the last two decades has been remarkable. Meat packing was carried on in Omaha as early as 1871,¹ and in 1880 the products of the industry in the state were valued at \$1,359,397. The first great advance was made in 1884, when the Union Stock Yards Company located its plant on farming land south of Omaha.² The city of South Omaha, which has grown up around these stock yards, had, in 1900, a population of 26,001, and was one of the largest stock markets in the United States.³ Its situation on the Missouri River, the boundary between its own state and Iowa, has afforded special advantages for the growth of its great industry. Both states are superior "feeding states," Iowa ranking first and Nebraska third, in 1900,⁴ in the production of corn. Slaughtering and meat-packing establishments are also located at Geneva, Nebraska City, and West Lincoln. In addition to the supplies of live stock bred in Nebraska and in Iowa, the stock yards receive sheep and "canning cattle" from many other states, while thousands of young animals are annually brought to the feed lots of Nebraska to be fattened on corn.⁵

The manufacture of flouring and grist mill products ranks second among the industries of the state, with 305

establishments, 698 wage-earners, and products valued at \$8,100,794. In 1890 there were 185 establishments, 690 wage-earners, and products valued at \$6,365,492. The increase in the value of products during the decade was \$1,735,302, or 27.3 per cent. The 305 mills reported in 1900 were scattered over the state in more than two hundred different localities. Many were small, the average number of wage-earners employed per establishment during the census year being less than three. Nevertheless, the wheat-flour product of Nebraska was alone valued at \$5,319,911.

There were 554 establishments engaged in printing and publishing in 1900, the industry third in rank, with 1,883 wage-earners, and products valued at \$3,431,582. In 1890 there were 443 establishments, 1,771 wage-earners, and products valued at \$3,222,368. The increase in the value of products during the decade was \$209,214, or 6.5 per cent. Omaha is the headquarters of what is said to be one of the most extensive printing establishments of its kind in the United States. Plants are operated in 12 cities in Nebraska and other states, and partly printed sheets are supplied to country newspapers in the territory lying between the Mississippi River and the Rocky Mountains.⁶

There were 23 establishments engaged in car construction and general shop work of steam railroad companies in 1900, with 2,458 wage-earners, and products valued at \$2,624,461. In 1890 there were 9 establishments, 2,041 wage-earners, and products valued at \$2,067,908. The increase in the value of products during the decade was \$556,553, or 26.9 per cent.

There were 93 establishments engaged in the manufacture of cheese, butter, and condensed milk in 1900, with 333 wage-earners, and products valued at \$2,253,893. In 1890 there were 58 establishments, 428 wage-earners, and products valued at \$1,183,000. The increase in the value of products during the decade was \$1,070,893, or 90.5 per cent. The first creamery in Nebraska was built in 1881. Many of those reported in 1900 were conducted on the cooperative plan. One establishment, located at Lincoln, is said to be the largest of its kind in the United States. Skimming or separating stations, located in 77 different localities in southern Nebraska and northern Kansas, send their cream to the central station at Lincoln to be manufactured into butter.⁷

There were 391 establishments engaged in the manufacture of saddlery and harness in 1900, with 583 wage-earners, and products valued at \$1,783,742. In 1890 there were 151 establishments, 419 wage-earners, and products valued at \$1,028,540. The increase in the value of products during the decade was \$755,202, or 73.4 per cent.

There were 19 establishments engaged in the manufacture of malt liquors in 1900, with 200 wage-earners, and products valued at \$1,433,501. In 1890 there were 14 establishments, 172 wage-earners, and products valued at

¹ History of Omaha, by J. W. Savage and J. T. Bell, page 621.

² Ibid., page 595, ff.

³ United States Treasury Department: Summary of Commerce and Finance, August, 1901, page 748.

⁴ Yearbook of the Department of Agriculture, 1900, page 757.

⁵ Report of the Nebraska Bureau of Labor and Industrial Statistics, 1893-94, page 521.

⁶ History of Omaha, page 502.

⁷ Annual Report of the Nebraska Dairymen's Association, 1898, page 141.

\$1,079,865. The increase in the value of products during the decade was \$353,636, or 32.7 per cent. The first brewery in the state was erected at Omaha in 1859.¹ The industry has been favored by the large quantity of barley raised in the adjoining state of Iowa, whose production of this cereal in 1900 was second only to that of California.²

There were 21 establishments engaged in the manufacture of planing mill products in 1900, with 293 wage-earners, and products valued at \$886,333. In 1890 there were 24 establishments, 497 wage-earners, and products valued at \$1,112,412. The decrease in the value of products during the decade was \$226,079, or 20.3 per cent.

There were 106 establishments engaged in the manufacture of brick and tile in 1900, with 855 wage-earners, and products valued at \$839,815. In 1890 there were 155 establishments, 2,586 wage-earners, and products valued at \$2,173,632. The decrease in the value of products during the decade was \$1,333,817, or 61.4 per cent.

In addition to the industries included in Table 3, atten-

tion may be called to the manufacture of beet sugar, distilled liquors, and the smelting and refining of lead. Experiments in the growing of sugar beets were made in 1886. A bounty of 1 cent per pound of sugar manufactured was granted by the state legislature in 1889, and the first factory was established in 1890.³ In 1900 there were 8 establishments in the state, 174 wage-earners, and products valued at \$481,593. In the city of Omaha are located one of the largest distilleries and one of the largest lead smelting and refining works in the United States, but as these are the only establishments in the state in these industries, their statistics are not shown separately.

URBAN MANUFACTURES.

Table 4 shows the totals for the manufacturing and mechanical industries of the cities of Lincoln and Omaha, as returned at the censuses of 1890 and 1900, with the percentages of increase.

³ Report of the Nebraska Bureau of Labor and Industrial Statistics, 1889-1890, pages 849, 852, and 853.

TABLE 4.—COMPARATIVE SUMMARY, LINCOLN AND OMAHA, 1890 AND 1900, WITH PER CENT OF INCREASE.

	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.			
The State.....	1900	5,414	\$71,982,127	24,461	\$11,570,688	\$6,935,399	\$102,197,707	\$143,990,102
Per cent of increase.....	1890	3,014	\$7,669,608	20,450	10,271,478	5,395,242	67,334,532	93,087,794
		79.6	91.6	19.6	12.6	28.5	51.3	54.8
Lincoln.....	1900	250	2,608,992	1,736	789,356	266,160	2,173,345	4,105,951
Per cent of increase.....	1890	182	2,360,454	1,640	898,003	269,742	1,534,623	3,710,138
		37.4	10.5	5.9	12.1	11.3	41.6	10.7
Omaha.....	1900	837	34,282,063	7,422	3,755,816	3,854,688	22,113,388	42,991,876
Per cent of increase.....	1890	675	13,819,594	8,223	4,863,542	3,678,516	29,260,102	42,839,821
		24.0	87.1	9.7	122.8	4.9	124.4	1.5
Total for 2 cities.....	1900	1,087	36,891,055	9,158	4,545,172	4,120,848	24,286,733	47,097,827
Per cent of increase.....	1890	857	20,680,048	9,863	5,761,545	3,943,258	30,794,725	46,049,459
		26.8	78.4	7.1	121.1	4.5	121.1	2.3
Per cent of 2 cities to total for state.....	1900	20.1	51.3	37.4	39.3	59.4	23.8	32.7
	1890	28.4	55.0	48.2	56.1	78.1	45.7	49.5

¹ Decrease.

It appears from Table 4 that the number of establishments in these 2 cities increased during the decade from 857 to 1,087, or 26.8 per cent; and the value of products from \$46,049,459 to \$47,097,827, or 2.3 per cent; while the average number of wage-earners decreased from 9,863 to 9,158, or 7.1 per cent. The increase in the number of establishments and in the value of products has been much smaller in these 2 cities than in the state as a whole, and the decrease in the average number of wage-earners is in contrast with an increase in the state. The city of Lincoln shows the more rapid growth, the value of products having increased from \$3,710,138 in 1890 to \$4,105,951 in 1900, or 10.7 per cent.

South Omaha, the leading manufacturing city of the state, was not separately reported at the census of 1890, and its growth, therefore, can not be shown. In 1900 the value of its products was 48.6 per cent of the total for

the state, although it had but 2.4 per cent of the total population.

In Omaha, the leading city of the state in population, the number of establishments increased during the decade from 675 to 837, or 24 per cent; and the value of products from \$42,339,321 to \$42,991,876, or 1.5 per cent; while the number of wage-earners decreased from 8,223 to 7,422, or 9.7 per cent. The number of establishments, the number of wage-earners, and the value of products in this city in 1900 constituted 15.5, 30.3, and 29.9 per cent, respectively, of the totals for the entire state.

Table 5 presents the totals for the manufacturing industries of the 10 cities withdrawn from the enumerators, places them in comparison with the totals for the entire state and the state exclusive of these cities, 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.....	5,414	\$71,982,127	5,942	24,461	\$11,570,688	\$6,935,399	\$102,197,707	\$143,990,102	-----	100.0	1,066,300	-----	100.0
Total for urban manufactures..	1,859	58,815,805	1,991	18,972	9,184,986	6,273,386	91,491,785	126,307,931	-----	87.7	210,561	-----	20.3
Beatrice.....	79	594,679	82	436	172,330	31,192	436,314	789,228	7	0.5	7,875	4	0.7
Fremont.....	86	1,096,351	98	420	203,715	92,278	475,681	956,006	5	0.7	7,241	7	0.7
Grand Island.....	104	989,896	117	465	227,656	56,469	445,681	899,195	6	0.6	7,554	5	0.7
Hastings.....	111	425,794	115	337	149,265	35,409	340,094	720,615	8	0.5	7,188	8	0.7
Kearney.....	84	379,769	91	364	120,890	22,793	248,223	498,586	10	0.3	5,694	9	0.5
Lincoln.....	250	2,608,992	269	1,736	789,356	266,160	2,173,345	4,105,951	4	2.9	40,160	2	3.8
Nebraska City.....	108	1,576,857	114	739	269,796	168,662	3,625,177	4,582,554	3	3.2	7,380	6	0.7
Omaha.....	837	84,282,063	837	7,422	3,755,816	3,854,688	22,118,388	42,991,876	2	29.9	102,555	1	9.6
Plattsmouth.....	61	390,575	68	447	227,671	25,815	356,393	682,979	9	0.5	4,964	10	0.5
South Omaha.....	139	16,471,329	150	6,606	3,238,591	1,719,920	61,277,486	70,080,941	1	48.6	26,001	3	2.4
Total for state exclusive of urban manufactures.....	3,555	13,166,322	3,951	5,489	2,385,702	602,013	10,705,972	17,682,171	-----	12.3	849,739	-----	79.7
Percent of urban manufactures to total for state.....	34.3	81.7	33.5	77.6	79.4	90.5	89.5	87.7	-----	-----	20.3	-----	-----

Of the 5,414 establishments in the state, 1,859, or 34.3 per cent, were located in these 10 cities. They furnished employment to 18,972 wage-earners, or 77.6 per cent of the total number, and the value of their products, \$126,307,931, formed 87.7 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 of Lincoln, Omaha, and South Omaha by specified industries.

Table 9 shows the totals for all industries in the cities withdrawn from the enumerators, exclusive of those shown in Table 8.

TABLE 6.—MANUFACTURES

[No manufactures reported]

COUNTIES.		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	5,414	\$71,982,127	\$6,359,075	\$15,822,836	\$23,201,553	\$26,599,168	5,942	2,657	\$2,325,038	24,461	\$11,570,688
2	Adams	146	461,493	20,050	73,160	143,076	225,207	155	8	6,355	358	155,295
3	Antelope	37	181,688	4,951	31,125	42,630	52,932	39	2	2,100	62	29,447
4	Banner	3	1,885	50	500	935	400	4			1	100
5	Boone	14	121,160	7,850	36,781	34,644	41,882	15	8	2,550	22	10,655
6	Boxbutte	80	131,291	5,175	62,825	30,545	35,746	32	10	9,169	101	61,819
7	Boyd	23	82,669	4,326	8,375	11,490	8,478	32			6	1,673
8	Brown	29	64,835	3,250	15,810	22,850	22,925	33			18	6,275
9	Buffalo	186	573,252	25,825	131,393	215,103	200,931	153	20	13,980	406	141,265
10	Burt	91	172,798	33,000	58,449	66,624	60,961	107	4	946	102	39,036
11	Butler	54	164,411	7,110	32,435	63,905	60,961	64	2	440	59	27,186
12	Cass	145	567,842	32,410	182,860	205,654	146,918	165	41	25,891	605	286,045
13	Cedar	33	165,654	60,010	22,100	50,114	32,830	36			35	15,511
14	Chase	11	26,225	2,600	5,000	12,245	6,380	12			3	660
15	Cherry	21	56,113	7,205	17,040	13,195	18,078	21	1	2,500	21	8,820
16	Cheyenne	18	57,527	1,925	10,050	25,892	19,720	17	1	750	43	24,475
17	Clay	103	264,841	19,382	57,825	86,472	101,162	120	4	1,648	122	38,282
18	Collins	58	232,712	17,887	65,088	91,683	108,054	61	13	7,180	88	44,785
19	Cumming	67	253,764	23,945	91,890	83,778	54,151	75	6	4,100	81	31,035
20	Custer	68	175,832	14,960	35,361	79,731	45,780	74	5	4,120	45	15,991
21	Dakota	21	64,895	4,305	13,850	27,175	19,065	24	3	2,280	24	9,450
22	Dawes	40	122,849	11,105	23,895	39,775	48,074	46			85	48,279
23	Dawson	43	166,367	5,165	30,345	49,630	81,227	41	8	6,600	59	27,545
24	Deuel	4	5,825	400	650	2,675	2,100	4			2	750
25	Dixon	53	153,952	15,625	36,265	53,930	48,132	59	4	1,450	63	22,819
26	Dodge	157	2,259,277	122,687	481,625	943,571	708,394	181	59	49,198	519	260,798
27	Douglas	1,013	51,459,723	4,885,107	11,406,162	15,690,738	19,477,716	1,073	1,801	1,645,296	14,172	7,092,406
28	Fillmore	93	247,699	19,656	58,784	72,485	96,824	102	15	11,980	128	45,292
29	Franklin	52	121,035	11,095	25,280	52,245	32,415	57	1	100	40	15,520
30	Frontier	15	60,237	2,765	11,050	22,925	23,497	14	2	960	10	4,590
31	Furnas	63	179,529	28,065	39,515	42,850	69,099	66	4	2,131	75	33,821
32	Gage	168	886,447	64,775	186,708	245,135	389,829	185	57	43,092	581	240,853
33	Garfield	14	15,950	1,570	4,130	4,050	6,150	14			9	3,050
34	Gosper	6	6,755	1,100	1,625	1,225	2,805	6			8	310
35	Grant	3	3,765	650	725	1,550	840	2			2	500
36	Greeley	15	46,775	3,815	16,100	17,605	9,255	13	3	1,300	15	6,180
37	Hall	121	1,041,065	46,870	190,210	603,024	200,961	136	33	27,930	490	237,106
38	Hamilton	41	87,460	10,260	22,225	32,064	22,911	43	2	1,560	33	14,280
39	Harlan	38	85,636	7,920	18,690	36,506	22,520	43	2	1,200	20	7,269
40	Hayes	4	13,950	1,700	2,750	7,350	2,150	4			4	1,225
41	Hitchcock	23	42,885	2,725	11,150	12,800	16,160	23	1	750	13	4,667
42	Holt	57	122,416	6,890	30,169	49,411	35,946	57	6	3,061	80	13,047
43	Howard	45	103,655	4,980	27,525	32,425	33,725	44	4	2,720	50	19,352
44	Jefferson	70	149,125	11,137	27,203	54,556	56,229	80	3	1,600	58	23,428
45	Johnson	88	120,262	6,155	20,395	35,414	58,298	99	2	1,700	78	29,540
46	Kearney	50	72,472	2,985	12,850	22,958	34,179	59	2	1,095	53	19,452
47	Keith	5	4,135	235	600	1,500	1,800	6			2	252
48	Keyapaha	8	12,935	1,515	3,400	5,140	2,880	8			2	475
49	Kimball	3	5,100	150	1,000	950	3,000	3			3	550
50	Knox	44	122,202	12,475	27,850	49,915	81,962	49	3	1,740	35	14,350
51	Lancaster	318	3,509,229	205,530	742,061	1,405,844	1,156,294	342	293	249,085	2,237	1,027,978
52	Lincoln	21	102,760	2,215	26,800	47,855	25,890	22	3	2,040	249	154,540
53	Loup	4	5,290	350	600	1,150	3,190	4			1	200
54	Madison	111	852,718	50,733	124,475	516,819	160,691	117	29	27,667	262	111,222
55	Merrick	39	87,886	8,505	19,850	32,170	27,361	50	4	2,020	38	18,943
56	Nance	27	113,970	7,803	22,630	23,230	60,305	35	1	1,000	31	12,298
57	Nemaha	51	167,430	13,285	34,080	60,335	59,730	58	4	2,140	68	28,556
58	Nuckolls	71	181,261	19,450	36,925	37,630	87,206	84	8	2,317	97	36,490
59	Otoe	159	1,669,103	84,605	317,249	389,203	878,051	173	50	55,690	731	286,063
60	Pawnee	45	128,421	7,400	30,050	57,944	33,027	46	3	501	36	29,115
61	Perkins	5	2,610	20	150	1,475	965	5				
62	Phelps	50	141,978	15,535	32,609	48,575	45,359	53	5	7,180	117	49,382
63	Pierce	32	167,341	11,980	42,500	44,706	68,155	32	2	1,600	28	12,783
64	Platte	89	554,779	32,276	128,050	126,844	217,609	99	21	17,380	281	126,339
65	Polk	53	142,137	17,690	34,940	53,660	35,847	61	4	1,350	50	19,806
66	Redwillow	37	163,389	8,250	30,775	33,484	40,880	42	13	10,620	137	73,084
67	Richardson	81	284,400	28,795	57,700	97,398	100,516	103	11	6,960	121	45,560
68	Rock	7	13,891	450	8,350	8,476	6,615	8			6	2,182
69	Saline	97	824,739	30,220	74,105	101,028	119,386	107	9	7,680	85	38,485
70	Sarpy	29	119,450	15,025	25,385	51,614	27,456	29	5	8,440	117	45,709
71	Saunders	99	237,121	32,995	44,190	73,562	86,374	114	7	5,360	101	40,379
72	Scotts Bluff	10	11,740	425	2,050	8,015	6,250	11			11	4,036
73	Seward	33	334,863	37,110	56,582	121,354	119,817	39	5	2,670	96	41,089
74	Sheridan	20	51,998	3,100	11,643	19,175	18,080	22			11	4,044
75	Sherman	27	39,806	3,305	8,810	11,475	16,216	30			19	7,521
76	Sioux	7	8,150	825	1,015	3,800	2,510	9			7	1,821

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.										
21,059	\$10,749,706	2,026	\$676,278	770	\$144,704	\$6,935,899	\$556,750	\$218,760	\$5,838,018	\$202,871	\$102,197,707	\$100,856,265	\$1,341,452	\$143,990,102	1
255	181,048	89	23,232	9	1,015	37,798	13,088	2,811	17,617	4,282	877,101	304,628	12,473	789,421	2
59	28,847	2	400	1	200	5,708	498	760	4,455		228,744	226,792	1,952	310,298	3
19	9,805	1	330	2	520	38		14	24		745	690	55	2,895	4
98	60,647	1	300	2	372	4,246	162	1,145	2,936		120,635	118,400	2,235	164,556	5
5	1,473	1	200			6,804	1,898	1,403	2,868	730	97,193	92,258	4,935	209,919	6
12	5,475	3	500	3	300	1,158	145	191	822		12,151	11,544	607	26,162	7
246	106,569	106	23,490	54	11,206	9,921	1,007	671	2,243		66,195	64,980	1,256	108,590	8
92	87,030	7	1,435	3	570	29,545	8,424	3,126	17,721	274	418,839	401,957	16,882	750,651	9
49	25,016	5	1,384	5	786	8,090	3,738	1,433	3,874	150	169,152	164,177	4,975	807,922	10
						8,869	2,192	1,214	5,463		169,594	162,165	7,429	263,577	11
568	280,502	12	2,187	25	3,356	34,926	7,422	6,495	15,199	5,810	487,593	466,251	21,342	952,581	12
33	15,085	2	426			5,185	1,097	699	3,389		80,867	78,148	2,719	136,910	13
1	250	2	410			640	109	302	802		17,729	17,507	222	29,244	14
21	8,820					3,818	558	729	2,681		83,712	82,945	767	66,568	15
38	23,775	4		1	250	3,698	745	847	2,006		48,839	46,306	2,038	102,746	16
91	33,522	17	3,135	14	1,625	15,846	2,714	1,499	11,127	506	282,601	275,467	7,134	433,187	17
75	42,949	6	1,602	1	234	12,889	1,840	1,308	9,721		408,746	399,243	9,503	550,141	18
81	29,895	2	620	4	620	20,560	2,165	1,654	10,726	15	170,477	164,092	6,385	292,174	19
36	14,582	1	181	8	1,281	9,381	1,710	2,041	5,563	17	143,250	140,432	2,818	231,980	20
19	8,716			5	734	1,292	1,990	868	668	62	41,864	40,181	1,180	82,635	21
74	45,769	10	2,810	1	200	4,568	1,450	1,002	2,111		109,042	104,991	4,051	207,779	22
50	26,054	5	820	4	671	10,607	1,593	698	8,271	45	195,968	190,850	5,113	292,014	23
2	750					125	25	12	88		850	736	120	5,050	24
556	21,464	4	825	4	560	7,568	1,341	1,140	4,428	650	231,110	225,006	5,504	816,236	25
466	245,504	58	14,129	10	1,105	115,497	13,712	5,452	96,323	10	659,519	628,389	31,180	1,253,437	26
12,279	6,603,095	1,470	398,247	423	91,064	5,591,247	302,878	181,850	4,961,114	105,405	53,569,109	52,782,678	836,431	113,400,929	27
109	40,609	11	3,746	8	987	16,174	3,958	1,560	10,086	570	412,414	431,921	10,493	603,122	28
35	14,707	1	356	4	457	4,131	621	670	2,840	500	141,298	139,218	2,080	224,583	29
8	4,240			2	350	1,547	325	338	884		70,157	69,792	365	99,424	30
68	31,752	8	1,564	4	505	7,448	2,086	1,339	3,918	100	166,289	163,019	3,270	293,432	31
508	225,566	54	13,574	19	1,713	40,451	11,104	5,930	22,833	1,184	620,217	607,441	12,776	1,138,711	32
7	2,750			2	300	1,688	861	167	660		23,643	27,656	987	47,110	33
1	400	1	110	2	200	398	55	65	278		2,297	2,080	217	5,600	34
13	5,902	1	200	1	100	60	5	20	86		2,972	892	80	8,480	35
					78	1,574	385	276	913		66,772	64,711	2,061	93,565	36
396	210,679	77	28,349	17	3,078	60,267	11,551	6,854	32,262	9,600	463,746	449,899	14,347	949,770	37
28	13,460	3	700	2	120	3,252	1,253	581	1,440	28	72,813	70,987	1,826	132,117	38
16	6,382	4	937			3,017	1,743	397	877		54,800	52,758	1,547	90,303	39
8	1,025			1	200	642	60	256	326		12,769	12,649	120	19,810	40
9	3,817	3	600	1	250	2,547	723	505	1,319		24,900	23,940	1,050	47,024	41
25	11,895	2	506	3	646	5,970	1,793	331	2,746	600	162,150	160,098	2,052	245,161	42
45	18,102	5	1,250			5,732	1,479	604	3,489	100	153,795	148,932	4,863	225,065	43
48	21,060	8	2,064	2	304	8,036	3,228	1,252	3,550		123,072	119,881	3,191	232,268	44
65	27,795	12	1,965	1	80	9,131	4,756	661	3,514	200	140,380	138,283	2,097	245,331	45
48	18,502	3	591	2	359	7,590	2,697	430	1,488	3,025	102,162	97,414	4,748	164,374	46
		1	200	1	52	172	72	44	56		1,870	1,628	242	5,646	47
1	275			1	200	298	10	103	185		10,825	10,131	194	14,660	48
2	500			1	50	49	25	14	10		2,108	1,968	140	5,060	49
32	13,600	2	500	1	250	4,070	1,091	623	3,046		194,215	190,857	3,358	271,922	50
1,952	956,222	264	68,941	21	2,810	302,463	57,355	21,712	172,958	50,487	2,526,500	2,453,878	72,682	4,874,135	51
246	153,990	1	300	2	250	19,013	1,474	1,359	16,180		82,913	79,227	3,686	272,182	52
1	200					39	5	23	11		2,192	1,990	202	4,407	53
223	102,929	21	4,808	18	3,985	60,983	6,139	3,350	51,374	70	550,696	521,016	29,680	879,037	54
36	18,381	2	562			4,223	1,441	652	1,980	150	116,320	113,311	3,018	179,753	55
29	11,978			2	320	7,775	1,232	742	3,301	2,500	76,851	75,274	1,577	180,708	56
61	23,909			1	130	12,365	1,417	857	4,091	6,000	144,251	139,781	4,470	241,360	57
81	33,072	6	3,830	1	88	14,162	5,046	949	7,327	840	218,552	213,998	4,554	343,249	58
617	258,334	151	26,679	13	1,050	172,194	10,478	5,297	152,941	3,478	3,766,299	3,716,823	49,470	4,811,961	59
77	27,470	5	1,100	4	545	6,991	3,724	558	2,709		58,932	45,439	13,498	183,407	60
						152	96	6	50		602	507	95	3,544	61
101	43,012	14	5,820	2	500	6,566	2,820	976	2,770		164,438	156,496	7,942	280,747	62
28	12,783					9,178	797	532	7,799		169,047	165,000	4,047	228,035	63
260	121,538	18	4,418	3	383	30,582	4,066	3,544	22,872	100	504,980	488,929	16,051	796,308	64
42	18,462	6	1,109	2	235	6,112	1,685	803	3,608	16	197,691	193,423	4,268	281,036	65
129	71,708	4	1,090	4	236	5,405	2,259	683	2,463		151,084	145,076	6,008	174,988	66
102	41,281	15	3,517	4	762	21,594	5,605	1,603	13,301	1,025	313,448	310,253	6,195	487,910	67
6	2,182					687	171	65	451		12,727	12,386	341	19,249	68
69	30,072	8	2,340	8	1,073	21,860	4,088	2,546	14,823	400	270,632	267,694	2,988	424,024	69
114	45,004	1	460	1	245	5,042	1,050	569	3,423		79,608	73,832	5,676	192,521	70
88	37,164	12	2,965	1	250	15,022	4,185	1,430	8,757	700	221,617	215,638	5,979	379,096	71
						1,340	823	52	465		21,824	21,057	767	37,385	72
9	3,496	2	560			10,534	3,111	1,816	5,325	232	358,679	353,691	4,988	511,753	73
79	37,006	11	3,080	4	1,023	1,753	393	373	992		37,767	36,462	1,305	68,114	74
6	3,220					1,761	470	382	909		27,078	25,459	1,614	63,375	75
15	6,877	4	647			197	10	112	75		3,647	3,535	112	8,149	76
2	6,990	2	356	3	475										

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 imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
77	Stanton	8	\$17,485	\$700	\$2,600	\$10,925	\$3,260	8	2	\$825	11	\$4,296
78	Thayer	80	153,243	23,075	38,075	46,730	47,363	92	7	2,608	80	30,355
79	Thurston	24	37,920	1,425	8,650	19,070	8,775	25	1	60	17	5,763
80	Valley	46	91,101	5,620	28,600	29,771	27,210	51	3	1,140	53	19,955
81	Washington	40	183,207	15,875	40,075	50,989	76,318	39	15	10,697	117	37,536
82	Wayne	47	114,735	8,950	22,925	44,660	38,200	58	1	600	72	32,055
83	Webster	60	144,302	8,425	20,200	35,043	80,634	68	4	3,440	33	31,465
84	York	84	308,674	23,845	47,975	109,436	127,418	91	11	8,850	152	57,771
85	All other counties ¹	9	20,131	263	11,915	4,700	8,253	9	1	1,080	8	3,566

¹ Includes establishments distributed as follows: Blaine, 1; Dundy, 1; Hooker, 1; Logan, 2; Thomas, 2; Wheeler, 2.

TABLE 7.—MANUFACTURES BY

		5,414	\$71,982,127	\$6,359,075	\$15,822,336	\$23,201,553	\$26,599,163	5,942	2,657	\$2,325,038	24,461	\$11,570,688
1	All industries											
2	Agricultural implements	9	184,081	4,100	10,950	79,163	89,888	9	11	6,705	87	41,128
3	Awnings, tents, and sails	5	54,226			4,555	49,671	7	6	7,360	57	15,830
4	Bicycle and tricycle repairing	51	47,801	2,130	2,170	15,875	24,326	55	4	898	53	21,187
5	Blacksmithing and wheelwrighting	939	1,088,701	154,821	279,173	276,047	378,660	1,064	4	2,058	462	213,437
6	Boots and shoes, custom work and repairing	196	84,559	14,165	22,210	21,649	26,535	206			42	17,657
7	Boots and shoes, factory product	3	48,500	1,000	9,000	8,700	24,800	6	6	3,300	55	17,802
8	Bottling	5	24,150	200	1,050	5,275	17,625	5	1	500	14	7,390
9	Boxes, wooden packing	3	20,275	3,000	6,000	6,075	5,200	2	2	2,500	43	17,930
10	Bread and other bakery products	91	550,604	55,650	136,490	208,930	149,584	102	44	30,689	332	139,233
11	Brick and tile	106	1,275,583	172,050	356,005	230,125	517,353	134	40	26,446	855	327,544
12	Bridges	3	30,300	2,000	300	6,000	22,000	3	6	4,300	86	46,415
13	Brooms and brushes	37	62,358	9,285	9,530	10,720	32,823	44	22	19,220	63	23,236
14	Carpentering	296	387,839	22,503	50,865	74,236	240,230	345	8	3,778	837	450,947
15	Carpets, rug	18	7,560	1,335	1,515	2,175	2,535	18			12	4,545
16	Carriage and wagon materials	5	11,775			1,475	10,300	3	4	3,124	19	8,668
17	Carriages and wagons	45	151,919	18,490	22,923	34,071	76,435	59	9	7,618	135	72,148
18	Cars and general shop construction and repairs by steam railroad companies	23	3,635,267	1,947,600	704,650	593,118	389,999		114	100,401	2,458	1,421,284
19	Cheese, butter, and condensed milk, factory product	93	952,185	29,891	318,572	312,816	290,906	47	66	40,569	333	146,522
20	China decorating	4	11,010	8,000	2,000	300	710	4			6	1,000
21	Clothing, men's, custom work and repairing	193	328,452	17,950	34,950	32,817	243,235	210	36	29,223	487	274,178
22	Clothing, women's, dressmaking	104	465,320	2,480	5,000	9,683	48,157	114	6	2,829	329	82,524
23	Confectionery	28	170,363	870	2,070	38,143	129,285	40	63	26,520	212	63,521
24	Cooperage	16	133,870	7,375	23,730	32,800	69,965	18	7	8,268	147	72,813
25	Dyeing and cleaning	11	7,145			5,265	1,880	12	2	936	16	5,666
26	Electrical apparatus and supplies	3	19,265			8,400	10,865	2	2	1,872	12	8,707
27	Electrical construction and repairs	9	6,805			1,770	5,035	10	4	382	18	11,670
28	Flouring and grist mill products	305	4,335,934	353,470	934,903	1,639,576	1,357,985	365	138	101,721	693	303,687
29	Food preparations	8	294,108	20,250	56,000	28,040	139,818	4	42	36,000	28	12,148
30	Foundry and machine shop products	38	320,826	29,030	33,359	138,402	115,035	44	19	13,580	209	107,535
31	Fruits and vegetables, canning and preserving	5	123,623	6,800	35,000	41,325	40,498	6	9	6,400	161	21,686
32	Fur goods	6	97,020	29,000	6,000	2,570	59,450	9	4	1,118	57	19,158
33	Furniture, cabinetmaking, repairing, and upholstering	55	95,515	9,080	14,775	16,250	55,410	66			54	26,191
34	Furniture, factory product	5	70,400	100	4,800	5,800	59,700	5	10	10,000	132	45,344
35	Gas, illuminating and heating	9	6,950,168	315,200	499,184	5,984,512	157,272	89	89	36,885	230	79,852
36	Gas machines and meters	3	6,560			2,050	4,500	4	1	1,200	6	2,620
37	Grease and tallow	3	33,979	2,000	10,000	18,800	3,679		4	2,290	7	6,820
38	Hardware	3	35,000	1,000	8,000	6,800	24,200	2	3	1,000	12	3,700
39	Ironwork, architectural and ornamental	4	248,221	60,000	43,000	30,770	109,451	3	14	15,320	133	76,610
40	Leather goods	3	4,100	100	400	950	2,650	2			4	895
41	Liquors, malt	19	2,678,593	228,023	775,735	784,728	890,107	14	45	94,215	200	131,455
42	Liquors, vinous	3	2,880	120	950	560	1,250	8			2	850
43	Lock and gun smithing	16	15,384	1,300	2,700	6,550	4,234	17	1	250	12	3,854
44	Looking-glass and picture frames	11	43,828			2,720	41,108	10	64	31,580	37	18,906
45	Lumber and timber products	23	117,380	70,805	5,270	27,825	13,460	30			31	10,727
46	Lumber, planing mill products, including sash, doors, and blinds	21	378,966	56,100	61,619	52,523	208,724	19	32	27,525	294	129,441
47	Marble and stone work	8	54,050	3,775	1,625	22,350	26,300	10	3	2,040	57	84,000
48	Masonry, brick and stone	79	106,915	7,625	8,070	30,675	120,545	96	3	3,120	618	314,097
49	Mattresses and spring beds	5	113,289	4,500	13,500	12,050	83,239	4	8	7,500	81	24,127
50	Millinery, custom work	313	441,809	26,715	65,725	15,256	334,113	375	66	29,078	393	100,022
51	Mineral and soda waters	35	131,215	11,885	15,275	71,850	32,205	37	12	11,580	53	25,135
52	Monuments and tombstones	47	199,465	26,750	33,355	3,058	131,302	52	20	15,520	120	61,908
53	Optical goods	3	12,100			2,600	9,500	4	2	1,220	11	5,549
54	Painting, house, sign, etc	136	123,592	11,755	15,180	17,144	79,513	160	14	10,494	318	161,786
55	Paints	3	881,657	60,000	358,000	98,500	367,157		41	58,456	93	53,020
56	Paper hanging	12	31,425	300	300	2,040	28,285	14	6	3,300	59	33,107

BY COUNTIES: 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.										
8	\$3,811	3	\$485			\$1,217	\$912	\$81	\$224		\$31,534	\$30,264	\$1,270	\$43,410	77
73	29,087	3	686	4	\$582	7,340	1,696	954	4,090	\$700	192,169	189,076	3,093	267,712	78
15	5,328	2	425			1,963	1,080	216	667		17,276	16,939	837	88,351	79
44	18,430	6	1,245	3	280	4,469	1,333	687	2,274	175	105,641	102,674	2,947	169,685	80
94	34,309	17	2,402	6	825	17,773	1,451	1,025	15,297		185,344	129,061	6,283	270,990	81
59	28,505	10	3,200	3	850	8,039	2,319	557	5,163		89,209	84,715	4,494	190,140	82
78	30,370	3	820	2	275	7,438	2,568	685	4,150	85	165,844	162,422	3,422	279,384	83
133	52,678	18	4,805	1	288	19,093	3,881	2,133	10,979	2,100	262,213	255,660	6,553	445,593	84
6	3,238	1	256	1	72	571	165	213	193		8,208	7,788	420	18,042	85

SPECIFIED INDUSTRIES: 1900.

21,059	\$10,749,706	2,626	\$676,278	776	\$144,704	\$6,935,399	\$555,750	\$248,760	\$5,838,018	\$292,871	\$102,197,707	\$100,856,255	\$1,341,452	\$143,990,102	1
83	40,728			4	400	4,416	817	374	3,455		82,856	80,449	2,407	176,446	2
14	7,844	43	7,986			6,712	2,907	165	3,640		62,520	61,990	530	124,470	3
51	20,821			2	366	7,745	4,867	180	2,648		95,065	93,879	1,186	93,988	4
458	212,789			4	648	50,644	21,854	7,889	19,256	1,545	451,021	411,076	39,948	1,395,024	5
39	17,162	1	810	2	185	14,600	11,298	612	2,160	500	57,495	54,942	2,553	180,766	6
18	8,812	37	8,490			2,000	250	205	1,545		47,005	46,208	797	73,210	7
12	6,940			2	450	567	422	65	80		23,999	23,794	255	49,410	8
48	17,930					1,157	220	205	732		58,888	53,288	600	78,640	9
243	121,345	79	15,883	10	2,005	65,888	20,145	2,824	42,619		505,056	493,672	21,384	1,061,567	10
837	324,256			18	3,288	41,934	6,436	5,003	20,895		203,247	43,689	150,558	839,815	11
86	46,415					3,821		50	3,271		297,015	296,875	140	873,185	12
62	23,142			1	94	16,923	924	341	1,855	13,803	118,502	117,969	533	221,009	13
834	450,164			3	783	153,071	7,207	1,822	16,575	127,467	1,195,091	1,192,861	2,330	2,155,789	14
8	3,744	4	801			1,408	927	75	406		15,560	15,217	343	24,867	15
16	7,720	2	792	1	156	2,962	1,750	1,155	1,155		23,510	23,420	90	52,400	16
134	72,013			1	130	14,386	7,691	1,230	4,165	1,800	82,755	79,372	3,383	248,182	17
2,458	1,421,284					92,946		24,824	68,122		1,009,830	983,196	46,634	2,024,461	18
324	144,676	8	1,726	1	120	38,823	4,976	4,212	29,533	102	1,854,228	1,806,789	47,439	2,253,893	19
483	254,281	6	1,000			448	318	125	5		2,571	2,471	100	6,860	20
		48	18,671	6	1,226	56,291	33,103	2,225	19,648	1,315	321,504	316,453	5,051	920,125	21
10	5,680	318	76,684	1	160	17,472	11,481	214	5,802	25	89,497	87,816	1,681	284,488	22
105	43,646	108	19,757	1	118	43,784	21,417	687	21,630		256,831	251,038	5,793	499,245	23
133	70,190			9	2,623	13,529	1,697	488	11,344		801,433	299,413	2,020	493,370	24
5	2,784	10	2,732	1	150	3,240	1,570	29	1,641		4,813	3,453	860	26,575	25
12	8,707					1,632	530	72	1,030		24,395	23,470	925	44,950	26
18	11,676					2,599	1,816	35	1,248		21,884	21,301	83	48,112	27
656	355,060	37	7,836	5	791	171,948	14,109	27,221	130,102	516	6,385,719	6,292,770	92,949	8,100,794	28
27	12,593	1	350			42,753	457	1,050	11,046	200	98,151	94,865	3,286	253,015	29
205	106,763	1	300	3	472	16,043	5,131	2,308	8,556	50	219,423	211,108	8,815	446,504	30
81	13,200	50	6,000	80	2,486	10,325		500	9,825		180,573	126,608	1,965	210,688	31
11	5,916	46	13,242			6,252	2,940	650	2,662		70,795	70,540	255	120,409	32
52	25,955			2	236	6,510	4,351	603	1,556		70,227	68,930	1,297	153,922	33
119	40,184	12	4,960	1	200	3,674	1,280	456	1,810	128	123,726	122,470	1,256	211,750	34
290	79,852					135,182	1,250	29,411	104,521		134,352	114,539	19,813	524,852	35
6	2,020					1,032	564	22	446		8,524	3,464	60	14,250	36
7	6,820					2,905	850	95	1,980		24,966	22,454	2,512	57,610	37
9	8,400			3	300	2,120	295	60	1,765		7,272	6,957	315	26,610	38
133	76,610					12,760	1,560	1,125	10,075		201,394	192,607	8,727	341,000	39
2	710			2	185	124	55	9	60		1,440	1,350	90	4,150	40
197	180,495	3	960			635,031	3,180	14,694	617,157		311,783	276,095	35,688	1,483,501	41
2	350					6		6							
11	3,630	1	224			2,741	1,703	96	912		1,077	1,012	65	2,981	42
37	18,906					10,014	6,106	307	3,601		6,535	6,136	399	24,760	43
28	10,196	1	156	2	375	830	15	335	480		51,680	51,494	186	118,799	44
286	128,541			8	900	18,428	4,636	2,294	11,498		27,123	27,123		51,773	45
											561,731	555,856	6,875	886,333	46
57	34,008					4,993	2,028	95	2,870		30,165	28,485	1,680	100,545	47
613	314,097					81,927	1,217	604	8,517	71,589	659,772	659,095	677	1,286,885	48
67	20,092	13	3,935	1	100	6,324	1,244	396	4,634		103,675	107,200	1,475	474,641	49
6	1,050	383	95,472	4	500	74,574	52,091	3,496	18,737	250	535,862	530,816	5,046	1,051,938	50
49	24,550	1	300	3	285	10,145	5,595	773	3,777		44,615	41,281	3,334	155,630	51
120	61,908					10,139	2,537	782	6,820		189,128	188,384	744	387,060	52
11	5,549					3,602	2,550	52	1,000		9,892	9,610	282	28,000	53
314	161,292			4	494	20,337	10,967	844	7,276	1,250	164,584	163,891	693	505,209	54
82	49,590					70,405	480	2,147	67,778		534,256	521,297	12,950	838,151	55
59	33,107					4,004	2,453	153	1,398		44,670	44,590	80	111,418	56

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.
57 Patent medicines and compounds.....	23	\$81,741	\$14,310	\$11,590	\$7,947	\$47,894	20	30	\$24,137	41	\$18,981
58 Paving and paving materials.....	16	300,838	57,539	22,060	30,216	141,028	15	14	18,128	369	149,388
59 Photography.....	142	163,339	16,595	28,945	68,440	49,359	150	7	5,560	91	37,456
60 Plastering and stuccowork.....	34	63,492	1,280	29,943	25,894	6,475	37	2	1,420	79	37,322
61 Plumbing, and gas and steam fitting.....	81	277,952	3,775	10,025	40,010	224,142	97	84	20,862	352	215,415
62 Printing and publishing, book and job.	62	633,028	8,720	13,440	376,937	233,931	57	72	65,061	549	256,076
63 Printing and publishing, newspapers and periodicals.	492	2,252,555	62,770	164,865	1,118,389	916,531	506	277	242,814	1,834	626,597
64 Roofing and roofing materials.....	13	51,586	725	4,700	17,330	28,831	11	8	7,310	54	29,418
65 Saddlery and harness.....	391	1,840,511	97,646	193,112	99,185	950,568	429	69	58,915	583	280,247
66 Sewing machine repairing.....	3	1,395			155	1,240	8	1	72	1	290
67 Shirts.....	5	12,700			950	11,750	5	6	2,652	30	9,650
68 Slaughtering and meat packing, wholesale.	8	16,488,545	823,209	4,060,054	1,327,895	10,277,637	1	721	684,240	6,083	2,986,828
69 Slaughtering, wholesale, not including meat packing.	4	36,050	4,550	4,400	2,600	24,500	6			7	4,035
70 Soap and candles.....	3	234,216	29,498	36,190	31,044	187,484		36	31,820	78	35,543
71 Sugar and molasses, beet.....	8	1,967,242	36,000	360,000	1,431,000	140,242		35	44,897	174	102,231
72 Sugar and molasses, refining.	6	168,397	1,880	460	15,507	150,550	5	21	86,600	34	15,046
73 Tinsmithing, coppersmithing, and sheet-iron working.	224	404,448	38,310	66,185	83,550	216,403	268	37	17,535	298	156,502
74 Tobacco, cigars and cigarettes.....	141	264,878	17,625	20,250	9,515	217,483	158	9	6,536	399	171,109
75 Trunks and valises.....	3	14,020			1,350	12,670	3	2	1,170	9	5,336
76 Typewriter repairing.....	3	400			300	100				7	3,880
77 Vinegar and cider.....	4	136,869	22,000	20,800	26,824	67,245	8	3	2,500	51	21,325
78 Watch, clock, and jewelry repairing.....	174	217,792	40,960	43,165	58,005	75,662	195	2	234	97	51,140
79 Windmills.....	4	282,299	9,000	46,961	37,171	189,167	4	30	23,660	194	81,758
80 Wirework, including wire rope and cable.	10	72,510	925	1,475	18,235	52,125	12	9	5,870	32	12,654
81 All other industries ¹	88	19,146,889	1,260,075	5,689,038	7,179,797	5,017,479	78	165	177,059	2,125	875,418

¹ Embraces ammunition, 1; bags, other than paper, 1; baking and yeast powders, 2; baskets, and rattan and willow ware, 1; bookbinding and blank book making, 1; boot and shoe uppers, 1; boxes, cigar, 1; boxes, fancy and paper, 1; buttons, 2; butter, reworking, 2; calcium lights, 1; cars and general shop construction and repairs by street railroad companies, 1; chemicals, 1; cleansing and polishing preparations, 1; clothing, men's, factory product, 2; clothing, women's, factory product, 1; coffee and spice, roasting and grinding, 1; cotton goods, 1; druggists' preparations, not including prescriptions, 1; electroplating, 2; engraving, steel, including plate printing, 1; fertilizers, 1; flags and banners, 1; flavoring extracts, 2; furnishing goods, men's, 1; gas and lamp fixtures, 1; glass, cutting, staining, and ornamenting, 1; gloves and mittens, 1; gold and silver, reducing and refining, not from the ore, 1; hairwork, 2; hand knit goods, 1; hand

TABLE 8.—MANUFACTURES IN CITIES

LINCOLN.

1	All industries.....	250	\$2,608,992	\$157,800	\$381,615	\$1,078,850	\$990,827	269	244	\$207,544	1,786	\$789,356
2	Bicycle and tricycle repairing.....	6	5,015			1,560	3,455	8			4	1,250
3	Blacksmithing and wheelwrighting.....	24	21,475	4,450	4,250	4,855	7,920	27			38	18,930
4	Boots and shoes, custom work and repairing.	10	1,135	165		610	860	10			2	760
5	Bread and other bakery products.....	4	9,650	800	1,600	2,760	4,500	5			25	8,035
6	Brooms and brushes.....	3	16,400	1,500	2,200	4,700	8,000	4	15	10,700	16	5,000
7	Carpentering.....	10	19,200	1,800	4,125	4,240	9,035	11			48	27,910
8	Carriages and wagons.....	4	4,525	1,500	500	800	1,725	5			8	4,000
9	Clothing, men's, custom work and repairing.	12	32,335			2,435	29,900	14	14	12,555	115	73,736
10	Clothing, women's, dressmaking.....	7	4,751			755	3,996	8	3	1,593	47	11,420
11	Confectionery.....	9	22,113	350	1,800	5,328	14,635	14	6	8,980	53	13,450
12	Dyeing and cleaning.....	3	1,100			900	200	3			4	925
13	Foundry and machine shop products.....	8	53,775	14,100	4,600	22,200	12,875	11	1	400	37	18,750
14	Lock and gun smithing.....	3	2,400			1,050	1,350	3			4	1,650
15	Lumber, planing mill products, including sash, doors, and blinds.	3	78,990	7,650	24,700	12,400	34,240	3	14	11,400	80	31,641
16	Masonry, brick and stone.....	4	23,165	100	100	2,415	20,550	6			42	19,000
17	Millinery, custom work.....	7	32,200			300	31,900	7	16	6,000	27	5,300
18	Monuments and tombstones.....	4	45,750	10,000	16,200	1,050	18,500	6	7	7,500	21	16,400
19	Painting, house, sign, etc.....	8	11,650	300	800	1,605	8,945	13	5	2,016	48	21,241
20	Photography.....	10	14,900	100		9,950	4,850	11	1	520	19	7,600
21	Plumbing, and gas and steam fitting.....	10	30,575			2,575	28,000	8	6	4,760	65	35,025
22	Printing and publishing, book and job.	10	94,270	6,400	7,000	63,553	17,317	9	10	7,610	109	42,935
23	Printing and publishing, newspapers and periodicals.	18	418,124	23,500	48,500	156,775	194,349	15	49	44,194	239	120,482
24	Saddlery and harness.....	6	99,675			8,575	91,100	7	5	5,100	76	28,900
25	Tinsmithing, coppersmithing, and sheet-iron working.	11	40,675	1,500	500	6,800	31,875	9	13	6,200	37	20,880
26	Tobacco, cigars and cigarettes.....	8	10,518	150	150	1,007	9,151	9	1	200	23	12,530
27	Watch, clock, and jewelry repairing.....	7	9,100			5,875	3,225	7			9	4,872
28	All other industries ¹	41	1,505,526	83,700	269,225	753,727	398,874	36	78	76,816	540	227,781

¹ Embraces awnings, tents, and sails, 2; boot and shoe uppers, 1; brick and tile, 1; carpets, rug, 1; cars and general shop construction and repairs by steam railroad companies, 1; cheese, butter, and condensed milk, factory product, 1; coffee and spice, roasting and grinding, 1; electrical construction and repairs, 2; flouring and grist mill products, 1; food preparations, 1; fur goods, 2; furniture, cabinetmaking, repairing, and upholstering, 2; furniture, factory product, 1; gas, illuminating and heating, 1; hairwork, 2; ice, artificial, 1; ironwork, architectural and ornamental, 1; leather, tanned, curried, and finished, 1; marble and stone work, 2; mattresses

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 number.	Wages.	Average number.	Wages.	Average number.	Wages.										
80	\$15,806	11	\$3,175			\$38,340	\$3,209	\$507	\$84,624		\$65,268	\$64,498	\$770	\$189,948	57
369	149,388					12,857	1,605	931	9,601	\$720	130,686	126,877	3,809	353,574	58
54	26,113	35	11,193	2	\$150	34,323	14,438	974	18,503	408	100,615	97,594	3,021	320,756	59
79	37,322					1,816	924	36	356	500	69,459	58,934	525	138,437	60
351	215,165	1	250			32,732	14,679	1,201	14,897	2,015	456,774	453,201	3,573	988,818	61
440	225,865	93	26,200	16	3,011	81,612	25,021	3,382	46,351	6,858	324,932	311,970	12,062	878,531	62
947	542,826	212	58,721	175	25,050	377,666	60,354	9,719	248,578	59,015	624,472	593,035	31,437	2,553,051	63
54	29,448					9,503	1,690	187	7,626		86,335	85,823	512	165,795	64
581	279,997			2	250	95,915	33,352	8,440	53,973	150	926,819	916,524	10,295	1,783,742	65
1	290					402	262	23	117		903	858	45	2,747	66
3	2,840	27	6,810			2,511	1,276	60	1,175		13,391	12,996	395	38,595	67
5,596	2,858,466	173	57,425	314	70,937	1,591,078	18,708	43,862	1,528,508		62,838,762	62,484,267	354,495	71,018,339	68
6	8,975			1	60	438		73	365		209,424	208,710	714	262,027	69
48	25,727	25	9,006	5	810	118,093	800	710	117,083		376,787	368,503	8,284	698,959	70
163	98,878			11	3,353	57,382		3,726	53,656		317,644	289,042	28,602	481,593	71
31	14,496	3	550			11,853	3,384	269	8,200		144,571	142,385	2,186	268,050	72
290	154,642	3	840	5	1,020	81,937	17,133	3,359	11,180	265	288,965	283,003	5,902	693,066	73
279	135,816	84	29,640	36	5,653	99,690	15,123	1,703	82,839	25	285,561	282,740	2,821	702,037	74
9	5,336					3,153	2,520	83	550		6,141	6,080	61	22,000	75
6	3,680			1	200	780					2,278	2,242	36	4,240	76
26	14,825	25	6,500			8,325	310	1,040	6,975		101,612	99,102	2,510	154,506	77
95	50,740			2	400	27,138	17,254	1,826	7,918	140	59,924	57,830	2,094	261,178	78
194	81,758					11,677	100	1,102	10,475		139,406	137,487	1,979	274,566	79
82	12,654					4,332	1,192	268	2,872		65,342	64,167	1,175	136,832	80
1,339	690,863	715	170,971	71	13,584	2,259,040	28,419	20,669	2,207,277	2,685	16,672,852	16,366,819	305,533	29,758,611	81

stamps, 2; hosiery and knit goods, 1; ice, artificial, 1; iron and steel, doors and shutters, 1; jewelry, 2; labels and tags, 1; lamps and reflectors, 2; lead, bar, pipe, and sheet, 1; lead, smelting and refining, 1; leather, tanned, curried, and finished, 2; liquors, distilled, 2; malt, 1; mantels, slate, marble, and marbleized, 1; mirrors, 1; models and patterns, 1; mucilage and paste, 1; musical instruments and materials, not specified, 1; musical instruments, pianos and materials, 1; oil, linseed, 1; paper goods, not elsewhere specified, 1; photographic materials, 1; photolithography and photoengraving, 1; pottery, terra cotta, and fire-clay products, 1; printing and publishing, music, 1; sausage, 2; scales and balances, 1; starch, 2; steam packing, 1; stereotyping and electrotyping, 2; surgical appliances, 1; taxidermy, 2; tobacco, chewing, smoking, and snuff, 2; tools, not elsewhere specified, 1; upholstering materials, 1; wire, 1.

BY SPECIFIED INDUSTRIES: 1900.

LINCOLN.

1,485	\$723,579	233	\$63,307	18	\$2,470	\$266,160	\$55,918	\$15,178	\$144,677	\$50,387	\$2,173,345	\$2,119,929	\$53,416	\$4,105,951	1
4	1,250					798	693	13	92		2,570	2,548	22	8,000	2
38	18,930					3,537	2,427	150	960		23,448	22,521	927	64,588	3
2	760					960	877	8	75		3,005	2,990	15	10,165	4
21	7,450	3	420	1	165	1,825	915	50	860		19,565	18,790	775	41,020	5
16	5,000					14,903	18	105	977	13,803	66,801	66,801		116,945	6
48	27,910					27,209	728	108	375	26,000	57,560	57,377	183	127,500	7
8	4,000					565	370	85	110		4,200	4,145	55	11,650	8
95	64,476	20	9,260			7,546	4,260	334	2,952		60,460	60,170	290	194,420	9
		47	11,420			1,355	1,046	14	295		4,770	4,770		29,510	10
31	9,800	22	4,090			4,873	3,404	280	1,189		55,669	54,430	1,239	114,130	11
		3	775	1	150	613	288		325		745	655	180	4,300	12
35	13,450			1	300	3,391	1,020	698	1,873		20,750	18,815	1,935	58,975	13
4	1,650					1,168	875	28	265		1,785	1,755	30	6,000	14
72	30,741			8	900	3,809		844	2,905		128,305	128,225	580	207,500	15
42	19,000					550			550		48,830	48,770	60	107,600	16
		27	5,800			5,780	4,400	205	1,175		60,700	60,700		94,400	17
21	16,400					1,515	360	66	1,089		44,108	44,070	36	90,090	18
48	24,244					2,943	1,560	108	1,275		22,550	22,485	65	74,665	19
13	5,524	6	2,076			6,317	2,512	100	3,705		11,790	11,415	375	37,900	20
64	34,775	1	250			4,616	2,380	211	2,025		101,556	100,886	670	167,480	21
88	88,700	21	4,235			11,197	4,606	1,069	5,522		58,883	56,458	2,425	143,920	22
200	115,287	36	10,855	3	340	73,518	2,686	1,942	58,301	10,584	196,176	192,685	3,491	486,076	23
76	28,900					6,898	3,970	532	2,396		37,710	37,295	415	154,090	24
36	20,480	1	400			5,815	3,695	480	1,640		38,080	32,265	815	93,050	25
21	12,080	1	250	1	200	8,093	2,239	59	5,745		18,412	18,412		46,970	26
9	4,872					2,715	2,090	80	545		3,365	3,365		17,073	27
492	213,340	45	18,976	8	415	63,656	8,449	7,611	47,596		1,036,054	997,231	38,823	1,597,472	28

and spring beds, 2; mineral and soda waters, 2; paints, 1; patent medicines and compounds, 1; paving and paving materials, 1; plastering and stucco work, 2; roofing and roofing materials, 1; sewing machine repairing, 1; shirts, 1; slaughtering, wholesale, not including meat packing, 1; trunks and valises, 1; vinegar and cider, 1; wire, 1.

TABLE S.—MANUFACTURES IN CITIES

OMAHA.

	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	837	\$34,282,063	\$3,940,965	\$7,232,340	\$14,197,820	\$8,910,938	887	1,015	\$895,415	7,422	\$3,755,816
2	Agricultural implements	3	52,000	2,000	4,775	18,725	26,500	5	5	2,325	38	22,400
3	Bicycle and tricycle repairing	12	6,800			3,450	3,350	15	8	198	26	10,890
4	Blacksmithing and wheelwrighting	53	42,955	4,150	8,900	9,405	20,500	63	4	2,056	70	54,608
5	Boots and shoes, custom work and repairing.	44	8,405	500	500	4,885	2,520	46			14	6,416
6	Bottling	3	20,175		600	2,075	17,500	3	1	500	12	6,610
7	Bread and other bakery products	43	348,437	36,850	95,500	125,600	90,487	45	34	21,743	197	88,019
8	Brick and tile	9	109,750	11,300	27,700	17,950	52,800	8	12	7,280	177	64,490
9	Brooms and brushes	4	14,600	3,000	1,750	2,000	7,850	5			11	5,300
10	Carpentering	42	89,173	1,080	3,880	9,015	75,298	47	3	2,140	202	125,171
11	Carriage and wagon materials	5	11,775			1,475	10,300	3	4	3,124	19	8,668
12	Carriages and wagons	10	49,750		3,300	12,400	34,050	16	5	4,570	71	42,636
13	Clothing, men's, custom work and repairing.	49	167,395	5,000	10,000	14,645	127,750	56	21	15,628	199	119,218
14	Clothing, women's, dressmaking	31	41,060	480	400	3,920	36,260	34	8	1,236	164	45,651
15	Confectionery	11	139,960	420		30,540	109,000	17	57	22,540	154	49,394
16	Dyeing and cleaning	5	5,210			3,730	1,480	6	2	936	11	4,273
17	Electrical construction and repairs	4	4,805			1,120	3,685	4	4	382	13	9,901
18	Flouring and grist mill products	4	95,200	25,250	13,600	19,500	31,850	4	6	4,660	14	7,940
19	Food preparations	3	154,435	15,000	25,000	4,775	109,660	2	39	35,400	20	8,900
20	Foundry and machine shop products	7	72,850	3,000	1,000	33,650	35,200	8	7	4,740	81	42,590
21	Fur goods	4	87,920	29,000	6,000	1,770	51,150	7	4	1,118	48	16,208
22	Furniture, cabinetmaking, repairing, and upholstering.	14	12,570	1,400	1,300	4,025	5,845	15			26	13,692
23	Furniture, factory product	3	37,200		4,500	3,000	29,700	3	7	6,000	68	24,744
24	Liquors, malt	6	1,736,824	146,301	528,385	579,314	482,824	2	30	79,755	118	82,091
25	Lock and gun smithing	6	3,525			1,800	1,725	7	1	250	3	1,064
26	Looking-glass and picture frames	5	40,150			2,050	38,100	3	64	31,580	31	16,984
27	Lumber, planing mill products, including sash, doors, and blinds.	6	259,176	46,000	30,719	23,123	159,334	4	18	16,125	172	76,890
28	Masonry, brick and stone	23	107,245	6,000	4,020	19,160	78,065	30	3	3,120	427	222,434
29	Millinery, custom work	18	72,725			2,820	69,905	22	40	19,542	108	36,069
30	Mineral and soda waters	4	85,950			27,600	8,350	1	8	9,720	21	12,142
31	Monuments and tombstones	7	32,685	9,200	4,950	2,135	16,400	7	1	1,200	14	8,904
32	Optical goods	3	12,100			2,600	9,500	4	2	1,220	11	5,549
33	Painting, house, sign, etc.	36	63,900	8,400	8,900	5,270	41,330	40	8	8,228	117	71,923
34	Paper hanging	11	31,225	800	300	1,990	28,135	13	6	3,300	58	32,363
35	Patent medicines and compounds	11	46,200	1,600	4,000	4,250	36,350	8	14	11,840	26	13,860
36	Paving and paving materials	6	240,433	46,339	14,310	49,266	130,023	2	11	10,428	159	65,645
37	Photography	13	32,570		1,200	12,900	18,470	14	4	3,780	25	14,641
38	Plastering and stucco work	4	1,960			800	1,160	4			9	6,438
39	Plumbing, and gas and steam fitting	32	150,895		100	16,045	134,250	37	23	13,932	184	124,386
40	Printing and publishing, book and job	38	459,714			279,809	179,905	32	59	55,737	395	196,739
41	Printing and publishing, newspapers and periodicals.	37	681,589	2,360		296,298	382,931	30	180	163,901	244	212,903
42	Roofing and roofing materials	6	42,800		4,100	14,850	28,850	5	8	7,310	44	25,641
43	Saddlery and harness	17	233,142	16,350	9,400	10,816	196,576	25	37	30,233	150	83,226
44	Shirts	4	12,100			750	11,350	4	6	2,652	23	8,150
45	Tinsmithing, coppersmithing, and sheet-iron working.	34	98,434	7,000	7,835	17,009	66,590	38	18	5,715	94	58,999
46	Tobacco, cigars and cigarettes	28	53,102	3,000	3,200	1,185	45,717	30	3	2,176	100	43,386
47	Typewriter repairing	3	400			300	100				7	3,880
48	Watch, clock, and jewelry repairing	24	42,145	14,000	4,500	10,150	13,495	20	2	234	39	24,430
49	All other industries ¹	92	28,229,144	3,494,785	6,392,766	12,487,875	5,853,768	84	248	276,811	3,213	1,529,407

¹ Embraces awnings, tents, and sails, 2; bags, other than paper, 1; baking and yeast powders, 2; baskets, and rattan and willow ware, 1; bookbinding and blank book making, 1; boots and shoes, factory product, 2; boxes, cigar, 1; boxes, fancy and paper, 1; boxes, wooden packing, 1; bridges, 2; buttons, 1; calcium lights, 1; carpets, rag, 2; cars and general shop construction and repairs by steam railroad companies, 1; cars and general shop construction and repairs by street railroad companies, 1; cheese, butter, and condensed milk, factory product, 2; china decorating, 1; cleansing and polishing preparations, 1; clothing, men's, factory product, 2; clothing, women's, factory product, 1; cooperage, 2; druggists' preparations, not including prescriptions, 1; electrical apparatus and supplies, 2; electroplating, 2; engraving, steel, including plate printing, 1; flags and banners, 1; flavoring extracts, 2; gas and lamp fixtures, 1; gas, illuminating and heating, 1; gas machines and meters, 1; glass, cutting, staining, and ornamenting, 1; gloves and mittens, 1; gold and silver, reducing and refining, not from the ore, 1; hand stamps, 2;

SOUTH OMAHA.

1	All industries	139	\$16,471,329	\$359,882	\$4,040,087	\$1,400,639	\$10,171,221	150	774	\$738,429	6,606	\$3,268,591
2	Blacksmithing and wheelwrighting	13	9,145	575	3,750	1,810	3,010	14			14	9,340
3	Boots and shoes, custom work and repairing.	5	370			265	105	5			2	1,176
4	Bread and other bakery products	7	9,270		200	2,370	6,700	8	1	400	25	11,406
5	Brick and tile	3	57,200		16,500	23,200	17,500	4	4	3,300	43	17,460
6	Carpentering	22	14,251	2,550	3,800	4,310	8,691	26			89	52,204
7	Clothing, men's, custom work and repairing.	5	4,955			330	4,625	5			21	13,100
8	Flouring and grist mill products	3	15,550	1,750	3,300	4,500	6,000	5			2	900
9	Masonry, brick and stone	8	5,545		50	2,025	3,470	11			61	28,034
10	Millinery, custom work	5	11,450	2,500	3,000	275	5,675	7			15	2,440
11	Painting, house, sign, etc	9	6,147	500	500	1,172	3,975	12			15	9,642

BY SPECIFIED INDUSTRIES: 1900—Continued.

OMAHA.

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.									
6,094	\$3,415,884	1,298	\$824,128	90	\$15,804	\$3,854,688	\$268,847	\$34,115	\$3,323,702	\$183,024	\$22,118,388	\$21,682,669	\$430,719	\$42,991,876
38	22,400					1,767	750	72	945		44,494	43,218	1,276	89,356
25	10,730			1	160	2,836	1,509	23	1,254	50	11,300	10,975	325	35,080
67	54,200			8	408	9,172	7,558	242	1,172	200	36,747	33,590	2,857	169,183
14	6,416					4,917	4,682	46	239		14,668	14,133	520	47,460
10	6,160			2	450	347	322	22	3		25,049	24,849	200	42,100
148	78,049	42	8,540	7	1,430	35,018	11,613	1,720	21,685		330,059	316,455	13,604	680,187
174	64,010			3	480	6,895	1,900	870	3,625		35,443	2,467	32,976	149,875
11	5,300					729	282	97	350		15,948	15,688	260	32,020
200	124,771			2	400	75,819	1,802	232	4,157	69,628	264,403	264,816	87	546,400
16	7,720	2	792	1	156	2,962	1,750	87	1,155		23,510	23,420	90	52,400
70	42,506				130	9,072	6,057	315	2,000	700	37,930	36,537	1,393	130,930
185	113,958	9	4,138	5	1,122	31,382	18,980	804	11,578	20	133,567	132,567	1,095	396,466
10	5,680	153	39,811	1	160	10,369	5,723	88	4,563		55,655	55,273	382	160,480
75	34,022	79	15,872			37,557	17,176	364	20,017		196,123	192,099	4,024	371,535
4	2,316	7	1,957			2,409	1,084	24	1,301		2,981	2,481	650	18,575
13	9,901					1,862	836	30	996		13,584	13,501	83	32,062
14	7,940					2,960	75	585	2,290		174,312	171,974	2,338	211,938
20	8,900					36,512	336	600	35,376	200	79,084	77,038	2,046	211,634
79	42,418			2	172	6,056	3,244	429	2,333	50	116,599	114,307	2,292	204,634
9	4,916	39	11,292			4,490	2,088	590	1,812		64,335	64,080	255	102,509
25	13,556			1	136	2,228	1,728	43	457		12,932	12,509	423	41,185
54	21,984	9	2,760			2,673	780	305	1,460	128	76,396	75,740	656	130,600
116	81,731	2	360			490,768	180	11,968	478,620		218,792	196,779	21,013	1,029,500
2	840	1	224			1,200	708	10	482		2,030	1,918	112	9,420
31	16,984					9,495	5,775	255	3,465		48,450	48,310	140	112,750
172	76,890					12,075	3,300	1,225	7,550		391,811	388,357	3,454	599,000
427	222,434					65,252	528	480	7,080	57,214	439,585	439,120	465	852,062
20	11,842	106	35,719	2	350	29,650	21,000	707	7,833		152,844	152,759	85	314,920
14	8,904	1	300			6,315	4,440	125	1,750		16,491	14,276	2,215	57,507
11	5,549					1,022	410	77	535		30,916	30,795	121	61,650
117	71,926					3,602	2,550	52	1,000		9,892	9,610	282	28,000
58	32,308					10,978	5,219	433	4,171	1,150	57,419	57,169	250	211,084
17	11,020					3,806	2,357	153	1,386		43,615	43,540	75	108,613
159	65,645	9	2,840			24,588	2,071	138	22,379		35,980	35,447	542	107,434
20	12,271					9,638	650	538	7,730	720	89,180	88,000	1,180	190,731
9	6,433	5	2,370			15,664	4,931	80	10,653		33,941	33,526	415	102,612
164	124,336					261	204	57	6,842		6,842	6,817	25	19,165
319	174,513	62	19,385	14	2,836	20,381	7,708	465	10,308	1,900	202,126	200,331	1,795	457,870
215	204,804	17	6,127	12	1,972	65,326	18,502	1,784	38,707	6,333	228,717	219,585	9,132	608,567
						215,733	26,826	1,425	143,876	44,106	175,640	166,332	9,308	916,901
44	25,611					8,607	1,205	120	7,972		69,053	68,646	407	139,300
148	82,976			2	250	39,554	7,260	1,316	30,978		303,764	302,512	1,252	557,080
3	2,840	20	5,310			1,909	1,180	54	675		10,491	10,491	395	31,595
89	57,809	2	440	3	750	10,272	4,583	341	5,243	100	88,010	86,845	1,165	231,170
78	35,945	20	7,285	2	156	22,716	4,387	216	17,913		77,675	77,080	595	180,984
6	3,680			1	200	780	780				2,278	2,242	36	4,240
98	24,180			1	250	6,024	3,813	78	1,993	140	17,943	17,716	232	80,576
2,586	1,366,465	653	159,106	24	3,836	2,491,365	42,795	54,562	2,393,023	385	17,596,295	17,287,999	308,296	32,026,686

hosiery and knit goods, 1; iron and steel, doors and shutters, 1; ironwork, architectural and ornamental, 2; jewelry, 2; lamps and reflectors, 2; lead, bar, pipe and sheet, 1; lead, smelting and refining, 1; liquors, distilled, 1; liquors, vinous, 1; malt, 1; mantels, slate, marble, and marbleized, 1; marble and stone work, 2; mattresses and spring beds, 1; mirrors, 1; mucilage and paste, 1; musical instruments and materials, not specified, 1; musical instruments, pianos and materials, 1; oil, linseed, 1; paints, 2; photographic materials, 1; photolithographing and photoengraving, 1; sausage, 2; sewing machine repairing, 1; soap and candles, 2; starch, 1; steam packing, 1; stereotyping and electrotyping, 2; sugar and molasses, refining, 1; surgical appliances, 1; taxidermy, 1; tobacco, chewing, smoking, and snuff, 2; tools, not elsewhere specified, 1; trunks and valises, 2; vinegar and cider, 1; wirework, including wire rope and cable, 2.

SOUTH OMAHA.

6,045	\$3,120,052	231	\$73,779	330	\$74,760	\$1,719,920	\$33,107	\$46,273	\$1,623,159	\$12,381	\$61,277,486	\$60,899,442	\$375,044	\$70,030,941	1
13	9,100			1	240	1,536	894	117	213	312	8,381	7,455	926	38,515	2
2	1,175					512	502	4	6		1,246	1,181	65	5,100	3
16	9,572	9	1,834			8,620	2,974	123	523		30,322	29,187	1,135	61,944	4
43	17,460					1,155	650	230	375		11,442	957	10,485	46,150	5
89	52,204					8,241	439	96	212	7,494	106,316	106,271	45	194,103	6
20	12,900	1	200			1,325	1,162	40	73	50	10,544	10,385	159	29,700	7
2	900					510		160	350		33,746	33,364	382	44,190	8
61	28,634					4,377	72	280	280	4,025	47,798	47,798		103,506	9
15	9,642	15	2,440			1,254	896	113	245		10,005	9,775	280	19,425	10
						948	532	20	396		13,222	13,217	5	82,395	11

TABLE 8.—MANUFACTURES IN CITIES

SOUTH OMAHA—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES, AND CITIES.		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	Photography.....	3	\$2,300			\$1,700	\$600	3			2	\$1,080
13	Plastering and stuccowork.....	4	1,830		\$200	1,330	300	5			17	9,331
14	Printing and publishing, newspapers and periodicals.....	4	41,333		6,000	19,300	16,033	2	7	\$9,515	26	21,689
15	Saddlery and harness.....	3	4,355			255	4,100	3			3	1,700
16	Slaughtering and meat packing, wholesale.	5	15,635,418	\$774,209	3,839,028	1,225,869	9,796,312		712	677,256	5,938	2,914,217
17	Tinsmithing, coppersmithing, and sheet-iron working.....	5	10,475	3,000	3,000	1,925	2,550	7			7	4,370
18	Tobacco, cigars and cigarettes.....	6	3,455			180	3,275	7			8	3,400
19	Watch, clock, and jewelry repairing.....	5	6,950	3,000	1,000	1,100	1,850	5			7	2,710
20	All other industries ¹	24	631,330	71,298	159,759	108,723	201,550	21	50	47,958	301	163,798

¹ Embraces ammunition, 1; bicycle and tricycle repairing, 1; carriages and wagons, 1; chemicals, 1; clothing, women's, dressmaking, 2; cooperage, 1; dyeing and cleaning, 1; electrical construction and repairs, 2; fertilizers, 1; furniture, cabinetmaking, repairing, and upholstering, 1; grease and tallow, 1; leather, tanned, curried, and finished, 1; liquors, malt, 1; lumber, planing mill products, including sash, doors, and blinds, 1; mineral and soda waters, 1; patent medicines and

TABLE 9.—MANUFACTURES IN CITIES

1	Total for cities.....	633	\$5,453,421	\$292,722	\$1,006,155	\$1,736,981	\$2,367,563	685	230	\$185,358	3,208	\$1,371,223
2	Beatrice.....	79	594,679	41,350	82,045	163,348	307,936	82	45	31,819	436	172,830
3	Fremont.....	86	1,096,351	89,397	171,095	242,037	593,822	98	45	30,338	420	203,715
4	Grand Island.....	104	989,396	45,600	172,430	586,499	184,867	117	31	26,440	465	227,056
5	Hastings.....	111	425,794	17,500	66,005	132,751	209,538	115	8	5,280	337	149,265
6	Kearney.....	84	379,769	6,050	78,673	158,915	136,131	91	18	12,260	364	120,890
7	Nebraska City.....	108	1,576,857	76,775	295,802	358,212	846,068	114	48	54,840	739	269,796
8	Plattsmouth.....	61	390,575	16,050	140,105	145,219	89,201	63	37	24,381	447	227,571

BY SPECIFIED INDUSTRIES: 1900—Continued.

SOUTH OMAHA—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.										
1	\$720	1	\$360			\$1,162	\$960	\$8	\$194		\$1,970	\$1,825	\$145	\$8,000	12
17	9,331					893	260	8	100	\$500	22,707	22,707		39,468	13
33	20,446	3	1,243			7,219	2,140	156	4,928		10,997	10,049	948	78,786	14
3	1,700					1,124	860	50	214		2,555	2,505	50	8,100	15
5,451	2,785,855	178	57,425	314	\$70,987	1,475,728	18,708	42,130	1,414,890		60,021,201	59,682,308	338,893	67,716,724	16
7	4,370					1,504	1,056	205	243		4,918	4,748	175	17,005	17
7	3,200	1	200			3,130	685	43	2,402		6,361	6,226	135	17,098	18
6	2,560			1	150	1,336	1,100	101	135		1,570	1,450	120	9,350	19
259	150,283	28	10,077	14	3,438	204,376	4,317	2,674	197,885		932,185	908,039	24,146	1,616,432	20

compounds, 1; paving and paving materials, 1; plumbing, and gas and steam fitting, 2; printing and publishing, book and job, 1; slaughtering, wholesale, not including meat packing, 1; soap and candles, 1.

UNDER 20,000 IN POPULATION: 1900.

2,572	\$1,230,833	513	\$121,032	123	\$19,358	\$432,618	\$60,886	\$29,323	\$317,899	\$24,510	\$5,927,516	\$5,808,356	\$119,160	\$9,129,163	1
374	159,338	45	11,444	17	1,548	31,192	7,668	3,169	19,171	1,184	436,314	430,481	5,833	789,228	2
366	189,789	47	13,270	7	650	92,278	10,600	4,657	77,021		475,634	458,701	16,933	956,006	3
372	201,501	77	23,343	16	2,803	55,469	11,042	6,564	29,243	9,600	445,681	437,098	8,583	899,195	4
243	125,514	87	22,932	7	819	35,409	12,207	2,027	16,293	4,282	340,094	328,078	11,416	720,615	5
209	87,047	105	23,295	50	10,548	22,793	5,958	2,133	14,423	274	213,223	234,899	13,324	498,583	6
585	243,912	143	25,084	11	800	108,602	9,294	4,774	151,224	3,370	3,625,177	3,577,826	47,351	4,582,554	7
423	223,729	9	1,652	15	2,190	25,815	4,117	5,379	10,510	5,800	350,393	340,678	15,715	682,979	8

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 133.

WASHINGTON, D. C.

January 23, 1902.

AGRICULTURE.

NEW JERSEY.

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 for the state of New Jersey, 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 New Jersey, June 1, 1900, numbered 34,650, and had a value of \$162,591,010. Of this amount \$69,230,080, or 42.6 per cent, represents the value of buildings, and \$93,360,930, or 57.4 per cent, the value of land and improvements other than buildings. On the same date the value of farm implements and machinery was \$9,330,030, and of live stock, \$17,612,620. These values, added to that of farms, give the "total value of farm property," \$189,533,660.

The term "value of farm products," as used in this

bulletin, has reference to the value of all crops and animal products, including the value of animals sold or slaughtered on farms. This valuation for 1899 was \$43,657,529, of which amount \$15,740,688, or 36.1 per cent, represents the value of products of the live-stock industry, and \$27,916,841, or 63.9 per cent, the value of crops, including forest products. The value of farm products in 1899 was \$14,660,180 greater than that reported for 1889, showing an increase of 50.6 per cent. A large part of this 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 \$8,604,920, leaving \$35,052,609 as the gross farm income. The percentage which this amount is of the "total value of farm property" is referred to in the text of the bulletin as the "percentage of income upon investment." For New Jersey in 1899 it was 18.5 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.

Very respectfully,

L. G. Powers.

Chief Statistician for Agriculture.

AGRICULTURE IN NEW JERSEY.

GENERAL STATISTICS.

New Jersey comprises the peninsula lying between the Delaware River and Delaware Bay on one side and the Atlantic Ocean on the other. Its greatest length is 170 miles and its greatest width 60 miles. It has a land surface of 7,525 square miles, of which 4,439 square miles, or 59.0 per cent, are included in farms.

North of a line from Trenton to Jersey City, the surface of the state is hilly or mountainous. South of this line, it is a gently undulating plain, sloping south, east, and west to the surrounding waters, which are bordered by extensive marshes. The soil is for the most part a sandy loam, everywhere easily tilled. It grows lighter toward the south, and is most fertile in the river valleys and in the hilly region of the north.

The proximity of the New York and Philadelphia markets renders gardening, dairying, and fruit raising especially remunerative, and these industries will be found to furnish a very large percentage of the farm products.

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.	Im-proved.	Unim-proved.	Average.	
1900	34,650	2,840,966	1,977,042	863,924	82.0	69.6
1890	30,828	2,662,009	1,999,117	662,892	86.4	75.1
1880	34,307	2,929,773	2,096,297	833,476	85.4	71.6
1870	30,652	2,989,511	1,976,474	1,013,037	97.5	66.1
1860	27,646	2,983,525	1,944,441	1,039,084	107.9	65.2
1850	28,905	2,752,946	1,767,991	984,955	115.2	64.2

Except for the period from 1880 to 1890, the number of farms has steadily increased, and is now 10,745, or 44.9 per cent, greater than in 1850, and 3,822, or 12.4 per cent, greater than in 1890. The total acreage of farm land, however, has increased but 3.2 per cent since 1850. It follows, therefore, that there has been a decrease in the average size of farms, and the table indicates that this decrease has been nearly continuous throughout the period covered.

The area of improved land gradually increased until 1880. The decrease since that date, while less marked than in the New England states treated in this series of

bulletins, is the result of the same general conditions, namely, the development of intensive agriculture and the increased attention given to dairying, truck farming, and fruit growing.

Those lands which are most fertile or most easily tilled have been retained under cultivation and made increasingly productive. As a result the aggregate income derived from cultivated crops is now greater than it was in 1880, although the acreage under cultivation is somewhat smaller. The less fertile lands have been found to afford greater incomes as permanent pasture than as meadow or plow lands, and the two last decades have shown an increasing acreage of such land reported as unimproved.

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 FARM PRODUCTS: 1850 TO 1900.

YEAR.	Total value of farm property.	Land, im-provements, and build-ings.	Implements and machinery.	Live stock.	Farm products. ¹
1900	\$189,533,660	\$162,591,010	\$9,330,030	\$17,612,620	\$43,657,523
1890	182,452,914	159,262,840	7,378,644	15,811,430	28,997,349
1880	212,678,330	190,895,833	6,921,085	14,861,412	29,650,756
1870 ²	286,854,830	257,523,376	7,887,991	21,443,463	³ 42,725,198
1860	202,131,598	180,250,398	5,746,567	16,134,633	
1850	135,342,305	120,237,511	4,425,503	10,679,291	

¹ For year preceding that designated.

² Values of 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.

Since 1850 the total value of farm property has increased \$54,191,355, and in the last decade, \$7,080,746. Of the latter amount, \$3,328,170, or 47.0 per cent, represents the increase in the value of farms; \$1,951,386, or 27.6 per cent, in that of implements and machinery; and \$1,801,190, or 25.4 per cent, in that of live stock. The value of farm products in 1899 was 50.6 per cent greater than in 1889. A portion of this increase, and of that noted in the case of implements and machinery, is doubtless the result of a more detailed 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.		VALUE OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With build-ings.	Total.	Im-proved.	Land and improve-ments (except buildings).	Buildings.	Imple-ments and ma-chinery.	Live stock.		Labor.	Fertilizers.
The State -----	34,650	34,027	2,840,966	1,977,042	\$93,860,930	\$69,230,080	\$9,330,030	\$17,612,620	\$35,052,609	\$6,720,030	\$2,165,320
Atlantic -----	1,295	1,259	64,419	32,954	1,611,560	1,124,220	144,270	211,215	767,869	119,800	58,570
Bergen -----	1,716	1,683	75,760	46,776	8,243,180	4,838,960	524,380	682,267	1,665,810	378,720	113,990
Burlington -----	2,549	2,505	343,096	190,871	6,474,010	5,845,790	899,120	1,863,961	3,836,901	858,430	257,250
Camden -----	1,133	1,109	76,535	55,370	3,873,320	2,258,700	332,920	513,482	1,487,394	274,370	130,170
Cape May -----	601	596	54,366	24,387	784,450	631,520	92,300	183,087	438,702	57,000	30,310
Cumberland -----	2,223	2,197	143,994	101,839	3,864,940	2,798,520	381,280	745,304	1,699,454	238,360	120,770
Essex -----	1,003	981	31,169	18,975	6,978,660	2,678,460	238,150	501,304	1,550,976	319,440	48,190
Gloucester -----	2,225	2,185	148,590	117,554	4,429,030	3,449,850	565,360	901,566	2,329,114	440,050	278,300
Hudson -----	358	335	2,820	1,928	2,901,700	915,250	175,550	158,783	1,018,170	294,230	23,440
Hunterdon -----	2,930	2,894	248,733	208,986	4,313,850	4,908,570	757,990	1,749,002	2,438,376	365,080	127,350
Mercer -----	1,573	1,531	132,726	108,747	4,518,210	3,641,700	582,070	1,044,667	1,775,184	379,430	152,680
Middlesex -----	1,750	1,719	120,317	96,782	4,631,230	3,519,430	511,910	750,229	1,385,804	264,520	124,490
Monmouth -----	2,772	2,720	197,481	155,716	8,508,590	6,101,810	851,050	1,449,793	3,013,361	629,630	221,730
Morris -----	2,305	2,281	206,759	118,212	7,477,170	6,483,320	631,020	987,558	1,974,241	461,680	82,000
Ocean -----	984	954	84,866	40,141	1,501,760	1,189,980	139,380	266,382	420,661	76,700	23,670
Passaic -----	916	892	69,820	28,721	2,976,860	1,908,610	180,160	361,578	817,908	148,350	33,290
Salem -----	2,072	2,022	175,202	135,727	4,636,570	3,609,700	501,780	1,216,613	2,401,474	356,290	164,570
Somerset -----	1,953	1,906	167,663	140,486	5,108,230	5,073,840	644,880	1,259,840	1,490,448	355,430	98,000
Sussex -----	1,792	1,784	256,896	178,431	3,661,480	3,172,640	338,010	1,406,100	1,984,744	264,700	14,940
Union -----	700	693	29,076	20,483	3,179,870	2,066,880	312,932	993,978	206,500	22,860	12,860
Warren -----	1,795	1,781	201,688	154,015	3,686,210	3,273,860	466,570	1,046,957	1,562,045	231,320	34,760

The only counties in which the number of farms is less than in 1890 are Somerset, Morris, and Hunterdon, which show decreases of 3.5 per cent, 4.4 per cent, and 5.8 per cent, respectively. The largest relative increases are in Hudson, Atlantic, Cumberland, Essex, and Ocean counties, in the order named.

The total area of farm land in the state is 6.7 per cent greater than in 1890. The counties showing the largest percentages of increase are: Hudson, 119.5 per cent; Ocean, 55.0 per cent; Cumberland, 34.3 per cent; Camden, 24.0 per cent; and Passaic, 21.0 per cent. The farm acreage has decreased slightly in Monmouth, Hunterdon, Morris, Somerset, and Bergen counties.

The percentage of farm land improved is less than it was in 1890 in all counties except those in which there are marked increases in total farm acreage.

The total value of land and buildings has decreased in all counties along the western boundary, except Camden and Cumberland, where small gains, due to large increases in total acreage, are reported. The value per acre of land and buildings has increased in Atlantic, Bergen, Essex, Morris, Passaic, Somerset, and Union counties. Of these counties all but Atlantic are in the northeastern part of the state, and the increased values are doubtless due to the rapid development in special branches of agriculture, stimulated by the proximity of New York city markets. The other counties, in each of which the value of farms has decreased since 1890, also showed decreases for the decade 1880-1890. The farms of these counties, as a rule, are better adapted to general agriculture than to the growing of fruits or vegetables, and are less intensively cultivated than the farms of those counties in which values are increasing.

The value of implements and machinery has increased

since 1890 in every county, the largest relative gains being in the counties where dairying and market gardening are the leading branches of agriculture.

The total value of live stock has increased 11.4 per cent, Morris being the only county in which a decrease is reported. Hudson, Essex, and Union counties show the largest relative gains.

The average expenditure per farm for labor was \$194 for the state, and ranged from \$78 in Ocean county to \$822 in Hudson county. In the latter county, \$104 was expended for labor for every acre of farm land.

For fertilizers the average expenditure per farm in 1890 varied from \$8 in Sussex county to \$125 in Gloucester county, while the average for the state was \$62. In 1889 the state average was \$60 per farm, and the county averages ranged from \$2 in Sussex to \$175 in Hudson.

FARM TENURE.

Table 4 gives a comparative exhibit of farm tenure for 1880, 1890, and 1900. In Table 5 the tenure of farms in 1900 is given by race of farmer, and "farms operated by owners" are subdivided into 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.	Own-ers. ¹	Cash tenants.	Share tenants.
1900	84,650	24,295	5,299	5,056	70.1	15.3	14.6
1890	80,828	22,442	3,449	4,937	72.8	11.2	16.0
1880	84,307	25,869	3,608	4,830	75.4	10.5	14.1

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

TABLE 5.—FARMS OF SPECIFIED TENURES, CLASSIFIED BY RACE OF FARMER, JUNE 1, 1900, WITH PERCENT. AGES.

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.

RACE.	Total number of farms.	Own-ers.	Part own-ers.	Owners and tenants.	Man-agers.	Cash tenants.	Share tenants.
The State.....	34,650	22,231	996	207	861	5,299	5,056
White	34,180	21,986	961	207	842	5,282	4,952
Colored ¹	470	245	35	—	19	67	104

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

RACE.	Total number of farms.	Own-ers.	Part own-ers.	Owners and tenants.	Man-agers.	Cash tenants.	Share tenants.
The State.....	100.0	64.1	2.9	0.6	2.5	15.3	14.6
White	100.0	64.3	2.8	0.6	2.5	15.3	14.5
Colored ¹	100.0	52.1	7.5	—	4.0	14.3	22.1

¹ Including 1 Chinese owner.

Between 1880 and 1900 the number of farms operated by owners increased 1,853, or 8.3 per cent. Cash-tenant farms increased 1,850, or 53.6 per cent, and share-tenant farms, 119, or 2.4 per cent. In 1890, 58.9 per cent of all tenants were share tenants, and in 1900, but 48.8 per cent. This change indicates a growing sentiment on the part of both landlord and tenant in favor of the cash-payment system, and greater independence and financial responsibility on the part of the tenant class as a whole. The greatest relative numbers of share tenants are found in the counties having the least intensively cultivated farms. In Warren and Hunterdon counties 70.5 per cent and 72.0 per cent, respectively, of all tenants are share tenants, while in Essex and Hudson counties the corresponding percentages are but 2.8 and 5.9. Table 5 shows that there are relatively more share tenants among colored farmers than among white farmers.

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.

OWNERSHIP OF RENTED FARMS.

The ownership of 9,708 of the 10,355 rented farms was ascertained by the enumerators. That of 647 was not reported. Titles to the 9,708 farms are vested in 8,680

owners, an average of approximately 112 farms to every 100 owners. Of these 8,680 owners or landlords, 7,974 possess 1 farm each. The remaining 706 hold titles to from 2 to 13 farms each, as follows: 542, 2; 93, 3; 28, 4; 23, 5; 11, 6; 4, 7; 2, 8; 1, 10; 1, 11; and 1, 13.

There are 205 landlords who possess rented farms with a total value per owner of \$25,000 or over. They have, in the aggregate, 419 farms, worth \$8,675,108, an average valuation per owner of \$42,318. Of these landlords, 136 own but 1 rented farm each, while the remaining 69 possess 283 rented farms, or an average of approximately 4 farms each.

There are 1,003 landlords who possess rented farms with a total value per owner of between \$10,000 and \$25,000. They have 1,397 farms, worth \$13,230,985, an average valuation per owner of \$13,191. Of these landlords, 742 have but 1 rented farm each, while the remaining 261 possess 655 rented farms, or an average of 2.5 farms each.

The landlords owning rented farms with a valuation of \$25,000 or over, constitute 1 in every 164 farm owners in the state, while those whose rented farms have a valuation of between \$10,000 and \$25,000 per owner constitute 1 in every 33 farm owners. The latter ratio indicates the relative number of farm owners whose incomes from rented farms are sufficient to support them in comfort, while the former ratio shows the relative number who receive comparatively large incomes from the same source.

Of the 8,680 owners of rented farms, 7,587 reside in New Jersey. They own 8,606 farms, of which 7,191 are located in the same county in which the owner resides. Of the nonresident owners, 1,020 live in the North Atlantic states, 30 in the South Atlantic states, 20 in the North Central states, 15 in the Western states, 4 in the South Central states, and 4 in foreign countries.

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.	Num-ber of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Aver-age.	Total.	Per cent.	Total.	Per cent.
The State.....	34,650	82.0	2,840,966	100.0	\$189,533,660	100.0
White farmers.....	34,180	82.6	2,821,755	99.8	188,485,172	99.4
Colored farmers ¹	470	40.9	19,211	0.7	1,048,488	0.6
Owners ¹	22,231	68.7	1,526,789	53.7	106,929,738	56.4
Part owners	996	78.5	78,210	2.8	6,967,553	3.7
Owners and tenants	207	65.7	19,817	0.7	1,435,195	0.7
Managers	861	290.7	250,292	8.8	13,381,347	7.1
Cash tenants	5,299	77.7	411,815	14.5	30,757,756	16.2
Share tenants	5,056	109.6	554,093	19.6	80,062,071	15.9

¹ Including 1 Chinese.

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 machin- ery.	Live stock.		
The State.....	\$2,695	\$1,998	\$269	\$508	\$1,012	18.5
White farmers.....	2,716	2,015	271	512	1,020	18.5
Colored farmers ¹	1,123	788	114	206	424	19.0
Owners ¹	2,207	1,901	250	452	911	19.0
Part owners.....	4,045	2,032	331	588	1,502	21.5
Owners and tenants.....	3,600	2,438	341	554	1,289	18.6
Managers.....	7,949	6,102	586	844	1,571	10.1
Cash tenants.....	3,372	1,657	251	524	1,023	17.6
Share tenants.....	2,930	2,050	303	663	1,236	20.8

¹ Including 1 Chinese.

The value of the farms owned by colored farmers, including implements, machinery, and live stock, together with the value of the implements, machinery, and live stock upon the farms which other colored farmers operate as tenants, is \$452,895. This amount is doubtless somewhat in excess of the actual wealth of the colored farmers of New Jersey, as it is improbable that the colored tenants own all of the machinery and live stock on the farms which they operate.

Of the 73 farms containing 1,000 acres each or over, 26 are operated by "owners," 2 by "part owners," 24 by "managers," 13 by "cash tenants," 7 by "share tenants," and 1 by an "owner and tenant."

Farms conducted by owners have the smallest average area, 68.7 acres, and those conducted by managers the largest, 290.7 acres. Many of the farms operated by managers are adjuncts of public institutions, while others are conducted for wealthy individuals in connection with their summer homes. These farms are, as a rule, favorably located and highly improved, and the average values of their several forms of farm property, shown in Table 7, are much larger 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 farm property is, however, smaller than for the other groups. This is due to the high average valuation of the farm property, and to the fact that many of these farms are not cultivated for profit.

FARMS CLASSIFIED BY AREA.

Tables 8 and 9 give, for farms classified by area, facts corresponding to those shown in Tables 6 and 7 for farms classified by race of farmer and by tenure.

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

AREA.	Num- ber of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	34,650	82.0	2,840,966	100.0	\$189,533,660	100.0
Under 3 acres.....	771	1.7	1,338	(¹)	8,223,861	1.7
3 to 9 acres.....	2,770	6.0	16,700	0.6	8,195,574	4.8
10 to 19 acres.....	4,044	13.9	56,294	2.0	11,704,753	6.2
20 to 49 acres.....	7,632	32.6	249,077	8.8	29,756,249	15.7
50 to 99 acres.....	8,832	71.9	638,281	22.5	46,018,404	24.3
100 to 174 acres.....	7,855	126.3	991,720	34.9	56,257,337	29.7
175 to 259 acres.....	1,862	203.6	379,022	13.3	18,717,282	9.9
260 to 499 acres.....	651	324.8	211,431	7.4	9,393,989	4.9
500 to 999 acres.....	110	617.8	67,963	2.4	3,716,581	2.0
1,000 acres and over.....	73	3,138.9	229,140	8.1	2,549,630	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 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 machin- ery.	Live stock.		
The State -----	\$2,695	\$1,998	\$269	\$508	\$1,012	18.5
Under 3 acres -----	1,708	2,145	156	172	1,389	82.0
3 to 9 acres -----	1,358	1,306	132	163	537	18.2
10 to 19 acres -----	1,467	1,124	124	179	481	16.6
20 to 49 acres -----	2,020	1,432	179	268	688	17.7
50 to 99 acres -----	2,584	1,333	275	439	984	19.0
100 to 174 acres -----	3,371	2,586	384	821	1,411	19.7
175 to 259 acres -----	5,045	3,378	464	1,165	1,871	13.6
260 to 499 acres -----	7,410	4,973	590	1,467	2,146	14.9
500 to 999 acres -----	15,486	14,370	1,531	1,850	3,894	11.5
1,000 acres and over ---	21,660	10,028	1,227	2,011	2,795	8.0

The group of medium-sized 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.

For the groups of farms containing between 10 and 1,000 acres, the average values given in Table 9 rise in unbroken series as the farms increase in size. For the 2 groups of farms of less than 10 acres each, the average values are relatively high, as these groups include 419 of the 494 florists' establishments of the state, and a large number of city dairies. It should be borne in mind that the incomes from these industries are determined, not so much by the acreage of land used, as by the amount of capital invested in buildings and implements, and the amounts expended for labor and fertilizers.

The average gross incomes per acre for the various groups classified by area are as follows: Farms under 3 acres, \$772; 3 to 9 acres, \$89; 10 to 19 acres, \$35; 20 to 49 acres, \$21; 50 to 99 acres, \$14; 100 to 174 acres, \$11; 175 to 259 acres, \$9; 260 to 499 acres, \$7; 500 to 999 acres, \$6; 1,000 acres and over, \$0.89.

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 for any farm 40 per cent of the products not fed to live stock consists of hay and grain, the farm is designated a hay and grain farm. Should 40 per cent of the products consist of vegetables, 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.....	34,650	82.0	2,840,966	100.0	\$189,533,600	100.0
Hay and grain.....	2,717	111.2	302,247	10.6	17,401,673	9.2
Vegetables.....	7,019	57.4	403,156	14.2	37,464,056	19.8
Fruit.....	2,715	71.4	193,870	6.8	11,180,577	5.9
Live stock.....	9,531	68.9	656,673	23.1	38,643,499	20.4
Dairy produce.....	5,959	102.7	611,933	21.6	45,790,712	24.2
Flowers and plants.....	494	6.2	3,061	0.1	4,825,446	2.5
Nursery products.....	54	54.3	2,932	0.1	685,221	0.4
Miscellaneous ¹	6,161	108.3	667,094	23.5	32,452,476	17.6

¹ Including 1 tobacco farm.

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.	Implementments and machinery.	Live stock.		
The State.....	\$2,695	\$1,998	\$269	\$508	\$1,012	18.5
Hay and grain.....	3,454	2,239	268	477	812	12.6
Vegetables.....	2,981	1,725	273	359	1,136	21.3
Fruit.....	2,058	1,578	206	276	990	24.0
Live stock.....	1,689	1,665	219	482	621	15.3
Dairy produce.....	3,825	2,623	355	881	1,412	18.4
Flowers and plants.....	4,402	4,976	317	73	3,969	40.6
Nursery products.....	8,167	3,805	447	270	6,895	50.4
Miscellaneous ¹	2,539	2,044	283	514	899	16.6

¹ Including 1 tobacco farm.

The large number of live-stock farms reported is due to

the fact that numerous small farms which derive their principal income from poultry are included in this class. This explains the comparatively low average value of live stock for such farms.

For the several classes of farms the average values per acre of products not fed to live stock are: Flowers and plants, \$641; nursery products, \$118; vegetables, \$20; fruit, \$14; dairy produce, \$14; live stock, \$9; hay and grain, \$7; and miscellaneous, \$8.

The wide variations shown in the averages and percentages of gross income are largely due to the fact that in computing gross incomes no deductions are 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.....	34,650	82.0	2,840,966	100.0	\$189,533,600	100.0
\$0.....	259	44.9	11,625	0.4	824,960	0.4
\$1 to \$49.....	630	29.8	18,748	0.7	1,768,940	0.9
\$50 to \$99.....	1,192	29.5	85,165	1.8	2,750,540	1.5
\$100 to \$249.....	4,953	34.9	172,890	6.1	12,915,220	6.8
\$250 to \$499.....	7,120	54.4	387,171	13.6	24,372,280	12.9
\$500 to \$999.....	8,865	80.1	710,398	25.0	42,467,010	22.4
\$1,000 to \$2,499.....	9,009	114.0	1,026,632	36.1	65,351,520	34.5
\$2,500 and over.....	2,622	182.4	478,342	16.8	39,083,190	20.6

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 machin- ery.	Live stock.		
The State.....	\$2,695	\$1,998	\$269	\$508	\$1,012	18.5
\$0.....	1,726	1,215	88	161		
\$1 to \$19.....	1,451	1,009	84	264	38	1.3
\$50 to \$99.....	1,188	938	70	112	75	3.2
\$100 to \$249.....	1,286	1,068	99	155	176	6.8
\$250 to \$499.....	1,676	1,347	148	252	371	10.8
\$500 to \$999.....	2,296	1,802	241	451	724	15.1
\$1,000 to \$2,499.....	3,502	2,572	395	785	1,541	21.2
\$2,500 and over.....	7,769	5,011	733	1,388	4,242	28.5

There are 259 farms, ranging in area from 3 to 1,000 acres, which report no income. The comparatively high average value of the land and buildings of these farms indicates that many of them are summer homes or country estates held for pleasure and not for the profit to be derived from operation. A considerable number of the farms with reported incomes of less than \$50 doubtless belong to the same class. Some, however, are farms that were partially abandoned in 1899, while others had changed owners or tenants, and the persons in charge, June 1, 1900, were unable to give 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 Twelfth Census. The age grouping for neat cattle was determined 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.	
Calves	Under 1	39,685	\$349,937	\$8.82	1,238
Steers	1 and under 2	1,519	25,951	17.08	172
Steers	2 and under 3	928	27,329	29.45	173
Steers	3 and over	588	23,818	40.51	3,938
Bulls	1 and over	8,271	226,177	27.35	386
Heifers	1 and under 2	23,609	470,484	19.93	742
Cows kept for milk	2 and over	157,407	5,840,228	37.10	10,392
Cows not kept for milk	2 and over	7,977	235,183	29.48	414
Colts	Under 1	1,826	153,251	83.93	107
Horses	1 and under 2	8,054	240,880	78.71	155
Horses	2 and over	89,144	7,188,043	80.64	82,929
Mule colts	Under 1	67	2,844	42.45	1
Mules	1 and under 2	322	20,823	64.67	11
Mules	2 and over	4,499	380,370	73.43	1,111
Asses and burros	All ages	48	2,455	57.09	73
Lambs	Under 1	21,867	83,566	3.81	129
Sheep (ewes)	1 and over	24,744	109,540	4.43	9,408
Sheep (rams and wethers)	1 and over	1,619	9,384	5.80	764
Swine	All ages	175,387	926,179	5.28	25,954
Goats	All ages	999	3,006	4.80	1,750
Fowls: ¹					
Chickens ²		1,998,594			
Turkeys		32,378			
Geese		10,518	1,300,853		
Ducks		40,024			
Bees (swarms of)		14,118	39,219	2.78	
Unclassified			3,000		
Value of all live stock.			17,612,620		

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, June 1, 1900, was \$17,612,620. Of this amount the value of horses constituted 43.0 per cent; dairy cows, 33.2 per cent; other neat cattle, 7.7 per cent; poultry, 7.4 per cent; swine, 5.3 per cent; sheep, 1.1 per cent; and all other live stock, 2.3 per cent.

Colts under 1 year have a higher average value than horses over 2. This is due to the fact that New Jersey contains several very extensive stock farms devoted exclusively to the breeding and training of horses for track purposes. This also explains the comparatively high value of "horses 1 and under 2."

No report was 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 averages, the total value of all live stock in the state, exclusive of poultry and bees not on farms, is approximately \$25,199,000.

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	157,407	82,577	94,024	4,931	26,363	175,387
1890	161,576	50,486	86,925	8,227	55,409	224,388
1880	152,078	71,808	86,940	9,267	117,020	219,069
1870	133,331	64,157	79,708	8,853	120,067	142,563
1860	138,818	99,976	79,707	6,362	135,228	235,089
1850	118,786	92,525	63,955	4,089	160,488	250,370

¹ Lambs not included.

The number of dairy cows is 4,169 less than that reported in 1890. The number reported in 1900, however, is exclusive of 7,977 "cows not kept for milk" (see Table 14), many of which were doubtless milch cows dry at the time of enumeration. The 39,685 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 nearly continuous decrease since 1860 would then be shown in the number of "other neat cattle."

The present census shows 47.0 per cent more horses than were reported in 1850. The increase has been nearly continuous, but especially marked in the last decade, when it amounted to 8.2 per cent. Mules and asses increased steadily in number from 1850 until 1880, when a decline began. The report for 1900 shows 40.1 per cent fewer mules and asses than were reported ten years before. The number of sheep has decreased steadily since 1850, and in the last twenty years at a very rapid rate, the present number being less than one-half the number reported in 1890. No regular movement is shown in the number of swine reported at the various decennial periods, but the general tendency since 1850 has been downward. There was a decrease of 21.8 per cent in the last decade.

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 3 months old, while in 1890 no such limitation was made. This fact explains, to a great extent, the decrease shown in the number of fowls of all kinds. Com-

pared with the figures for 1890, the present census shows decreases in the number of fowls as follows: Chickens, 33.3 per cent; geese, 48.4 per cent; ducks, 64.8 per cent; and turkeys, 80.0 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.....	146,628	\$31,266
Milk.....	Gallons.....	177,714,055 ¹	
Butter.....	Pounds.....	5,894,363	8,436,869
Cheese.....	Pounds.....	24,377	
Eggs.....	Dozens.....	11,942,550	1,938,304
Poultry.....			2,265,816
Honey.....	Pounds.....	174,250	23,479
Wax.....	Pounds.....	7,640	
Animals sold.....			1,638,767
Animals slaughtered.....			1,406,187
Total.....			15,740,688

¹ Includes all milk produced.

The value of animal products in 1899 was \$15,740,688, or 36.1 per cent of the value of all farm products and 44.9 per cent of the gross farm income. Of the above amount, 53.6 per cent represents the value of dairy products; 19.3 per cent, that of animals sold and slaughtered on farms; 26.7 per cent, that of poultry and eggs; and 0.4 per cent, that of wool, honey, and wax.

DAIRY PRODUCE.

The steady growth of city population and the increasing popularity of Atlantic coast resorts have largely increased the demand for dairy-produce in New Jersey. The present importance of the industry is shown by the fact that in 1899 the proprietors of 5,959 farms, or 17.2 per cent of the farms of the state, derived their principal income from dairy produce, the total value of which constituted over one-half that of all animal products, and 24.1 per cent of the gross farm income. The production of milk in 1899 was 13,710,102 gallons greater than in 1889, a gain of 21.4 per cent. The quantity of milk sold was 50,726,011 gallons. The milk sold in 1889 was not separately reported, but since 1879 there has been a gain of 35,253,228 gallons, or 227.8 per cent, the quantity having more than doubled in every county except Atlantic, Middlesex, and Union.

Of the \$8,436,869 given in Table 16 as the value of all dairy products in 1899, \$1,265,980, or 15.0 per cent, represents the value of such products consumed on farms, and \$7,170,889, or 85.0 per cent, the amount realized from sales. Of the latter sum, \$6,318,568 was derived from the sale of 50,726,011 gallons of milk; \$818,624, from 3,748,489 pounds of butter; \$31,508, from 35,986 gallons of cream; and \$2,189, from 20,909 pounds of cheese.

In 1879, 9,513,835 pounds of butter were made on farms; in 1889, 8,867,218 pounds; and in 1899, but 5,894,363

pounds. This decrease is due principally to the transfer of butter making from the farm to the creamery, and to the increase in the quantity of milk and cream consumed in cities.

POULTRY AND EGGS.

Of the \$4,204,120 given as the total value of the products of the poultry industry, 46.1 per cent represents the value of eggs, and 53.9 per cent that of poultry raised. The total number of dozens of eggs produced in 1879 was 6,686,142; in 1889, 8,031,571; and in 1899, 11,942,550. The increase in the last decade, amounting to 48.7 per cent, tends to confirm the statement, made elsewhere, that the reported decrease in the number of chickens is more apparent than real.

WOOL.

The raising of sheep is confined almost entirely to the northwestern part of the state, the 5 counties of Warren, Hunterdon, Morris, Sussex, and Somerset having reported more than three-fourths of the total production of wool in 1899. The clip has decreased almost constantly for more than fifty years, and in 1899 was 60.9 per cent less than in 1849.

HONEY AND WAX.

In 1889, 160,310 pounds of honey and 3,381 pounds of wax were reported, while in 1899 the production of honey was 174,250 pounds, and of wax, 7,640. In both years the greater portion of the product was reported from Hunterdon, Morris, Sussex, and Warren counties.

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.....	30,838	94,024	3.0	27,177	157,407	5.8
White farmers.....	30,441	93,218	3.1	26,960	156,784	5.8
Colored farmers.....	397	806	2.0	217	623	2.9
Owners ¹	20,621	58,500	2.8	18,123	92,408	5.1
Managers.....	728	3,501	4.8	644	5,386	8.4
Cash tenants.....	4,693	13,729	2.9	3,832	25,689	6.6
Share tenants.....	4,796	18,294	3.8	4,523	33,924	7.5
Under 20 acres.....	5,657	8,797	1.6	3,737	9,270	2.5
20 to 99 acres.....	15,112	39,048	2.6	13,653	52,906	3.9
100 to 174 acres.....	7,520	31,687	4.2	7,354	62,207	8.5
175 to 259 acres.....	1,789	9,139	5.1	1,707	21,569	12.6
260 acres and over.....	760	6,353	7.0	726	11,455	15.8
Hay and grain.....	2,115	8,175	3.9	1,815	8,975	4.9
Vegetable.....	6,448	17,439	2.7	4,853	14,494	3.0
Fruit.....	2,200	5,844	2.4	1,546	4,876	2.8
Live stock.....	5,689	24,411	2.8	7,533	31,103	4.1
Dairy.....	5,597	20,243	3.6	5,959	72,241	12.1
Miscellaneous ²	5,829	18,412	3.2	5,466	26,218	4.8

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

² Including florists' establishments, nurseries, and 1 tobacco farm.

CROPS.

The following table gives the acreages, quantities, and values of the crops of 1899.

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

CROPS.	Acres.	Unit of measure.	Quantity.	Value.
Corn.....	295,258	Bushels.....	10,978,800	\$4,533,473
Wheat.....	132,571	Bushels.....	1,902,590	1,347,650
Oats.....	75,959	Bushels.....	1,601,610	492,841
Barley.....	836	Bushels.....	4,790	2,301
Rye.....	68,967	Bushels.....	881,410	442,446
Buckwheat.....	15,762	Bushels.....	234,275	120,479
Kafir corn.....	4	Bushels.....	100	50
Clover seed.....		Bushels.....	181	977
Grass seed.....		Bushels.....	5,006	1,818
Hay and forage.....	444,610	Tons.....	542,796	5,544,970
Miscellaneous.....				88,595
Tobacco.....	2	Pounds.....	720	83
Dry beans.....	201	Bushels.....	2,888	5,886
Dry peas.....	45	Bushels.....	806	868
Potatoes.....	52,896	Bushels.....	4,542,816	2,192,456
Sweet potatoes.....	20,538	Bushels.....	2,418,641	1,213,010
Onions.....	882	Bushels.....	168,728	105,327
Miscellaneous vegetables.....	76,897			4,914,803
Sorghum cane.....	6	Tons.....	11	3
Sorghum sirup.....		Gallons.....	460	160
Small fruits.....	25,371			1,406,049
Grapes.....	2,400	Centals.....	42,350	81,758
Orchard fruits.....	280,684	Bushels.....	6,168,480	42,594,981
Flowers and plants.....	614			1,953,290
Seeds.....	112			48,191
Nursery products.....	1,782			339,926
Broom corn.....	11	Pounds.....	4,810	266
Hops.....	1	Pounds.....	75	9
Peanuts.....	(*)	Bushels.....	7	10
Nuts.....				20,660
Forest products.....				409,005
Total.....	1,295,909			27,916,841

¹ Sold as cane.

² Estimated from number of trees or vines.

³ Including value of raisins, wine, etc.

⁴ Including value of cider, vinegar, etc.

⁵ Less than 1 acre.

Vegetables, including potatoes, sweet potatoes, and onions contributed 30.2 per cent of the total value of crops; cereals, 24.8 per cent; hay and forage, 19.9 per cent; fruits, 14.6 per cent; flowers, plants, nursery products, and seeds, 8.4 per cent; and all others, 2.1 per cent.

The average yield per acre of hay and forage was 1.2 tons, and the average values \$10.22 per ton and \$12.47 per acre. The acreage devoted to hay and forage was 34.3 per cent of the total acreage in crops, but yielded only 19.9 per cent of the total receipts. The average values per acre of other crops were as follows: Flowers and plants, \$3,181.25; nursery products, \$190.76; miscellaneous vegetables, \$63.91; sweet potatoes, \$58.92; small fruits, \$55.42; potatoes, \$41.45; orchard fruits, \$32.18; and cereals, \$11.78. The crops yielding the highest average returns per acre were grown on land in a very high state of improvement. Their production requires a relatively large amount of labor, and, in addition, large expenditures for fertilizers.

CEREALS.

The following table 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.....	336	15,762	295,258	75,959	68,967	132,571
1889.....	47	13,520	267,648	121,327	77,245	121,570
1879.....	240	35,373	344,555	137,422	106,025	149,760

PART 2.—BUSHELS PRODUCED.

YEAR.....	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899.....	4,790	234,275	10,978,800	1,601,610	881,410	1,902,590
1889.....	1,043	114,626	8,637,011	2,837,293	874,049	1,823,382
1879.....	4,091	466,414	11,150,705	3,710,573	949,064	1,901,739
1869.....	8,238	853,983	8,745,384	4,009,830	566,775	2,301,433
1859.....	24,915	877,886	9,723,386	4,589,182	1,439,497	1,763,218
1849.....	6,492	878,934	8,759,704	3,378,063	1,255,578	1,601,190

¹ No statistics of acreage were secured prior to 1879.

The total area devoted to cereals in 1899 was 588,853 acres; in 1889, 601,357 acres; and in 1879, 773,375 acres. For the period 1879 to 1899 the percentages of decrease in acreage for the principal grains are as follows: Buckwheat, 55.4; oats, 44.7; rye, 35.0; corn, 14.3; and wheat, 11.5. The decrease in the last decade is confined to oats and rye, the other grains having larger acreages in 1899 than in 1889. With the exception of corn, which is a staple crop throughout the state, and wheat, which is grown in all the western counties, cereal production is at present confined almost entirely to the northwestern counties.

The 295,258 acres, given in Table 19 as the area devoted to corn in 1899, is exclusive of 24,628 acres of corn, non-saccharine sorghum, and similar crops grown for forage or ensilage.

New Jersey is one of the few Eastern states in which the production of cereals is not rapidly decreasing. While the production of oats, rye, barley, and buckwheat is less than in 1849, this loss has been nearly offset by the increased production of corn and wheat, so that the net decrease in total cereal production has been only 326,486 bushels, or 2.1 per cent. The recent increase in the acreage devoted to corn is believed to be closely related to the growth of dairying noted under Table 16.

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.....	1,810,793	1,810,705	4,640,896	603,890
Apricots.....	368	533	201	2
Cherries.....	88,906	35,452	82,005	6,762
Peaches.....	2,746,607	4,413,568	620,928	776,078
Pears.....	926,117	274,015	790,818	80,664
Plums and prunes.....	73,820	7,946	24,685	617

Of the farmers of the state 23,998, or 69.3 per cent, reported orchard fruits in 1899. The value of orchard products was not reported by the census of 1890, but in 1879 the total value of such products was \$860,090. For 1899 the corresponding value is \$2,594,981, a gain in twenty years of 201.7 per cent.

The most noteworthy changes between 1890 and 1900 are an increase of 38.2 per cent in the number of apple trees and a decrease of 37.8 per cent in the number of peach trees. In 1890, 21.7 per cent of all fruit trees in the state were apple trees and 73.0 per cent were peach trees, while in 1900 the corresponding percentages are 32.1 and 48.6, respectively. The number of apple trees increased in every county except Cumberland, the largest relative increases being in Ocean, Union, and Salem counties.

The peach-growing industry is largely confined to the 5 northwestern counties of Hunterdon, Sussex, Morris, Somerset, and Warren, which reported, in 1899, 74.4 per cent of all the peach trees in the state. The marked decrease in the number of trees in Hunterdon, Somerset, and Cumberland counties during the last decade is due largely to the ravages of the yellows. In the aggregate these 3 counties sustained a loss of 1,549,806 peach trees, or 93.0 per cent of the total loss of 1,666,961 trees reported for the state. Hunterdon county alone lost 1,026,941 trees. The counties in the extreme northern part of the state and along the southeastern coast report more trees than in 1890.

There has been a large increase in the number of pear trees in almost every county of the state. The gain in most cases is the result of the extensive introduction of Kieffer pears. Burlington, Camden, Cumberland, Gloucester, Monmouth, and Sussex are the leading pear-growing counties, and report the largest gains for the decade.

The number of cherry trees increased 150.8 per cent, Monmouth being the only county to report a decrease. An increase of 829.0 per cent in the number of plum and prune trees was distributed among all the counties.

In addition to the trees shown in Table 20, unclassified orchard trees to the number of 17,829 are reported, with a yield of 8,947 bushels of fruit. The value of orchard products given in Table 18 includes the value of 28,902 barrels of cider, 6,276 barrels of vinegar, and 14,860 pounds of dried and evaporated fruits.

The quantity of fruit produced in any year is determined largely by the nature of the season. Comparisons between the crop of 1889 and that of 1899 have little significance, because in the former year there was an almost complete failure of all fruits except peaches.

GRAPES.

Grapes were grown by 3,604 farmers, who obtained, in 1899, 42,350 centials of fruit from 1,199,859 vines. The total value of the grapes grown, including the value of 123,454 gallons of wine made on farms, was \$81,758. Atlantic and Cumberland are the leading counties in the cultivation of grapes, reporting in 1900 more than one-half of the vines of the state. In these 2 counties there has been a marked increase since 1890 in the number of vines.

VEGETABLES AND SMALL FRUITS.

The value of the vegetables grown in 1899, including potatoes, sweet potatoes, and onions, was \$8,425,596, of which amount 26.0 per cent represents the value of potatoes and 14.4 per cent the value of sweet potatoes. Aside from the land devoted to potatoes, sweet potatoes, and onions, 76,897 acres were used in the growing of miscellaneous vegetables. Of this area, 15,426 acres were included in family gardens or farms, the vegetable products of which were not reported in detail. Of the 61,471 acres concerning which detailed reports were received, 25,332 were devoted to tomatoes; 11,646, to sweet corn; 6,548, to muskmelons, citrons, etc.; 5,121, to cabbages; 4,040, to watermelons; 2,089, to asparagus; 1,822, to green peas; 1,460, to green beans; 1,314, to cucumbers; and 2,099, to other vegetables.

The total area used in the cultivation of small fruits in 1899 was 25,371 acres, distributed among 10,342 farms. The value of the fruits grown was \$1,406,049, an average of \$136 per farm. Of the total area, 8,746 acres, or 34.5 per cent, were devoted to strawberries. The total production for the state was 13,274,120 quarts, of which about one-third was reported by Cumberland county. Next in importance are cranberries, of which 8,356 acres were reported, or 32.9 per cent of the total area used for small fruits. The raising of cranberries is confined almost entirely to the southern counties, Burlington reporting the largest crop. The total production for the state was 240,221 bushels.

The acreage and production of other berries were as follows: Blackberries and dewberries, 5,254 acres and 3,918,320 quarts; currants, 161 acres and 264,740 quarts; raspberries and Logan berries, 2,240 acres and 2,506,730 quarts; gooseberries, 104 acres and 124,160 quarts; and other berries, 510 acres and 564,160 quarts.

FLORICULTURE.

In the raising of flowers and foliage plants New Jersey is surpassed by few states. In 1899 the proprietors of 630 establishments reported flowers and foliage plants grown for the market, valued at \$1,953,290. Of these proprietors, 494 made commercial floriculture their principal business, growing, in 1899, flowers and plants worth \$1,893,839 and other products worth \$66,719. They used 3,061 acres of land, valued at \$2,174,865. The value of their buildings, including greenhouses, was \$2,458,240, and in addition they had \$156,429 invested in implements and \$35,912 in live stock, making a total investment of \$4,825,446. Their expenditures for labor in 1899 were \$400,382, and for fertilizers, \$48,334.

The comparatively large area of land under glass, 11,190,251 square feet, is due to the fact that many truck farmers use glass in growing early vegetables for the New York and Philadelphia markets. The 494 commercial florists report 6,195,903 square feet of glass surface, equivalent to 4,646,927 square feet of land under glass. In addition, there are 1,651 farmers who report a total area under glass of 6,543,324 square feet.

NURSERIES.

Nursery products of a total value of \$339,926 were grown upon 142 farms. The proprietors of 54 of these farms made the growing of nursery products for market their sole or principal business, and derived therefrom in 1899 a total gross income of \$292,153. They also sold or consumed \$53,175 worth of other products.

LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was \$6,720,030, an average of \$194 per farm. The average was highest on the most intensively cultivated farms, having been \$1,405 for nurseries, \$810 for florists' establishments, \$264 for dairy farms, \$219 for market gardens, \$200 for fruit farms, \$162 for hay and grain farms, and \$112 for live-stock farms. "Managers" expended on an average, \$641; "owners," \$170; "cash tenants," \$186; and "share ten-

ants," \$201 per farm. White farmers expended \$196 per farm, and colored farmers \$56.

Fertilizers purchased in 1899 cost \$2,165,320, an average of \$62 per farm, and an increase since 1890 of 17.8 per cent. The average expenditure was greatest for nurseries and least for live-stock farms, the amounts being \$182 and \$33, respectively. For vegetable farms the average was \$124; for florists' establishments, \$98; for fruit farms, \$57; for dairy farms, \$43; and for hay and grain farms, \$50.

IRRIGATION.

Irrigation was reported on 8 farms in 1899. Of the 73 acres irrigated, 69 acres were devoted to crops, as follows: Hay, 26 acres; vegetables, 20 acres; corn, 13 acres; celery, 6 acres; seeds, 4 acres. The total value of the crops produced was \$8,720, an average of \$126 per acre.

The average value per acre of irrigated land was \$155. The total capital invested in irrigation plants was \$2,831, and the average cost of irrigating was \$36 per acre.

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 134.

WASHINGTON, D. C.

January 28, 1902.

MANUFACTURES.

KENTUCKY.

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 Kentucky 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 18 cities and towns 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 towns which were withdrawn from the enumerators and committed to special agents, and only to manufacturing establishments within the corporate limits of such places.

Four cities in Kentucky contain a population exceeding 20,000 each: Covington, Lexington, Louisville, and Newport. The manufacturing statistics of these 4 cities are presented by specified industries, and in comparison with the returns of the Eleventh Census.

Mr. Stephen D. Smith, of Louisville, rendered valuable

assistance in the preparation of the text for the accompanying report.

The statistics of Kentucky 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 a governmental establishment, 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 10 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the cities of Covington, Lexington, Louisville, and Newport 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 towns 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 of Covington, Lexington, Louisville, and Newport by specified industries; and Table 9 showing the totals for all industries in each of the cities and towns withdrawn from the enumerators (exclusive of those shown in Table 8).

Table 1 shows the growth of manufactures in Kentucky 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 Kentucky 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 relat-

ing 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 \$104,070,791 invested in manufactures and mechanical industries in the 9,560 establishments reporting for the state of Kentucky. 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 \$154,605,115, to produce which involved an outlay of \$4,687,441 for salaries of officials, clerks, etc.; \$22,434,185 for wages; \$19,581,680 for miscellaneous expenses, including rent, taxes, etc.; and \$82,773,415 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 Kentucky, \$154,605,115, 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 Kentucky, the gross value of products for 1900 was \$154,605,115. The value of materials purchased in a partly manufactured form was \$45,985,916. The difference, \$108,619,199, is the net or true value of products, and represents the increase in the value of raw materials resulting from the various processes of manufacture.

Very respectfully,



Chief Statistician for Manufactures.

KENTUCKY.

Table 1 shows the manufacturing and mechanical industries of the state of Kentucky 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 manufacturing estab-

lishments, 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.....	9,560	7,745	5,328	5,390	3,450	3,609	23.4	45.4	11.2	56.2	14.4
Capital.....	\$104,070,791	\$79,811,980	\$45,813,089	\$29,277,809	\$20,256,579	\$11,810,402	30.4	74.2	56.5	44.5	71.5
Salaries officials, clerks, etc., number.....	5,079	29,021	(³)	(³)	(³)	(³)	143.7				
Salaries.....	\$4,687,441	\$26,434,915	(³)	(³)	(³)	(³)	127.2				
Wage-earners, average number.....	62,962	56,558	37,391	30,636	21,258	21,476	11.3	51.3	22.0	44.1	11.0
Total wages.....	\$22,434,185	\$21,326,831	\$11,657,844	\$9,444,524	\$6,020,082	\$5,106,018	5.2	82.9	23.4	56.9	17.9
Men, 16 years and over.....	51,101	46,015	30,949	27,687	19,587	19,576	11.1	48.7	11.8	41.4	0.1
Wages.....	\$20,216,990	\$19,212,477	(³)	(³)	(³)	(³)	5.2				
Women, 16 years and over.....	9,174	8,280	3,529	1,159	1,671	1,900	10.8	134.6	204.5	130.6	112.1
Wages.....	\$1,887,504	\$1,850,514	(³)	(³)	(³)	(³)	2.0				
Children, under 16 years.....	2,687	2,263	2,913	1,790	(³)	(³)	18.7	122.3	62.7		
Wages.....	\$329,291	\$263,840	(³)	(³)	(³)	(³)	24.8				
Miscellaneous expenses.....	\$19,581,630	\$15,879,728	(³)	(³)	(³)	(³)	23.3				
Cost of materials used.....	\$32,773,415	\$63,677,583	\$47,461,890	\$29,497,535	\$22,295,759	\$12,163,075	30.0	34.2	60.9	32.3	83.3
Value of products, including custom work and repairing.....	\$154,605,115	\$126,719,857	\$75,483,377	\$54,625,809	\$37,931,240	\$21,710,212	22.0	67.9	33.2	44.0	74.7
Total population.....	2,147,174	1,858,635	1,648,600	1,321,011	1,155,684	982,405	15.5	12.7	24.8	14.3	17.6
Wage-earners engaged in manufactures.....	62,962	56,558	37,391	30,636	21,258	21,476	11.3	51.3	22.0	44.1	11.0
Per cent of total population.....	2.9	3.0	2.3	2.3	1.8	2.2					
Assessed value of real estate.....	\$449,400,657	\$376,788,792	\$265,085,908	\$311,479,694	\$277,925,054	\$177,013,407	19.3	42.1	114.9	12.1	57.0
Value of land and buildings invested in manufactures ⁶	\$26,097,041	\$19,596,397	(³)	(³)	(³)	(³)	33.2				
Per cent of assessed value.....	5.8	5.2									

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 As given in the Proceedings of the State Board of Equalization, of Kentucky, session of 1900.

⁶ Does not include value of rented property.

Although Kentucky is an agricultural state, Table 1 shows that there has been a large growth in its manufacturing and mechanical industries during the half century. The population during these years increased from 982,405 to 2,147,174, or 118.6 per cent, while the average number of wage-earners employed in manufacturing establishments increased from 21,476 to 62,962, or 193.2 per cent, embracing, in 1900, 2.9 per cent of the entire population, compared with 2.2 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 91,536, or 4.3 per cent of the total population of the state. Measured by the value of the products, the greatest percentage of increase, 74.7, was during the decade ending with the year 1860, although the greatest absolute increase was between the years 1880 and 1890.

The state of Kentucky has two extensive coal fields, one in the eastern section of the state and the other in the western, while large areas are still covered with forests of hard wood. Lack of railroad facilities delayed the devel-

opment of its mineral resources, but that lack has been measurably supplied. The Ohio River, flowing along its northern border, and the Mississippi River, bounding it on the west, have long furnished access to the great river system of the central valley of the United States. Steam navigation has caused a change in the distribution of manufactures. In 1810 Lexington, situated in the central part of the state, had 144 manufacturing establishments,¹ and was a leading manufacturing point of the Southwest, but since then the river cities and towns have grown into prominence.

Table 2 divides the industries of the state between the hand trades and the manufactures proper. This table also gives the statistics for a governmental establishment, 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.

¹ History of Lexington, by George W. Ranck, page 241.

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	12,902	\$104,988,434	14,803	63,078	\$22,484,575	\$19,630,931	\$83,022,991	\$38,650,435	\$46,157,274	\$3,215,282	\$155,339,645
Hand trades ¹	3,743	5,613,995	4,368	8,524	3,147,221	1,526,208	6,835,436	152,310	6,480,227	202,899	15,714,218
Governmental establishment	1	80,115		11	7,200		6,558		6,137	416	13,754
Educational, eleemosynary, and penal institutions	11	109,649		19	9,835	2,705	28,129	10,559	15,902	1,068	49,100
Establishments with a product of less than \$500	3,330	727,879	3,570	81	33,355	46,596	214,894	65,575	149,319		671,676
All other establishments	5,817	98,456,796	6,865	54,458	19,286,964	18,055,427	75,937,979	33,421,991	39,505,639	3,010,299	138,890,897

¹ Includes bicycle and tricycle repairing, 55; blacksmithing and wheelwrighting, 1,324; boots and shoes, custom work and repairing, 288; carpentering, 313; clothing, men's, custom work and repairing, 245; clothing, women's, dressmaking, 274; dyeing and cleaning, 26; furniture, cabinetmaking, repairing, and upholstering, 66; lock and gun smithing, 27; masonry, brick and stone, 88; millinery, custom work, 353; painting, house, sign, etc., 226; paper hanging, 57; plastering and stuccowork, 48; plumbing, and gas and steam fitting, 153; sewing machine repairing, 10; watch, clock, and jewelry repairing, 190.

Of the 12,902 establishments of all classes shown in this table, 7,078, or 54.8 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 \$16,885,894, or only 10.5 per cent of the total value of the products of the state.

In addition to the 12,902 active establishments in the state during the census year, with a capital of \$104,988,434, shown in Table 2, there were 146 idle establishments, with a capital of \$3,563,231, divided as follows:

INDUSTRIES.	Number of idle establishments.	Capital.	INDUSTRIES.	Number of idle establishments.	Capital.
Brick and tile	15	\$236,655	Liquors, malt	1	\$5,000
Coke	1	5,000	Lumber, planing mill products, including sash, doors, and blinds	1	22,000
Flouring and grist mill products	18	89,755	Lumber and timber products	25	185,868
Fruits and vegetables, canning and preserving	2	23,500	Printing and publishing, newspapers and periodicals	1	4,300
Glass	2	70,581	Woolen goods	6	1,095,063
Iron and steel	3	100,000	All other industries	30	24,110
Lime and cement	3	87,700			
Liquors, distilled	38	1,072,702			

TABLE 3.—COMPARATIVE SUMMARY OF TEN LEADING INDUSTRIES.

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.			
Total for selected industries for state	1900	8,332	\$58,521,580	30,010	\$10,925,167	\$14,940,231	\$51,176,198	\$91,638,617
	1890	1,908	43,559,058	23,951	7,708,854	12,308,868	33,816,212	64,927,577
Increase, 1890 to 1900		1,424	14,962,522	6,059	3,216,313	2,631,363	17,359,986	26,711,040
Per cent of increase		74.6	34.3	25.3	41.7	20.6	51.3	41.1
Per cent of total of all industries in state	1900	34.9	56.2	47.7	48.7	76.3	61.8	59.3
	1890	24.6	54.6	42.3	86.1	78.1	53.1	51.2
Cars and general shop construction and repairs by steam railroad companies.	1900	25	1,761,958	3,572	1,841,778	55,981	2,267,578	4,248,029
	1890	9	305,220	623	353,200		225,485	588,925
Clothing, men's, factory product.	1900	192	1,509,136	2,701	694,018	259,040	1,851,051	3,420,365
	1890	248	1,146,454	2,612	619,188	74,268	1,195,776	2,518,540
Flouring and grist mill products.	1900	1,145	4,928,928	1,184	483,594	295,952	12,018,998	14,515,161
	1890	505	4,285,619	1,328	395,806	272,883	7,917,917	9,081,259
Foundry and machine shop products.	1900	91	3,445,869	2,790	1,182,942	246,088	2,010,857	4,434,610
	1890	65	5,109,609	2,947	1,512,966	289,727	2,667,393	5,563,321
Iron and steel.	1900	8	4,198,987	2,402	1,144,782	176,846	4,324,100	6,876,093
	1890	9	2,310,655	1,435	670,489	115,645	1,703,144	2,725,003
Leather, tanned, curried, and finished.	1900	23	4,681,389	810	321,658	112,659	2,881,896	3,757,016
	1890	31	2,519,339	582	289,931	109,684	2,573,299	3,487,570
Liquors:								
Total	1900	203	17,411,708	1,703	886,081	5,682,979	4,236,285	12,973,154
	1890	155	14,971,958	2,253	864,052	8,450,422	4,729,717	17,760,545
Liquors, distilled.	1900	177	12,280,054	1,112	559,489	4,182,373	3,605,316	9,786,527
	1890	126	10,966,210	1,744	543,367	7,031,619	3,870,591	15,169,648
Liquors, malt	1900	26	5,131,654	591	327,242	1,500,606	680,969	3,186,627
	1890	29	4,005,743	509	320,685	818,808	853,126	2,000,897
Lumber and timber products	1900	1,280	9,805,404	7,549	2,477,696	379,074	7,379,148	13,774,911
	1890	599	6,571,374	6,322	1,568,394	381,797	4,375,392	7,904,428

TABLE 3.—COMPARATIVE SUMMARY OF TEN 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.			
Slaughtering:								
Total	1900	28	\$1,326,976	511	\$214,271	\$105,694	\$4,444,621	\$5,717,167
	1890	26	1,447,945	414	130,767	135,116	2,604,664	3,874,011
Slaughtering and meat packing, wholesale	1900	13	70,870	42	19,434	6,269	545,373	635,685
	1890	17	1,415,373	391	119,194	130,312	2,283,997	2,963,227
Slaughtering, wholesale, not including meat packing	1900	15	1,256,106	469	194,837	99,425	3,899,248	5,081,482
	1890	9	32,572	23	11,573	4,804	320,667	405,784
Tobacco:								
Total	1900	337	9,451,735	6,838	1,677,747	7,625,885	9,761,664	21,922,111
	1890	261	4,890,851	5,435	1,304,061	2,569,325	5,820,425	11,821,375
Tobacco, chewing, smoking, and snuff	1900	59	3,485,793	3,187	850,018	7,182,022	5,221,257	14,948,192
	1890	38	2,687,471	2,479	659,906	2,320,144	2,847,081	6,788,586
Tobacco, cigars and cigarettes	1900	180	1,105,303	1,349	388,064	296,081	514,943	1,506,559
	1890	144	528,297	694	280,759	138,541	384,339	1,068,039
Tobacco, stemming and rehandling	1900	98	4,860,629	2,302	439,665	147,782	4,025,464	5,467,860
	1890	79	1,675,083	2,262	363,396	110,641	2,589,005	3,474,750

The 10 leading industries of the state in 1900, as shown in Table 3, embraced 3,332 establishments, or 34.9 per cent of the total number in the state; used a capital of \$58,521,580, or 56.2 per cent of the total; gave employment to 30,010 wage-earners, or 47.7 per cent of the total number; and paid \$10,925,167, or 48.7 per cent of the total wages. The value of their products was \$91,638,617, or 59.3 per cent of the total. In the discussion of Table 3, which follows, these industries are ranked with reference to the value of their products.

Table 3 shows that the manufacture of tobacco is the most important industry in the state. The 337 establishments reported in 1900 gave employment to 6,838 wage-earners, or 10.9 per cent of the wage-earners employed in the state, and the products were valued at \$21,922,111, or 14.2 per cent of the total value of the products of the state. In 1890 there were 261 establishments, 5,435 wage-earners, and products valued at \$11,321,375. The increase in the value of products during the decade was \$10,600,736; or 93.6 per cent. Settlers from the eastern part of Virginia introduced tobacco planting in what was then a county of that state, and by 1783 the Virginia legislature had established 3 warehouses in that region for the storage and inspection of the leaf.¹ Tobacco was for some years a legal tender for all debts, but in 1794 the Kentucky legislature took away its quality as a legal tender for court fees, the Constitution of the United States having taken it away in other respects. In 1810 there were 2 tobacco factories in Lexington,² and in 1819, 2 of the establishments located in Louisville were engaged in what was known to the trade as preparing strips for foreign markets, while the others produced cigars, snuff, and chewing tobacco. At that period, cigars were made in small establishments in nearly every town in the state, and on many of the farms, while chewing tobacco was also made in a number of these towns. Owing to its

facilities for communication with the largest tobacco-growing section of the country, Louisville has been for many years a leading leaf-tobacco market of the world,³ and its greater facilities as a distributing point have given it an added advantage over other localities in the state equally well supplied with the leaf. Tobacco industries of all kinds have tended, therefore, to concentrate in that city, although the establishments at Owensboro and Henderson do an extensive business in preparing leaf for shipment.

The manufacture of flouring and grist mill products ranks second among the industries of the state, with 1,145 establishments, 1,134 wage-earners, and products valued at \$14,515,161. In 1890 there were 505 establishments, 1,328 wage-earners, and products valued at \$9,681,259. The increase in the value of products during the decade was \$4,833,902, or 49.9 per cent. Flouring and grist mills were early established on all the streams of the state, but only in the last decade has much been done in the way of making flour for foreign markets. A large mill in Louisville now has a considerable export trade.

There were 1,280 establishments engaged in the manufacture of lumber and timber products in 1900, the industry third in rank, with 7,549 wage-earners, and products valued at \$13,774,911. In 1890 there were 599 establishments, 6,322 wage-earners, and products valued at \$7,904,428. The increase in the value of products during the decade was \$5,870,483, or 74.3 per cent. Logging is an extensive industry on the upper waters of the Cumberland, Kentucky, and Licking rivers, where large sawmills are also located.

There were 203 establishments engaged in the manufacture of liquors in 1900, with 1,703 wage-earners, and products valued at \$12,973,154. In 1890 there were 155 establishments, 2,253 wage-earners, and products valued at \$17,760,545. The decrease in the value of products during the decade was \$4,787,391, or 27 per cent. This decrease was confined to the value of distilled liquors, the

¹ Memorial History of Louisville, by J. Stoddard Johnston, Vol. I, page 251.

² History of Lexington, page 240.

³ Memorial History of Louisville, Vol. I, page 279.

value of malt liquors having increased during the decade. The first distillery was built at Louisville in 1783,¹ by Evans Williams. About the same time a distillery was built near Maysville, another near Bardstown, and a third near Harrodsburg. In 1787 a colony of 60 families from Maryland established distilleries in what are now Washington and Marion counties, and sent the products down Salt River, to settlements on the Ohio and Mississippi rivers.² When the first tax on whiskey was imposed, in 1794, it caused a whiskey rebellion in western Pennsylvania, and many distillers migrated westward, a number settling in Bourbon county. Small distilleries, making from 1 to 2 barrels of whiskey a day, multiplied rapidly. In the early days the farmer turned his corn into whiskey and fattened his hogs on the refuse. For a time whiskey was used in settling accounts. After the Civil War, the character of the distilling industry was changed by the introduction of business-like methods, and the smaller distilleries were gradually replaced by larger ones, making from 10 and 20 to 30 and 40 or more barrels a day. The product is almost wholly corn whiskey, known to the trade as "Bourbon." Owing to its facilities as a distributing point, Louisville has become the principal seat of the brewing industry of the state. The smaller breweries, located formerly at several different points, have nearly all been abandoned.

There were 8 establishments engaged in the manufacture of iron and steel in 1900, with 2,402 wage-earners, and products valued at \$6,876,093. In 1890 there were 9 establishments, 1,435 wage-earners, and products valued at \$2,725,603. The increase in the value of products during the decade was \$4,150,490, or 152.3 per cent. Iron ore exists in large quantities in 32 counties. Furnaces were early established in Bath and Estill counties, but were abandoned because of a lack of transportation facilities.³ Ashland is now the center of a large and growing iron industry. In 1846 William Kelly built 2 iron furnaces near Eddyville, on the lower Cumberland, and in 1851 began what was called his "air-boiling process" for converting iron into steel. This was five years before Henry Bessemer took out a patent for the pneumatic process of manufacturing steel, to which his name has been given, and during these years steamboats built at Cincinnati were using boiler plates similar to the Bessemer boiler plates, but made by the Kelly air-boiling process. Litigation about patents followed, and ultimately Kelly was allowed a royalty.⁴

There were 28 establishments engaged in the slaughtering and meat packing industry in 1900, with 511 wage-earners, and products valued at \$5,717,167. In 1890 there were 26 establishments, 414 wage-earners, and products valued at \$3,374,011. The increase in the value of products during the decade was \$2,343,156, or 69.4 per cent. Pork packing was an early industry in Kentucky, and from the first

centered in the city of Louisville, although before 1860 some packing was done at Lexington, Frankfort, and Maysville, and later at Bowling Green. Between 1850 and 1860, Louisville contended with Cincinnati for first place in the pork-packing industry of the United States; but the opening of the West, with its great grain fields, carried the supremacy away from the Ohio Valley. The use of artificial ice, permitting summer packing, has caused a great increase in general slaughtering in Louisville, where this industry is now much larger than in the old days of winter packing.

There were 91 establishments engaged in the manufacture of foundry and machine shop products in 1900, with 2,790 wage-earners, and products valued at \$4,434,610. In 1890 there were 65 establishments, 2,947 wage-earners, and products valued at \$5,565,321. The decrease in the value of products during the decade was \$1,130,711, or 20.3 per cent. This decrease is due to the removal of several large establishments from Covington and Newport to the gas fields of Indiana.

There were 25 establishments engaged in car construction and general shop work of steam railroad companies in 1900, with 3,572 wage-earners, and products valued at \$4,248,029. In 1890 there were 9 establishments, 623 wage-earners, and products valued at \$588,925. The increase in the value of products during the decade was \$3,659,104, or 621.3 per cent. The first railroad train in the West ran on an oval track in a machine shop in Lexington, in 1827,⁵ but it was not until 1835 that the first railroad was operated in Kentucky.⁶ In 1900 there were 3,056 miles of track in the state.

There were 23 establishments engaged in the tanning, currying, and finishing of leather in 1900, with 810 wage-earners, and products valued at \$3,757,016. In 1890 there were 31 establishments, 582 wage-earners, and products valued at \$3,487,570. The increase in the value of products during the decade was \$269,446, or 7.7 per cent. From the first settlement of the state, small tanneries were established to meet neighborhood requirements. About 1848 a large custom tannery was established in Louisville, soon followed by another. The chestnut-oak tree, the bark of which furnishes the tannin for leather manufacturing in Kentucky, has an advantage over hemlock, for when it is cut down and stripped of its bark, new shoots spring from the stump. In twenty years the new tree is ready for stripping, while the hemlock tree, once cut down and stripped of its bark, is permanently destroyed. Railroad development has given access to chestnut-oak forests, and has led to the erection of tanneries in Louisville, where the industry is now mainly concentrated. Sole-leather and harness leather are the principal products, although some sheepskins are tanned for the manufacture of shoes and saddles. Tanning is still one of the state's important industries, although it reached its highest development about 1883.

¹ Memorial History of Louisville, Vol. I, page 261.

² Ibid.

³ History of Kentucky, by Richard H. Collins, Vol. II, pages 47, 167, and 168.

⁴ History of Kentucky, by Z. F. Smith, pages 505 and 506. Memorial History of Louisville, Vol. I, page 319.

⁵ History of Lexington, page 186.

⁶ Memorial History of Louisville, Vol. I, page 319. History of Kentucky, by Z. F. Smith, page 525.

There were 192 establishments engaged in the manufacture of men's clothing, factory product, in 1900, with 2,701 wage-earners, and products valued at \$3,420,365. In 1890 there were 248 establishments, 2,612 wage-earners, and products valued at \$2,518,540. The increase in the value of products during the decade was \$901,825, or 35.8 per cent. The manufacture of jean clothing began in Louisville about 1857, and developed rapidly after the close of the Civil War, until the city became one of the great centers of this industry. The jean used is made largely in the mills of the state. In place of shears formerly used in cutting the material for clothing, machines

operated by electricity, and which cut from 24 to 54 thicknesses of cloth at once, are now used. The low profit on jean clothing during the last decade has led to the manufacture of cassimere clothing from cloth made partly in Kentucky and partly in the Atlantic states.

URBAN MANUFACTURES.

Table 4 shows the totals for the manufacturing and mechanical industries of the cities of Covington, Lexington, Louisville, and Newport, as returned at the censuses of 1890 and 1900, with the percentages of increase.

TABLE 4.—COMPARATIVE SUMMARY, COVINGTON, LEXINGTON, LOUISVILLE, AND NEWPORT, 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	9,560	\$104,070,791	62,962	\$22,434,185	\$19,581,630	\$82,773,415	\$154,605,115
Per cent of increase.....	1890	7,745	79,811,980	56,558	21,326,831	15,879,728	63,677,583	126,719,857
		23.4	30.4	11.3	5.2	23.3	30.0	22.0
Covington.....	1900	403	4,729,786	3,898	1,539,089	832,705	2,983,976	6,610,082
Per cent of increase.....	1890	1,308	6,807,380	6,111	2,956,263	1,026,579	8,228,079	16,999,575
		109.2	31.4	36.2	47.9	18.9	63.7	58.7
Lexington.....	1900	271	1,532,378	1,441	545,118	224,916	1,467,515	2,925,697
Per cent of increase.....	1890	183	1,619,880	1,279	550,026	124,915	1,256,739	2,708,445
		48.6	5.4	12.7	0.9	80.1	16.8	8.0
Louisville.....	1900	2,807	49,334,701	29,926	10,945,720	13,145,595	41,016,891	79,286,390
Per cent of increase.....	1890	1,700	36,086,985	24,159	9,844,468	6,250,230	28,033,840	64,515,226
		35.7	36.7	23.9	11.2	110.3	46.3	45.4
Newport.....	1900	272	2,848,435	2,561	1,165,361	866,620	2,017,773	4,888,169
Per cent of increase.....	1890	1,002	8,471,388	3,776	1,692,177	335,404	3,072,313	6,687,987
		172.9	17.9	32.2	31.7	158.4	34.3	26.9
Total for 4 cities.....	1900	3,253	58,445,300	37,826	14,185,238	15,069,836	47,485,655	93,710,338
Per cent of increase.....	1890	4,193	48,075,633	35,325	15,042,934	7,737,128	40,590,971	79,911,233
		122.4	21.6	7.1	5.7	94.8	17.0	17.3
Per cent of 4 cities to total for state.....	1900	34.0	56.2	60.1	63.2	77.0	57.4	60.6
	1890	54.1	60.2	62.5	70.5	48.7	63.7	63.1

¹ Decrease.

It appears from Table 4 that there has been an increase during the past decade in the combined manufactures of the 4 principal cities of the state. Although the number of establishments decreased from 4,193 to 3,253, or 22.4 per cent, the average number of wage-earners increased from 35,325 to 37,826, or 7.1 per cent, and the value of products increased from \$79,911,233 to \$93,710,338, or 17.3 per cent.

In Louisville, the leading manufacturing city in the state, the number of establishments increased during the decade from 1,700 to 2,307, or 35.7 per cent; the number of wage-earners from 24,159 to 29,926, or 23.9 per cent; and the value of products from \$54,515,226 to \$79,286,390, or 45.4 per cent. The number of establishments, number of wage-earners, and value of products, in this city in 1900,

constituted 24.1, 47.5, and 51.3 per cent, respectively, of the totals for the state. An increase in each of these particulars is also shown for the city of Lexington, while a decrease in each particular is shown for the cities of Covington and Newport. This decrease is due mainly to the removal from Covington and Newport of 30 large establishments employing, in the aggregate, about 3,000 wage-earners. These have taken advantage of the cheaper fuel and the better shipping facilities offered in the natural gas belt of Indiana.

Table 5 presents the totals for the manufacturing industries of the 18 cities and towns withdrawn from the enumerators, places them in comparison with the totals for the entire state and the state exclusive of these cities and towns, and shows their rank in population and in value of products.

TABLE 5.—URBAN MANUFACTURES.

	Num-ber of estab-lish-ments.	Capital.	Propri-eters and firm mem-bers.	WAGE-EARNERS.		Miscella-neous 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	9,560	\$104,070,791	11,283	62,962	\$22,434,185	\$19,581,630	\$82,773,415	\$154,605,115	-----	100.0	2,147,174	-----	100.0
Total for urban manufactures.	4,379	76,117,611	4,879	48,723	17,929,160	16,382,789	60,848,448	116,675,885	-----	75.5	412,838	-----	19.2
Ashland	82	2,980,975	83	1,620	575,152	169,151	3,046,856	4,595,809	4	3.0	6,800	11	0.3
Bellevue	29	63,313	30	66	20,395	18,342	33,619	4,103,558	18	0.1	6,332	18	0.3
Bowling Green	104	624,907	119	782	290,774	64,174	855,636	1,557,952	10	1.0	8,226	9	0.4
Covington	408	4,729,786	435	3,898	1,539,089	832,705	2,983,976	6,610,082	2	4.3	42,938	2	2.0
Dayton	59	193,690	62	236	86,218	6,908	125,112	314,610	16	0.2	6,104	14	0.3
Frankfort	66	1,594,791	75	367	161,474	256,229	1,181,326	2,033,125	9	1.8	9,487	8	0.4
Henderson	106	2,759,258	120	1,456	880,726	168,909	1,815,579	2,803,628	8	1.8	10,272	7	0.5
Hopkinsville	78	445,770	90	547	186,846	50,917	514,404	884,913	13	0.6	7,280	10	0.3
Lexington	271	1,582,378	290	1,441	545,118	224,916	1,467,515	2,925,697	7	1.9	26,369	4	1.2
Louisville	2,307	49,384,701	2,568	29,926	10,945,720	13,145,595	41,016,391	79,286,390	1	51.3	204,781	1	9.5
Ludlow	35	462,807	45	726	362,995	34,331	566,689	1,077,556	12	0.7	3,334	18	0.2
Mayfield	45	954,448	52	324	100,992	13,001	373,258	607,499	14	0.4	4,081	16	0.2
Maysville	95	1,125,147	119	644	194,055	52,770	621,730	1,207,560	11	0.8	6,428	12	0.3
Mt. Sterling	62	253,825	59	181	35,168	15,059	140,268	263,954	17	0.2	3,561	17	0.2
Newport	272	2,848,435	311	2,561	1,155,861	866,020	2,017,773	4,888,169	3	3.1	28,301	3	1.3
Owensboro	159	3,808,056	178	1,582	424,786	215,675	2,000,368	3,446,605	6	2.2	13,189	6	0.6
Paducah	171	2,689,121	175	2,305	918,603	233,926	1,703,324	3,627,344	5	2.3	19,446	5	0.9
Winchester	50	216,203	68	111	35,799	13,516	324,629	436,434	15	0.3	5,964	15	0.3
Total for state exclusive of urban manufactures.	5,181	27,953,180	6,354	14,239	4,505,025	3,198,841	21,924,967	37,929,230	-----	24.5	1,734,336	-----	80.8
Per cent of urban manufac-tures to total for state	45.8	73.1	43.4	77.4	79.9	83.7	73.5	75.5	-----	-----	19.2	-----	-----

Of the 9,560 establishments in the state, 4,379, or 45.8 per cent, were located in these 18 cities and towns. The capital reported for these establishments was \$76,117,611, or 73.1 per cent of that for the entire state. They furnished employment to 48,723 wage-earners, or 77.4 per cent of the total for the state; and the value of their products, \$116,675,885, formed 75.5 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 of Covington, Lexington, Louisville, and Newport by specified industries.

Table 9 shows the totals for all industries in the cities and towns withdrawn from the enumerators, exclusive of those shown in Table 8.

TABLE 6.—MANUFACTURES

[No manufactures reported]

COUNTIES.	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.
The State.....	9,560	\$104,070,791	\$10,493,135	\$15,603,906	\$25,424,506	\$52,549,244	11,233	5,079	\$4,687,441	62,962	\$22,434,185
Adair.....	42	38,573	3,850	5,675	21,318	8,230	50	2	1,050	35	9,586
Allen.....	58	166,995	15,445	11,539	64,132	75,879	68	7	4,374	197	65,712
Anderson.....	30	1,008,220	45,295	146,000	859,190	457,735	36	13	24,620	133	91,499
Ballard.....	33	131,039	34,130	9,885	45,575	41,449	42	5	4,560	127	39,325
Barren.....	78	139,554	9,255	14,500	75,402	40,397	101	3	1,800	120	39,041
Bath.....	46	210,610	82,515	14,566	55,694	57,505	54	7	3,040	113	34,670
Bell.....	42	1,966,351	168,370	406,530	438,479	952,972	42	36	45,862	771	242,279
Boone.....	34	70,380	3,055	14,720	22,600	80,005	39	3	1,100	26	9,347
Bourbon.....	50	437,888	80,650	80,675	170,750	155,813	71	15	13,860	129	51,184
Boyd.....	130	3,235,138	183,677	727,542	711,628	1,612,291	180	87	88,888	1,843	640,865
Boyle.....	84	883,405	35,510	59,350	103,933	184,612	104	22	14,020	829	93,661
Bracken.....	35	162,848	9,085	20,885	42,670	90,208	43	7	9,500	98	23,887
Breathitt.....	17	145,305	11,050	7,095	36,080	91,080	21	5	4,000	70	21,847
Breckinridge.....	82	352,072	57,259	119,255	97,149	78,409	104	9	5,442	222	70,276
Bullitt.....	22	381,991	25,455	53,070	68,895	239,571	27	10	5,400	46	18,610
Butler.....	41	66,529	15,375	7,005	28,635	15,514	50	15	5,870	42	12,270
Caldwell.....	52	178,733	18,255	33,210	57,573	69,985	64	4	4,550	221	54,307
Calloway.....	33	124,823	5,215	10,591	28,405	80,582	41	15	7,195	74	14,463
Campbell.....	409	3,575,089	310,260	801,910	793,709	1,669,210	456	154	103,962	3,063	1,302,598
Carlisle.....	42	109,947	25,925	12,650	48,505	22,867	48	7	1,184	77	22,148
Carroll.....	51	528,802	23,545	67,507	172,815	264,985	60	6	4,550	160	70,348
Carter.....	48	193,110	63,976	42,771	47,805	43,558	45	4	4,460	255	65,859
Casey.....	54	57,856	3,955	3,515	30,702	19,684	70	74	88,272	129	36,184
Christian.....	141	652,467	60,560	126,935	173,175	281,787	184	74	88,272	639	177,034
Clark.....	65	1,738,834	956,197	81,950	109,660	591,027	88	27	24,800	469	160,095
Clay.....	23	23,622	6,227	1,225	9,720	6,840	27	4	1,270	20	6,010
Clinton.....	28	83,796	4,676	4,765	15,105	9,250	35	4	1,270	31	7,507
Crittenden.....	33	76,850	4,570	8,470	33,425	30,335	38	3	2,600	45	12,533
Cumberland.....	15	35,304	5,530	2,004	12,800	14,970	22	8	1,130	12	3,691
Daviess.....	215	3,926,782	365,565	572,780	624,387	2,364,050	241	214	132,864	1,733	470,383
Edmonson.....	20	82,780	3,665	3,760	14,195	5,160	24	5	1,860	88	6,997
Elliott.....	36	24,573	1,303	2,905	14,340	6,025	40	5	1,860	26	7,270
Estill.....	36	196,720	103,800	8,870	37,157	46,833	40	5	1,860	91	29,831
Fayette.....	321	2,550,280	177,935	403,435	650,590	1,318,320	340	188	139,945	1,625	605,274
Fleming.....	76	153,573	23,405	20,400	39,010	70,158	92	3	1,130	61	20,944
Floyd.....	23	34,265	5,450	1,785	11,370	15,600	23	96	92,018	24	7,251
Franklin.....	91	1,895,311	118,835	247,610	462,584	1,066,332	99	96	92,018	571	212,805
Fulton.....	36	325,323	37,783	45,260	74,180	168,100	49	1	1,200	282	92,086
Gallatin.....	21	88,913	2,940	12,420	28,980	46,573	25	2	2,100	50	19,410
Garrard.....	38	91,015	9,960	23,160	36,805	21,090	41	2	2,100	44	14,349
Grant.....	55	70,526	6,965	12,815	26,706	24,040	64	1	500	31	10,504
Graves.....	32	1,080,991	48,880	82,232	156,609	793,270	106	11	8,200	387	118,408
Grayson.....	57	119,115	14,964	18,006	55,450	30,695	80	3	1,160	82	24,411
Green.....	32	40,330	4,570	5,270	22,670	7,820	38	3	1,720	21	5,755
Greenup.....	34	57,616	6,320	8,990	22,931	19,375	37	3	1,720	88	35,652
Hancock.....	32	61,214	7,785	6,450	22,515	24,464	38	1	800	42	11,655
Hardin.....	83	275,906	17,715	40,465	99,258	118,478	99	13	7,890	119	38,552
Harlan.....	27	23,137	9,479	2,038	9,725	1,897	28	1	800	7	2,103
Harrison.....	93	548,305	28,170	96,885	189,212	234,088	107	13	7,952	143	61,410
Hart.....	47	99,814	22,498	11,965	32,722	32,629	58	1	900	51	17,076
Henderson.....	163	3,221,702	208,526	468,480	588,227	1,956,519	171	115	84,597	1,716	465,001
Henry.....	53	140,095	5,915	32,415	26,435	75,330	59	2	1,110	51	16,929
Hickman.....	18	81,526	5,600	12,830	26,980	36,116	23	9	5,200	170	67,355
Hopkins.....	117	581,818	82,495	60,240	148,707	290,376	155	27	14,524	562	157,623
Jackson.....	21	14,468	2,866	1,445	8,757	1,460	20	2	1,460	11	3,620
Jefferson.....	2,382	50,158,508	4,462,721	7,116,778	11,395,437	27,183,372	2,658	2,915	2,946,231	30,244	11,060,209
Jessamine.....	57	437,056	38,666	50,525	176,345	171,520	74	24	16,800	264	77,654
Johnson.....	18	20,191	2,131	1,510	7,925	8,625	23	256	251,861	16	6,125
Kenton.....	476	5,625,892	537,508	963,705	1,952,186	2,172,494	514	256	251,861	4,979	1,990,895
Knott.....	13	11,910	3,260	1,400	5,400	1,850	18	1	800	2	380
Knox.....	30	60,304	28,614	3,785	17,030	10,925	41	1	600	37	11,010
Larue.....	29	553,608	58,740	64,035	151,650	84,183	42	8	9,160	60	32,992
Laurel.....	42	181,807	61,170	10,300	29,120	81,217	51	8	4,850	154	52,622
Lawrence.....	37	113,808	33,902	8,674	38,839	32,393	68	8	2,034	79	25,889
Lee.....	16	75,912	35,030	2,640	22,540	15,702	15	2	967	41	14,465
Letcher.....	21	17,797	6,478	2,130	6,925	2,264	28	7	8,650	16	5,090
Lewis.....	60	191,894	17,490	34,030	34,682	105,192	75	5	1,725	248	67,900
Lincoln.....	87	253,532	11,905	46,820	69,543	125,264	115	5	1,725	168	49,395
Livingston.....	28	44,165	1,520	5,095	16,915	20,728	35	1	850	32	7,807
Logan.....	113	503,712	230,487	54,395	111,910	106,920	138	12	8,750	207	59,400
Lyon.....	25	181,465	24,970	5,655	28,980	121,860	32	30	14,960	367	75,847
McCracken.....	189	2,784,099	337,845	835,654	783,834	1,277,666	194	139	109,584	2,343	980,727
McLean.....	44	172,345	11,965	14,255	68,084	88,041	57	4	1,725	172	49,105
Madison.....	94	519,468	44,765	63,060	211,906	199,747	99	21	14,301	233	81,888
Magoffin.....	12	110,450	1,085	6,690	25,950	76,775	15	6	5,300	135	47,990

BY COUNTIES: 1900.

from Leslie county.]

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.										
51,101	\$20,216,990	9,174	\$1,887,904	2,687	\$329,291	\$19,581,630	\$855,998	\$627,392	\$16,682,288	\$1,415,952	\$82,773,415	\$80,610,225	\$2,163,190	\$151,605,115	1
34	9,486	1	100			2,265	907	211	1,147		79,679	78,998	681	124,101	2
187	63,882	2	510	8	1,290	6,555	783	851	4,921		216,673	215,482	1,191	391,490	3
133	91,499					288,456	867	3,488	284,101		536,228	500,176	36,052	1,040,533	4
124	38,805	2	420	1	100	6,424	500	790	5,134		141,906	142,704	2,142	237,309	5
113	38,461	3	300	4	290	5,162	865	1,165	2,862	270	249,686	246,467	3,229	382,735	6
102	31,765	9	2,630	2	275	6,518	2,154	641	3,623	100	143,213	140,191	3,052	246,024	7
705	241,343			6	383	71,850	1,367	10,287	60,196		1,263,027	1,046,880	216,147	1,968,504	8
26	9,347					1,604	136	321	897	250	69,917	68,342	1,676	108,430	9
118	47,944	16	3,240			18,164	5,312	2,715	9,904	233	229,122	229,472	6,650	402,187	10
1,779	627,280	28	4,817	52	8,768	197,490	16,367	13,241	161,957	5,925	3,387,179	2,864,506	472,673	5,108,228	11
289	87,938	33	5,196	7	527	30,221	6,123	3,421	19,077	1,600	377,904	372,784	5,170	669,285	12
62	18,861	26	4,176	10	860	10,757	844	384	9,029		166,554	164,082	2,522	273,707	13
68	21,487			2	360	2,607	225	356	2,026		105,928	105,343	5,585	164,835	14
203	63,104	13	1,522	6	650	11,394	1,586	1,496	8,187	125	268,723	262,804	5,919	457,276	15
46	18,610					11,792	96	822	10,874		124,197	120,059	4,138	200,088	16
39	11,880	1	280	2	110	1,370	380	326	664		81,983	80,842	1,141	182,718	17
186	49,300	18	2,915	17	2,092	17,843	2,596	1,819	5,428	8,000	265,024	256,899	8,125	431,433	18
46	11,378	17	2,505	11	580	31,415	812	865	29,692	16	73,692	72,382	1,310	158,062	19
2,179	1,139,864	837	156,647	47	6,087	903,808	26,452	21,859	616,373	239,124	2,335,294	2,235,409	99,885	5,630,182	20
68	20,893	6	865	3	400	3,622	478	935	2,114		132,619	130,809	1,810	197,959	21
146	68,125	12	2,145	2	78	92,994	2,063	3,677	86,951	303	252,454	247,391	5,060	482,733	22
255	65,859					5,725	1,180	720	3,876		75,819	61,523	14,296	193,610	23
129	86,184					3,366	1,871	443	1,052		125,223	124,802	421	221,711	24
616	166,031	54	8,483	19	2,520	58,298	8,441	5,120	38,103	6,632	725,627	712,315	13,312	1,220,055	25
490	154,657	21	4,544	8	894	67,072	5,600	7,886	53,092	585	875,838	871,062	4,776	1,352,441	26
20	6,010					2,702	50	155	2,497		26,557	26,102	455	46,104	27
31	7,507					5,861	84	317	5,460		40,704	40,259	445	74,985	28
43	12,283	1	210	1	100	1,727	341	386	1,000		91,426	89,547	1,879	142,489	29
1,132	3,891					1,214	22	349	843		28,974	28,745	229	40,435	30
1,938	415,887	274	40,833	121	14,169	360,305	20,112	18,018	302,122	20,053	2,838,350	2,305,456	532,894	4,010,360	31
38	6,997					2,848	40	203	2,510	95	29,816	28,810	1,006	54,415	32
26	7,270					599	24	155	420		65,137	64,543	594	94,536	33
91	20,831					10,142	202	1,863	8,027	50	98,604	97,422	682	200,423	34
1,354	556,822	238	43,223	38	3,739	472,033	47,794	16,397	348,423	59,414	1,764,498	1,716,971	47,527	3,751,094	35
58	20,465	3	479			5,822	1,672	2,509	1,141	500	156,931	153,734	3,197	263,012	36
23	7,000	1	251			453	44	320	89		30,914	30,684	230	51,086	37
458	196,100	78	14,956	35	1,749	288,498	15,850	24,206	119,363	124,039	1,424,993	1,402,373	22,620	2,420,327	38
247	57,061	4	1,200	31	4,725	9,849	510	1,637	5,702	2,000	493,783	487,480	6,303	816,972	39
48	19,130	1	180	1	100	6,257	388	304	5,205	300	73,265	72,635	630	122,716	40
42	13,824	2	525			17,958	1,128	622	16,208		99,317	96,073	3,244	156,628	41
28	10,120	3	384			2,868	1,431	493	889		98,011	95,281	2,730	152,852	42
212	80,416	160	36,582	15	1,470	15,075	9,373	5,209	5,783	710	592,454	582,744	9,710	922,512	43
68	21,725	11	2,196	3	490	4,926	920	789	3,217		169,582	167,224	2,358	252,323	44
21	5,755					3,290	161	240	2,769	130	70,487	69,476	1,015	101,575	45
88	35,652					1,019	154	417	448		98,829	97,760	1,069	163,068	46
86	10,930	1	100	5	625	3,528	743	510	2,275		63,619	62,803	816	107,327	47
116	38,225	2	215	1	112	7,354	1,587	1,135	4,599	38	381,063	374,712	6,351	553,683	48
7	2,103					1,297		95	1,202		26,987	26,806	181	36,422	49
131	58,026	18	3,884			31,538	4,429	2,506	20,873	3,730	272,156	262,760	9,396	482,019	50
51	17,076					2,357	258	531	1,543	25	119,483	118,280	1,153	176,931	51
1,050	345,023	479	96,500	187	23,478	216,597	15,804	17,523	175,502	7,768	2,168,757	2,143,333	24,924	3,449,406	52
49	16,634	1	195	1	100	5,396	1,105	516	8,785	40	151,646	147,911	3,735	212,895	53
146	58,896			24	3,659	5,172	545	310	4,317		101,302	100,381	971	205,483	54
461	145,283	47	7,875	54	4,470	27,824	6,942	2,191	18,591	100	554,106	548,794	5,312	946,807	55
11	3,620					241	10	103	123		21,550	21,365	185	35,709	56
23,663	9,752,615	5,177	1,187,281	1,404	170,318	13,188,281	464,427	288,913	11,656,585	778,406	41,426,500	40,756,134	670,366	80,034,790	57
257	76,329	4	1,023	3	302	25,449	2,171	2,822	20,822	300	462,153	449,255	12,898	665,218	58
18	6,125					422	185	77	160		23,304	23,179	125	42,910	59
3,940	1,810,440	881	166,044	158	23,411	1,680,419	61,442	52,033	1,452,825	114,119	3,929,801	3,792,370	136,981	5,067,844	60
2	380					1,420		81	1,339		25,264	25,161	108	31,862	61
34	10,685			3	325	686	100	174	332	80	57,886	57,596	290	104,885	62
58	32,492	2	500			7,735	415	1,405	5,915		156,153	152,323	3,830	254,727	63
147	51,626	4	800	3	296	8,796	1,325	874	1,547		101,601	100,951	650	206,464	64
70	25,859	2	865	2	115	2,890	355	507	1,983	45	187,903	186,681	1,222	212,280	65
41	14,465					1,183	112	516	555		54,945	54,845	100	86,424	66
16	5,090					292	105	152	10	25	38,262	38,067	195	57,759	67
247	67,848			1	52	11,724	341	1,871	9,916	96	196,518	185,068	11,450	394,723	68
138	44,985	20	3,489	10	921	57,242	2,855	1,289	52,653	445	272,892	266,639	6,253	454,674	69
32	7,807					640	332	195	113		54,550	53,782	768	86,333	70
170	55,052	16	2,808	21	1,540	14,781	3,770	2,888	8,628		457,902	450,771	7,131	686,990	71
366	75,787	1	110			12,714	252	728	11,784		267,806	267,079	727	423,748	72
2,003	869,892	190	36,833	150	24,002	285,003	30,997	17,516	168,064	18,896	1,812,971	1,780,638	32,333	3,779,096	73
168	48,095	1	100	3	310	4,993	681	876	3,776		141,402	140,499	903	271,790	74
220	79,529	4	759	8	1,100	23,851	4,100	2,782	16,459	100	403,550	395,118	8,437	666,039	75
184	47,690	1	300			13,047	517	922	12,208		235,239	234,870	369	375,592	76

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 imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
77	Marion.....	70	\$538,748	\$31,470	\$105,915	\$135,435	\$265,928	83	23	\$16,892	267	\$89,902
78	Marshall.....	29	54,040	9,255	7,865	27,295	9,625	38	1	900	43	14,202
79	Martin.....	4	29,020	8,015	20	2,975	23,010	4	1	900	27	8,100
80	Mason.....	139	1,273,260	176,812	210,234	290,690	595,524	169	62	52,613	699	212,901
81	Meade.....	37	265,766	41,415	85,010	97,010	92,331	45	9	5,100	110	27,665
82	Menifee.....	18	149,053	37,807	19,395	54,580	37,271	22	2	3,480	38	12,836
83	Mercer.....	55	266,676	14,700	50,980	104,340	96,656	70	4	1,860	75	31,486
84	Metcalfe.....	36	57,056	16,185	8,985	24,470	12,416	48	2	1,056	37	10,786
85	Monroe.....	62	80,545	18,440	11,700	37,830	17,575	90	3	275	70	22,916
86	Montgomery.....	75	374,245	43,990	73,795	136,005	120,455	86	12	7,904	155	44,145
87	Morgan.....	17	19,888	870	1,820	12,255	4,943	24	2	780	61	18,380
88	Muhlenberg.....	72	311,859	21,895	42,425	60,676	186,868	109	29	18,790	342	98,430
89	Nelson.....	58	1,017,726	44,315	207,155	222,853	543,403	73	26	28,998	150	60,123
90	Nicholas.....	53	174,660	18,770	24,815	53,970	77,105	64	4	4,000	81	26,479
91	Ohio.....	61	118,705	15,865	22,300	53,206	27,334	87	2	700	81	20,761
92	Oldham.....	25	25,770	4,995	4,425	8,240	8,110	27	3	1,680	26	4,893
93	Owen.....	59	111,249	8,840	9,209	35,567	63,138	75	3	1,680	70	18,960
94	Owsley.....	17	10,705	1,920	765	6,130	1,890	23	11	6,000	12	3,300
95	Pendleton.....	59	214,396	15,300	32,125	61,135	107,835	71	11	6,000	141	45,389
96	Perry.....	19	13,865	2,715	2,320	7,920	910	26	11	6,000	8	2,184
97	Pike.....	34	64,898	31,500	3,050	22,948	7,400	42	2	1,200	47	14,015
98	Powell.....	24	296,351	41,630	15,305	52,370	137,046	20	11	9,180	99	34,912
99	Pulaski.....	102	528,715	40,788	52,405	195,837	239,625	127	22	17,260	394	145,150
100	Robertson.....	12	15,670	1,090	3,490	6,605	4,485	16	1	240	8	883
101	Rockcastle.....	31	56,290	15,700	6,740	22,665	11,285	39	1	240	46	16,331
102	Rowan.....	35	145,650	29,190	12,680	56,906	47,474	36	7	6,300	104	50,570
103	Russell.....	27	28,535	2,970	4,025	16,195	5,845	34	4	2,320	19	5,006
104	Scott.....	64	201,256	12,580	51,235	67,100	70,371	81	4	2,320	100	36,608
105	Shelby.....	53	177,048	15,040	29,890	61,033	71,085	66	8	8,940	66	25,734
106	Simpson.....	34	105,076	5,910	15,275	43,760	40,181	39	8	2,220	82	23,519
107	Spencer.....	38	60,435	3,610	8,750	21,275	26,800	38	3	1,700	52	15,470
108	Taylor.....	45	218,006	6,608	16,515	29,318	165,065	51	8	2,100	123	41,322
109	Todd.....	52	83,870	9,323	12,575	35,947	26,020	63	2	800	56	16,200
110	Trigg.....	26	75,840	3,664	11,940	33,420	21,816	36	2	2,400	26	8,485
111	Trimble.....	18	116,860	1,480	67,905	40,235	7,240	23	2	2,400	41	20,101
112	Union.....	94	599,502	33,347	92,347	181,739	292,069	121	15	17,070	280	102,762
113	Warren.....	146	311,629	31,122	125,510	234,943	370,054	134	54	37,222	335	307,148
114	Washington.....	39	59,334	4,484	10,360	26,080	18,470	46	1	250	85	11,249
115	Wayne.....	40	45,356	3,660	7,100	21,475	13,181	54	1	250	25	7,280
116	Webster.....	58	161,499	13,775	34,222	47,895	65,607	69	4	1,154	105	32,191
117	Whitley.....	110	326,761	39,071	20,784	99,967	166,939	138	18	9,355	287	91,752
118	Wolfe.....	31	116,261	60,231	4,040	37,080	14,910	41	4	1,740	75	24,640
119	Woodford.....	55	833,383	21,935	181,855	192,540	487,053	62	31	43,355	162	56,648

TABLE 7.—MANUFACTURES BY

		9,560	\$104,070,791	\$10,493,135	\$15,603,906	\$25,424,506	\$52,549,244	11,233	5,079	\$4,687,441	62,962	\$22,434,185
1	All industries.....	9,560	\$104,070,791	\$10,493,135	\$15,603,906	\$25,424,506	\$52,549,244	11,233	5,079	\$4,687,441	62,962	\$22,434,185
2	Agricultural implements.....	9	1,735,595	169,400	189,837	240,550	1,185,758	6	95	124,720	680	300,106
3	Awnings, tents, and sails.....	6	13,195	2,000	1,430	1,675	15,190	6	2	550	29	11,877
4	Baking and yeast powders.....	4	9,825	100	150	1,275	7,800	8	12	2,020	13	3,049
5	Baskets, and rattan and willow ware.....	11	7,087	850	2,655	137	8,445	13	8	8,940	2	830
6	Bicycle and tricycle repairing.....	55	50,451	4,000	4,950	15,596	25,905	67	2	110	53	17,303
7	Blacksmithing and wheelwrighting.....	1,324	1,004,026	174,532	238,568	193,411	397,515	1,586	4	1,224	728	271,872
8	Bookbinding and blank book making.....	3	6,100	6,100	4,700	4,700	4,700	3	1	400	12	2,840
9	Boot and shoe uppers.....	4	6,688	6,688	5,148	5,148	5,148	7	1	400	14	5,969
10	Boots and shoes, custom work and repairing.....	288	142,835	30,562	39,184	31,092	41,937	299	1	468	123	40,947
11	Boots and shoes, factory product.....	7	254,382	44,456	209,926	44,456	209,926	12	63	37,075	207	50,810
12	Bottling.....	5	59,427	7,000	5,000	4,097	43,880	8	17	19,322	35	72,694
13	Boxes, wooden packing.....	9	482,784	96,275	39,986	95,424	251,039	8	21	17,857	630	180,973
14	Brass castings and brass finishing.....	5	31,772	6,708	6,708	24,979	24,979	7	7	89,246	33	12,784
15	Bread and other bakery products.....	226	360,804	166,050	306,450	234,634	155,406	243	79	39,246	608	215,918
16	Brick and tile.....	84	805,446	144,280	297,987	143,330	220,749	97	36	25,843	918	251,547
17	Brooms and brushes.....	84	153,216	5,230	10,545	9,496	127,945	46	25	17,154	180	45,890
18	Carpentering.....	313	544,035	60,337	70,707	70,068	342,876	397	31	16,923	1,451	668,732
19	Carpets, rug.....	5	4,339	900	1,500	1,685	254	4	42	42,082	8	1,340
20	Carriage and wagon materials.....	17	658,150	86,500	107,639	179,335	234,626	8	122	110,935	578	187,006
21	Carriages and wagons.....	151	3,034,793	271,364	463,311	227,393	2,122,725	196	122	110,935	1,077	625,304
22	Cars and general shop construction and repairs by steam railroad companies.....	25	1,761,958	252,430	484,950	442,561	582,017	96	96	82,689	3,572	1,841,778
23	Cheese and butter, urban dairy products.....	18	4,022	175	250	665	3,032	20	1	75	9	2,726
24	Cheese, butter, and condensed milk, factory product.....	9	18,640	165	1,450	5,665	11,860	14	14	1,740	17	5,200
25	Clothing, men's, custom work and repairing.....	245	1,399,194	51,976	77,000	73,743	1,196,475	234	115	107,697	1,632	492,995
26	Clothing, men's, factory product.....	192	1,509,136	24,442	53,430	90,439	1,340,825	210	172	136,915	2,701	694,015

BY COUNTIES: 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.										
261	\$89,009	8	\$562	3	\$331	\$176,876	\$2,118	\$5,321	\$168,677	\$760	\$410,628	\$102,985	\$7,643	\$854,728	77
43	14,262					822		482	340		94,568	93,453	1,110	145,562	73
27	8,100					260		210	50		11,575	11,565	10	30,695	79
524	189,988	101	16,719	74	6,194	55,680	10,697	7,851	36,092	1,040	668,616	652,072	16,544	1,317,865	80
68	18,565	25	6,500	17	2,600	20,007	110	958	18,839	100	176,086	173,313	2,773	262,864	81
38	12,836					4,277		207	4,070		91,420	91,226	194	124,387	82
71	30,611	4	875			14,070	2,794	1,725	9,051	500	201,607	195,999	5,608	312,784	83
37	10,736					1,959		394	1,854		73,791	73,263	628	116,303	84
66	22,299	3	552	1	65	5,845	476	557	4,312		182,199	130,614	1,585	224,695	85
134	89,280	19	4,710	2	155	166,689	5,722	4,033	150,843	6,091	216,063	209,308	6,755	545,975	86
61	18,380					554		215	110		23,863	23,412	451	56,480	87
275	90,371	33	4,482	34	3,577	53,648	1,496	3,114	48,938		341,473	337,365	4,108	652,746	88
150	60,123					92,842	413	4,846	87,583		406,763	388,413	18,350	751,760	89
72	24,855	7	1,374	2	250	6,180	3,820	998	1,862		149,698	147,815	2,383	238,325	90
81	26,761					3,699	384	781	2,434	100	163,601	152,177	1,424	243,656	91
14	3,245	12	1,624			1,141	598	98	295	150	14,925	14,419	506	35,222	92
48	14,870	22	4,090			3,438	1,651	387	1,400		182,160	180,029	2,131	259,433	93
12	3,360					221	60	71	90		17,861	17,734	127	29,751	94
133	44,359	8	1,080			12,868	1,169	1,189	10,510		221,015	216,990	4,025	402,679	95
8	2,184					206		106	100		19,344	19,249	95	26,642	96
47	14,015					2,530	286	434	1,810		68,242	67,797	445	109,427	97
96	34,232			3	680	84,200	531	1,475	32,194		202,680	202,538	142	348,020	98
381	143,315	3	690	10	1,145	19,851	1,186	2,285	16,170	210	455,260	451,709	3,551	788,099	99
2	743	1	150			415	185	95	15,977		15,977	15,520	467	25,272	100
46	10,331					1,683	310	260	1,135		56,608	55,271	1,337	102,289	101
161	50,150			3	420	4,813	790	663	3,860		137,457	136,247	1,210	275,592	102
19	5,006					621	192	194	47,425		47,425	47,230	145	70,467	103
87	34,055	11	2,288	2	265	13,373	5,318	1,337	6,718		244,754	237,053	7,701	387,146	104
65	25,662			1	72	6,467	1,233	954	4,280		213,069	208,804	4,265	308,214	105
66	21,007	13	2,273	3	234	7,467	648	812	6,007		169,157	165,838	3,269	250,875	106
50	15,130	1	220	1	120	4,044	1,866	396	1,682	100	86,358	84,869	1,484	139,582	107
121	41,102			2	220	2,742	460	711	1,571		328,466	326,176	2,290	455,927	108
51	15,179	4	955	1	75	4,277	1,590	541	2,106	40	89,491	87,219	2,272	168,435	109
24	8,270			2	215	1,617	420	557	640		106,688	106,024	609	148,125	110
37	19,351	4	750			6,465	292	567	5,601	5	148,062	143,268	4,794	214,164	111
243	95,592	31	6,100	6	1,130	20,407	2,789	2,339	15,067	212	496,486	484,054	12,482	772,324	112
711	281,241	111	24,005	13	1,302	91,466	11,329	6,137	65,178	11,822	991,898	977,897	14,001	1,782,891	113
32	11,099			3	150	1,821	671	363	787		112,393	110,510	1,883	156,597	114
25	7,230					1,133	388	288	462		65,334	65,364	470	91,248	115
83	28,551	10	2,085	12	1,555	6,280	871	974	3,935	500	149,775	145,935	2,840	248,663	116
261	90,886	6	810	1	56	7,950	1,292	3,220	3,388	50	341,011	340,111	900	610,526	117
75	24,610					1,294	89	858	347		84,536	83,944	592	151,973	118
140	53,213	22	3,430			64,007	3,354	11,404	49,249		389,205	367,704	21,601	687,899	119

SPECIFIED INDUSTRIES: 1900.

51,101	\$20,216,090	9,174	\$1,887,904	2,687	\$329,291	\$19,581,630	\$355,998	\$627,892	\$16,682,288	\$1,415,952	\$82,773,415	\$80,610,225	\$2,163,190	\$154,605,115	1
679	299,846			1	260	148,009	914	12,072	135,028		466,198	455,876	10,817	1,320,714	2
14	8,491	15	3,486			3,978	1,684	121	1,523		24,043	28,567	176	55,165	3
6	1,986	5	775	2	288	2,189	372	85	1,782	650	13,231	18,213	18	23,791	4
2	930					138	90	32	16		8,170	3,089	81	10,115	5
46	16,510			7	856	9,995	6,677	282	2,711	325	37,941	37,004	937	113,640	6
716	270,320			12	1,552	60,789	41,144	6,000	10,028	3,617	467,581	434,581	32,950	1,645,425	7
4	1,590	8	1,250			716	480	43	193		2,977	2,877	100	11,169	8
14	5,969					1,482	570	37	875		13,714	13,660	54	26,458	9
125	46,491	2	360	1	96	24,845	19,436	1,422	3,061	926	109,266	107,149	2,107	352,495	10
94	30,629	69	14,664	44	5,526	64,813	3,294	14,897	4,842	41,780	456,018	454,404	1,614	630,358	11
24	9,944	11	2,750			7,920	2,140	757	5,028		98,125	97,961	164	163,668	12
551	172,787	14	3,132	65	11,054	9,581	1,100	383	8,098		379,074	366,613	12,461	692,894	13
25	10,984	8	1,800			3,095	1,466	11	1,618		58,877	57,335	1,542	89,760	14
492	198,427	106	16,933	8	1,558	75,652	82,976	7,436	35,240		837,811	812,017	25,794	1,644,415	15
874	246,757			44	4,790	23,718	4,045	4,127	14,021	1,525	127,603	32,898	94,705	680,839	16
161	41,604	15	3,754	4	532	30,087	2,516	529	11,042	16,000	282,402	281,527	875	489,758	17
1,450	608,466			1	276	641,915	14,998	3,113	17,196	606,610	1,639,174	1,637,118	2,056	3,617,952	18
5	740	3	600			459	260	41	158		551	526	25	4,404	19
584	180,694	22	3,926	22	2,476	57,251	181	4,419	52,651		426,005	417,873	8,632	814,235	20
1,628	615,812	14	3,405	35	6,087	144,774	13,195	12,464	113,625	500	1,500,315	1,488,568	17,247	2,860,899	21
3,564	1,838,893	8	2,885			55,984	35	16,135	39,814		2,267,578	2,218,056	49,522	4,248,029	22
9	2,726					1,092	1,849	10	133		27,440	27,300	140	40,877	23
14	4,916	2	160	1	130	1,261	326	59	378		55,447	55,077	870	77,035	24
718	338,872	800	143,735	114	10,388	315,489	60,087	7,000	84,484	133,918	1,406,208	1,389,002	7,201	2,818,687	25
602	287,620	1,993	444,795	106	11,603	259,040	25,898	6,518	108,519	118,105	1,851,051	1,839,310	11,741	3,420,365	26

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.
27	Clothing, women's, dressmaking	274	\$210,132	\$23,950	\$38,130	\$31,023	\$117,029	305	22	\$18,664	1,058	\$236,109
28	Clothing, women's, factory product	9	17,875			3,575	14,300	15	3	2,190	91	21,844
29	Coffee and spice, roasting and grinding.	5	75,000	3,000	10,000	11,600	50,400	6	4	3,000	19	14,454
30	Coke	5	198,533	1,900	17,800	166,078	12,755		8	5,600	126	47,806
31	Confectionery	50	423,217	19,700	35,485	74,507	238,525	62	89	68,526	570	123,074
32	Cooperage	81	1,041,079	98,570	87,014	150,456	707,039	90	44	64,392	1,289	318,997
33	Cordage and twine	4	403,053	1,500	40,200	178,647	183,306	2	18	21,804	384	116,312
34	Cotton goods	6	1,867,605	77,016	273,428	869,363	647,738		24	33,761	1,351	280,407
35	Dyeing and cleaning	26	24,367	2,850	6,150	11,615	8,732	26	4	2,160	47	15,188
36	Dyeing and finishing textiles	3	161,239	7,800	28,922	55,455	69,062	3	7	9,090	116	45,235
37	Electrical apparatus and supplies	4	76,077			34,811	41,266	3	7	6,379	56	24,396
38	Electrical construction and repairs	16	25,125	400	600	4,600	19,525	20	4	2,594	43	19,553
39	Electroplating	4	5,220	1,000	250	3,550	420	6			7	2,761
40	Engraving, steel, including plate printing.	3	16,764			12,170	4,594	3	3	400	24	18,125
41	Fertilizers	4	385,974	20,000	27,500	40,788	247,686	2	16	17,650	89	39,738
42	Flouring and grist mill products	1,145	4,928,928	440,784	964,408	1,893,110	1,630,626	1,465	171	125,909	1,134	483,594
43	Food preparations	7	7,625	1,350	1,300	1,787	3,090	8	2	782	10	3,754
44	Foundry and machine shop products	91	3,445,389	468,617	533,552	890,895	1,552,905	86	225	230,134	2,790	1,182,942
45	Fruits and vegetables, canning and preserving.	8	95,600	6,000	18,150	34,400	37,050	7	12	5,840	231	36,903
46	Fur goods	4	18,465	700	300	1,065	16,400	6	4	2,288	35	13,976
47	Furniture, cabinetmaking, repairing, and upholstering.	66	72,102	12,815	12,215	11,490	35,582	81	3	310	97	39,747
48	Furniture, factory product	24	1,352,518	93,902	139,223	204,855	914,538	28	72	65,981	918	333,288
49	Gas, illuminating and heating	17	4,495,722	304,077	810,185	3,570,690	810,770		60	51,129	279	121,741
50	Glass, cutting, staining, and ornamenting.	4	14,635			910	13,725	5	1	200	19	13,490
51	Hatwork	4	2,870			195	2,675	5			9	1,545
52	Hats and caps, not including fur hats and wool hats.	5	13,975	1,200	1,850	2,300	8,625	7	2	1,950	26	7,342
53	House furnishing goods, not elsewhere specified.	3	34,785			5,500	29,285	6			44	11,078
54	Ice, artificial	31	1,200,117	91,890	241,474	763,581	103,172	22	52	32,600	192	84,321
55	Instruments, professional and scientific.	3	11,030			1,715	9,315	3	1	780	7	3,148
56	Iron and steel	8	4,198,987	151,998	918,000	1,122,857	1,966,132		95	138,504	2,402	1,144,782
57	Ironwork, architectural and ornamental.	10	281,273	34,600	56,968	98,012	91,698	8	30	25,256	193	63,085
58	Jewelry	4	13,412			3,712	9,700	5	1	936	29	14,262
59	Leather, tanned, curried, and finished.	23	4,681,389	249,842	597,407	439,040	3,395,100	17	53	61,063	810	321,658
60	Lime and cement	12	604,969	134,961	221,446	104,465	144,097	12	13	7,440	313	106,201
61	Liquors, distilled	177	12,280,054	1,204,073	2,250,022	3,065,812	5,760,147	188	248	327,057	1,112	569,439
62	Liquors, malt	26	5,181,654	504,115	1,870,781	1,810,836	1,446,442	14	124	192,525	591	327,242
63	Lock and gun smithing	27	30,305	4,110	4,635	12,145	9,395	31	1	600	25	11,008
64	Looking-glass and picture frames	23	44,320	6,500	13,350	3,840	20,630	32	3	800	24	11,376
65	Lumber and timber products	1,280	9,805,404	2,644,036	595,097	2,272,810	4,303,991	1,699	337	258,910	7,649	2,477,696
66	Lumber, planing mill products, including sash, doors, and blinds.	90	1,508,038	177,688	212,092	288,405	829,853	123	80	57,694	981	379,273
67	Malt	3	24,500			3,000	21,500	3	3	4,200	26	15,631
68	Marble and stone work	35	194,788	42,477	16,734	67,323	68,251	61	10	7,385	296	110,057
69	Masonry, brick and stone	88	409,424	37,343	24,332	60,823	286,926	110	21	19,140	783	381,081
70	Mattresses and spring beds	12	16,655	1,450	1,550	2,630	10,925	16	7	4,746	31	13,421
71	Millinery, custom work	353	628,442	52,085	109,830	22,989	435,598	417	76	32,133	762	186,766
72	Mineral and soda waters	80	167,555	36,655	24,770	57,030	49,100	87	10	7,424	88	34,657
73	Monuments and tombstones	64	353,690	62,396	57,120	27,680	206,494	83	40	54,217	253	122,670
74	Musical instruments, pianos and materials.	4	118,250	9,500	15,000	36,250	57,500	4	8	1,440	48	21,885
75	Oil, cottonseed and cake	3	2,029,296	40,680	165,546	309,656	1,513,414		30	52,877	180	69,070
76	Optical goods	4	10,100		800	1,350	8,450	3	2	1,250	7	2,622
77	Painting, house, sign, etc	226	181,512	27,146	29,045	36,109	89,212	280	8	4,328	056	287,193
78	Paints	9	174,586	20,422	25,500	27,837	100,827	7	12	12,900	52	20,326
79	Paper hanging	57	182,370	16,760	25,625	6,102	133,883	81	18	10,678	249	104,841
80	Patent medicines and compounds	34	363,951	20,440	46,700	30,372	256,439	39	58	59,504	189	64,518
81	Paving and paving materials	42	641,986	240,015	37,950	169,117	194,904	43	43	32,913	1,008	367,874
82	Perfumery and cosmetics	5	4,514			930	3,584	5			7	1,460
83	Photography	112	105,754	4,445	7,722	58,496	35,091	117	16	3,091	79	33,515
84	Pickles, preserves, and sauces	4	146,115	10,500	34,000	30,101	71,514	5	20	19,360	202	36,850
85	Pipes, tobacco	3	21,000	2,400	2,900	12,000	4,900	5	9	7,300	73	14,220
86	Plastering and stucco work	43	36,932	8,960	11,265	4,375	12,332	56	4	2,928	118	63,570
87	Plumbing, and gas and steam fitting	153	508,332	28,936	40,775	56,818	381,808	179	50	28,845	621	271,268
88	Pottery, terra cotta, and fire-clay products.	16	698,560	118,553	233,852	95,788	250,372	11	47	45,416	841	233,253
89	Printing and publishing, book and job.	82	737,502	37,000	20,425	398,702	281,375	83	73	64,110	709	275,438
90	Printing and publishing, newspapers and periodicals.	248	2,638,855	294,025	290,240	929,157	1,170,433	225	367	325,851	1,154	621,739
91	Pumps, not including steam pumps	3	5,800	1,500	500	2,450	1,850	4			2	986
92	Roofing and roofing materials	80	209,180	28,910	47,915	34,955	97,400	63	13	12,320	206	88,534
93	Saddlery and harness	218	1,278,214	62,480	96,665	85,343	1,033,776	261	86	66,802	809	348,162
94	Sewing machine repairing	10	5,161	900	1,500	1,109	1,662	7	2	1,520	10	2,806
95	Ship and boat building, wooden	10	60,377	12,100	8,300	12,075	27,902	14	6	3,785	104	48,090
96	Shirts	9	51,679			7,575	44,104	13	16	7,400	164	37,554

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 number.	Wages.	Average number.	Wages.	Average number.	Wages.										
5	\$2,664	1,025	\$230,671	28	\$2,774	\$40,440	\$28,539	\$1,022	\$9,759	\$1,120	\$330,475	\$327,257	\$3,218	\$864,130	27
10	4,400	81	17,444			8,131	1,683		6,433	15	78,300	77,918	332	130,756	28
18	14,304	1	160			4,043	1,795	742	1,506		132,592	131,323	1,269	173,420	29
126	47,806					7,893	50	720	6,623		75,234	75,014	220	161,451	30
223	96,058	342	25,994	5	1,022	77,985	22,153	2,955	52,877		589,149	580,361	8,788	1,214,816	31
1,286	818,634					39,741	3,401	7,037	28,598	710	894,701	891,955	2,746	1,563,078	32
250	91,596	105	23,121	29	1,505	35,287	1,430	1,433	32,424		268,537	265,212	3,375	478,701	33
480	126,180	591	116,081	380	38,196	105,796	2,078	9,843	83,349	10,526	972,244	951,707	20,537	1,663,712	34
25	10,306	19	4,600	3	282	10,044	7,348	508	1,708	480	8,486	6,834	1,652	51,959	35
83	39,987	25	4,138	8	1,100	9,702	360	640	8,702		84,023	77,543	6,480	179,121	36
37	21,801	18	2,461	1	134	11,526	2,325	142	8,029	1,030	65,285	65,186	1,099	117,680	37
40	18,982					3,507	2,398	187	800	122	37,712	37,427	285	73,140	38
6	2,608					404	263	26	115		2,430	1,678	752	9,650	39
23	13,047					1,828	804	97	927		2,002	1,261	741	26,798	40
89	80,738					16,508	2,400	2,938	11,170		166,215	161,835	4,380	321,245	41
1,181	483,032	2	442	1	120	295,982	8,836	38,535	246,446	2,165	12,018,998	11,874,647	144,351	14,515,161	42
7	8,416					1,301	680	46	575		28,512	22,182	1,330	40,722	43
2,779	1,180,220					246,088	13,465	21,830	208,478	2,815	2,010,857	1,934,822	76,035	4,434,610	44
89	19,248	105	14,094	37	3,561	10,100	254		9,846		75,346	73,781	1,565	192,787	45
6	4,600	29	9,370			2,794	2,106	50	463	175	19,611	19,550	61	52,000	46
91	88,895	4	506	2	256	8,312	6,260	478	1,274	300	54,157	52,842	1,315	158,894	47
885	324,813	1	225	82	8,200	169,665	9,494	7,743	83,428	69,000	647,943	638,072	9,871	1,504,083	48
279	121,744					194,579	60	83,945	110,574		139,194	136,221	2,973	670,804	49
19	13,480					2,407	1,420	8	979		9,511	9,375	130	84,650	50
1	200	7	1,145	1	200	1,211	674	12	525		2,787	2,740	47	7,815	51
13	5,176	13	2,166			1,396	595	61	740		18,802	18,717	85	47,295	52
18	7,522	26	4,156			7,095	2,035	40	5,020		64,960	64,645	315	112,400	53
188	84,041					64,879	555	8,961	55,363		81,564	23,484	58,080	454,497	54
7	3,148					624	396	37	91	100	1,241	955	288	10,372	55
2,387	1,141,862					176,846	9,047	13,246	154,553		4,324,100	3,524,913	799,187	6,876,093	56
192	62,968					22,206	3,219	2,030	16,957		126,926	123,360	3,566	249,870	57
23	13,100	4	850	2	312	1,402	996	36	830	40	17,110	16,873	237	40,478	58
810	321,658					112,659	1,950	18,455	92,254		2,881,896	2,805,092	16,804	3,757,016	59
308	105,897					30,493	260	2,627	19,606	8,000	114,815	84,856	29,959	296,949	60
1,079	554,819	29	4,628	4	492	4,182,373	10,231	67,205	4,094,989	9,948	3,605,316	3,599,930	205,386	9,786,527	61
573	323,602	8	864	15	3,216	1,500,606	1,760	30,222	1,468,624		630,969	569,782	61,187	3,186,627	62
22	10,343	2	400	1	260	3,897	2,874	224	799		13,919	13,451	463	50,715	63
22	11,076	1	150	1	150	3,490	2,572	275	589	60	36,819	36,572	247	75,857	64
7,385	2,451,590	4	837	160	25,219	379,074	18,821	50,505	309,748		7,379,148	7,378,266	882	13,774,911	65
963	376,439	2	250	16	2,584	101,882	7,459	13,115	40,057	41,251	1,089,381	1,070,790	18,541	1,891,617	66
26	15,631					14,768	8,900	1,424	9,444		160,126	155,480	4,646	203,713	67
294	109,732	1	200	1	125	14,770	5,759	1,157	7,379	475	98,016	93,880	4,136	328,908	68
780	330,351					156,563	9,712	1,588	17,057	134,206	657,955	646,258	11,697	1,410,121	69
28	12,783	8	638	3	730	2,049	1,337	67	541	104	41,391	41,076	315	80,237	70
12	3,615	743	182,369	7	782	81,208	57,538	4,674	18,976	20	762,633	753,103	4,580	1,492,960	71
79	32,474					12,441	3,872	1,195	7,374		62,736	61,268	1,463	185,720	72
252	122,508					26,972	4,793	2,010	9,419	10,750	369,923	368,519	1,404	678,350	73
42	21,705					2,258	130	426	912	800	70,770	68,580	2,190	112,020	74
166	56,470	8	1,664	6	936	63,632	1,735	66,897	66,897		4,225,390	4,214,197	11,193	4,633,343	75
7	2,622					3,803	1,340	113	2,175	175	12,316	12,141	175	23,100	76
643	234,081	1	100	12	3,012	25,738	12,959	1,432	9,187	2,160	244,646	244,059	587	799,322	77
46	13,325	6	1,500			7,848	1,440	838	5,570		263,952	261,261	2,691	359,085	78
236	103,169	1	132	12	1,606	29,628	11,483	1,223	12,667	4,350	144,506	143,972	534	373,102	79
142	56,505	43	7,631	4	382	365,007	14,674	2,220	342,113	6,000	327,573	322,989	4,584	1,099,774	80
1,008	306,694					38,953	4,570	1,504	24,786	8,093	398,900	386,089	12,811	1,107,615	81
5	1,338					982	352	25	655		2,715	2,615	100	7,967	82
63	30,804	12	2,347	4	364	27,730	18,288	913	6,674	1,855	70,177	68,733	1,444	238,842	83
122	22,450	140	14,400			9,892	1,020	782	8,090		205,989	203,157	2,832	319,428	84
51	12,350	10	920	12	950	1,098	360	230	518		7,897	6,297	1,600	40,640	85
118	63,570					8,718	1,661	273	1,784		74,380	73,752	628	199,399	86
599	263,443					75,371	26,325	3,153	23,888	22,510	822,756	813,663	4,093	1,470,739	87
801	226,569	10	1,729	30	4,955	41,157	708	2,893	36,770	888	198,659	127,120	71,539	724,255	88
513	239,243	163	32,324	28	3,371	70,835	23,074	4,143	34,768	3,850	369,095	357,692	11,403	1,000,479	89
1,015	491,715	102	26,260	37	3,764	325,093	50,601	12,273	139,450	72,769	445,000	418,835	26,165	2,240,724	90
2	986					432	222	45	165		2,884	2,881	3	11,745	91
203	88,134					24,699	6,117	1,954	6,508	10,120	316,265	313,676	2,589	546,910	92
721	335,270	41	8,234	47	6,658	85,095	82,371	7,822	44,819	88	1,194,950	1,186,110	8,840	2,119,799	93
7	2,258	2	392	1	156	1,216	929	73	149	65	5,418	5,309	109	14,503	94
104	45,090					7,804	245	564	6,199	796	20,775	20,076	699	97,492	95
20	7,864	137	29,234	7	456	10,044	3,185	30	6,829		55,345	52,919	2,426	119,821	96

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.
97 Slaughter and meat packing, wholesale.	13	\$70,870	\$15,300	\$14,800	\$6,000	\$85,270	16			42	\$10,434
98 Slaughter, wholesale, not including meat packing.	15	1,256,106	85,160	157,550	210,133	803,263	15	62	\$51,799	469	194,837
99 Soap and candles	4	211,201	8,930	44,676	53,311	104,284	5	15	13,224	62	21,246
100 Sporting goods	5	25,310	4,800	8,300	9,200	8,010	5	1	1,350	9	5,348
101 Stamped ware	4	67,625			19,400	48,225	7	1	900	67	24,700
102 Sugar and molasses, refining	5	123,300	18,500	24,700	22,100	61,000	10	12	8,200	81	14,979
103 Tinsmithing, coppersmithing, and sheet-iron working.	210	652,987	65,608	107,855	193,473	286,051	252	43	26,831	644	251,037
104 Tobacco, chewing, smoking, and snuff	59	3,485,793	86,938	580,984	726,255	2,091,618	58	498	524,758	3,187	850,018
105 Tobacco, cigars and cigarettes	180	1,105,303	77,650	95,395	24,126	908,132	200	81	67,677	1,349	388,064
106 Tobacco, stemming and rehandling	98	4,860,623	163,285	472,940	220,240	4,004,164	143	155	113,189	2,302	439,665
107 Trunks and valises	8	146,320	11,000	22,000	9,176	104,144	13	11	8,480	154	51,974
108 Upholstering materials	12	268,666	16,504	29,150	31,516	186,496	13	5	2,400	109	42,510
109 Varnish	3	187,749	8,500	25,775	13,807	139,667	32	32	26,554	41	19,940
110 Vinegar and cider	9	368,900	30,000	47,500	58,039	232,307	22	99	62,906	66	30,620
111 Watch, clock, and jewelry repairing	190	189,345	10,505	20,920	49,095	108,825	212	5	2,228	106	49,737
112 Wirework, including wire rope and cable.	9	12,720			5,500	7,220	12	5	2,880	30	18,294
113 Wood, turned and carved	18	99,670	11,705	16,285	39,360	32,320	17	15	12,728	284	103,062
114 Woolen goods	36	1,588,816	32,955	157,195	340,422	1,058,241	18	20	28,972	618	144,874
115 All other industries ¹	102	3,548,369	260,175	498,207	928,003	1,871,979	88	189	203,558	2,508	970,222

¹ Embraces ammunition, 2; artificial limbs, 1; axle grease, 1; bags, other than paper, 1; belting and hose, leather, 1; bicycles and tricycles, 1; bluing, 1; boot and shoe cut stock, 1; boxes, cigar, 2; boxes, fancy and paper, 2; bridges, 2; buttons, 1; cars and general shop construction and repairs by street railroad companies, 1; cars, steam railroad, not including operations of railroad companies, 1; charcoal, 1; chemicals, 1; china decorating, 1; coffins, burial cases, and undertakers' goods, 1; cordials and sirups, 1; cutlery and edge tools, 2; dentists' materials, 1; druggists' preparations, not including prescriptions, 2; dye stuffs and extracts, 1; engraving and diesinking, 2; fancy articles, not elsewhere specified, 1; flavoring extracts, 2; foundry supplies, 1; furnishing goods, men's, 1; gas machines and meters, 2; grease and tallow, 2; hammocks, 1; hand stamps, 2; hardware, 2; hones and whetstones, 1; iron and steel, bolts, nuts, washers, and rivets, 1; iron and steel, forgings, 1; jute and jute goods, 1; kaolin and other earth grinding, 1; lamps and reflectors, 1; leather goods, 1; linen goods, 1;

TABLE 8.—MANUFACTURES IN CITIES

COVINGTON.

1	All industries	403	\$4,729,786	\$452,285	\$719,298	\$1,648,406	\$1,909,797	435	217	\$214,300	3,898	\$1,530,089
2	Bicycle and tricycle repairing	8	2,025			450	1,575	5			8	750
3	Blacksmithing and wheelwrighting	19	8,965	1,800	1,850	2,740	3,075	22			21	7,620
4	Boots and shoes, custom work and repairing.	27	11,020	3,050	4,200	2,115	1,655	28			7	2,430
5	Bread and other bakery products	20	15,990	2,700	3,400	5,015	4,875	26			31	12,425
6	Brick and tile	3	20,725	6,000	3,375	4,350	7,000	4	1	1,200	25	6,860
7	Carpentering	28	40,135	5,850	4,300	4,980	25,025	36			83	47,496
8	Carriages and wagons	4	22,650	6,000	4,500	3,000	9,150	6			22	9,420
9	Clothing, men's, custom work and repairing.	15	35,485	4,850	5,700	4,810	20,575	15			24	10,082
10	Clothing, men's, factory product	82	31,582	4,117	6,850	13,690	6,925	88			572	127,306
11	Clothing, women's, dressmaking	6	2,640			540	2,100	6			15	3,100
12	Confectionery	3	3,200			1,550	1,650	4	2	3,750	5	1,255
13	Dyeing and cleaning	3	4,850	1,500	2,250	900	200	3			5	1,040
14	Foundry and machine shop products	9	295,608	21,600	23,803	114,921	135,284	6	30	23,026	297	140,512
15	Furniture, cabinetmaking, repairing, and upholstering.	4	4,775	2,500	1,500	140	635	4			2	770
16	Liquors, malt	3	765,180	113,272	217,218	168,159	266,531		18	28,890	84	51,970
17	Lumber, planing mill products, including sash, doors, and blinds.	3	123,512	24,944	23,950	25,700	48,918	2	8	2,000	55	23,898
18	Marble and stone work	3	11,900	3,000	800	6,100	2,000	4			22	11,120
19	Masonry, brick and stone	6	37,800	3,000	1,000	4,900	28,400	9			49	20,500
20	Millinery, custom work	12	49,585	7,000	5,000	1,285	36,300	13			40	11,714
21	Painting, house, sign, etc	17	15,620	2,075	2,125	1,720	9,700	17	2	1,168	52	20,832
22	Plumbing, and gas and steam fitting	13	19,725	2,500	1,500	2,925	12,800	13	1	300	45	24,523
23	Printing and publishing, book and job	6	16,825			11,600	4,725	7			13	5,627
24	Printing and publishing, newspapers and periodicals.	3	10,025			6,800	3,225	3	5	8,075	23	7,044
25	Roofing and roofing materials	7	13,929	3,210	3,130	2,520	5,009	7	2	516	17	8,260
26	Saddlery and harness	6	14,025	2,000	3,000	1,950	7,075	7			7	2,863
27	Slaughtering and meat packing, wholesale.	3	16,300	1,000	1,000	800	13,500	5			12	5,844
28	Tinsmithing, coppersmithing, and sheet-iron working.	14	95,533	1,650	2,400	68,348	27,635	17	2	780	117	30,085
29	Tobacco, chewing, smoking, and snuff	4	172,340	8,100	13,000	21,800	134,440	1	42	39,573	123	30,155
30	Tobacco, cigars and cigarettes	15	44,697	9,400	8,550	847	25,600	17	4	2,725	37	14,629
31	Watch, clock, and jewelry repairing	7	2,600	500	1,000	550	550	7			7	2,500
32	All other industries ¹	55	2,821,590	216,667	373,537	1,167,721	1,063,665	58	105	102,357	2,078	871,809

¹ Embraces awnings, tents, and sails, 1; boot and shoe uppers, 1; boxes, wooden packing, 2; carpets, rag, 1; cars and general shop construction and repairs by steam railroad companies, 2; clothing, women's, factory product, 1; cooperage, 1; cordage and twine, 1; cotton goods, 1; dyeing and finishing textiles, 1; flouring and grist mill products, 1; foundry supplies, 1; furniture, factory product, 2; gas, illuminating and heating, 1; hairwork, 1; hats and caps, not including fur hats and wool hats, 1; ice, artificial, 1; iron and steel, 2; ironwork, architectural and ornamental, 2; jewelry, 1; leather, tanned, curried, and finished, 1; liquors, distilled, 1; looking-glass and picture frames, 2; mineral and soda waters, 1; monuments and tombstones, 2; paints, 2; paper hanging, 1; perfumery and cosmetics, 2;

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 number.	Wages.	Average number.	Wages.	Average number.	Wages.										
42	\$19,434					\$6,269	\$420	\$374	\$4,947	\$28	\$545,373	\$543,778	\$1,595	\$635,685	97
465	194,277	4	\$560			99,425	2,240	6,398	90,787		3,899,248	3,872,513	26,735	5,081,482	98
49	17,547	13	3,699			13,583		296	18,287		183,207	184,888	3,919	286,588	99
9	5,348					1,363		408	874		2,419	2,279	140	19,566	100
63	23,790	2	520	2	\$390	16,130	1,180	50	14,900		86,198	85,445	753	162,500	101
29	14,439	1	360	1	180	3,432	350	287	2,815		287,174	285,905	1,269	361,900	102
582	239,523	5	786	57	10,708	52,503	24,746	5,475	22,107	175	583,864	575,150	8,714	1,219,360	103
2,202	670,054	567	187,549	418	42,415	7,182,022	15,956	22,556	7,143,510		5,221,257	5,180,005	41,252	14,948,192	104
671	274,254	452	91,200	226	22,610	296,081	20,004	4,951	271,126		514,943	512,362	2,581	1,506,559	105
1,056	346,769	382	63,979	264	28,917	147,782	16,934	19,643	109,105	2,100	4,025,464	4,008,517	16,947	5,467,860	106
189	49,405	15	2,569			25,659	3,788	1,036	20,885		99,144	98,236	908	236,938	107
197	42,210			2	300	15,890	1,990	1,258	12,142		291,804	289,259	2,545	401,289	108
41	19,940					8,841		210	2,540		205,868	204,674	994	334,978	109
58	28,846	11	1,993	2	281	25,636	2,748	1,753	21,085		214,572	210,932	3,640	462,078	110
101	49,021	1	300	4	416	37,035	19,289	1,528	4,403	11,810	55,950	54,164	1,786	282,195	111
39	13,294					3,222	2,048	40	1,134		16,652	16,487	165	58,662	112
288	102,787			1	325	5,207	1,766	615	2,826		144,006	141,230	2,776	342,525	113
149	50,950	364	79,966	105	14,558	48,644	556	6,365	41,723		405,775	397,162	8,613	746,684	114
1,947	869,484	400	82,550	161	18,188	224,378	24,407	11,208	168,804	19,959	2,703,012	2,631,702	71,310	4,891,807	115

lithographing and engraving, 1; millinery and lace goods, 2; mirrors, 2; models and patterns, 2; mucilage and paste, 2; musical instruments and materials, not specified, 2; musical instruments, organs and materials, 2; oil, not elsewhere specified, 2; oleomargarine, 1; photographic materials, 2; photolithographing and photoengraving, 2; plumbers' supplies, 1; pulp, from fiber other than wood, 1; refrigerators, 2; sales and vaults, 1; saws, 2; scales and balances, 1; sewing machines and attachments, 1; show cases, 1; silversmithing, 2; smelting and refining, not from the ore, 1; soda water apparatus, 1; steam fittings and heating apparatus, 1; steam packing, 1; stencils and brands, 2; stereotyping and electrotyping, 1; surgical appliances, 1; tin andterne plate, 1; umbrellas and canes, 2; watch cases, 1; windmills, 1; window shades, 1; woodenware, not elsewhere specified, 1; wool pulling, 1; worsted goods, 1.

BY SPECIFIED INDUSTRIES: 1900.

COVINGTON.

2,902	\$1,365,411	760	\$151,834	146	\$21,844	\$382,705	\$52,004	\$39,260	\$640,956	\$100,485	\$2,983,976	\$2,865,832	\$118,144	\$5,610,082	1
3	750					550	425		125		3,200	3,175	25	7,600	2
19	7,345			2	275	1,996	1,843	83	70		8,425	7,830	595	30,798	3
6	2,890	1	100			1,574	1,203	178	198		6,947	6,833	114	24,195	4
24	11,159	6	1,110	1	156	8,846	3,090	188	618		44,642	43,815	1,327	86,200	5
21	6,440			4	420	1,463	325	253	888		3,162	242	2,920	19,850	6
38	47,496					73,052	1,065	337	381	71,269	100,934	100,868	66	276,748	7
21	9,800			1	120	1,960	700	300	960		7,303	7,055	248	25,823	8
16	8,720	4	912	4	450	20,766	2,156	405	1,580	16,625	45,300	45,190	200	96,955	9
79	33,910	471	91,411	22	2,066	7,565	4,647	236	1,577	1,105	1,420	12	1,408	188,517	10
		13	2,885	2	215	613	438	30	95	50	2,470	2,425	45	9,074	11
2	600	1	155	2	500	1,604	720	39	845		12,296	12,191	105	26,520	12
3	550	2	490			380	175	50	165		470	370	100	3,700	13
297	146,512					20,209	2,002	1,527	16,680		171,880	164,018	7,862	410,470	14
2	770					286	228	48	10		1,891	1,871	20	5,370	15
84	51,970					150,859		6,581	144,278		65,578	55,346	10,232	397,458	16
55	23,898					4,333		968	3,865		60,540	58,978	1,562	99,861	17
22	11,120					1,162	750	72	190	150	10,100	9,550	550	29,500	18
49	26,500					1,196	467	85	654		33,100	33,010	90	75,065	19
		40	11,714			3,299	1,355	145	1,799		47,850	47,800	50	81,700	20
51	20,582			1	250	1,595	1,118	147	330		14,170	14,140	30	55,237	21
45	24,523					2,979	1,861	147	971		80,895	80,670	225	75,350	22
12	6,215	1	312			1,882	1,218	89	375		7,178	6,742	436	19,145	23
22	7,519	1	125			2,530	720	10	1,540	260	6,091	5,676	415	37,839	24
17	8,260					923	433	100	890		18,966	18,806	160	37,105	25
6	2,713			1	150	1,992	682	217	1,093		6,794	6,634	160	16,609	26
12	5,844					570	300	70	200		229,431	229,031	400	257,080	27
72	26,885			45	9,200	5,295	3,859	834	602		112,395	111,605	790	180,745	28
79	25,955	49	10,200			261,984	8,560	973	252,442		151,162	149,897	1,265	541,158	29
32	14,039			5	590	10,151	957	273	8,921		23,520	23,462	58	66,283	30
7	2,500					590	505		75		1,315	1,300	15	9,450	31
1,851	831,937	171	32,420	56	7,452	245,711	10,203	24,928	199,554	11,026	1,754,961	1,667,790	87,171	3,418,695	32

photography, 1; plastering and stuccowork, 1; pottery, terra cotta, and fire-clay products, 1; safes and vaults, 1; sewing machine repairing, 1; ship and boat building, wooden, 1; slaughtering, wholesale, not including meat packing, 1; stamped ware, 1; tin andterne plate, 1; tobacco, stemming and rehanding, 1; trunks and valises, 1; upholstering materials, 1; vinegar and cider, 1; wirework, including wire rope and cable, 2; wood, turned and carved, 1; woolen goods, 1; wool pulling, 1.

TABLE 8.—MANUFACTURES IN CITIES

LEXINGTON.

	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	271	\$1,582,378	\$119,116	\$176,904	\$552,691	\$683,667	290	161	\$108,290	1,441	\$545,118
2	Bicycle and tricycle repairing	4	8,000			2,350	5,650	4			7	2,540
3	Blacksmithing and wheelwrighting	22	25,011	5,500	2,925	3,455	13,131	24	1	150	28	10,514
4	Boots and shoes, custom work and repairing.	10	3,773	772	125	1,204	1,672	10			12	8,838
5	Bread and other bakery products	7	19,375	5,600	5,900	3,195	4,680	8	4	1,962	21	6,522
6	Carpentering	12	37,712		400	1,490	35,822	15	1	416	73	32,740
7	Carriages and wagons	7	56,311	10,000	17,700	4,450	24,161	9	2	530	44	19,635
8	Clothing, men's, custom work and repairing.	12	30,362	300	600	2,075	27,387	13	3	2,786	57	27,697
9	Clothing, women's, dressmaking	26	42,082	4,350	7,350	2,692	27,690	29	8	11,200	135	27,414
10	Cooperage	4	23,345	2,500	2,500	2,200	16,145	5	2	1,080	31	10,821
11	Flouring and grist mill products.	4	118,767	8,000	21,000	26,100	63,667	2	9	8,000	21	12,341
12	Foundry and machine shop products.	4	24,263	1,000	800	13,100	9,363	4	4	3,680	20	6,532
13	Furniture, cabinetmaking, repairing, and upholstering.	7	6,580		260	906	5,414	10			6	1,263
14	Lock and gun smithing	3	3,700			1,650	2,050	4			3	1,874
15	Lumber, planing mill products, including sash, doors, and blinds.	4	109,680	9,500	18,500	19,286	67,394	4	12	10,040	125	64,046
16	Marble and stone work	3	3,810	585	325	600	2,300	4			9	9,124
17	Masonry, brick and stone	6	5,350	300	500	1,380	3,170	7			42	15,190
18	Millinery, custom work	15	31,872	3,750	2,200	1,212	24,710	18	5	2,151	38	6,441
19	Painting, house, sign, etc	9	18,145			1,345	16,800	11	3	1,560	66	25,830
20	Photography	6	7,487			4,800	2,687	7	2	840	5	1,696
21	Plumbing, and gas and steam fitting.	7	29,876			3,333	26,543	9	9	4,815	41	17,858
22	Printing and publishing, book and job.	10	41,550			24,350	17,200	8	7	2,168	54	18,531
23	Printing and publishing, newspapers and periodicals.	16	82,561			27,750	54,811	6	40	29,082	67	28,891
24	Roofing and roofing materials	3	2,644			575	2,069	4			8	3,100
25	Saddlery and harness	9	20,164	250	350	2,150	17,414	10			23	10,963
26	Tinsmithing, coppersmithing, and sheet-iron working.	11	27,298	1,300	3,600	4,983	17,415	13	5	1,820	35	12,609
27	Upholstering materials	6	126,478	10,204	18,700	13,386	84,188	9	4	1,700	119	19,471
28	Watch, clock, and jewelry repairing.	11	12,780			3,850	8,930	12	1	200	14	8,024
29	All other industries ¹	33	613,402	55,205	78,169	378,824	101,204	31	39	24,120	337	139,557

¹ Embraces awnings, tents, and sails, 1; brick and tile, 1; cars and general shop construction and repairs by steam railroad companies, 2; cheese, butter, and condensed milk, factory product, 1; confectionery, 2; dyeing and cleaning, 2; electrical construction and repairs, 1; gas, illuminating and heating, 1; ice, artificial, 2; liquors, distilled, 1; lumber and timber products, 2; mattresses and spring beds, 2; mineral and soda waters, 2; paper hanging, 1; patent medicines and compounds, 1;

LOUISVILLE.

1 All industries	2,307	\$49,334,701	\$4,368,981	\$6,929,847	\$11,196,678	\$26,839,195	2,668	2,893	\$2,929,141	29,926	\$10,945,720
2 Agricultural implements	4	1,588,063	162,000	176,837	232,000	1,012,379	1	90	113,420	634	232,499
3 Baking and yeast powders	4	3,825	100	150	1,275	7,800	8	12	2,020	13	8,049
4 Bicycle and tricycle repairing	25	13,267	2,050	2,650	5,955	8,555	30	2	110	27	9,695
5 Blacksmithing and wheelwrighting	90	82,202	23,145	15,220	14,892	23,945	99			159	78,920
6 Boot and shoe uppers	3	6,358			1,440	4,948	5			13	5,629
7 Boots and shoes, custom work and repairing	121	47,736	7,135	10,670	12,714	17,217	125	1	468	73	23,808
8 Boots and shoes, factory product	3	89,268			18,053	71,210	6	30	14,075	168	39,919
9 Bottling	3	53,842	7,000	5,000	1,842	39,500	5	16	18,722	30	11,500
10 Boxes, wooden packing	5	450,557	95,075	37,000	56,783	231,099	5	18	15,840	599	179,789
11 Brass castings and brass finishing	3	20,672			5,693	14,979	5			28	9,784
12 Bread and other bakery products	130	684,225	125,925	236,603	198,979	122,721	135	69	36,209	437	150,620
13 Brick and tile	9	256,090	49,700	112,078	34,201	60,111	7	11	9,825	298	92,519
14 Brooms and brushes	3	42,414	900	3,600	2,480	35,434	12	10	7,794	32	11,402
15 Carpentering	139	273,088	30,332	36,675	33,476	172,655	176	19	9,292	760	328,656
16 Carriage and wagon materials	6	300,557	59,850	34,789	31,094	114,924	1	12	14,460	192	63,559
17 Carriages and wagons	26	1,887,148	110,050	307,109	117,273	1,322,716	35	56	76,507	786	304,233
18 Cars and general shop construction and repairs by steam railroad companies	5	654,533	77,500	149,310	96,652	331,071		20	16,210	1,563	316,825
19 Cheese and butter, urban dairy products	18	4,022	175	250	505	3,032	20	1	75	9	2,726
20 Cheese, butter, and condensed milk, factory product	4	14,925	50	300	4,165	10,410	9			11	4,310
21 Clothing, men's, custom work and repairing	117	1,142,732	27,951	37,200	48,988	1,028,643	136	105	99,537	1,233	356,084
22 Clothing, men's, factory product	11	1,122,833	1,800	3,700	36,533	1,030,800	20	125	121,228	1,115	353,456
23 Clothing, women's, dressmaking	170	110,069	12,800	19,055	19,274	58,940	185	12	6,784	672	161,518
24 Clothing, women's, factory product	6	16,875			2,675	14,200	12	3	2,193	64	10,474
25 Coffee and spice, roasting and grinding	5	75,000	8,000	10,000	11,600	60,400	6	4	3,600	19	14,464
26 Confectionery	29	391,632	16,575	28,535	68,777	279,745	31	34	63,732	527	112,303
27 Cooperage	18	341,397	33,680	70,514	133,010	554,193	17	33	61,712	1,104	252,855
28 Dyeing and cleaning	18	15,090	1,000	3,250	8,435	2,415	12	4	2,160	34	11,704
29 Electrical apparatus and supplies	3	45,077			14,811	30,266	3	4	4,020	36	20,231
30 Electrical construction and repairs	11	11,475	400	600	2,650	7,825	15	1	858	31	14,467
31 Electroplating	3	2,320			2,350	270	4			5	2,064

BY SPECIFIED INDUSTRIES: 1900—Continued.

LEXINGTON.

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.										
1,213	\$504,628	200	\$38,023	28	\$2,467	\$224,916	\$46,349	\$12,003	\$107,188	\$59,286	\$1,467,515	\$1,434,292	\$33,223	\$2,925,697	1
7	2,540					1,744	1,080	25	639		2,030	1,927	103	14,898	2
27	10,466			1	48	3,199	2,473	160	566		10,647	10,087	560	45,249	3
12	3,838					1,219	928	32	259		3,789	3,762	27	16,931	4
21	6,522					1,451	900	147	404		23,195	26,984	1,211	60,619	5
73	32,740					50,156	1,452	40	1,113	47,551	134,440	134,440		256,550	6
44	19,635					3,757	934	900	1,923		18,178	17,570	608	58,184	7
52	26,156	4	1,456	1	85	10,161	5,941	269	3,119	832	46,448	46,136	312	111,055	8
1	1,200	134	26,214			5,377	2,835	246	2,296		53,654	53,554	100	127,637	9
31	10,821					1,133	400	255	478		28,010	27,935	75	53,410	10
21	12,841					21,760		1,176	20,684		325,901	322,116	3,735	419,636	11
19	6,480			1	52	1,739	960	130	649		5,978	5,448	530	22,384	12
6	1,263					739	594	27	118		4,596	4,576	20	14,491	13
3	1,874					652	432	37	183		1,847	1,332	15	6,850	14
122	63,742			3	304	9,493	2,700	1,003	5,790		125,068	123,608	1,460	258,024	15
9	9,124					425	240	30	155		4,860	4,860		19,500	16
42	15,100					4,404	264	20	120	4,000	57,595	57,395	200	81,865	17
66	25,836	38	6,441			5,424	3,449	318	1,657		38,935	38,896	39	83,404	18
2	1,426	3	270			2,125	1,043	272	810		23,126	23,101	25	68,700	19
41	17,858					1,912	1,094	78	740		3,548	3,423	125	14,035	20
						5,153	1,944	268	2,456	485	44,738	44,615	123	88,266	21
42	16,423	12	2,108			4,523	2,798	387	1,138	200	23,469	22,354	1,115	63,300	22
59	27,754	6	895	2	242	15,443	2,819	260	7,421	4,943	15,441	12,940	2,501	110,950	23
8	3,100					1,318	465	80	773		4,622	4,590	32	11,073	24
23	10,953					2,555	1,760	198	597		12,655	12,511	144	34,535	25
33	12,573			2	96	3,109	2,105	140	839	25	21,146	20,746	400	49,416	26
119	19,471					6,280	1,160	589	4,531		140,604	140,056	548	191,751	27
14	8,024					2,015	1,545		270	200	4,508	4,477	81	24,596	28
316	137,278	3	639	18	1,640	57,650	4,034	5,006	47,560	1,050	283,987	264,853	19,134	615,358	29

paving and paving materials, 2; photolithographing and photoengraving, 1; plastering and stuccowork, 2; slaughtering, wholesale, not including meat packing, 1; soap and candles, 1; tobacco, chewing, smoking, and snuff, 2; tobacco, cigars and cigarettes, 1; wirework, including wire rope and cable, 1.

LOUISVILLE.

23,348	\$9,638,562	5,175	\$1,136,945	1,403	\$170,213	\$13,145,595	\$462,462	\$286,338	\$11,618,542	\$778,263	\$41,016,391	\$40,369,370	\$647,021	\$79,286,390	1
633	282,239			1	200	144,785	875	11,277	132,633		430,431	423,204	7,227	1,227,288	2
6	1,980	5	775	2	238	2,180	372	35	1,732		13,231	13,213	18	23,791	3
21	9,041			6	654	4,549	3,373	73	1,676	325	16,551	16,072	479	49,757	4
156	78,441			3	488	11,149	8,145	660	1,676	663	69,897	67,009	2,888	238,419	5
13	5,629					1,422	510	87	875		13,334	13,280	54	24,678	6
72	28,548	1	260			14,279	11,689	586	1,280	724	54,212	53,225	987	177,714	7
75	23,729	49	10,664	44	5,526	6,586	1,980	199	4,407		124,845	123,410	1,485	206,624	8
20	9,000	10	2,500			7,043	1,700	693	4,650		69,660	69,566	94	127,133	9
528	166,441	14	8,032	57	10,816	7,555	320	224	7,011		359,512	347,884	11,628	651,884	10
20	7,984	8	1,800			2,739	1,120	11	1,008		17,147	16,385	762	37,250	11
336	135,393	95	13,981	6	1,246	52,502	18,232	4,986	29,284		610,757	592,683	18,074	1,163,915	12
295	92,249			3	300	7,404	2,100	1,039	4,265		62,987	19,939	43,048	255,573	13
17	7,066	13	3,324	2	412	12,758	1,176	80	4,502	7,000	75,892	75,607	285	162,402	14
759	323,380			1	276	229,079	8,949	1,619	7,830	210,681	744,672	743,415	1,257	1,689,023	15
187	62,859			5	700	12,020	106	1,706	10,268		175,306	170,245	5,061	316,578	16
745	300,456	1	300	20	3,467	77,738	5,376	4,937	67,175	250	805,897	793,927	6,970	1,442,104	17
1,558	814,936	5	1,829			30,042	85	5,654	24,353		1,889,127	1,365,586	28,541	2,252,204	18
9	2,726					1,992	1,849	10	133		27,440	27,300	140	40,877	19
10	4,180			1	130	948	744	36	168		48,611	48,416	195	67,852	20
461	218,269	668	128,847	104	9,478	246,616	38,521	4,561	74,593	128,941	1,157,129	1,153,008	4,121	2,179,537	21
206	122,582	853	224,026	55	6,848	229,716	18,698	5,086	39,482	116,500	1,516,322	1,510,178	6,144	2,530,910	22
4	1,464	644	157,689	24	2,865	28,050	20,604	591	6,045	810	213,636	211,651	1,987	564,550	23
8	3,320	56	13,154			7,803	1,425		6,963	15	75,668	75,305	363	119,577	24
18	14,301	1	150			4,043	1,795	742	1,506		132,592	131,323	1,269	178,420	25
201	88,860	324	23,129	2	314	69,618	18,293	2,656	48,669		546,788	533,810	7,978	1,116,808	26
1,102	252,555			2	300	82,960	980	5,921	26,059		543,307	542,685	622	1,046,475	27
18	7,960	14	3,562	2	182	5,911	8,068	403	1,274	480	6,832	4,879	1,108	40,260	28
86	20,281					9,896	1,965	142	6,756	1,080	60,085	59,586	499	97,280	29
28	14,096			3	371	2,268	1,594	84	518	122	24,279	24,142	137	53,990	30
4	1,908			1	156	327	263	9	56		1,566	854	712	7,250	31

TABLE 8.—MANUFACTURES IN CITIES

LOUISVILLE—Continued.

LOUISVILLE—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.
Engraving, steel, including plate printing.	3	\$16,764			\$12,170	\$4,594	3	3	\$400	24	\$13,125
Fertilizers	3	274,974	\$5,000	\$21,500	30,788	217,685	4	16	17,650	63	29,738
Flouring and grist mill products	6	507,280	106,470	60,130	127,275	213,385	27	27	81,980	116	57,882
Food preparations	5	3,425	850	500	785	1,290	7	1	500	4	758
Foundry and machine shop products.	38	2,552,385	351,907	402,232	596,332	1,201,364	28	158	181,411	2,016	812,469
Fur goods	4	18,465	700	300	1,065	16,400	6	4	2,288	35	13,976
Furniture, cabinetmaking, repairing, and upholstering.	29	36,161	8,250	4,950	4,959	18,002	34	8	316	71	31,462
Furniture, factory product.	16	480,788	60,202	68,040	86,131	266,410	24	30	19,737	603	217,210
Glass, cutting, staining, and ornamenting.	3	14,285			660	13,625	4	1	200	19	13,480
Hairwork	3	2,835			185	2,650	4			8	1,470
Hats and caps, not including fur hats and wool hats.	3	12,050	800	1,500	1,800	7,950	4	2	1,950	24	6,852
House furnishing goods, not elsewhere specified.	3	34,785			5,500	29,285	6			44	11,678
Ice, artificial.	7	371,821	34,500	104,000	203,221	30,100	4	12	10,140	50	27,372
Instruments, professional and scientific.	3	11,030			1,715	9,315	3	1	780	7	3,148
Ironwork, architectural and ornamental.	6	240,951	30,600	51,768	80,871	77,712	4	28	23,906	165	52,257
Jewelry	3	13,200			3,700	9,500	4	1	936	25	13,412
Leather, tanned, curried, and finished.	15	3,597,579	210,332	443,967	260,515	2,682,765	8	40	49,869	575	250,103
Lime and cement	8	575,294	129,521	216,966	103,200	125,607	1	3	5,000	250	94,788
Liquors, distilled.	9	3,432,539	639,600	585,000	831,098	1,326,841	8	60	76,257	186	95,498
Liquors, malt.	19	2,734,994	262,624	973,599	832,946	665,825	14	62	97,671	317	179,834
Lock and gun smithing.	14	17,475	2,750	3,050	6,970	4,705	17	1	600	19	8,049
Looking-glass and picture frames.	7	10,515			1,960	8,555	12	3	800	9	5,600
Lumber and timber products	9	645,154	56,507	55,700	117,230	415,717	37	37	42,773	373	273,822
Lumber, planing mill products, including sash, doors, and blinds.	13	496,411	62,307	76,407	57,869	299,828	18	33	28,719	254	107,918
Malt.	3	24,500			3,000	21,500	3	3	4,200	26	15,631
Marble and stone work	9	131,100	29,677	11,874	39,584	49,965	25	5	4,585	150	54,034
Masonry, brick and stone	49	244,442	30,600	17,600	16,173	180,069	59	10	10,620	339	215,085
Mattresses and spring beds.	7	12,965	950	1,050	1,815	9,150	8	6	4,046	27	11,657
Millinery, custom work	56	168,810	10,200	24,950	4,123	129,587	64	40	20,124	316	86,165
Mineral and soda waters	10	63,245	21,900	11,300	19,020	11,025	11	7	5,444	37	14,127
Monuments and tombstones	10	238,078	43,152	49,100	11,937	125,889	9	21	47,460	144	73,509
Oil, cottonseed and cake	3	2,029,296	40,680	105,546	309,556	1,513,414	30	30	52,877	180	59,070
Optical goods	3	9,400			1,100	8,300	2	2	1,250	7	2,622
Painting, house, sign, etc.	121	88,649	16,700	20,375	13,174	33,400	144	3	1,000	369	172,330
Paints	7	153,081	16,422	21,500	25,337	94,822	4	11	12,000	45	17,426
Paper hanging	40	189,310	12,560	15,625	4,567	106,558	57	17	10,574	186	78,845
Patent medicines and compounds	29	247,466	16,540	39,100	13,269	178,557	31	56	56,504	108	48,978
Paving and paving materials	22	235,262	13,500	18,550	86,467	116,745	24	21	19,226	611	268,487
Perfumery and cosmetics	3	2,704			620	2,084	3			4	1,163
Photography	26	32,098	500	2,000	15,778	14,420	28	6	1,072	43	20,932
Pickles, preserves, and sauces	3	90,115	4,500	14,000	15,101	56,514	5	19	17,360	88	14,050
Plastering and stucco work	31	20,727	3,510	7,640	3,190	6,887	36	3	2,080	60	36,313
Plumbing, and gas and steam fitting	78	336,007	15,435	25,675	32,035	262,811	96	38	19,804	349	154,071
Printing and publishing, book and job.	45	631,577	32,750	17,825	330,777	250,225	49	60	60,257	601	236,535
Printing and publishing, newspapers and periodicals.	52	1,911,237	265,550	249,300	491,289	905,157	32	255	250,956	464	283,349
Pumps, not including steam pumps.	3	5,800	1,500	500	2,450	1,350	4			2	986
Roofing and roofing materials	23	126,047	8,375	18,650	22,535	76,937	29	15	10,524	144	62,382
Saddlery and harness	43	658,600	20,695	25,555	41,630	570,720	61	62	51,064	414	176,074
Sewing machine repairing	6	4,086	900	1,500	724	962	3	1	1,040	8	2,414
Shirts	9	51,679			7,575	44,104	13	16	7,400	164	37,554
Slaughtering and meat packing, wholesale.	4	40,950	10,900	9,150	3,050	17,850	5			15	7,220
Slaughtering, wholesale, not including meat packing.	8	1,177,476	65,160	139,300	194,253	778,763	9	52	45,739	434	182,197
Sporting goods	3	13,710	3,000	1,000	6,200	3,510	2	1	1,350	7	4,148
Tinsmithing, coppersmithing, and sheet-iron working.	77	245,074	24,368	47,045	73,229	100,432	89	28	20,591	299	119,810
Tobacco, chewing, smoking, and snuff.	24	2,894,999	65,240	511,074	633,313	1,684,872	24	388	443,878	2,710	748,121
Tobacco, cigars and cigarettes	92	902,227	50,425	58,820	13,800	779,182	99	55	53,794	1,045	290,159
Tobacco, stemming and rehandling.	14	1,476,051	43,910	96,040	141,000	1,194,101	18	25	37,406	727	155,365
Trunks and valises	6	143,795	11,000	22,000	9,051	101,744	11	11	8,480	152	50,529
Varnish	3	187,740	8,500	25,775	13,807	139,667	32	32	26,554	41	19,940
Vinegar and cider	7	313,400	24,000	29,500	39,098	220,807	21	93	59,666	54	22,520
Watch, clock, and jewelry repairing.	45	46,828	2,600	2,550	9,793	31,885	52	1	468	43	19,428
Wirework, including wire rope and cable.	5	10,010			4,650	5,360	4	5	2,880	33	11,970
Wood, turned and carved.	7	13,920	4,815	3,725	3,010	2,370	9			17	7,512
All other industries ¹	98	7,857,781	506,153	854,202	8,855,440	2,641,986	85	227	261,386	2,994	1,099,126

¹ Embraces ammunition, 2; artificial limbs, 1; awnings, tents, and sails, 2; axle grease, 1; bags, other than paper, 1; baskets, and rattan and willow ware, 2; belting and hose, leather, 1; bluing, 1; bookbinding and blank book making, 1; boot and shoe out stock, 1; boxes, cigar, 1; boxes, fancy and paper, 1; bridges, 2; buttons, 1; carpets, rag, 2; cars and general shop construction and repairs by street railroad companies, 1; chemicals, 1; coffins, burial cases, and undertakers' goods, 1; coke, 1; cordage and twine, 1; cordials and sirups, 1; cotton goods, 1; cutlery and edge tools, 2; dentists' materials, 1; druggists' preparations, not including prescriptions, 2; dyeing and finishing textiles, 1; engraving and diesinking, 2; flavoring extracts, 2; furnishing goods, men's, 1; gas, illuminating and heating, 2; gas machines and meters, 1; grease and tallow, 2; hammocks, 1; hand stamps, 2; hones and whetstones, 1; iron and steel, 1; iron and steel, bolts, nuts, washers, and rivets, 1; iron and steel, forgings, 1; jute and jute goods, 1; linen goods, 1; millinery and lace goods, 2; mirrors, 2; models and patterns, 1; mucilage

BY SPECIFIED INDUSTRIES: 1900—Continued.

LOUISVILLE—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.										
23	\$13,047			1	\$78	\$1,828	\$804	\$97	\$927		\$2,002	\$1,261	\$741	\$26,798	32
63	29,788					16,208	2,400	2,838	10,970		144,965	142,085	2,880	272,045	33
114	57,440	2	\$442			107,041	160	4,084	102,797		1,586,737	1,574,280	12,457	1,824,575	34
1	420			3	328	768	560	33	175		15,290	14,560	730	22,297	35
2,008	810,181			8	2,288	194,882	8,633	15,160	169,749	\$1,340	1,484,371	1,442,590	41,781	8,233,222	36
6	4,600	29	9,376			2,794	2,106	50	463	175	19,611	19,550	61	52,000	37
67	30,906	2	300	2	256	5,702	4,245	299	858	300	35,849	34,779	1,070	103,483	38
586	212,610			17	4,600	45,552	7,044	5,067	33,441		296,997	290,846	6,151	705,517	39
19	18,480					2,307	1,320	8	979		9,511	9,375	136	33,850	40
1	200	6	1,070	1	200	1,031	524	12	495		2,512	2,465	47	6,815	41
12	4,936	12	1,916			1,066	420	46	600		16,925	16,860	65	40,750	42
18	7,522	26	4,156			7,095	2,035	40	5,020		61,960	64,645	315	112,400	43
50	27,372					21,590	125	2,733	18,732		35,096	7,370	27,726	132,395	44
7	3,148					624	396	37	91	100	1,241	955	286	10,372	45
165	52,257					20,922	2,923	1,580	16,419		98,354	95,690	2,664	197,852	46
23	18,100			2	312	1,166	960	36	180	40	16,850	16,613	237	88,478	47
575	250,103					92,333	975	14,682	76,681		2,373,135	2,358,708	14,427	3,114,781	48
250	94,788					21,748		2,542	19,206		103,486	79,479	24,007	249,763	49
186	98,408					1,762,614		18,809	1,743,805		802,087	753,513	48,574	2,968,947	50
313	179,190	3	364	1	230	829,313	1,760	14,564	812,989		381,064	342,547	38,517	1,782,220	51
16	7,389	2	400	1	260	2,393	1,957	101	335		9,161	8,802	359	29,080	52
9	5,600					1,556	1,280	72	201		20,426	20,409	17	36,567	53
867	277,466			6	1,356	42,541	2,856	2,460	37,225		543,940	543,340	600	1,068,219	54
252	107,683	2	230			40,933	694	8,894	12,094	24,251	275,983	270,975	5,008	490,542	55
26	15,631					14,768	3,900	1,424	9,444		160,126	155,480	4,646	203,713	56
149	58,834	1	200			7,692	2,975	846	3,871		58,630	57,329	1,301	160,304	57
396	214,470			3	615	137,072	2,450	788	5,615	128,269	295,364	291,870	4,494	790,349	58
25	10,959	2	598			1,599	997	43	455	104	35,942	35,777	165	70,076	59
11	3,315	302	82,320	3	530	34,747	27,840	1,074	5,833		313,276	312,183	1,093	602,649	60
82	18,050			5	1,077	5,320	2,186	154	2,980		16,932	16,521	411	69,596	61
144	78,509					18,231	1,815	1,113	5,303	10,000	196,062	195,133	929	364,785	62
166	56,470	8	1,664	6	936	68,632	1,240	1,735	66,897		4,225,390	4,214,197	11,193	4,683,943	63
7	2,622					3,670	105	105	2,150	175	11,700	11,635	165	26,500	64
358	169,941			11	2,398	16,849	7,651	642	6,556	2,000	186,605	186,368	237	455,610	65
39	15,926	6	1,500			6,158	1,840	588	4,230		253,107	250,576	2,531	331,185	66
174	77,239			12	1,606	25,091	8,695	843	11,853	4,200	105,177	104,712	465	230,627	67
82	39,345	25	4,451	1	132	341,484	13,509	1,736	320,239	6,000	268,924	266,455	2,469	939,930	68
606	267,797			5	690	29,572	2,401	652	19,619	6,900	342,083	335,026	7,057	826,355	69
4	1,163					472	192	5	275		2,175	2,155	20	5,787	70
35	10,856	4	976	1	100	13,848	9,544	280	2,699	825	26,831	26,375	466	96,719	71
37	7,450	51	6,600			9,284	1,020	510	7,754		145,814	144,482	1,332	218,928	72
60	86,313					2,744	1,227	123	1,894		42,488	41,926	512	120,627	73
832	151,886			17	2,185	55,192	16,614	1,592	16,361	21,625	642,563	539,927	2,636	938,292	74
429	203,085	146	29,112	26	3,388	59,249	21,476	3,240	32,120	2,413	319,998	311,342	8,656	854,547	75
414	267,668	46	14,851	4	830	252,267	27,147	7,661	155,396	62,063	285,030	271,233	13,747	1,850,981	76
2	986					432	222	45	165		2,834	2,831	3	11,745	77
141	61,952			3	400	20,083	4,197	1,349	4,417	10,120	246,996	245,464	1,532	415,234	78
874	108,488	21	5,238	19	2,848	39,104	12,238	8,840	23,458	68	722,239	718,173	4,066	1,167,400	79
7	2,258			1	166	1,012	735	63	149	65	4,637	4,543	94	11,103	80
20	7,804	137	20,234	7	456	10,044	3,185	30	6,829		55,345	52,919	2,426	119,821	81
15	7,220					4,200		710	3,490		180,285	180,085	200	213,370	82
433	181,987	1	260			95,112	1,200	5,705	89,207		3,648,201	3,622,956	25,245	4,771,608	83
7	4,148					743	408	40	300		1,445	1,345	100	11,906	84
286	117,872	5	786	8	1,152	25,539	9,366	1,870	14,203	150	258,137	253,716	4,421	563,252	85
1,946	601,612	421	111,749	343	84,760	6,613,729	4,772	18,960	6,594,997		4,861,060	4,825,971	34,089	13,693,700	86
445	188,869	400	81,693	200	19,597	229,662	13,092	3,399	213,171		373,870	372,453	1,417	1,096,666	87
634	185,885	60	15,500	33	3,980	35,133	291	4,304	30,538		1,185,765	1,176,568	9,197	1,740,211	88
137	47,960	15	2,569			25,406	3,580	1,001	20,825		98,396	97,488	908	232,303	89
41	19,940					3,841	240	1,061	2,540		205,668	204,674	994	334,973	90
41	20,246	11	1,993	2	281	23,771	2,448	1,288	20,035		188,860	186,170	2,690	413,828	91
39	19,012			4	416	18,785	7,009	507	1,027	10,222	20,562	20,049	513	90,922	92
38	11,970					2,447	1,630	24	793		10,711	10,576	185	42,800	93
17	7,512					655	318	169	168		3,478	2,921	557	13,475	94
2,024	922,116	670	139,105	300	37,905	396,265	21,525	74,168	281,260	19,312	3,435,367	3,319,252	116,115	6,401,355	95

and paste, 1; musical instruments and materials, not specified, 1; musical instruments, organs and materials, 2; musical instruments, pianos and materials, 1; oil, not elsewhere specified, 2; oleomargarine, 1; photographic materials, 2; photolithography and photoengraving, 1; plumbers' supplies, 1; pottery, terra cotta, and not elsewhere specified, 1; scales and balances, 1; sewing machines and attachments, 1; show cases, 1; smelting and refining, not from the ore, 1; fire-clay products, 2; refrigerators, 1; saws, 2; steam fittings and heating apparatus, 1; steam packing, 1; stencils and brands, 2; stereotyping and soap and candles, 2; soda water apparatus, 1; stamped ware, 1; steam fittings and heating apparatus, 1; steam packing, 1; stencils and brands, 2; stereotyping and electrotyping, 1; sugar and molasses, refining, 2; surgical appliances, 1; umbrellas and canes, 1; upholstering materials, 1; windmills, 1; window shades, 1; woodenware, not elsewhere specified, 1; woolen goods, 2; worsted goods, 1.

TABLE 8.—MANUFACTURES IN CITIES

NEWPORT.

	MANUFACTURING AND MECHANICAL INDUSTRIES, AND CITIES AND TOWNS.	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	272	\$2,848,435	\$249,235	\$673,643	\$603,408	\$1,822,149	311	132	\$142,404	2,561	\$1,155,861
2	Blacksmithing and wheelwrighting	9	17,125	3,750	3,400	3,400	6,575	11			20	11,290
3	Boots and shoes, custom work and re- pairing.	11	4,290	700	1,150	2,070	370	12			9	2,962
4	Bread and other bakery products.....	13	29,890	5,600	16,150	3,790	4,350	18			31	12,863
5	Carpentering.....	19	22,867	6,100	2,700	3,575	10,492	23	1	540	81	44,579
6	Carriages and wagons.....	3	15,105	7,250	3,155	1,350	3,350	4			9	5,120
7	Clothing, men's, custom work and re- pairing.	6	54,190	8,500	19,500	690	25,500	7			27	18,238
8	Clothing, men's, factory product.....	56	52,970	5,750	13,305	13,615	20,300	61			554	124,971
9	Clothing, women's, dressmaking.....	5	1,000			500	500	6			14	3,478
10	Confectionery.....	4	2,155	400	450	900	405	4			5	1,270
11	Foundry and machine shop products.....	4	246,111	34,910	39,200	50,500	121,501	4	8	6,157	197	122,124
12	Furniture, cabinetmaking, repairing, and upholstering.	3	8,050	1,500	3,000	650	2,900	3			10	3,096
13	Lumber, planing mill products, includ- ing sash, doors, and blinds.	3	79,000	5,500	16,500	19,000	38,000	6	3	2,175	56	18,755
14	Masonry, brick and stone.....	7	5,225	600	900	725	3,000	11			46	32,014
15	Millinery, custom work.....	6	21,580	3,000	7,000	230	11,350	7			23	6,290
16	Painting, house, sign, etc.....	12	5,276	350	300	1,610	3,016	19			27	14,212
17	Paper hanging.....	5	20,625	2,000	6,500	425	11,700	10	1	104	20	8,332
18	Paving and paving materials.....	3	16,360	4,500	400	4,800	5,660	5	1	800	32	13,178
19	Plumbing, and gas and steam fitting	13	17,425	1,700	1,300	3,975	10,450	14	3	726	49	19,128
20	Saddlery and harness.....	4	9,510	2,000	5,000	360	2,150	4			2	1,460
21	Tinsmithing, coppersmithing, and sheet-iron working.	10	27,760	7,800	7,260	2,825	9,875	12			20	9,648
22	Tobacco, cigars and cigarettes.....	23	25,536	5,775	6,925	2,536	10,300	25	1	700	70	20,768
23	Watch, clock, and jewelry repairing.....	5	10,632			1,327	9,305	6	1	260	6	1,854
24	All other industries ¹	43	2,156,753	141,550	519,548	484,555	1,011,100	39	113	130,942	1,253	663,826

¹ Embraces awnings, tents, and sails, 1; bicycle and tricycle repairing, 2; boots and shoes, factory product, 1; bottling, 1; brick and tile, 2; carpets, rag, 2; carriage and wagon materials, 1; clothing, women's, factory product, 1; cooperage, 1; dyeing and cleaning, 1; electrical construction and repairs, 2; fancy articles, not elsewhere specified, 1; flouring and grist mill products, 1; glass, cutting, staining, and ornamenting, 1; hardware, 1; hats and caps, not including fur hats and wool hats, 1; ice, artificial, 1; iron and steel, 1; ironwork, architectural and ornamental, 1; lamps and reflectors, 1; liquors, malt, 1; lithographing and

TABLE 9.—MANUFACTURES IN CITIES AND

1 Total for cities and towns	1,126	\$17,672,311	\$1,822,566	\$2,732,189	\$3,826,634	\$9,790,892	1,275	801	\$604,547	10,897	\$3,743,872
2 Ashland	32	2,980,975	121,947	703,917	662,163	1,492,948	33	72	82,346	1,620	575,152
3 Bellevue	29	63,318	6,750	7,950	42,803	5,810	30	3	1,686	66	20,839
4 Bowling Green	104	624,907	57,700	77,225	190,413	299,569	119	48	34,167	782	290,774
5 Dayton	59	193,690	23,750	24,575	55,910	89,455	62	4	2,440	236	36,218
6 Frankfort	66	1,694,791	114,115	194,225	354,294	932,157	75	80	83,888	367	161,474
7 Henderson	106	2,759,258	155,270	350,383	473,577	1,780,028	120	77	58,821	1,456	380,726
8 Hopkinsville	73	445,770	42,360	100,090	115,140	188,180	90	68	30,747	547	136,346
9 Ludlow	35	462,807	12,928	127,882	174,321	147,676	45	30	21,411	726	382,995
10 Mayfield	45	954,448	22,100	72,302	115,571	744,475	62	10	8,040	324	100,992
11 Maysville	96	1,125,147	127,087	174,984	265,085	557,991	119	60	50,793	644	194,055
12 Mt. Sterling	52	253,825	19,000	46,450	76,515	111,860	59	9	6,004	131	35,163
13 Owensboro	159	3,308,056	278,374	439,627	503,133	2,086,922	178	189	112,767	1,582	424,736
14 Paducah	171	2,689,121	322,540	378,804	768,774	1,224,003	175	136	108,137	2,305	918,603
15 Winchester	50	216,203	13,675	33,775	33,935	129,818	63	6	3,300	111	35,799

BY SPECIFIED INDUSTRIES: 1900—Continued.

NEWPORT.

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.										
1,885	\$1,020,395	639	\$130,656	37	\$4,320	\$366,620	\$22,869	\$18,783	\$599,905	\$225,063	\$2,017,773	\$1,982,149	\$35,624	\$1,888,169	1
20	11,290					3,611	948	98	15	2,550	12,672	12,222	450	39,356	2
9	2,962					612	506	32	22	52	4,446	4,847	99	13,013	3
20	12,462	1	250	1	166	2,157	1,587	448	122		39,181	37,913	1,268	78,600	4
81	44,579					220,174	1,016	164	1,125	217,869	109,199	109,193	6	414,843	5
9	5,120					304		192	112		9,588	9,503	85	24,135	6
24	12,582	3	656			2,102	264	706	232	900	19,826	19,660	166	48,340	7
82	34,787	456	88,805	16	1,319	6,444	2,059	397	3,488	500	14,225	12,377	1,848	201,540	8
		14	3,478			435	430		5		748	714	34	8,408	9
3	1,030	2	240			882	660	131	91		4,860	4,705	155	11,939	10
197	122,124					13,796		2,372	11,424		241,877	228,187	13,740	414,962	11
8	2,800	2	206			215	160	20	35		3,600	3,505	35	8,900	12
54	18,505	2	250			2,198	400	1,128	670		62,995	61,927	1,068	104,238	13
46	82,914					220	144	26	50		33,982	33,982		81,849	14
27	14,212	23	6,290			1,348	851	446	51		29,703	29,575	128	47,712	15
						636	450	11	15	160	10,594	10,585	9	40,581	16
19	8,200	1	132			857	516	219	122		12,984	12,925	59	30,710	17
32	13,178					231	90	35	108		13,137	12,837	300	34,716	18
49	19,123					2,697	1,894	196	207	400	47,865	47,622	233	93,975	19
2	1,460					342	161	123	53		10,602	10,578	24	14,932	20
20	9,648					1,016	564	299	153		31,179	30,949	230	56,549	21
47	16,093	23	5,075			16,812	1,426	252	14,634		19,540	19,276	264	71,614	22
6	1,854					723	658	51	14		3,797	3,760	37	11,400	23
1,121	636,457	112	24,524	20	2,845	589,308	8,085	11,432	567,159	2,632	1,281,183	1,215,797	65,886	3,035,907	24

engraving, 1; looking-glass and picture frames, 1; marble and stone work, 1; mineral and soda waters, 1; monuments and tombstones, 1; mucilage and paste, 1; photography, 1; pipes, tobacco, 1; plastering and stuccowork, 1; printing and publishing, book and job, 2; printing and publishing, newspapers and periodicals, 1; roofing and roofing materials, 2; slaughtering and meat packing, wholesale, 1; slaughtering, wholesale, not including meat packing, 1; tobacco, chewing, smoking, and snuff, 1; watch cases, 1.

TOWNS UNDER 20,000 IN POPULATION: 1900.

8,740	\$3,370,238	1,628	\$292,439	629	\$81,195	\$1,812,953	\$139,109	\$114,057	\$839,274	\$219,613	\$13,362,793	\$12,782,602	\$630,191	\$22,965,547	1
1,556	564,320	14	2,314	60	8,518	169,151	14,972	11,680	137,449	5,050	3,046,856	2,575,506	471,350	4,595,809	2
38	16,940	26	4,494	2	405	18,942	1,218	1,181	2,793	13,150	33,619	32,600	1,019	103,558	3
658	264,867	111	24,005	13	1,302	64,174	11,162	5,185	36,002	11,822	855,636	844,030	11,606	1,557,352	4
147	70,227	86	15,451	3	537	6,903	1,131	732	5,040		125,112	119,144	5,968	314,610	5
833	154,614	28	6,556	6	304	256,229	10,300	22,871	98,979	124,079	1,181,326	1,165,465	15,861	2,088,125	6
848	271,775	427	86,243	181	22,708	168,909	15,694	15,601	130,240	7,368	1,815,579	1,796,158	19,421	2,803,628	7
481	126,163	51	7,983	15	2,200	50,917	7,229	4,018	38,338	6,332	514,404	503,938	10,411	884,913	8
695	376,831	27	5,514	4	650	34,381	3,501	3,577	17,240	10,000	566,689	555,042	10,647	1,077,556	9
149	62,940	160	36,582	15	1,470	13,001	3,114	4,583	4,644	710	378,253	366,184	7,069	607,199	10
473	172,082	100	16,579	71	6,394	62,770	10,125	7,056	34,589	1,000	621,730	609,677	12,053	1,207,560	11
110	30,298	19	4,710	2	155	15,069	5,137	2,095	6,759	1,083	140,268	135,855	4,413	263,954	12
1,198	371,142	269	40,133	115	13,461	215,075	18,999	16,505	160,118	20,053	2,080,368	2,085,457	24,911	3,446,035	13
1,067	857,968	189	36,728	149	23,917	239,926	30,955	17,162	167,423	18,396	1,703,324	1,671,766	31,558	3,627,344	14
87	31,081	21	4,544	3	174	18,510	5,509	2,768	4,654	585	324,629	320,725	3,904	436,434	15

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 135.

WASHINGTON, D. C.

January 30, 1902.

METHODS AND RESULTS.

METHODS OF ESTIMATING POPULATION.

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

SIR: I have the honor to transmit herewith, for publication as a Census Bulletin, the results of a study made in accordance with your instructions into the accuracy of the methods of estimating population in vogue, especially in large cities.

The main methods are four: The first assumes that the city's rate of growth between any two successive censuses is maintained during the following decade; the second assumes a constant or known ratio between the total population and the vote cast; the third assumes a constant or known ratio between the total population and the number of children of school age; and the fourth assumes a constant or known ratio between the total population and the number of names in the city directory.

As these methods are used mainly in estimating the population of cities, the study has been confined for the most part to the 78 cities, each of which has over 50,000 inhabitants, and extended to the states only where information for the cities is lacking.

The bulletin is based in part upon the published results of the Twelfth Census and in part upon information contained in state and municipal documents courteously supplied to the Census Office by the secretaries of state, the state superintendents of public instruction, and other state or municipal officers. Where published figures of the Twelfth Census are used, reference is made to the source; the figures drawn from other authorities and used in the present bulletin are reproduced in the last two tables, to facilitate the critical examination of the results.

The main conclusions of the study may be summarized as follows:

1. In half of the 78 cities examined the per cent of growth between 1890 and 1900 differed by 18 or more from the per cent of growth between 1880 and 1890. Therefore, the assumption that under present conditions

the rate of growth of a given city tends to remain the same is inadmissible.

2. The number of votes cast at an election in a large city, affected as it is by the ratio of males to population, the ratio of adult males to all males, the ratio of citizens to all male adults, the ratio of legal voters to citizens, and the ratio of actual voters to legal voters, stands in no constant or uniform relation to the population. In Albany, Columbus, and Dayton there were less than four inhabitants to each vote cast at the presidential election of 1900, while in several Northern cities there were more than eight and in certain Southern cities more than twelve to each vote cast.

3. In the states and territories the increase of population runs by no means parallel with the increase of votes. Even when the Southern states are disregarded, as having few large cities, and exceptional conditions affecting the number of votes, still the per cent of gain in the vote for the decade is likely to be as much as 8 greater or less than the corresponding per cent for population.

4. The number of children of school age is a more accurate index of total population than prior rate of increase or vote cast. This method gives estimates of population half of which fall within 6 per cent of the truth.

5. But the number of children of school age in a city is so seldom given with close accuracy by a school census, that this method is found of little practical value.

6. The ordinary method of estimating the population of a large city, that based on the number of names in the city directory, results uniformly in too large a figure and usually in very serious inaccuracy.

A quotation from Samuel Johnson which James A. Garfield made in 1870 puts the whole subject in a nutshell: "To count is a modern practice; the ancient method was to guess and where numbers are guessed they are always magnified." A combination of counting and guessing is

better than a guess not founded on a count, but when it differs from the results of a thorough and complete enumeration it is entitled to no standing.

To the general conclusion of the bulletin that none of the four ways of estimating population hitherto employed is worthy of use, it may be objected that negative results such as this are of little value, that city officials require for various purposes estimates of the city's population, are ready to accept the best simple method, but must have some method.

A method of estimating urban growth under present American conditions, which is certainly simpler and probably more accurate than any of the four here examined, may be commended to the consideration of interested city officials. This is to add for each year after 1900 one-tenth of the city's increase from 1890 to 1900. It is merely a rule of thumb and without rational justification. But between 1880 and 1890 the 78 cities together increased in population by an average annual amount of 407,028, and between 1890 and 1900 by an average annual amount of 414,793. As the rate of increase for the cities collectively fell from 46.8 per cent between 1880 and 1890 to 32.5 per cent between 1890 and 1900, but the total amount of increase between 1890 and 1900 exceeded by less than 2 per cent the total amount between 1880 and 1890, it is

evident that the assumption of a constant amount is much nearer the truth than the assumption of a constant rate. If this method had been applied to the cities for 1900, the results in half the cases would have been within 6 per cent of the truth, closer than estimates based upon vote cast or number of names in the directory, and as close as the estimates resulting from an accurate census of school children, were that obtainable. From the point of view of local authorities, however, it may be an objection to this simple method that, on the basis of the estimates for 1900, it is as likely to result in an underestimate as in an overestimate, while the method now most in vogue, that based on the number of names in the city directory, produces nearly always an overestimate.

It is not the intention of this bulletin to criticise the use of these methods where nothing better can be secured; the aim has been merely to give the reasons of the Census Office for doubting that the results of such methods are entitled to serious consideration when they contradict those of a careful enumeration.

Yours respectfully,

Walter F. Willcox

Chief Statistician for Methods and Results.

METHODS OF ESTIMATING POPULATION.

The results of the Federal Census, giving the population of the several states and territories, are accepted without challenge, both by Congress and by the country. But the accuracy of the figures for the population of a city is sometimes disputed or denied. Criticism of this character is made usually in good faith and is entitled to candid consideration. It is the object of the following bulletin to examine the bases for such criticism and indicate how far they seem adequate.

All such criticism of census figures assumes openly or tacitly either that a city's population can be determined in some other way with greater accuracy, or that an inconsistency between the census results and indications derived from other sources believed to be more accurate is warrant for rejecting the former. Various alternative ways of determining the population have been invoked, but for the purpose in hand the following are all that are important:

1. An estimate reached by assuming that the rate of growth between any two successive censuses, is maintained during the following decade.
2. An estimate based upon the number of votes cast at an election.
3. An estimate based upon a school census.
4. An estimate based upon a directory canvass.

I. ESTIMATES REACHED BY ASSUMING A CONSTANT RATE OF GROWTH.

The assumption that a city grew during the ten years from 1890 to 1900 at the same rate at which it grew during the ten years from 1880 to 1890 may be brought to the test of general American experience. The United States as a whole, excluding Alaska and the insular territories, increased between 1880 and 1890, 24.9 per cent, but between 1890 and 1900, 20.9 per cent, a decided reduction in rate of growth. Among the states and territories 19 grew at a higher rate and 29 at a lower rate in the last ten years than they did in the earlier decade.¹ In only two, Massachusetts and Tennessee, was the per cent of increase between 1890 and 1900 within five-tenths (0.5) of what it was between 1880 and 1890 and in half of the states and territories it differed from that of ten years before by more than five (5). So far as indications derived from the rates of growth in the states and territories can be applied to the cities, therefore, they

show the chances to be even that the per cent of increase in a city during the ten years, 1890-1900, would differ from its per cent of increase during the preceding ten years by 5 or more, and the chances would be about 25 to 1 against its per cent of increase during the second decade being within five-tenths (0.5) of what it was in the first.

But, as a rule, and other things being equal, the smaller the population the less the chance that its rate of growth from decade to decade will be the same. Hence, cities as a class would be expected to show a rate of growth less uniform than that of states. How far this anticipation conforms to the facts appears from Table 1 (page 4). This table shows for the last two decades, 1880-1890 and 1890-1900, the rate of growth of each of the 78 cities of the United States which in 1900 had over 50,000 people, and the differences between these rates. To make the evidence of the table clearer the cities are arranged in the order of this difference, those in which the rate of growth, 1890-1900, was greater coming first, and those in which it was less, following. In no case, except that of New York city, has allowance been made for any change in the city's boundaries between 1880 and 1900.

Scrutiny of the table will show that in half of the cities the rate of growth between 1890 and 1900 differed by more than 18 per cent from the same city's rate of growth between 1880 and 1890; that is, in 39 of the 78 cities the increase between 1890 and 1900 was more than 18 per cent greater or more than 18 per cent less than it was during the preceding decade. If in the case of each city allowance were made for the effect of changes in city boundaries between 1880 and 1900, the table would be somewhat changed, but probably such corrections would not affect materially the inference to be drawn from it. As it stands it shows that American cities have a less constant rate of growth than the states and territories. It shows, also, that in default of evidence to the contrary the rate of growth in a city during the last decade would be likely to differ from its own rate of growth in the preceding ten years by 18 per cent. In only 1 of the 78 cities, Philadelphia, was the rate of growth the same during the two decades, and in only 4 did the rate during the second decade come within 1 per cent of that during the first.

We may conclude that the assumption on which this method of disputing census figures rests is without warrant in general American experience.

¹Omitting Indian Territory and Oklahoma, where prior to 1890 no census was taken.

TABLE 1.—PER CENTS OF INCREASE OF POPULATION, 1890-1900 AND 1880-1890, AND DIFFERENCE BETWEEN THEM FOR CITIES HAVING IN 1900 AT LEAST 50,000 INHABITANTS.¹

CITY.	PER CENT OF INCREASE.		Difference.	CITY.	PER CENT OF INCREASE.		Difference.
	1890-1900	1880-1890			1890-1900	1880-1890	
St. Joseph, Mo.	96.8	61.8	35.5	Baltimore, Md.	17.2	30.7	13.5
Portland, Me.	87.7	7.7	30.0	Savannah, Ga.	25.6	40.6	15.0
Lawrence, Mass.	40.1	14.1	26.0	Erie, Pa.	29.8	46.5	16.7
Hartford, Conn.	50.0	26.7	23.3	Cleveland, Ohio	46.1	63.2	17.1
Indianapolis, Ind.	60.4	40.5	19.9	Pittsburg, Pa.	34.8	52.6	17.8
Springfield, Mass.	40.5	32.5	8.0	Dayton, Ohio	39.4	58.3	18.9
Providence, R. I.	32.9	26.0	6.9	Paterson, N. J.	34.2	53.5	19.3
New Orleans, La.	18.6	12.0	6.6	Wilmington, Del.	24.5	44.6	20.1
New York, N. Y.	37.1	31.2	5.9	Lynn, Mass.	22.9	45.6	22.7
Elizabeth, N. J.	38.0	33.8	4.2	Richmond, Va.	4.5	28.0	23.5
New Haven, Conn.	32.9	29.3	3.6	Wilkesbarre, Pa.	37.1	61.6	24.5
Newark, N. J.	35.3	33.2	2.1	Buffalo, N. Y.	37.8	64.8	27.0
New Bedford, Mass.	53.3	51.7	1.6	Columbus, Ohio	42.4	70.7	28.3
Boston, Mass.	25.1	23.6	1.5	Rochester, N. Y.	21.4	49.8	28.4
Philadelphia, Pa.	23.6	23.6	0.0	Scranton, Pa.	35.6	64.0	28.4
Toledo, Ohio.	61.9	62.4	0.5	Bridgeport, Conn.	45.3	76.8	31.5
Harrisburg, Pa.	27.4	28.0	0.6	Memphis, Tenn.	58.6	92.0	33.4
Reading, Pa.	34.6	35.5	0.9	Milwaukee, Wis.	39.5	76.9	37.4
St. Louis, Mo.	27.3	28.9	1.6	Atlanta, Ga.	37.1	75.2	38.1
Utica, N. Y.	28.1	29.8	1.7	Detroit, Mich.	38.8	77.0	38.2
Cambridge, Mass.	31.2	33.0	1.8	San Antonio, Tex.	41.5	83.8	41.8
Louisville, Ky.	27.1	30.2	3.1	Grand Rapids, Mich.	45.3	88.3	43.0
Oakland, Cal.	37.5	40.9	3.4	Syracuse, N. Y.	23.0	70.2	47.2
Peoria, Ill.	36.7	40.2	3.5	Evansville, Ind.	16.3	73.3	57.0
Hoboken, N. J.	36.0	40.8	4.8	Chicago, Ill.	54.4	118.6	64.2
Worcester, Mass.	39.9	45.2	5.3	Trenton, N. J.	27.6	92.1	64.5
Albany, N. Y.	-0.8	4.6	5.4	Portland, Oreg.	94.9	163.9	69.0
Manchester, N. H.	29.1	35.2	6.1	Nashville, Tenn.	6.2	75.7	69.5
Cincinnati, Ohio.	9.8	16.4	6.6	Salt Lake City, Utah	19.4	115.9	96.5
Somerville, Mass.	58.5	61.0	2.5	Des Moines, Iowa	24.0	123.5	99.5
Troy, N. Y.	-0.5	7.4	7.9	Kansas City, Mo.	28.4	137.9	114.5
Charleston, S. C.	1.6	9.9	8.3	Denver, Colo.	25.4	199.5	174.1
Jersey City, N. J.	26.6	35.0	8.4	St. Paul, Minn.	22.5	221.1	198.6
Lowell, Mass.	22.2	30.6	8.4	Minneapolis, Minn.	23.1	251.4	228.3
Washington, D. C.	21.0	29.7	8.7	Los Angeles, Cal.	103.4	350.6	247.2
Camden, N. J.	30.2	40.0	9.8	Omaha, Nebr.	-27.0	360.2	387.2
Allegheny, Pa.	23.4	33.8	10.4	Duluth, Minn.	60.0	350.8	790.8
Fall River, Mass.	40.9	52.0	11.1	Seattle, Wash.	88.3	1,112.5	1,024.2
San Francisco, Cal.	14.6	27.8	13.2	Kansas City, Kans.	34.2	1,097.4	1,063.2

¹Data from Twelfth Census, Vol. I, Table 7, pages 434-437, or Bulletin 70, Table 9, pages 9 and 10.

II. ESTIMATES BASED UPON THE NUMBER OF VOTES.

The method just analyzed depends upon illegitimate deduction from census figures; all other methods rest upon results from some other source. To test them it is needful to examine the accuracy of the basis figures and of the argument by which the total population is inferred therefrom.

A city's population is often estimated by multiplying the total vote at a recent election by some round number, such as 5. The abstract of vote cast is found in official documents, which may be assumed to be substantially accurate, though minor numerical errors frequently exist. How near to the truth is the assumption that the total population of a city is likely to be about five times the number of votes? It is evident that the ratio of votes to population must tend to vary as one or more of the following elements varies:

1. The proportion of males in the total population except in the cases of Denver and Salt Lake City, where women are entitled to vote.

2. The proportion of males of voting age, that is, 21 or over, in the total male population.

3. The proportion that the citizens make of the total males of voting age. By "citizens" is meant those who by birth or naturalization are citizens of the United States. The term for present purposes also includes in a few states aliens who have indicated an intention to become natural-

ized, by taking out first papers, and who are allowed after a fixed time to register and vote.

4. The proportion of "citizens" as thus defined who satisfy the legal conditions of residence in the state, city, and voting district required as a prerequisite to voting.

5. The proportion of resident "citizens" who possess at the given election the educational or other qualifications, or have paid the tax imposed in some states as a condition of voting.

6. The proportion of qualified voters who exercise their right to vote at the election in question by casting a ballot.

7. The proportion of ballots cast that appears in the largest total vote.

Of the foregoing conditions influencing the ratio of votes counted to total population not all are subject to statistical measurement. The census reports the number of each sex, the number of males of voting age, and the number of aliens. But neither from the census nor from any other source of information can the number of "citizens" who meet the residence, educational, or tax requirements, be derived. The election returns, as published, seldom give the total number of ballots counted, but only the total for each of a list of candidates and the scattering. Election returns were requested from the secretaries of state, but for 18 of the 78 cities could not be had. The figures reported were not used for Salt Lake

City, because women have the ballot there, nor for Troy, because the election returns related to a larger area than the census returns. Washington, D. C., has no part in a presidential election.

In the following table a statistical measure is presented for all the measurable elements affecting the ratio of votes cast to total population. Column 1 gives the per cent of males in the total population; column 2, the per cent of males over 21 years of age in the male population; column 3, the result of combining 1 and 2, the per cent of males over 21 years of age in the total population; column 4, the per cent of "citizens," so far as the census has enumerated that class, in the total adult male population; column 5, the per cent of the votes cast at the presidential

election of 1900 to all "citizens;" column 6, the result of combining 4 and 5, the per cent of the votes cast at the presidential election of 1900 to the males over 21 years of age; and, finally, column 7, the combined result of all the factors, gives the per cent of the votes cast to the total population. The largest and smallest figures in the column in which they stand are printed in *italic* in order to call attention to the range of difference among the several cities in the matter to which the column relates. Thus, in the first column, Charleston, S. C., has the lowest and Seattle, Wash., the highest proportion of males to total population, and the difference between these two italicized figures, 18.0, is the range among the 78 cities in reference to this particular.

TABLE 2.—PERCENTAGE FIGURES BEARING UPON THE RELATION BETWEEN TOTAL VOTE CAST AND TOTAL POPULATION FOR CITIES HAVING AT LEAST 50,000 INHABITANTS: 1900.¹

CITY.	Per cent of males in total population.	Per cent of males over 21 years of age in total male population.	Per cent of males over 21 years of age in total population.	Per cent of "citizens" in total males over 21 years of age.	Per cent of votes cast Nov. 6, 1900, to total "citizens."	Per cent of votes cast Nov. 6, 1900, to total males over 21 years of age.	Per cent of votes cast Nov. 6, 1900, to total population.
Maine:							
Portland	47.3	65.1	30.8	89.3	57.8	51.6	15.9
New Hampshire:							
Manchester	46.7	57.9	27.0	81.1	78.2	69.4	17.1
Massachusetts:							
Boston	49.0	64.0	31.4	84.2	56.4	47.5	14.9
Worcester	49.9	60.5	30.2	78.3	65.1	51.0	15.4
Fall River	47.9	58.4	25.6	72.7	58.4	42.2	10.8
Lowell	47.3	60.2	28.5	74.8	65.6	49.1	14.0
Cambridge	48.4	60.4	29.2	81.1	52.1	42.3	12.4
Lynn	48.6	64.5	31.4	80.4	59.3	51.3	16.1
Lawrence	48.4	58.9	28.5	75.5	69.0	52.1	14.8
New Bedford	47.6	57.8	27.5	72.6	56.2	40.8	11.2
Springfield	47.7	62.4	29.8	86.2	63.5	54.7	16.3
Somerville	47.8	61.7	29.4	83.7	51.5	43.1	12.7
Rhode Island:							
Providence	48.5	62.5	30.3	88.7	49.4	41.4	12.5
Connecticut:							
New Haven	49.9	60.5	30.2	86.7	81.1	70.3	21.2
Hartford	51.0	65.4	33.4	88.4	66.9	56.9	19.0
Bridgeport	49.8	62.0	30.9	84.0	75.3	63.2	19.6
New York:							
New York	49.6	59.1	29.8	80.3	75.0	60.3	17.7
Buffalo	49.6	56.0	27.8	90.9	76.6	69.6	19.4
Rochester	47.7	58.5	27.9	94.4	82.5	77.9	21.8
Syracuse	48.5	61.9	30.0	94.2	82.5	77.8	23.8
Albany	47.8	63.1	30.2	97.2	89.1	86.6	26.1
Troy	46.2	60.8	28.1	96.8	(²)	(²)	(²)
Utica	47.7	60.3	28.8	95.0	83.9	79.7	22.9
New Jersey:							
Newark	49.2	58.8	28.7	87.8	80.0	70.2	20.1
Jersey City	50.4	58.0	29.2	86.9	78.1	67.8	19.8
Paterson	49.3	57.1	28.2	85.4	83.2	71.1	20.0
Camden	48.9	59.9	29.3	94.7	83.9	79.4	23.3
Trenton	50.5	59.7	30.2	91.1	83.3	75.8	22.9
Hoboken	50.5	56.9	28.8	82.3	71.3	58.7	16.9
Elizabeth	50.8	57.4	29.1	86.3	80.7	70.1	20.4
Pennsylvania:							
Philadelphia	49.0	61.0	29.9	89.5	67.8	60.7	18.2
Pittsburg	51.5	58.3	30.0	85.9			
Allegheny	51.3	59.8	30.7	88.5			
Scranton	50.2	54.8	27.5	89.0			
Reading	49.6	57.5	28.5	96.1			
Erie	50.3	58.4	29.4	93.3			
Wilkesbarre	48.7	53.8	25.2	90.7			
Harrisburg	48.5	60.4	29.3	93.9			
Delaware:							
Wilmington	50.2	60.3	30.3	94.7	76.3	72.3	21.9
Maryland:							
Baltimore	47.8	58.1	27.8	96.4	68.0	80.0	22.2
District of Columbia:							
Washington	47.4	63.5	30.1	97.2	(³)	(³)	(³)
Virginia:							
Richmond	47.0	58.7	27.6	99.0	42.8	42.4	11.7
South Carolina:							
Charleston	45.9	55.4	25.4	98.2			
Georgia:							
Atlanta	46.0	56.0	25.8	93.5	22.3	22.0	5.7
Savannah	47.8	61.7	29.5	97.5	21.5	21.0	6.2
Ohio:							
Cleveland	50.5	57.9	29.2	88.5	78.2	69.2	20.2
Cincinnati	48.2	59.1	28.5	97.9	85.0	83.2	23.7
Toledo	49.8	58.3	29.0	96.0	77.4	74.2	21.5
Columbus	50.4	63.3	31.9	98.5	81.7	80.5	25.7
Dayton	49.4	61.1	30.2	98.3	89.1	87.5	26.4
Indiana:							
Indianapolis	49.4	62.9	31.1	99.1			
Evansville	48.8	58.2	28.4	99.6			
Illinois:							
Chicago	50.8	59.2	30.1	90.9	79.9	72.8	21.8
Peoria	51.2	63.0	32.3	97.8			

¹ Data from Twelfth Census, Vol. I, Tables 23, 80, and 82 (pages 609, ff.; 930, ff.; and 930, ff.), and the present bulletin, Table 9.

² Election returns are for a larger area than the census returns.

³ No elections held in Washington, D. C.

TABLE 2.—PERCENTAGE FIGURES BEARING UPON THE RELATION BETWEEN TOTAL VOTE CAST AND TOTAL POPULATION FOR CITIES HAVING AT LEAST 50,000 INHABITANTS: 1900—Continued.

CITY.	Per cent of males in total population.	Per cent of males over 21 years of age in total male population.	Per cent of males over 21 years of age in total population.	Per cent of "citizens" in total males over 21 years of age.	Per cent of votes cast Nov. 6, 1900, to total "citizens."	Per cent of votes cast Nov. 6, 1900, to total males over 21 years of age.	Per cent of votes cast Nov. 6, 1900, to total population.
Michigan:							
Detroit.....	48.7	56.6	27.6	83.3	79.6	70.2	19.4
Grand Rapids.....	48.5	58.6	28.4	91.3	95.7	87.3	24.8
Wisconsin:							
Milwaukee.....	49.3	53.4	26.3	95.6	81.2	77.6	20.4
Minnesota:							
Minneapolis.....	50.9	61.8	31.4	88.2	68.9	60.7	19.1
St. Paul.....	51.8	60.5	31.3	93.1	58.6	49.9	15.6
Duluth.....	50.4	63.4	35.3	80.8	56.3	45.5	16.3
Iowa:							
Des Moines.....	49.8	61.1	30.4	97.8	77.2	75.5	23.0
Missouri:							
St. Louis.....	50.1	59.6	29.9	96.1	75.7	72.7	21.7
Kansas City.....	50.5	64.0	32.3	98.5	71.5	70.4	23.1
St. Joseph.....	55.1	60.6	33.4	99.0	39.3	38.8	13.0
Nebraska:							
Omaha.....	52.7	64.0	33.8	97.7	61.4	59.9	20.2
Kansas:							
Kansas City.....	51.9	58.4	30.3	98.1	70.8	69.4	21.0
Kentucky:							
Louisville.....	48.6	59.9	29.1	98.3	70.6	69.4	20.2
Tennessee:							
Memphis.....	51.1	60.1	30.7	98.4			
Nashville.....	47.4	57.9	27.4	99.2			
Louisiana:							
New Orleans.....	47.4	55.5	26.3	95.4	31.6	30.1	7.9
Texas:							
San Antonio.....	49.0	55.5	27.2	95.7			
Colorado:							
Denver.....	49.8	64.1	31.9	96.5			
Utah:							
Salt Lake City.....	48.3	52.8	25.5	92.1	(¹)	(¹)	56.6
Washington:							
Seattle.....	63.9	76.7	49.0	91.2	35.6	32.4	15.9
Oregon:							
Portland.....	58.8	72.2	42.4	77.2	42.9	33.1	14.1
California:							
San Francisco.....	53.9	69.8	37.6	83.3	58.8	49.0	18.4
Los Angeles.....	49.3	65.4	32.3	89.6			
Oakland.....	49.2	63.3	31.1	87.8			
All cities.....	49.7	60.0	29.8	88.8	271.5	263.0	218.8

¹ Right of franchise extended to women.

² Ratio for the 53 cities for which election returns were available.

The first column of Table 2 shows that the male population of these cities as a whole is a trifle less than half (49.7 per cent) of the entire population, but that in the several cities the proportion is by no means the same. Closer examination, however, shows that in 61 of the 78 cities, or nearly four-fifths, the male population is between 47 and 51 per cent of the total, and in half of them it is between 48.5 and 50.5 per cent. Aside from a few cities, where the male population is greatly in excess, the proportion of the sexes does not depart far from equality.

From the second column of Table 2 it appears that the male adults are just three-fifths (60.0 per cent) of the total male population. In Salt Lake City they are little more than half (52.8 per cent); in Seattle, more than three-fourths (76.7 per cent). In nearly half (38) of the cities the male adults are between 58 and 62 per cent of the total number of males.

The third column of Table 2, presenting in combination the two preceding columns, shows that in Charleston only about one-fourth (25.4 per cent) of the population are adult males, while in Seattle nearly one-half (49.0 per cent) are adult males. Nearly three-tenths (29.8 per cent) of the population of the 78 cities taken collectively are potential voters.

In advancing from the topic of sex and age composition to that of "citizenship" the statistical basis becomes less secure. The requirements for "citizenship" vary in the several states. In most of them aliens are not allowed to vote, but in a few states, as already explained, aliens who

have indicated their intention to become citizens by taking out first papers and have resided in the state for a specified time thereafter, are given the privilege of the ballot, and thus for the purposes of this discussion, are "citizens." The Twelfth Census inquired about each foreign born male adult, whether he was an alien, had taken out his first papers, or was a full-fledged citizen of the United States. But the enumerators were often unable to obtain this information. In Fall River one-ninth (11.2 per cent) and in Manchester one-tenth (10.3 per cent) of the adult males were persons of foreign birth whose condition of citizenship was not reported. In the computations, the results of which are presented in the fourth and fifth columns of Table 2, the number of "citizens" has been obtained by subtracting from the total number of males over 21 years of age the aliens and, except in the few states where they are allowed to vote, the foreign born who have advanced toward citizenship only so far as to have taken out their first papers. The total thus reached would include substantially all who would be entitled to vote, together with some who would not, because of failure to meet the residence, educational, or tax requirements.

From column 4 of Table 2 it appears that in these 78 cities nearly nine-tenths (88.8 per cent) of the men are citizens or of unknown status, and probably entitled to vote, provided they meet the other requirements of the state or territorial law. In Fall River, the ratio is lowest (72.1 per cent), while in Evansville, it is highest (99.6 per cent).

No information could be obtained which would serve,

even approximately, as a statistical measure of the influence exercised separately by any one of the last conditions in the preceding list of those affecting the ratio of votes cast to population (page 4). They are important factors, but elude separate statistical measurement. The ratio of votes cast, November 6, 1900, to the total number of citizens, however, is some index of the joint effect exercised by these four conditions. To obtain the ratio, the vote cast at the presidential election of 1900 was analyzed with the aid of information furnished through the courtesy of the respective secretaries of state. To determine the total number of votes cast and counted in each city, the following figures were compared so far as they were obtainable:

1. The sum of the votes for the presidential electors receiving the largest number of votes in each party.
2. The sum of the votes for the several candidates for election to the national House of Representatives.
3. The sums of the votes for the several candidates for governor and other state offices.

The largest of these sums was assumed to be the best approximation to the total number of votes cast. In this way the totals found in Table 9 (page 14) were obtained and from them the per cents presented in columns 5, 6, and 7 of Table 2 were computed.

In these columns only 58 of the 78 cities are included. For 18 cities the secretaries of state were unable to supply the needed information. Among them was Chicago, but as the figures for Cook county were available and as 92.4 per cent of its population live in Chicago, the figures for Cook county have been employed.

Column 5 of Table 2 shows that in the 58 cities here included, the vote cast November 6, 1900, amounted to over seven-tenths (71.5 per cent) of the "citizen" population, and that the several cities differed more in this per cent than they did in any of the preceding, the vote in Savannah being about one-fifth (21.5 per cent) of the

"citizen" population and in Grand Rapids over nineteen-twentieths (95.7 per cent).

In order to avoid the objection that the number of "citizens" obtained in the manner already explained must involve some errors, a sixth column has been added wherein is given the ratio that the vote cast November 6, 1900, bears to the entire adult male population.

From column 6 it appears that the votes cast November 6, 1900, in the 58 cities were about five-eighths (63.0 per cent) of the total male population of voting age; in Savannah, only about one-fifth (21.0 per cent) of the adult male population voted, and in Dayton seven-eighths (87.5 per cent) voted.

The seventh and last column of Table 2 shows the net result of the six preceding. It appears that in the 58 cities one-sixth (18.8 per cent) of the population voted at the presidential election of 1900. In determining the average given in the last line of this column the figures for Salt Lake City have been excluded, since in that city alone of those appearing in this column, women are entitled to vote. This explains the very high proportion of votes cast to total population in Salt Lake City. With that exception the largest proportion was found in Dayton, where over one-fourth of the population (26.4 per cent) voted. The lowest per cent was in Atlanta, where only about one-seventeenth (5.7 per cent) voted. The great range between these extremes is sufficient evidence that in the different American cities the vote cast bears very different ratios to the population, and that the assumption of a uniform ratio between these elements can not be admitted.

To bring out this conclusion with greater clearness, Table 3 has been prepared. It employs not the usual census method, but the ordinary or popular method of stating the numerical relation between the vote and the population, that is, not as a per cent, but as the number of inhabitants to each vote. The cities are arranged not geographically, but according to the size of the ratio.

TABLE 3.—NUMBER OF INHABITANTS, JUNE 1, 1900, TO EACH VOTE CAST NOVEMBER 6, 1900.

Salt Lake City, Utah	2.73	Rochester, N. Y.	4.00	Buffalo, N. Y.	5.17	Boston, Mass.	6.70
Dayton, Ohio	3.79	St. Louis, Mo.	4.00	Minneapolis, Minn.	5.24	Lawrence, Mass.	6.75
Albany, N. Y.	3.82	Toledo, Ohio	4.64	Hartford, Conn.	5.27	Portland, Oreg.	7.11
Columbus, Ohio	3.89	New Haven, Conn.	4.72	San Francisco, Cal.	5.42	Lowell, Mass.	7.14
Grand Rapids, Mich.	4.03	Kansas City, Kans.	4.75	Philadelphia, Pa.	5.51	St. Joseph, Mo.	7.71
Cincinnati, Ohio	4.22	Elizabeth, N. J.	4.90	New York, N. Y.	5.66	Somerville, Mass.	7.88
Syracuse, N. Y.	4.29	Milwaukee, Wis.	4.90	Manchester, N. H.	5.84	Providence, R. I.	7.99
Camden, N. J.	4.30	Omaha, Nebr.	4.94	Hoboken, N. J.	5.92	Cambridge, Mass.	8.09
Kansas City, Mo.	4.33	Cleveland, Ohio	4.95	Springfield, Mass.	6.14	Richmond, Va.	8.67
Des Moines, Iowa	4.35	Louisville, Ky.	4.95	Duluth, Minn.	6.15	New Bedford, Mass.	8.92
Utica, N. Y.	4.36	Newark, N. J.	4.97	Lynn, Mass.	6.22	Fall River, Mass.	9.27
Trenton, N. J.	4.37	Paterson, N. J.	4.99	Portland, Me.	6.30	New Orleans, La.	12.64
Baltimore, Md.	4.50	Jersey City, N. J.	5.05	Seattle, Wash.	6.30	Savannah, Ga.	16.18
Wilmington, Del.	4.57	Bridgeport, Conn.	5.11	St. Paul, Minn.	6.40	Atlanta, Ga.	17.61
Chicago, Ill.	4.58	Detroit, Mich.	5.16	Worcester, Mass.	6.50		

Table 3 shows how very wide of the mark in nearly all of these cities would be an estimate of the population made by multiplying the vote cast by any single ratio, and that this method of estimating a city's population is without foundation.

While Table 3 proves that no single ratio for the different American cities is possible, it might still be urged that the ratio of a city once determined would remain approximately constant for a series of years. It has been

found impracticable at this date to get the figures for the vote of these cities in 1880 and 1890, and so to examine this objection in the light of city election statistics. But the figures for the states and territories have been obtained, and from them Table 4 has been prepared. After searching all accessible state publications, about two-fifths of the figures for 1880 and 1890 had to be drawn from such private publications as the American Almanac and the Tribune Almanac.

As no presidential election was held in 1890, and as the vote at other elections is usually smaller, the vote in 1890 was estimated by taking the average of the vote for presidential electors in 1888 and 1892, except for 5 states, in which the vote in 1890 for some state officer was higher than the average thus obtained. Aside from this difference, the method of determining the highest vote was like that already described for the cities (page 7), but more laborious, because the votes for a longer list of officers were available for comparison.

Where local criticism of census figures has been made, it has not infrequently taken this form: The vote cast in 1900 increased over that of 1890 by such a per cent and the

reported population by a per cent so much smaller as to seem incredible. In the form stated the objection overlooks the fact that the vote in 1890 was smaller in most states and cities than it would have been had a President been elected in that year. But when this difficulty is met, as in the method here employed, by estimating the vote in 1890 from the average of the votes for 1888 and 1892, the question still remains: Does the increase in population run closely parallel with the increase in votes? Light is thrown upon the question by Table 4. It has been cast in the form of a comparison by states and territories between the increase of population and the increase of votes during the last two decades.

TABLE 4.—PER CENT OF INCREASE IN POPULATION AND IN VOTE CAST, 1890-1900 AND 1880-1890.¹

STATE OR TERRITORY.	PER CENT OF INCREASE 1890-1900.		PER CENT OF INCREASE 1880-1890.		STATE OR TERRITORY.	PER CENT OF INCREASE 1890-1900.		PER CENT OF INCREASE 1880-1890.	
	In popula- tion.	In vote cast.	In popula- tion.	In vote cast.		In popula- tion.	In vote cast.	In popula- tion.	In vote cast.
The United States	20.9	18.8	24.9	26.7	North Central division—Cont'd.				
North Atlantic division	20.9	15.9	19.9	17.5	Minnesota	38.7	20.1	66.7	75.9
Maine	5.0	-8.6	1.9	-17.2	Iowa	16.7	25.2	17.7	31.3
New Hampshire	9.3	2.6	8.5	4.0	Missouri	16.0	28.7	23.6	33.8
Vermont	3.4	12.6	0.0	-15.7	North Dakota	67.1	59.7	278.4	300.1
Massachusetts	25.3	12.8	25.6	30.2	South Dakota	15.2	24.0	134.1	14.5
Rhode Island	24.0	20.4	24.9	66.7	Nebraska	0.8	12.8	43.3	62.8
Connecticut	21.7	13.7	19.8	19.9	Kansas	8.0	8.0		
New York	21.1	18.5	18.0	20.3	South Central division	26.1	4.7	23.0	25.8
New Jersey	30.4	25.1	27.7	39.4	Kentucky	15.5	36.5	12.7	28.2
Pennsylvania	19.9	17.8	22.8	14.3	Tennessee	14.3	-3.5	14.6	16.9
South Atlantic division	17.9	1.6	16.6	10.2	Alabama	20.8	-20.4	19.8	15.1
Delaware	9.6	19.3	14.9	19.6	Mississippi	20.3	-30.0	14.0	-27.5
Maryland	14.0	24.7	11.5	22.0	Louisiana	28.5	-33.2	19.0	10.5
District of Columbia	21.0		23.7		Arkansas	16.3	-30.5	40.6	65.6
Virginia	12.0	-2.7	9.5	40.2	Indian Territory	117.6			
West Virginia	25.7	33.6	28.3	46.6	Oklahoma	407.6	768.0		
North Carolina	17.1	10.7	15.6	17.3	Texas	86.4	15.4	40.4	47.6
South Carolina	16.4	-32.2	15.6	-37.9	Western division	31.9	* 63.3	71.3	* 69.3
Georgia	20.6	-32.6	19.1	-0.1	Montana	70.8	104.7	237.5	119.6
Florida	35.0	-22.6	46.2	-1.0	Idaho	82.7	* 213.1	158.8	175.1
North Central division	17.5	24.4	28.8	35.5	Wyoming	47.9	53.7	192.0	* 109.1
Ohio	13.2	23.0	14.8	16.6	Colorado	30.6	* 138.5	112.1	73.4
Indiana	14.8	21.8	10.8	15.9	New Mexico	21.9	22.0	28.5	58.6
Illinois	26.0	39.6	24.3	30.4	Arizona	39.3	50.0	47.4	43.0
Michigan	15.6	16.4	27.9	33.6	Utah	31.3	* 299.2	44.4	16.0
Wisconsin	22.2	21.9	28.2	35.9	Nevada	-10.6	-17.7	-26.5	-32.6
					Washington	45.0	96.2	365.1	248.4
					Oregon	30.2	14.5	79.5	80.2
					California	22.4	16.4	39.7	58.1

¹ Data from Twelfth Census, Vol. 1, Tables VI and 2 (Bulletin 64, Tables 6 and 8) and Table 10 of this bulletin.

² Woman suffrage granted in Colorado, Idaho, and Utah between 1890 and 1900.

³ Woman suffrage granted in Wyoming in 1890.

In the United States as a whole the divergence at each decade between the rate of increase of population and that of votes is not wide. In the earlier period the vote increased about 2 per cent faster than the population; in the later the relation of the two was reversed.

But in the five great groups of states a much greater diversity appears. Between 1880 and 1890 the population of the North Atlantic, South Atlantic, and Western divisions increased more rapidly than the vote, while in the North Central and South Central divisions the rates of increase in the vote were the greater. Between 1890 and 1900 the population of the North Atlantic, South Atlantic, and South Central groups increased much more rapidly than the vote; in the North Central and Western groups the increase in vote was the more rapid.

The real test of the hypothesis, however, is found neither in the figures for the United States as a whole, nor in those for the five divisions, but in those for the

several states. The table shows for the two decades 94 cases in which there might be a coincidence between the rate of increase of population and that of vote cast. In only 4, namely, Connecticut and Oregon from 1880 to 1890, and Michigan and Wisconsin from 1890 to 1900, were the two rates within 1 per cent of agreeing. This indicates that in American states and territories under present conditions there is not one chance in twenty that the increase of population will keep even pace with that of votes cast. In half of these 94 instances the per cent of decennial increase of population differed from that of vote cast by more than 12. The table shows, also, that the variation between increase of votes and increase of population in the Southern and Western states is much greater than it is in the North Atlantic and North Central divisions, where most of the great cities of the country lie. But even in the North Atlantic and North Central states, in half of the 41 cases the per cent of decennial increase

of population differed by 8, or more, from the per cent of decennial increase in vote cast. Evidence previously offered has shown that the variations in such figures for cities are usually greater than they are for states. Hence, the argument applies to cities *a fortiori*, and the conclusion that in no way can a sound inference be drawn from the figures of vote cast to the population of a city seems established beyond reasonable doubt.

III. ESTIMATES BASED UPON A SCHOOL CENSUS.

Most of the states and territories provide by statute for a periodical census of the population of school age. It is usually taken annually and the results published in state and municipal reports. For the purpose of such a census the school age as specified by statute is not the same in the several states and territories, the lower limit ranging from 4 to 8 years and the upper from 14 to 20 years. The

smallest number of years included is 10 and the highest 17. The most ordinary limits are 6 and 20, and 5 and 20, the former established by 11, the latter by 9 states. From the number of persons of school age as thus returned, an estimate of the population of a city is sometimes derived by multiplying the number of school children enumerated by the ratio which that class of persons is thought to bear to the total population. The accuracy of such an estimate depends upon the accuracy of the ratio and the accuracy of the school census.

The ratio that naturally suggests itself as the best to employ in such a case, is that derived from the figures of the next preceding census for the city under examination. Table 5 has been constructed to test the accuracy of this assumption. The limits of school age used by the Federal Census, namely 5 to 20, inclusive, have been adopted, no other being available.

TABLE 5.—RATIO OF CHILDREN OF SCHOOL AGE (5-20) TO POPULATION IN 1900 AND 1890, AND PER CENT OF ERROR IN ESTIMATES REACHED BY USE IN 1900 OF RATIO ESTABLISHED IN 1890, FOR CITIES HAVING IN 1900 AT LEAST 50,000 INHABITANTS.¹

CITY.	NUMBER IN TOTAL POPULATION TO EACH PERSON OF SCHOOL AGE (5-20)—		Per cent of error in estimate reached by multiplying number of persons (5-20) in 1900 by ratio (1890) of persons 5-20 to total population in city named.	CITY.	NUMBER IN TOTAL POPULATION TO EACH PERSON OF SCHOOL AGE (5-20)—		Per cent of error in estimate reached by multiplying number of persons (5-20) in 1900 by ratio (1890) of persons 5-20 to total population in city named.
	1900	1890			1900	1890	
Maine:				Georgia:			
Portland.....	3.97	3.58	9.7	Atlanta.....	2.99	2.85	4.6
New Hampshire:				Savannah.....	3.31	3.12	5.8
Manchester.....	3.32	3.12	6.2	Ohio:			
Massachusetts:				Cleveland.....	3.13	3.01	3.8
Boston.....	3.90	3.66	6.1	Cincinnati.....	3.23	3.08	4.7
Worcester.....	3.49	3.35	4.0	Toledo.....	3.17	2.97	6.4
Fall River.....	2.95	2.85	3.4	Columbus.....	3.43	3.15	8.2
Lowell.....	3.48	3.24	7.0	Dayton.....	3.37	3.10	7.9
Cambridge.....	3.60	3.35	7.0	Indiana:			
Lynn.....	3.87	3.79	2.0	Indianapolis.....	3.48	3.15	9.5
Lawrence.....	3.40	3.20	5.8	Evansville.....	3.09	2.91	5.8
New Bedford.....	3.31	3.39	2.4	Illinois:			
Springfield.....	3.76	3.62	3.8	Chicago.....	3.23	3.25	0.6
Somerville.....	3.79	3.55	6.3	Peoria.....	3.44	3.25	6.4
Rhode Island:				Michigan:			
Providence.....	3.66	3.48	5.0	Detroit.....	3.11	3.06	1.7
Connecticut:				Grand Rapids.....	3.20	3.15	1.5
New Haven.....	3.51	3.33	5.2	Wisconsin:			
Hartford.....	3.94	3.62	8.1	Milwaukee.....	2.89	2.87	0.6
Bridgeport.....	3.57	3.37	5.5	Minnesota:			
New York:				Minneapolis.....	3.36	3.68	9.6
New York.....	3.34	3.28	1.9	St. Paul.....	3.17	3.44	8.5
Buffalo.....	3.08	3.10	0.6	Duluth.....	3.43	4.15	21.1
Rochester.....	3.28	3.14	4.3	Iowa:			
Syracuse.....	3.48	3.23	7.3	Des Moines.....	3.33	2.84	14.9
Albany.....	3.54	3.18	11.5	Missouri:			
Troy.....	3.44	3.20	7.0	St. Louis.....	3.20	3.02	5.7
Utica.....	3.47	3.27	5.8	Kansas City.....	3.53	3.47	1.7
New Jersey:				St. Joseph.....	3.04	2.93	3.7
Newark.....	3.29	3.09	6.0	Nebraska:			
Jersey City.....	3.25	3.06	5.9	Omaha.....	3.35	3.24	3.4
Paterson.....	3.17	2.97	6.3	Kansas:			
Camden.....	3.31	3.23	2.4	Kansas City.....	3.10	3.03	2.3
Trenton.....	3.28	3.17	3.4	Kentucky:			
Hoboken.....	3.17	3.00	5.5	Louisville.....	3.27	3.01	8.1
Elizabeth.....	3.21	3.01	6.3	Tennessee:			
Pennsylvania:				Memphis.....	3.19	3.15	1.2
Philadelphia.....	3.50	3.38	3.4	Nashville.....	3.10	2.88	7.2
Pittsburg.....	3.17	2.98	6.1	Louisiana:			
Allegheny.....	3.25	3.02	7.2	New Orleans.....	3.03	2.90	4.4
Scranton.....	2.97	2.80	5.9	Texas:			
Reading.....	3.15	2.95	6.4	San Antonio.....	2.90	2.91	0.2
Erie.....	3.19	2.91	8.7	Colorado:			
Wilkesbarre.....	2.96	2.79	5.7	Denver.....	3.53	4.06	18.5
Harrisburg.....	3.30	3.09	6.3	Utah:			
Delaware:				Salt Lake City.....	2.91	3.03	4.1
Wilmington.....	3.32	3.27	1.4	Washington:			
Maryland:				Seattle.....	4.43	4.37	1.3
Baltimore.....	3.17	3.10	2.3	Oregon:			
District of Columbia:				Portland.....	3.90	4.29	10.1
Washington.....	3.61	3.11	13.7	California:			
Virginia:				San Francisco.....	3.95	3.53	9.3
Richmond.....	3.17	2.95	6.8	Los Angeles.....	3.59	3.48	3.2
South Carolina:				Oakland.....	3.46	3.20	7.5
Charleston.....	2.98	2.98	1.8	All cities.....	3.33	3.22	

¹ Data from Twelfth Census Bulletins 67, 75, 77, 79, 81, 86, 89, 91, 94, 97, and 102, Table 6; and Eleventh Census Population, Part I, Table 72, page 742.

² Estimate too high.

The first entry on the last line of the table shows that the number of children between 5 and 20 years of age in 1900 for all the 78 cities collectively must be multiplied by 3.33 to get the entire population in 1900. But at the time these estimates were needed and made the census of 1890 was the last the figures for which were available, except for cities lying in states which had taken a state census between 1890 and 1900. The ratios for 1890 are given in the second column of Table 5. The entry in the last line of this column shows that the number of children between 5 and 20 years of age in 1890 for all the 78 cities collectively must be multiplied by 3.22 to get the entire population in 1890. To estimate the population in 1900 of any city on the list, its population of school age, which is supposed to be known, might be multiplied by the ratio which the number of persons of school age in 1890 bore to the total population in that year. The per cent of error resulting from this method of estimate is given for each city in column 3. In 68 of the 78 cities an estimate so reached would be too small, this being due, as shown by examination of columns 1 and 2, to the decreasing proportion of children of school age in most of these cities. The average error of these 78 estimates is 5.7 per cent.

The evidence indicates that, if the number of children of school age is known, an estimate of a city's population can be made therefrom with greater accuracy than from the population of the last two censuses or from the number of votes cast at a presidential election.

The point remaining for examination is the accuracy of school censuses. By correspondence with state and municipal officers the figures for school censuses in 1900 have been obtained for 47 cities. But in only 4 are the age limits the same as those published by the Federal census, namely, 5-20, and, in consequence, the information from these sources can not be compared with much confidence in the results. But for the states and territories the Twelfth Census reports both the ages 5-20, as in the cities, and the ages 5-17. There are 8 states and territories from which, in one way or the other, comparable returns are obtained. But there are also 17 states and territories in which the school age adopted by state authority differs by only 1 year from one or the other of those adopted by the Federal Government, 7 states and territories in which it differs by 2, and 1 in which it differs by 3 years. As the Eleventh Census reported the population of each state and territory classified by single years of age, and as the age composition of a state's population varies but little from decade to decade, it is possible to estimate with reasonable accuracy from the returns of the Twelfth Census the population of a state in 1900 within the age limits adopted by the state.

In the following tables such a process of estimating has been used wherever the limits of school age reported by the Twelfth Census did not agree with those of the states:

TABLE 6.—COMPARISON OF STATE SCHOOL CENSUSES OF 1900 WITH RESULTS OF TWELFTH CENSUS.

STATE OR TERRITORY.	Age limits for state school census.	Persons of school age by state census.	PERSONS WITHIN SAME AGE LIMITS BY TWELFTH CENSUS.		Probable per cent of error in state school census.	STATE OR TERRITORY.	Age limits for state school census.	Persons of school age by state census.	PERSONS WITHIN SAME AGE LIMITS BY TWELFTH CENSUS.		Probable per cent of error in state school census.
			Enumerated.	Estimated.					Enumerated.	Estimated.	
Arizona	6-17	20,833	-----	28,890	-27.9	New Hampshire	5-15	71,544	-----	73,510	-2.7
Arkansas	6-20	434,019	-----	432,900	-1.7	New Jersey	5-17	437,479	470,741	-----	-2.8
California	5-16	361,167	-----	314,140	+15.0	New Mexico	5-20	53,003	69,712	-----	-24.0
Colorado	6-20	153,142	-----	148,180	+3.3	North Carolina	6-20	659,629	-----	703,290	-6.2
Florida	6-20	161,428	-----	184,240	-12.4	North Dakota	6-19	82,009	-----	96,380	-4.5
Idaho	5-20	54,839	54,964	-----	-0.2	Ohio	6-20	1,226,366	-----	1,252,800	-2.1
Illinois	6-20	1,538,695	-----	1,478,160	+7.6	Oklahoma	6-20	127,921	-----	133,850	-5.8
Indiana	6-20	756,004	-----	783,310	-4.1	Oregon	4-19	133,181	-----	134,230	-0.8
Iowa	5-20	731,154	737,370	-----	-4.8	Rhode Island	5-15	82,230	-----	84,140	-2.3
Kansas	5-20	508,354	527,500	-----	-3.5	Tennessee	6-20	768,343	-----	720,870	+5.3
Kentucky	6-19	727,631	-----	702,860	+3.5	Texas	8-17	706,546	-----	761,590	-7.2
Maine	4-20	211,085	-----	213,130	-1.0	Utah	6-17	62,267	-----	81,420	-23.5
Michigan	5-19	721,698	-----	745,560	-3.2	Vermont	5-20	90,648	98,614	-----	-8.1
Missouri	6-19	938,605	-----	909,330	+1.7	Washington	5-20	139,037	153,245	-----	-12.1
Montana	6-20	57,210	-----	60,340	-5.2	West Virginia	6-20	307,581	-----	332,050	-7.4
Nebraska	5-20	377,791	386,384	-----	-2.2	Wisconsin	4-19	731,063	-----	747,640	-2.2
Nevada	6-17	9,075	-----	8,370	+8.4						

In the 8 instances in which the age limits of the two censuses are the same, and in which resort to estimates was unnecessary, the school census was deficient by amounts ranging between two-tenths of 1 per cent for Idaho and 24.0 per cent for New Mexico. Of the 25 cases in which recourse to estimates was necessary, the school census was apparently deficient in 18, including all states east of the Mississippi River except Illinois, Kentucky, and Tennessee. It is probable that the state school censuses do not include Indian children of school age, and that this partly accounts for the wide discrepancies in several Western states. But even in the Eastern states the results are so divergent

as to cast doubt upon the state censuses of school children.

It might be urged that to count the children of school age in cities is far easier than to count them throughout an entire state, and that the city school censuses may be more accurate than would appear by analogy from Table 6. The force of the objection may be weakened, if not destroyed, in the following way. The population of nearly all our large cities is increasing decade by decade, and probably also year by year. If so, the number of school children should increase slowly but steadily. A bad census, except in the rare cases where fraud is an element, results almost invariably in an undercount. If the

city school censuses as a class are sometimes bad and sometimes good, this will probably be reflected in very irregular increases from year to year in the reported number of school children. Indeed, a careless census taken the year after a thorough one might report a smaller number of school children than was found by its predecessor. To show the irregular increases in the reported number of school children Table 7 has been prepared. It includes figures for the 38 cities regarding which the facts have been secured. The first column gives the highest amount and the third the highest per cent of increase in the reported numbers of school children at two successive years between

1890 and 1900; the second column gives the lowest amount and the fourth the lowest per cent of increase, or, where there has been a decrease, the highest per cent of decrease between any two such years; the fifth column gives the difference between the third and fourth, and so measures roughly the fluctuations in the reported figures for the ten years. A small figure in column 5 is an indication, although not a proof, that the school censuses for each year have been accurate; a large figure in column 5 is an indication that some, at least, of the school censuses in that city between 1890 and 1900 were inaccurate.

TABLE 7.—LIMITS IN AMOUNT AND IN RATE OF INCREASE OF PERSONS OF SCHOOL AGE FOR ANY YEAR BETWEEN 1890 AND 1900.

CITY.	Amount of increase for any year between 1890 and 1900.		Per cent of increase for any year between 1890 and 1900.		Range of per cents, i. e., difference between two preceding columns.	CITY.	Amount of increase for any year between 1890 and 1900.		Per cent of increase for any year between 1890 and 1900.		Range of per cents, i. e., difference between two preceding columns.
	Highest.	Lowest.	Highest.	Lowest.			Highest.	Lowest.	Highest.	Lowest.	
Maine:						Ohio:					
Portland	541	-1,148	3.9	-9.5	13.4	Cleveland	4,615	1,992	6.1	2.2	3.9
Massachusetts:						Cincinnati	11,104	-1,845	12.7	-1.4	14.1
Boston	3,639	144	4.3	0.2	4.1	Toledo	3,264	-1,263	11.7	-4.3	16.0
Worcester	903	137	4.7	0.7	4.0	Columbus	2,020	-163	6.6	-0.6	7.2
Fall River	1,342	-839	7.7	-4.2	11.9	Dayton	1,549	-778	8.1	-4.1	12.2
Lowell	3,047	-1,958	22.8	-11.9	34.7	Michigan:					
Cambridge	1,351	-365	9.8	-2.5	12.3	Detroit	7,827	-6,755	10.8	-8.5	19.3
Lynn	739	-436	8.5	-1.1	12.6	Grand Rapids	3,775	-940	22.8	-3.6	26.4
Lawrence	482	-150	4.8	-1.7	6.5	Wisconsin:					
New Bedford	1,384	-393	15.5	-3.5	19.0	Milwaukee	4,372	742	5.5	0.8	4.7
Springfield	536	39	6.1	0.5	5.6	Iowa:					
Somerville	931	-860	10.3	-3.7	14.0	Des Moines	1,102	103	6.9	0.7	6.2
Rhode Island:						Nebraska:					
Providence	2,762	-626	10.6	-2.4	13.0	Omaha	3,019	-1,908	11.3	-5.8	17.1
Connecticut:						Kansas:					
New Haven	722	156	3.6	0.8	2.8	Kansas City	1,302	-435	11.2	-3.7	14.9
Hartford	940	-67	8.1	-0.6	8.7	Utah:					
Bridgeport	1,255	-455	8.3	-3.3	11.6	Salt Lake City	1,221	64	13.8	0.5	13.3
New Jersey:						Oregon:					
Newark	4,008	-3,469	7.8	-6.0	13.8	Portland	920	-348	6.9	-1.8	8.7
New York City	9,969	-14,173	15.3	-20.3	35.6	California:					
Paterson	1,379	-665	7.4	-2.7	10.1	San Francisco	3,073	-944	4.7	-1.2	5.9
Camden	2,539	-2,102	16.5	-11.8	28.3	Los Angeles	3,723	217	22.0	2.0	20.0
Trenton	1,354	-251	8.5	-1.7	10.2	Oakland	1,269	-233	10.2	-2.1	12.3
Hoboken	1,641	-4,118	10.4	-21.3	31.7						
Elizabeth	587	-35	5.6	-0.3	5.9						

It is hardly possible to demand more evidence than is contained in Table 7, that city school censuses as a class are not entitled to implicit acceptance. In 29 of the 38 cities the number of school children enumerated at some year between 1890 and 1900, was less than the number enumerated the preceding year. The conclusion may be confirmed, however, by quoting a few typical admissions found in the reports.

DETROIT.—“The result of the census enumeration for several years past has been very unsatisfactory.” (Board of Education Annual Report, 1893, p. 14.)

JERSEY CITY.—“The utter unreliability of these returns renders them, as has been proved, a very unsafe guide.” (Board of Education Annual Report, 1897, p. 50.)

“Enough has been given to show that error is generally prevalent in the census reports of the whole state.” (Ibid., 1893, p. 34.)

CAMBRIDGE.—“School returns show more children in the schools, public and private, than were found by the enumerators.” (School Committee Annual Report, 1899, p. 53.)

NEW BEDFORD.—“The returns this year prove that the census of 1896 was short from 500 to 700 children.” (School Committee Annual Report, 1897, pp. 4-5.)

SYRACUSE.—“The results of the enumeration were totally void of any reliable information.” (Board of Education Annual Report, 1895, p. 21.)

On the whole, therefore, city school censuses and *a fortiori* estimates of total population based upon them do not compare in accuracy with a complete enumeration.

IV. ESTIMATES BASED UPON A DIRECTORY CANVASS.

An estimate of population is based more often perhaps on the number of names in the city directory than on any other figure. This is not due to the fact that the number of names in the directory is a more trustworthy index of population, but to the fact that many publishers of directories in each issue estimate the population. During the canvass they gain information that would be of much service in making an estimate, and are better prepared than others for the task. The directory estimate, based upon information gained annually and published by well-known firms, is given a wider circulation than is accorded to estimates made in other ways. Even where a directory publisher does not print an estimate in the directory, as is true in the majority of cases, he may give one out to the local newspapers, based upon the results of his canvass, or other persons may make estimates resting on the number of names in the directory.

These estimates are made by multiplying the number of names in the directory by a ratio assumed to represent

the most probable number of persons in the total population to each name in the directory. It is more usual for directory publishers to print the number of names contained in the directory than it is for them to base thereon an estimate of the city's population. They seldom explain, however, the meaning of this phrase "number of names," and it does not, as might at first be thought, carry its meaning on its face. Does it include not merely persons, but firms, buildings, societies, and public institutions, of which entry is frequently made in the directory? Does it include each entry of the same name where two or more such entries appear as cross references? The meager evidence obtainable indicates that "number of names" means number of entries. In that case a considerable per cent of duplicates or inadmissible entries is involved. This per cent may be different in the same city for different years. Another possibility of error arises in the fact that the names in very few directories are carefully counted; usually the number of names stated is an estimate.

Furthermore the entries in a directory do not include the names of all adults, for those of married women seldom appear. Unmarried women living with their families and not engaged in any business are usually omitted. The age limit below which persons are excluded varies from 16 to 21. In a large city many men may be regarded as floating or transient population. Their addresses change so often that it is of little use to include them in a directory. Their social or business importance is so slight that the value of the directory to its public would be little heightened, if all their names appeared. The proportionate importance of this class, and the directory publisher's treatment of it, vary in the different cities and probably from time to time in the same city.

The directory publisher is not bound in any way to restrict his list to persons residing within the corporate limits of the municipality. A great many persons residing outside, but doing business in the city, are included in the city directories. Oftentimes residents of those suburbs which are an integral part of the city, viewed as a business center, are included even when they do not have a place of business within the corporate limits of the larger city.

The starting point of a directory must usually be the directory of the same city for the preceding year. Many of the residents have died or removed since the previous canvass. Many others have come to reside in the city since that time, or have begun business there. The names of the former must be expunged, those of the latter added. To get the necessary information and decide upon each case takes time and money. The efficiency with which this work is done varies in the different cities and in the same city at different periods.

For all these reasons the phrase "number of names" does not sharply define any class of the population and in consequence the ratio between the "number of names" and the population is not likely to be uniform. This is

indicated by noting that, where directory publishers have estimated the total population during the last ten years by multiplying the number of names in the directory, the figure used as a multiplier varied from 2 to $5\frac{1}{2}$, and in most cases it was a simple number, namely, $2\frac{1}{2}$, $2\frac{3}{4}$, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, or $3\frac{3}{4}$. Round numbers like these carry on their face a demonstration that they are the results of guessing rather than of accurate calculation. The evidence shows that the ratio between the number of names in a directory and the population is almost unknown, but varies with the age and sex composition of the population, and the conditions and rules of the directory canvass.

A directory compiler doubtless amasses local information which might enable him to estimate closely the population of his city, provided he were an expert in making estimates, gave his attention seriously to the subject, and were animated only by a desire to get as near as possible to the truth. But in the great majority of directories examined the indications are that some of these conditions are lacking. Not a single directory bears evidence that the author of the estimate appreciated the difficulties in the way of an accurate result from the information before him. His estimate is a mere incident to his main object and receives little attention. It is usually dismissed in a sentence with no explanation of the method employed, often with no statement of the ratio adopted, and no indication of the evidence on which it rests. Most directories omit it entirely, thereby indicating that they regard it as aside from their real work.

It is a notorious fact that in many cities of the United States public sentiment is in favor of having the population appear as large as possible. There are no strong motives for an underestimate; there are many motives of local pride and business rivalry for an overestimate. These are likely to weigh with the maker of a directory appealing exclusively to local patronage, but are of different strength in different cities. Opposed to them are the business integrity and judgment of the directory maker and his unwillingness to make an estimate so wide of the truth as to arouse criticism. Motives of the former character have apparently influenced certain directory makers to count for purposes of an estimate names of deceased persons, of nonresidents, and of others not entitled to recognition. They have also influenced some to exaggerate the true ratio of "number of names" to population.

Table 8 is designed to test the serviceability of directories for the purpose under consideration. The first three columns throw light upon the publishers' estimates. The first gives the ratios of the "number of names" to population; the second, the ratios used by the publishers; and the third the per cent of error in their estimates. Column 4 gives the rate of decennial increase in population, and column 5 the rate of decennial increase in "number of names."

TABLE 8.—FIGURES RELATIVE TO POPULATION ESTIMATES BASED ON "NUMBER OF NAMES" IN DIRECTORY.

CITY.	Number of persons in total population to each name in directory, 1900.	Number of persons in total population to each name in directory assumed by publisher, 1900.	Per cent of error in publisher's estimate, 1900.	PER CENT OF INCREASE, 1890-1900		CITY.	Number of persons in total population to each name in directory, 1900.	Number of persons in total population to each name in directory assumed by publisher, 1900.	Per cent of error in publisher's estimate, 1900.	PER CENT OF INCREASE, 1890-1900	
				In population.	In names.					In population.	In names.
New Hampshire:						Ohio:					
Manchester	2.28			29.1	25.8	Cleveland	2.80	3.00	7.3	46.1	47.6
Massachusetts:						Cincinnati	1.81			9.8	33.5
Boston	2.27			25.1	27.9	Dayton		2.08			
Worcester	2.44			39.9	42.4	Indiana:					
Fall River	2.86			40.9	53.8	Indianapolis	2.27	2.75	20.9	60.4	54.0
Lowell	2.50			22.2	19.4	Illinois:					
Lynn	2.23			22.9	26.0	Chicago	2.91	3.44	18.3		
Lawrence	2.44			40.1	53.0	Michigan:					
Springfield	1.92					Detroit		2.75		38.8	48.6
Rhode Island:						Minnesota:					
Providence	2.23			32.9	34.6	Minneapolis	2.00	2.25	12.4	23.1	26.1
Connecticut:						St. Paul				22.5	20.4
New Haven	1.91			32.9	43.0	Missouri:					
Hartford	2.07	2.30	2.9	50.0	58.1	St. Louis	2.51	3.00	19.6	27.3	47.5
Bridgeport				45.3	44.8	Nebraska:					
New York:						Omaha	1.89	2.75	45.7	-27.0	23.0
Buffalo	2.77	3.20	13.5	37.8	49.2	Tennessee:					
Rochester	2.23			21.4	28.5	Memphis		2.75		58.6	50.3
Syracuse	2.03			23.0	21.5	Texas:					
Albany	2.22			- 0.8	17.2	San Antonio			12.5		
New Jersey:						Colorado:					
Newark	3.21	3.50	9.0			Denver				25.4	30.5
Elizabeth	3.15	3.50	11.1			Washington:					
Pennsylvania:						Seattle	2.35	2.50	6.5	88.3	95.9
Reading		2.75		34.6	59.8	Oregon:					
Harrisburg		2.75		27.4	33.8	Portland		2.50		94.9	126.6
Maryland:						California:					
Baltimore	2.50	3.25	29.9	17.2	27.4	Oakland	1.75	2.22	26.7		
Georgia:											
Atlanta		3.00									
Savannah	1.92			25.6	51.5						

Table 8 shows that the ratios of "number of names" to population ranged from 1.75 to 3.21; and those used by the publishers from 2.08 to 3.50. Of the 14 estimates, but 4 are in error by less than 10 per cent; in 6 the error is from 10 to 20 per cent, and in 4 it is over 20 per cent. All of the estimates are too large. Only one instance has been found, either in 1900 or 1890, where a directory estimate was not in excess of the population as returned by the census.

If an estimate of population were based upon the "number of names" in 1900, as compared with that in 1890, the per cent of increase of population would probably be assumed to equal that of "number of names." Columns 4 and 5 present the figures for 31 of the 78 cities and show that the "number of names" has increased more rapidly than population. In but 7 of the 31 instances is the per cent of increase in population greater than that in "number of names." This more rapid increase in the "number of names" witnesses probably to the greater

care and thoroughness with which the work of directory publishing is done, to a tendency of the publishers to include a larger proportion of the doubtful classes, like unmarried women, or children just entering adult life, and also to a growing tendency among persons doing business in large cities to reside in the suburbs. For these reasons the directory is likely to give an exaggerated idea of the true resident population. On the whole, therefore, the evidence warrants the conclusion that this method of estimating population, like the other three, is not entitled to public acceptance or to any weight as a basis upon which to dispute the accuracy of a careful enumeration.

In the two tables which follow, all the data used in the present bulletin and not contained in the published results of the Twelfth Census are presented. They afford a means of checking the results which have been set forth. Perfect accuracy can not be claimed for these tables, but the figures are the best that the Census Office has been able to secure.

TABLE 9.—NUMBER OF "CITIZENS" AND VOTE CAST IN 1900, NUMBER OF NAMES IN DIRECTORY IN 1890 AND 1900, AND DIRECTORY ESTIMATE OF POPULATION IN 1900.

CITY.	Number of males of voting age who possess the "citizenship" qualifications.	Vote cast.	NUMBER OF NAMES IN DIRECTORY.		Directory estimate of population in 1900.	CITY.	Number of males of voting age who possess the "citizenship" qualifications.	Vote cast.	NUMBER OF NAMES IN DIRECTORY.		Directory estimate of population in 1900.
			1900	1890					1900	1890	
Maine:						Georgia:					
Portland	13,781	7,961				Atlanta	22,843	5,104	146,480		
New Hampshire:						Savannah	15,597	8,552	28,218	18,026	
Manchester	12,489	9,766	24,965	19,840		Ohio:					
Massachusetts:						Cleveland	98,678	77,146	136,539	92,496	409,617
Boston	148,312	83,675	246,725	192,888		Cincinnati	90,803	77,223	180,000	134,820	
Worcester	28,006	18,228	48,457	34,029		Toledo	36,709	28,400			
Fall River	19,364	11,817	36,603	23,803		Columbus	39,479	32,269			
Lowell	20,254	18,295	37,936	31,772		Dayton	25,299	22,535	146,602		
Cambridge	21,780	11,355				Indiana:					
Lynn	18,560	11,011	30,033	23,834		Indianapolis	52,080		74,370	48,282	204,518
Lawrence	13,441	9,278	25,634	16,763		Evansville	16,096				
New Bedford	12,454	7,003				Illinois:					
Springfield	15,932	10,110	32,286			Chicago	464,753	(2)	584,000		2,010,000
Somerville	15,198	7,827				Peoria	17,700				
Rhode Island:						Michigan:					
Providence	44,471	21,970	78,768	58,505		Detroit	69,603	55,377	1136,000	91,500	
Connecticut:						Grand Rapids	22,729	21,754			
New Haven	28,222	22,833	56,572	39,551		Wisconsin:					
Hartford	22,218	15,154	38,657	24,452	82,146	Milwaukee	71,685	58,209			
Bridgeport	18,442	13,881	181,638	21,773		Minnesota:					
New York:						Minneapolis	56,163	38,700	101,250	80,271	227,812
New York	809,653	607,682				St. Paul	47,494	25,469	194,226	78,271	
Buffalo	89,018	68,207	127,000	85,140	400,000	Duluth	15,300	8,613			
Rochester	42,870	35,864	71,292	55,465		Iowa:					
Syracuse	30,618	25,275	53,445	44,000		Des Moines	18,498	14,284			
Albany	27,623	24,615	42,402	36,241		Missouri:					
Troy	16,488					St. Louis	165,037	124,937	229,265	155,400	687,795
Utica	15,401	12,920				Kansas City	52,890	37,814			
New Jersey:						St. Joseph	34,015	13,353			
Newark	61,921	49,510	76,666		268,331	Nebraska:					
Jersey City	52,402	40,912				Omaha	33,823	20,753	54,392	42,498	149,456
Paterson	25,318	21,070				Kansas:					
Camden	21,052	17,672				Kansas City	15,286	10,821			
Trenton	20,134	16,763				Kentucky:					
Hoboken	14,064	10,025				Louisville	58,554	41,343			
Elizabeth	13,191	10,644	16,551		57,928	Tennessee:					
Pennsylvania:						Memphis	30,898		148,261	82,100	
Philadelphia	346,461	234,889				Nashville	22,023				
Pittsburg	82,906					Louisiana:					
Allegheny	35,288					New Orleans	71,962	22,716			
Scranton	24,997					Texas:					
Reading	21,642		185,514	22,228		San Antonio	13,863				60,000
Erie	14,447					Colorado:					
Wilkesbarre	12,294		123,003	17,197		Denver	41,234		171,196	54,548	
Harrisburg	14,523					Utah:					
Delaware:						Salt Lake City	12,558	19,614			
Wilmington	21,927	16,730				Washington:					
Maryland:						Seattle	36,013	12,804	34,354	17,534	85,885
Baltimore	136,152	113,008	203,368	159,658	660,946	Oregon:					
District of Columbia:						Portland	29,620	12,712	141,210	18,184	
Washington	81,480					California:					
Virginia:						San Francisco	107,417	63,207			
Richmond	23,211	9,927				Los Angeles	29,619				
South Carolina:						Oakland	18,304		38,164		84,808
Charleston	18,918										

¹ Directory canvass covered suburbs.² Vote in Cook county, 401,134; "citizens," 502,002.

TABLE 10.—VOTE CAST IN CENSUS YEARS BY STATES AND TERRITORIES.¹

STATE OR TERRITORY.	1900	1890	1880	STATE OR TERRITORY.	1900	1890	1880
The United States.....	14,201,528	11,953,554	9,437,591	North Central division—Continued.			
North Atlantic division.....	4,052,069	3,405,237	2,974,389	Minnesota.....	317,936	261,712	150,484
Maine.....	117,879	122,820	147,802	Iowa.....	580,855	423,053	322,709
New Hampshire.....	92,348	90,086	86,573	Missouri.....	684,294	531,468	397,221
Vermont.....	67,099	59,612	70,684	North Dakota.....	57,795	36,195	28,426
Massachusetts.....	414,697	367,766	282,512	South Dakota.....	96,124	77,530	87,452
Rhode Island.....	56,548	46,985	29,235	Nebraska.....	241,430	214,090	201,236
Connecticut.....	181,040	159,286	132,863	Kansas.....	353,766	327,560	
New York.....	1,548,042	1,328,269	1,103,945	South Central division.....	1,696,788	1,620,193	1,288,022
New Jersey.....	401,206	320,074	245,928	Kentucky.....	467,599	342,492	267,131
Pennsylvania.....	1,173,210	1,000,289	874,847	Tennessee.....	274,805	284,392	243,286
South Atlantic division.....	1,322,936	1,302,144	1,181,161	Alabama.....	162,802	203,932	177,254
Delaware.....	42,112	85,309	29,528	Mississippi.....	59,103	84,408	116,401
Maryland.....	264,434	212,111	173,039	Louisiana.....	76,870	115,089	104,137
Virginia.....	269,113	298,172	212,606	Arkansas.....	132,979	191,448	115,609
West Virginia.....	220,815	165,253	112,713	Oklahoma.....	73,867	8,453	
North Carolina.....	313,313	283,022	241,208	Texas.....	450,263	389,979	264,204
South Carolina.....	50,842	75,028	178,096	Western division.....	1,021,147	625,361	369,344
Georgia.....	122,715	182,100	182,353	Montana.....	63,796	31,090	14,160
Florida.....	39,592	51,089	51,618	Idaho.....	57,914	18,204	6,617
North Central division.....	6,108,588	4,910,619	3,624,675	Wyoming.....	24,646	16,032	7,667
Ohio.....	1,040,073	845,262	724,941	Colorado.....	221,382	92,830	53,532
Indiana.....	664,094	545,281	470,672	New Mexico.....	39,474	82,348	20,397
Illinois.....	1,131,894	810,735	621,716	Arizona.....	16,620	11,078	7,701
Michigan.....	548,214	471,086	352,686	Utah.....	92,980	23,293	19,925
Wisconsin.....	442,613	363,097	267,182	Nevada.....	10,196	12,802	18,393
				Washington.....	107,524	54,803	15,823
				Oregon.....	84,216	73,550	40,816
				California.....	302,399	259,741	164,313

¹The figures for 1900 and 1880 represent the largest total of votes cast for the candidates for any office (usually presidential electors) in the year named; those for 1890 represent the average vote on presidential electors in 1888 and 1892, except in states where the vote in 1890 was larger, and in the territories.

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 139.

WASHINGTON, D. C.

February 13, 1902.

AGRICULTURE.

MAINE.

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 for the state of Maine, 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 Maine, June 1, 1900, numbered 59,299, and had a value of \$96,502,150. Of this amount \$47,142,700, or 48.9 per cent, represents the value of buildings, and \$49,359,450, or 51.1 per cent, the value of land and improvements other than buildings. On the same date the value of farm implements and machinery was \$8,802,720, and of live stock, \$17,106,034. These values, added to that of farms, give the "total value of farm property," \$122,410,904.

The products derived from domestic animals, poultry, and bees, including animals sold or 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 prod-

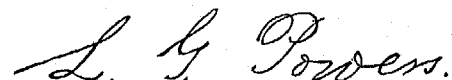
ucts." This value for 1899 was \$37,113,469, of which amount \$15,159,415, or 40.8 per cent, represents the value of animal products, and \$21,954,054, or 59.2 per cent, the value of crops, including forest products. The total value for 1899 exceeds that reported for 1889 by \$15,064,249, or 68.3 per cent. A large part of this apparent increase is doubtless due to a more detailed enumeration in 1900 than in 1890. Of the actual increase, the greater part has been in the products of market gardens, dairies, and poultry farms.

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 livestock on the farms of the producers. In 1899 the reported value of products fed was \$9,847,860, leaving \$27,265,609 as the gross farm income. The percentage which this amount is of the "total value of farm property" is referred to in the text of the bulletin as the "percentage of gross income upon investment." For Maine in 1899 it was 22.3 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 volume, "Statistics of Agriculture for the United States," which will be published about June 1, 1902. The present publication is designed to present a succinct advance statement for Maine.

Very respectfully,



Chief Statistician for Agriculture.

AGRICULTURE IN MAINE.

GENERAL STATISTICS.

Maine has a total land area of 29,895 square miles, of which 9,844 square miles, or 32.9 per cent, are included in farms. The surface consists of two great slopes, the northern and the southern. The northern slope, comprising about one-third of the total area, is drained by the St. John River and its tributaries, and the southern slope by numerous streams which flow into the Atlantic. The broad, flat divide which separates the two slopes serves as a natural reservoir, most of the rivers of the state having their sources in the large lakes of this region. Some of the lakes have outlets on both sides of the watershed.

The surface of a large part of the state is rugged and broken. The soil of the river valleys is very productive, but in the mountainous regions and along the seacoast it is for the most part sterile. The Aroostook Valley, which comprises the largest area of fertile farming land in New England, has a deep, porous, yellow loam, especially adapted to the growing of fruits and vegetables. The remarkable development of this part of the state in the past ten years is an important feature revealed by the statistics presented in this bulletin.

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.....	59,299	6,299,946	2,386,889	3,913,057	106.2	37.9
1890.....	62,013	6,179,925	3,044,666	3,135,259	99.7	49.3
1880.....	64,309	6,552,578	3,484,908	3,067,670	101.9	53.2
1870.....	59,804	5,838,068	2,917,793	2,920,265	97.6	50.0
1860.....	55,698	5,727,671	2,704,133	3,023,538	102.8	47.2
1850.....	46,760	4,555,398	2,039,596	2,515,797	97.4	44.8

The number of farms in 1900 was 12,539 greater than in 1850, a gain of 26.8 per cent. Since 1880, however, the number has been decreasing, the loss for the past decade having been 2,714 farms, or 4.4 per cent.

Except in the decade 1880-1890, the total farm acreage has increased steadily since 1850. An increase since 1890 of 120,021 acres, accompanying the decrease in the number of farms, resulted in a gain of 6.5 acres in the average size of farms, which was larger in 1900 than at any previous time.

The acreage of improved land increased steadily until 1880, when a marked decline began, and in 1900 the per-

centage of farm land improved was smaller than ever before reported. This change, although less marked than in other New England states, is doubtless due to the same general causes, namely, the demands of a growing city population for the products of special branches of agriculture, notably dairying and market gardening, and the competition of western land in cereal production. The lands which are most fertile and most easily tilled have been retained under cultivation and made increasingly productive. As a result, the aggregate income derived from meadow, orchard, and plow lands is now greater than it was in 1860, although the acreage under cultivation is considerably less. The less fertile lands have been found to afford greater incomes as permanent pastures than as meadow or plow lands, and each decade since 1870 has shown an increasing acreage of such land reported as unimproved.

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.....	\$122,410,904	\$96,502,150	\$8,802,720	\$17,106,034	\$37,113,469
1890.....	122,347,283	98,567,730	5,499,413	18,280,140	22,049,220
1880.....	123,805,089	102,357,615	4,943,048	16,499,376	21,945,489
1870 ²	131,128,198	102,961,951	4,309,113	23,857,129	33,470,044
1860.....	97,424,885	78,688,525	3,298,327	15,437,533	
1850.....	66,852,031	54,861,748	2,284,557	9,705,726	

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.

The value of farm property in 1900 was nearly twice as great as in 1850, although the gain in the decade 1890-1900, was less than one-tenth of 1 per cent. In this decade there was a slight decrease in the value of land, improvements, and buildings, and also in that of live stock, but in the value of implements and machinery there was a gain of 60.1 per cent. A portion of this increase, however, is doubtless the result of a more detailed 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 -----	59,299	58,136	6,299,946	2,386,889	\$49,359,450	\$47,142,700	\$8,802,720	\$17,106,034	\$27,265,609	\$2,667,260	\$819,680
Androscoggin -----	2,924	2,900	257,400	125,701	2,897,270	3,045,050	470,650	906,907	1,574,083	170,710	46,840
Aroostook -----	6,938	6,761	793,205	889,232	6,803,290	4,274,020	1,325,440	2,220,671	4,553,169	473,010	268,700
Cumberland -----	5,101	5,080	408,946	148,436	5,371,850	5,067,720	775,840	1,303,913	2,509,406	274,100	67,480
Franklin -----	2,526	2,462	893,870	154,051	1,774,550	1,713,290	316,300	874,136	1,038,486	98,290	22,790
Hancock -----	2,784	2,747	274,390	51,353	1,783,450	1,895,510	316,530	571,943	912,518	91,200	16,940
Kennebec -----	5,523	5,249	479,749	180,994	4,650,350	4,846,950	776,510	1,564,277	2,258,618	236,250	56,270
Knox -----	2,115	2,091	156,480	47,091	1,507,890	1,682,720	249,970	477,548	767,607	72,320	10,860
Lincoln -----	2,808	2,779	223,069	58,430	1,049,490	1,851,050	324,540	582,060	884,035	59,290	14,340
Oxford -----	4,420	4,320	620,704	198,474	3,604,620	3,478,880	576,650	1,443,731	2,000,323	181,690	45,390
Penobscot -----	6,076	6,007	663,671	293,240	4,496,330	4,845,340	999,020	2,011,128	2,787,258	263,690	68,700
Piscataquis -----	1,935	1,888	265,180	104,223	1,825,180	1,382,870	310,730	632,232	858,652	85,520	24,270
Sagadahoc -----	1,238	1,221	115,043	39,279	973,950	1,052,990	174,840	299,840	555,006	61,830	19,200
Somerset -----	4,122	4,068	579,301	240,474	3,093,060	3,199,150	601,210	1,435,540	1,868,907	186,060	52,160
Waldo -----	3,674	3,637	381,531	155,789	2,326,690	2,535,680	526,710	974,963	1,544,808	128,840	29,530
Washington -----	2,051	2,022	248,782	54,919	1,232,670	1,225,490	278,890	479,714	753,171	61,370	14,070
York -----	5,064	4,954	438,625	141,203	5,808,810	5,045,990	778,890	1,327,431	2,399,612	225,090	62,140

For the 7 counties which reported more farms in 1900 than in 1890, the percentages of increase are as follows: Aroostook, 12.3; Kennebec, 5.6; Androscoggin, 2.2; Sagadahoc, 1.4; Franklin, Knox, and Oxford each less than 1 per cent. The counties reporting the largest relative decreases were Hancock, Washington, Waldo, and Penobscot, the percentages being 28.4, 16.9, 10.7, and 9.2, respectively.

The portion of the total land surface included in farms varied from 11.4 per cent in Piscataquis county to 85.2 per cent in Kennebec county, and the average size of farms, from 74 acres in Knox county to 156 acres in Franklin county.

The total acreage in farms increased in the last decade in every county except Hancock, Washington, Piscataquis, and Somerset, which reported decreases of 10.6 per cent, 8.9 per cent, 4.0 per cent, and 0.5 per cent, respectively. The greatest relative increase, 9.7 per cent, occurred in Aroostook county, which was the only county that reported a larger acreage of improved land in 1900 than in 1890. In 1900 the per cent of improved farm land varied from 18.7 in Hancock county to 49.1 in Aroostook county.

All counties except Androscoggin, Aroostook, and Oxford show decreases since 1890 in the value of farms. With the exception of the increase of 48.1 per cent in Aroostook county, and the decreases of 21.7 per cent and 20.2 per cent in Hancock and Waldo counties, respectively, the changes were slight. The average value of farms varied from \$1,199 in Washington county to \$2,144 in York county. In the south-central part of the state the value of the farm buildings exceeds that of the land. Elsewhere the reverse is true, especially in Aroostook county and in the extreme southeastern part of the state.

The value of implements and machinery increased greatly in every county. In Aroostook county it was more than three times as large in 1900 as in 1890. The average value per farm ranged from \$114 in Hancock county to \$191 in Aroostook county.

The only counties in which the value of live stock increased are Aroostook and Sagadahoc, where gains of 18.5 per cent and 1.2 per cent, respectively, were reported. The most marked decrease occurred in Washington county, and amounted to 21.7 per cent.

The average value per farm of the products of 1899 not fed to live stock ranged from \$315 in Lincoln county to \$656 in Aroostook county. The average value per acre was greatest in Cumberland, where it was \$6.14, and least in Franklin, where it was \$2.64.

The average expenditure per farm for labor, including value of board furnished, varied from \$21 in Lincoln county to \$68 in Aroostook county. Waldo and Washington counties each reported a smaller expenditure for fertilizers than in 1890. All other counties show increases, the amounts reported by Hancock and Aroostook counties in 1900 being three and five times, respectively, as great as the amounts reported in 1890. The average expenditures per farm varied from \$5 in Lincoln and Knox counties to \$39 in Aroostook county. The general use of commercial fertilizers in recent years in the growing of potatoes accounts for the relatively large expenditure in the latter 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, and "farms operated by owners" are subdivided into 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	59,299	56,524	2,080	745	95.3	3.4	1.3
1890	62,013	58,643	1,976	1,394	94.6	3.2	2.2
1880	64,309	61,528	1,628	1,153	95.7	2.5	1.8

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

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

RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The State	59,299	54,263	775	569	917	2,030	745
White	59,270	54,237	774	569	916	2,029	745
Colored ¹	29	26	1		1	1	

¹ Including 5 Indians.

The number of farms operated by owners has decreased 5,004 since 1880, but, as the total number of farms has also decreased, the percentage of farms operated by owners has not materially changed. The total number of tenant-operated farms, June 1, 1900, varied but 6 from the number reported twenty years before. Within the class, however, there has been a significant change in the intervening years, the number of share tenants having decreased 35.4 per cent, while the number of cash tenants increased in a corresponding degree. In 1880, 41.5 per cent of all tenants were share tenants, while in 1900 only 26.8 per cent were of this class. The change in the relative number of cash and share tenants is 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. Considered as evidence of agricultural progress, the significance of this change is enhanced by the fact that the greatest relative numbers of share tenants are found in the most recently developed and least improved sections of the state. In Aroostook county 42.9 per cent of all tenants are share tenants, while in Cumberland county the corresponding per cent is but 19.7.

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 2,633 of the 2,775 rented farms in Maine was ascertained by the enumerators; that of 142 was unreported. The titles to the 2,633 farms are vested in 2,563 owners, an average of about 103 farms to every 100 owners. Of the 2,563 owners, 2,510 possess 1 farm each; 45, 2 each; 6, 3 each; and the remaining 2 own 4 and 11 farms, respectively.

Of the 2,563 owners, 2,165, possessing 2,235 farms, reside in Maine. The owners of 1,868 of these farms live in the counties in which their farms are located. Of the non-resident owners 336 live in the North Atlantic states; 5, in the South Atlantic states; 14, in the North Central states; 32, in the Western states; 1, in a South Central state; and 10, in foreign countries. None of them possess more than one farm. The total value of the 398 farms owned by these nonresidents was \$719,675, an average of \$1,808. This amount is so small as to make it apparent that few, if any, of the nonresident owners derive their support from farms in Maine.

Of the 2,775 rented farms, only 5 are worth \$25,000 or over. These 5 farms have an aggregate value of \$157,800, an average of \$31,560. Eighteen rented farms are worth between \$10,000 and \$25,000 each, their aggregate value being \$229,200, and their average value \$12,733. The remaining 2,752 rented farms have a total value of \$3,576,160. As the average value of these farms is but \$1,299, it is evident that the number of landlords in Maine who are supported by the incomes from their rented farms is very small.

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	59,299	106.2	6,299,946	100.0	\$122,410,904	100.0
White farmers	59,270	106.3	6,298,591	100.0	122,383,844	100.0
Colored farmers ¹	29	46.7	1,355	(²)	27,060	(²)
Owners	54,263	105.3	5,712,308	90.7	109,959,024	89.8
Part owners	775	168.7	130,704	2.1	2,334,770	1.9
Owners and tenants	569	133.4	75,910	1.2	1,614,390	1.3
Managers	917	138.0	126,537	2.0	3,668,370	3.0
Cash tenants	2,080	86.9	176,491	2.8	3,536,510	2.9
Share tenants	745	104.7	77,996	1.2	1,297,840	1.1

¹ Including 5 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.....	\$832	\$795	\$148	\$289	\$460	22.3
White farmers.....	833	795	148	289	460	22.3
Colored farmers ¹	440	333	52	108	265	28.4
Owners.....	808	785	147	286	457	22.5
Part owners.....	1,344	1,024	231	414	743	21.7
Owners and tenants.....	1,080	1,062	218	477	729	25.7
Managers.....	1,835	1,509	228	428	591	14.8
Cash tenants.....	802	636	97	207	381	19.0
Share tenants.....	756	646	119	221	376	21.6

¹ Including 5 Indians.

The value of the farm property of the 24 negroes who operate farms in Maine is \$24,915, and that of the 5 Indian farmers, all of whom are owners, is \$2,145.

Farms operated by "part owners" have the largest average area, 168.7 acres, and those operated by "cash tenants" the smallest, 86.9 acres. Of the 114 farms containing 1,000 acres each or over, 99 are operated by "owners;" 6, by "managers;" 5, by "part owners;" 3, by "share tenants;" and 1, by an "owner and tenant."

Many of the farms operated by managers are adjuncts of public institutions. Such farms, as a rule, are favorably located and highly improved, and the average values of the several classes of farm property are generally larger 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.

FARMS CLASSIFIED BY AREA.

Tables 8 and 9, for farms classified by area, present facts corresponding to those given in Tables 6 and 7 for farms classified by race of farmer and by tenure.

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

AREA.	Num- ber of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	59,299	106.2	6,299,946	100.0	\$122,410,904	100.0
Under 3 acres.....	375	2.8	1,094	(¹)	441,290	0.4
3 to 9 acres.....	2,042	7.8	14,833	0.2	2,494,250	2.0
10 to 19 acres.....	2,890	14.1	40,690	0.7	3,762,290	3.1
20 to 49 acres.....	9,267	34.3	317,627	5.0	13,131,150	10.7
50 to 99 acres.....	18,644	69.6	1,297,754	20.6	31,386,830	25.7
100 to 174 acres.....	17,191	123.8	2,127,393	33.8	39,178,374	32.0
175 to 259 acres.....	5,662	207.0	1,171,767	18.6	17,399,050	14.2
260 to 499 acres.....	2,598	322.5	837,867	13.3	10,301,900	8.4
500 to 999 acres.....	516	594.4	306,709	4.9	2,051,890	1.6
1,000 acres and over.....	114	1,615.5	184,172	2.9	1,380,850	1.1

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 build-ings).	Build-ings.	Imple-ments and ma-chinery.	Live stock.		
The State -----	\$832	\$795	\$148	\$289	\$460	22.3
Under 3 acres -----	360	706	46	65	300	25.5
3 to 9 acres -----	391	674	80	92	175	14.4
10 to 19 acres -----	457	651	76	114	185	14.2
20 to 49 acres -----	542	625	95	155	268	18.9
50 to 99 acres -----	661	667	128	227	372	22.7
100 to 174 acres -----	922	840	170	347	548	24.0
175 to 259 acres -----	1,268	1,100	219	486	736	24.0
260 to 499 acres -----	1,714	1,337	290	624	935	23.6
500 to 999 acres -----	2,773	1,825	344	785	1,194	20.8
1,000 acres and over -----	7,370	2,733	755	1,255	1,970	16.3

The group of medium-sized farms, containing from 100 to 174 acres each, comprises a larger percentage of the total farm area and of the value of farm property than does any other group. With the exception of slight variations in the average values of buildings on small farms, the average values of the several forms of farm property advance as the farms increase in size. For farms of less than 100 acres each, the value of the buildings exceeds that of the land and improvements other than buildings,

but for larger farms the land is more valuable than the buildings. For the group of farms containing less than 3 acres each, the average values of farm property per acre are relatively high, as this class includes most of the florists' establishments and many city dairies.

The average gross incomes per acre for the various groups are as follows: Farms under 3 acres, \$108.82; 3 to 9 acres, \$23.94; 10 to 19 acres, \$13.10; 20 to 49 acres, \$7.82; 50 to 99 acres, \$5.34; 100 to 174 acres, \$4.42; 175 to 259 acres, \$3.56; 260 to 499 acres, \$2.90; 500 to 999 acres, \$2.01; and 1,000 acres and over, \$1.22. In considering the high gross income per acre for farms of less than 3 acres, it should be borne in mind that the incomes 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 for any farm 40 per cent of the products not fed to live stock consists of hay and grain, the farm is designated a "hay and grain" farm. Should 40 per cent of the products consist of vegetables, the farm is designated a "vegetable" farm. The farms of the other groups are classified in the same manner. A "miscellaneous" farm is one whose operator does not derive his principal income from any single class of farm products. Farms which yielded 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.....	59,299	106.2	6,299,946	100.0	\$122,410,904	100.0
Hay and grain.....	7,453	97.5	726,661	11.5	13,601,110	11.1
Vegetables.....	5,263	101.8	535,611	8.5	12,409,818	10.1
Fruit.....	551	64.2	35,494	0.6	1,075,509	0.9
Live stock.....	15,048	102.1	1,537,083	24.4	28,978,948	23.7
Dairy produce.....	17,740	100.6	1,785,236	28.4	38,761,782	31.7
Flowers and plants.....	65	8.6	625	(1)	283,255	0.2
Nursery products.....	16	78.4	1,254	(1)	84,940	0.1
Miscellaneous.....	13,163	127.5	1,678,022	26.6	27,215,542	22.2

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.	Implementments and machinery.	Live stock.		
The State.....	\$832	\$795	\$148	\$289	\$460	22.8
Hay and grain.....	891	735	86	118	254	13.9
Vegetables.....	1,087	747	205	319	731	31.0
Fruit.....	810	874	113	155	351	18.0
Live stock.....	710	760	144	312	427	22.2
Dairy produce.....	825	859	157	348	475	21.7
Flowers and plants.....	1,898	2,338	209	67	2,181	48.3
Nursery products.....	3,425	1,475	359	50	2,988	56.3
Miscellaneous.....	840	790	156	282	478	23.1

Only about one-half of the 7,453 "hay and grain" farms report any domestic animals, and many report no crops except small quantities of hay or grain. These facts explain the relatively small percentage of gross income shown in Table 11 for farms of this group.

For the several classes of farms the average values per acre of products not fed to live stock are: Flowers and plants, \$226.84; nursery products, \$38.13; vegetables, \$7.18; fruit, \$5.45; dairy produce, \$4.72; live stock, \$4.18; miscellaneous, \$3.75; hay and grain, \$2.60.

The wide variations in the averages and percentages of gross income are largely due to the fact that in computing gross income no deductions are made for expenses involved in operation. 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. If it were 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.....	59,299	100.2	6,299,946	100.0	\$122,410,904	100.0
\$0.....	266	84.6	9,194	0.2	205,370	0.2
\$1 to \$49.....	1,842	39.1	71,962	1.1	1,636,920	1.3
\$50 to \$99.....	3,886	48.8	189,466	3.0	3,787,910	3.1
\$100 to \$249.....	16,215	69.0	1,118,265	17.8	21,035,890	17.2
\$250 to \$499.....	19,414	103.0	1,999,205	31.7	36,313,420	29.6
\$500 to \$999.....	12,732	143.8	1,831,449	29.1	35,856,810	28.9
\$1,000 to \$2,499.....	4,436	207.5	920,587	14.6	19,809,790	16.2
\$2,500 and over.....	508	314.6	159,818	2.5	4,264,794	3.5

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 investment 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.....	\$832	\$795	\$148	\$289	\$160	22.3
\$0.....	807	894	87	94		
\$1 to \$49.....	963	435	37	54	82	8.7
\$50 to \$99.....	401	455	44	75	75	7.7
\$100 to \$249.....	527	549	80	141	178	13.7
\$250 to \$499.....	724	742	137	287	865	19.5
\$500 to \$999.....	1,105	1,020	215	487	694	25.0
\$1,000 to \$2,499.....	1,881	1,549	347	689	1,422	31.8
\$2,500 and over.....	4,011	2,597	618	1,174	3,550	42.3

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 proprietorship had occurred shortly prior to the date of enumeration. Frequently the persons in charge of such farms, June 1, 1900, could not 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. Some of the farms reporting little or no income are doubtless summer homes or country estates held for pleasure and not for profit.

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 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.....	61,794	\$411,104	\$6.65	1,522
Steers.....	1 and under 2.....	15,508	218,758	14.11	396
Steers.....	2 and under 3.....	11,156	266,452	23.88	174
Steers.....	3 and over.....	11,442	582,828	50.94	168
Bulls.....	1 and over.....	6,995	152,984	21.87	82
Heifers.....	1 and under 2.....	45,877	621,354	13.54	1,179
Cows kept for milk.....	2 and over.....	173,592	5,060,048	29.15	11,956
Cows and heifers not kept for milk.....	2 and over.....	12,488	272,017	21.79	146
Colts.....	Under 1.....	2,834	78,587	27.71	156
Horses.....	1 and under 2.....	3,955	201,548	50.96	165
Horses.....	2 and over.....	99,510	6,778,904	68.12	33,690
Mule colts.....	Under 1.....	92	2,675	29.08	8
Mules.....	1 and under 2.....	21	970	46.19	1
Mules.....	2 and over.....	240	15,885	66.19	41
Asses and burros.....	All ages.....	48	799	16.02	18
Lambs.....	Under 1.....	167,908	864,795	2.17	2,045
Sheep (ewes).....	1 and over.....	240,717	709,720	2.95	4,820
Sheep (rams and wethers).....	1 and over.....	11,496	42,057	3.66	228
Swine.....	All ages.....	79,018	516,015	6.53	9,545
Goats.....	All ages.....	279	1,091	3.91	86
Fowls: ¹					
Chickens.....		1,564,853			
Turkeys.....		6,487			
Geese.....		4,566	756,153		
Ducks.....		9,708			
Bees (swarms of).....		16,857	51,459	4.74	
Value of all live stock.....			17,106,034		

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

² Including Guinea fowls.

The total value of all live stock on farms was \$17,106,034. Of this amount 41.3 per cent represents the value of horses; 29.6 per cent, that of dairy cows; 14.8 per cent, that of other neat cattle; 6.5 per cent, that of sheep; 4.4 per cent, that of poultry; 3.0 per cent, that of swine; and 0.4 per cent, that of all other live stock.

As in the other New England states, the value of steers 3 years old and over is comparatively high, this class including the valuable working oxen still used in some parts of the state. The number of these animals is rapidly decreasing. In 1850, 83,893 working oxen were reported; in 1860, 79,792; in 1870, 60,530; in 1880, 43,049; in 1890, 33,105. In 1900 the total number of steers over 2 years old was only 22,598, and it is probable that many of these were not working oxen.

No reports were received concerning 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 averages, however, the total value of all live stock in the state, exclusive of the poultry and bees not on farms, is approximately \$19,897,000.

CHANGES IN LIVE STOCK 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.....	173,592	165,255	108,299	401	252,213	79,018
1890.....	157,278	141,832	109,156	278	370,484	91,297
1880.....	160,845	133,576	87,848	208	563,918	74,369
1870.....	289,259	203,802	71,514	336	434,666	45,760
1860.....	247,314	229,619	60,637	104	452,472	54,783
1850.....	183,556	209,783	41,721	55	451,577	54,598

¹ Lambs not included.

With the exception of the decade 1860-1870 the number of dairy cows has increased steadily for fifty years, the gain in the last decade having been 16,314, or 10.4 per cent. The number of "other neat cattle" given for 1900 includes 61,794 calves. It is uncertain whether calves were included with "neat cattle" in census reports prior to 1900. If not, their number in that year should be deducted when making comparisons with reports for previous years, in which case a decrease would be shown for the last decade in the number of "other neat cattle" corresponding with that shown for each succeeding decade since 1860.

The number of horses more than doubled from 1850 to 1890, but in the last decade there was a small decrease. The number of sheep remained nearly constant until 1880, since which date there has been a rapid decrease, amounting in the last ten years to 31.9 per cent. Between 1850 and 1890 the number of swine fluctuated slightly with a general upward tendency, but in the last decade there was a decrease of 13.4 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 3 months old, while in 1890 no such limitation was made. This fact explains, in part, the decrease shown in the number of all kinds of fowls except chickens, and the smallness of the increase shown for these fowls. Compared with the figures for 1890, the present census shows decreases in the number of fowls as follows: Ducks, 64.0 per cent; turkeys, 57.8 per cent; and geese, 37.2 per cent. The number of chickens increased 10.9 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.....	1,478,018	\$318,585
Mohair and goat hair.....	Pounds.....	105	21
Milk.....	Gallons.....	199,586,188	8,182,344
Butter.....	Pounds.....	16,174,173	
Cheese.....	Pounds.....	425,102	2,038,225
Eggs.....	Dozens.....	13,304,151	
Poultry.....	Pounds.....	200,080	955,468
Honey.....	Pounds.....	6,570	34,461
Wax.....	Pounds.....		
Animals sold.....			2,371,717
Animals slaughtered.....			1,258,594
Total.....			15,159,415

¹ Includes all milk produced.

The animal products of the state in 1899 were valued at \$15,159,415, or 40.8 per cent of the value of all farm products and 55.6 per cent of the gross farm income. Of the above amount, 54.0 per cent represents the value of dairy products; 23.9 per cent, that of animals sold and of animals slaughtered on farms; 19.8 per cent, that of poultry and eggs; and 2.3 per cent, that of wool, mohair, honey, and wax.

DAIRY PRODUCE.

The steady growth of population in Maine and the increasing popularity of its summer resorts have largely increased the demand for dairy produce in this state. The present importance of this industry is shown by the fact that in 1899 the proprietors of 17,740 farms, or 29.9 per cent of the farms of the state, derived their principal income from dairy produce. The production of milk in 1899 was 41,616,397 gallons greater than in 1889, a gain of 71.8 per cent. The census of 1890 secured no report of the quantity of milk sold, but since 1880 there has been a gain of 329.5 per cent. In every county except Androscoggin, the quantity of milk sold in 1899 was more than three times as great as that sold in 1879.

Of the \$8,182,344 given in Table 16 as the value of all dairy products in 1899, \$2,561,239, or 31.3 per cent, represents the value of such products consumed on the farms of the producers, and \$5,621,105, or 68.7 per cent, the amount realized from sales. Of the latter sum, \$2,278,122 was derived from the sale of 15,979,003 gallons of milk; \$2,272,437, from 11,030,091 pounds of butter; \$1,028,752, from 2,810,733 gallons of cream; and \$41,794, from 365,936 pounds of cheese.

While the quantity of butter made on farms has increased since 1890, that of cheese has rapidly decreased, the production of 1899 being little more than one-half that of 1889 and less than one-fifth that of 1849. The transfer of cheese making from the farm to the factory explains the decrease.

POULTRY AND EGGS.

Of the \$2,993,698 given as the total value of the products of the poultry industry in 1899, 68.1 per cent represents the value of eggs, and 31.9 per cent that of poultry raised. The number of dozens of eggs increased 41.8 per cent in the last decade.

WOOL.

The northern counties report a larger total production of wool than the southern counties, but show a much smaller number of fleeces per square mile. The production of wool increased steadily from 1850 until 1880, in which year 2,776,407 pounds were reported. Since that date there has been a steady decrease, amounting in the last decade to 20.7 per cent. The average weight of fleeces was 5.3 pounds in 1890 and 5.7 pounds in 1900.

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	49,576	106,299	2.1	49,161	173,592	3.5
White farmers	49,554	106,267	2.1	49,148	173,563	3.5
Colored farmers	22	32	1.5	13	29	2.2
Owners ¹	46,996	100,274	2.1	46,689	164,753	3.5
Managers	578	2,007	3.5	554	3,020	5.5
Cash tenants	1,457	2,884	2.0	1,361	4,083	3.0
Share tenants	545	1,134	2.1	557	1,736	3.1
Under 20 acres	3,262	4,587	1.4	2,921	4,520	1.5
20 to 99 acres	22,217	38,939	1.8	22,584	59,365	2.6
100 to 174 acres	15,723	36,076	2.3	15,459	62,529	4.0
175 to 259 acres	5,367	15,209	2.8	5,250	28,386	5.4
260 acres and over	3,007	11,538	3.8	2,947	18,792	6.4
Hay and grain	3,273	7,142	2.2	2,246	4,761	2.1
Vegetable	4,809	13,091	2.7	4,108	11,463	2.8
Fruit	370	650	1.8	242	648	2.7
Live stock	13,352	27,098	2.0	13,100	39,671	3.0
Dairy	15,982	33,199	2.1	17,740	83,298	4.7
Miscellaneous ²	11,791	23,119	2.1	11,725	33,756	2.9

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

² Including florists' establishments and nurseries, and 1 tobacco farm.

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	16,856	Bushels	645,040	\$326,824
Wheat	6,667	Bushels	116,720	107,396
Oats	108,661	Bushels	3,799,435	1,374,573
Barley	8,809	Bushels	252,850	137,448
Rye	611	Bushels	9,290	6,126
Buckwheat	25,292	Bushels	408,320	185,886
Flaxseed	2	Bushels	16	22
Clover seed		Bushels	519	2,956
Grass seed		Bushels	417	854
Hay and forage	1,270,254	Tons	1,136,774	10,641,546
Tobacco	(1)	Pounds	150	14
Hops	(1)	Pounds	60	6
Peanuts	1	Bushels	22	46
Dry beans	10,252	Bushels	137,290	290,885
Dry pease	2,300	Bushels	35,991	44,618
Potatoes	71,765	Bushels	9,813,748	3,711,999
Onions	163	Bushels	44,489	38,160
Chicory	29	Pounds	64,820	217
Miscellaneous vegetables	19,844			1,207,075
Maple sugar		Pounds	5,500	643
Maple sirup		Gallons	16,024	15,280
Small fruits	1,036			157,679
Grapes	251	Centals	2,758	37,584
Orchard fruits	2117,322	Bushels	1,438,919	483,634
Nuts				593
Forest products				2,652,249
Flowers and plants	71			155,131
Seeds	6			3,082
Nursery products	106			46,207
Miscellaneous				5,371
Total	1,660,103			21,954,054

¹ Less than 1 acre.

² Estimated from number of vines or trees.

³ Including value of raisins, wine, etc.

⁴ Including value of cider, vinegar, etc.

Of the total value of crops, hay and forage contributed 48.5 per cent; vegetables, including potatoes and onions, 22.6 per cent; forest products, 12.1 per cent; cereals, 9.7 per cent; fruits and nuts, 4.5 per cent; and all other products, 2.6 per cent.

Owing to a more favorable season, the yield per acre of most crops in 1899 was greater than in 1889. The season of 1899 was especially favorable to the growing of potatoes, the yield per acre having been 136.7 bushels while in 1889 it was but 105.8 bushels. The average yield per acre of hay and forage was 0.9 ton, and the average values, \$9.36 per ton and \$8.88 per acre. The acreage devoted to hay and forage was 76.5 per cent of the total area in crops, but yielded only 48.5 per cent of the total receipts. The average values per acre of other crops were as follows: Flowers and plants, \$2,185; nursery products, \$436; onions, \$227; small fruits, \$152; grapes, \$149; miscellaneous vegetables, \$61; potatoes, \$52; cereals, \$13; and orchard fruits, \$7. 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.

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.	Buck-wheat.	Corn.	Oats.	Rye.	Wheat.
1899.....	8,809	25,292	16,856	108,661	611	6,667
1889.....	11,973	22,395	10,891	121,612	791	4,116
1879.....	11,106	20,135	30,997	78,785	2,161	43,829

¹No statistics of acreage were secured prior to 1879.

PART 2.—BUSHELS PRODUCED.

1899.....	252,850	468,820	645,040	3,799,485	9,290	116,720
1889.....	286,262	466,411	380,662	3,668,909	6,654	79,820
1879.....	242,185	382,701	900,638	2,265,575	26,398	665,714
1899.....	658,816	466,685	1,089,888	2,351,854	34,116	278,793
1889.....	802,108	239,519	1,546,071	2,988,839	123,287	283,876
1849.....	151,781	104,528	1,750,056	2,181,037	102,916	296,259

The development of agriculture in the southern part of Maine during the past fifty years has been attended by changes similar to those noted in other New England states, namely, a steady growth in the importance of dairying and market gardening, and a marked decrease in the acreage devoted to cereals.

In the northern part of the state, where agriculture has been more recently developed, very different conditions prevail. The distance from city markets, while retarding the development of special branches of husbandry, has favored general farming, and the production of such cereals as are adapted to the soil and climate has been steadily and rapidly increasing for several decades. This is especially true in Aroostook county, where the total area in cereals increased 37,116 acres, or 82.6 per cent, from 1879 to 1899, while for the remainder of the state there was a decrease of 57,233 acres, or 40.3 per cent. In 1880 Aroostook county reported 24.0 per cent of the total acreage in cereals; in 1890, 33.5 per cent; and in 1900, 49.2 per cent, or approximately one-half.

Of the total area in cereals in 1899, 65.1 per cent was devoted to oats; 15.1 per cent, to buckwheat; 10.1 per cent, to corn; 5.3 per cent, to barley; 4.0 per cent, to wheat; and 0.4 per cent, to rye.

Most of the barley is raised in the southern counties, and the total acreage of this grain decreased 26.4 per cent in the last decade. The northern counties of Aroostook, Penobscot, and Piscataquis show a gain of 48.7 per cent, while all others show decreases.

In 1900, 83.7 per cent of the total area devoted to buckwheat was in Aroostook county, and 12.7 per cent in the other 3 northern counties. The gain of 12.9 per cent in the last ten years in the acreage of this grain has resulted entirely from the increases in these 4 counties.

The northern counties report very little corn, Aroostook county only 27 acres, but in all others there were substantial increases in the last decade, amounting to 54.8 per cent for the state.

Aroostook county reports 48.4 per cent of the total acreage in oats, and Penobscot and Somerset counties, 22.7 per cent. For the last decade Aroostook shows a gain of 16,885 acres, or 47.3 per cent, but all other counties show decreases, resulting in a net loss for the state of 10.6 per cent.

Very little attention is given to rye. Aroostook county reports 58.6 per cent of the product and shows a gain in the last decade of 102.3 per cent. Oxford county, which reported 54.9 per cent of the total acreage in 1890, reports but 5.4 per cent in 1900.

The area in wheat in Aroostook county increased from 1,910 acres in 1889 to 5,759 acres in 1899. For the balance of the state there was a decrease from 2,206 to 908 acres. In 1889 Aroostook county had 46.4 per cent of the acreage devoted to this grain, and in 1899, 86.4 per cent. The gain for the state was 62.0 per cent.

The acreage given for cereals does not include 14,212 acres of grain cut green for hay, nor 12,494 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.—ORCHARD TREES AND FRUITS: 1890 AND 1900.

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples.....	4,184,781	3,003,109	1,421,778	3,071,471
Apricots.....	84	186		3
Cherries.....	11,597	10,686	1,550	864
Peaches.....	9,592	1,607	1,895	217
Pears.....	39,902	34,331	11,200	13,141
Plums and prunes.....	29,001	14,394	2,282	1,291

The value of the orchard products of 1899 was \$833,634. The counties whose orchard products were valued at over \$50,000 were: York, \$150,297; Cumberland, \$94,087; Kennebec, \$80,991; Penobscot, \$70,486; Androscoggin, \$66,183; Oxford, \$65,925; and Waldo, \$63,826.

In 1890, 98.0 per cent, and in 1900, 97.9 per cent of all fruit trees in the state were apple trees. All counties report increases since 1890 in the number of trees, the rate of gain for the state being 39.3 per cent. The greatest relative gain was in Aroostook county. In 1899 there were manufactured on farms 11,906 barrels of cider, 2,161 barrels of vinegar, and 26,170 pounds of dried fruit.

Very little attention is given to apricots. The number of cherry trees has increased slightly, but many counties show decreases. Peach and nectarine trees are few in number, though a large percentage of gain is reported in all parts of the state. A large percentage of the pear trees reported are in the southwestern counties. The gain of 16.2 per cent for the state is, however, quite generally distributed, the only marked decreases being in Cumberland and Franklin counties. Plum and prune

trees have more than doubled in number, the only counties reporting losses being Androscoggin, Franklin, and Oxford. In addition to the trees given in Table 20, unclassified fruit trees to the number of 3,244 are reported, with a yield of 219 bushels of fruit.

The quantity of fruit produced in any year is determined largely by the nature of the season. Consequently, comparisons between the crop of 1889 and that of 1899 have little significance, as in the latter year there was only about one-third of a crop of the most important fruits.

SMALL FRUITS.

The total area used in the cultivation of small fruits in 1899 was 1,036 acres, distributed among 4,577 farms. The value of the fruits grown was \$157,679, an average of \$34.45 per farm. Of the total area, 512 acres, or 49.4 per cent, were devoted to strawberries, the total production of which was 1,066,860 quarts, grown principally in the southern counties. The acreage and production of other berries were as follows: Blackberries and dewberries, 151 acres and 164,300 quarts; cranberries, 90 acres and 1,554 bushels; currants, 32 acres and 37,080 quarts; gooseberries, 30 acres and 41,230 quarts; raspberries and Logan berries, 131 acres and 214,700 quarts; and other berries, 90 acres and 102,040 quarts.

VEGETABLES.

The value of all vegetables grown in the state in 1899, including potatoes and onions, was \$4,957,234. Of this amount, 74.9 per cent represents the value of potatoes. This important crop was reported by 49,548 farmers, or 83.6 per cent of the total number in the state. It is relatively of greatest importance in Aroostook county, where the natural fertility of the soil and the presence of a number of starch factories render the crop an especially profitable one. In 1890 this county reported 33.5 per cent of the total acreage, and in 1900, 58.5 per cent. The average area per farm devoted to potatoes in 1899 was 6.6 acres for Aroostook county, and but 0.7 acre for the remainder of the state. The acreage of potatoes in Aroostook county in 1899 constituted 10.8 per cent of the total improved land; the average yield per acre was 154.1 bushels, while for the rest of the state it was but 112.3 bushels. Aside from the land devoted to potatoes and

onions, 19,844 acres were used in the growing of miscellaneous vegetables. Of this area the products of 9,541 acres were not reported in detail. Of the remaining 10,303 acres, concerning which detailed reports were received, 8,252 acres were devoted to sweet corn; 594, to cabbages; 405, to turnips; 223, to cucumbers; 165, to green pease; 162, to tomatoes; and 502 to other vegetables.

FLORICULTURE.

The proprietors of 65 of the 93 establishments where flowers are grown for the market make commercial floriculture their principal business. They have invested a capital of \$293,255, of which \$123,375 represents the value of land; \$151,940, that of buildings; \$13,610, that of implements; and \$4,330, that of live stock. In 1899 they raised flowers and plants valued at \$134,232 and other products valued at \$8,910, making a total product of \$143,142 or \$229.03 for each of the 625 acres used. During the same year they expended \$2,830 for fertilizers and \$39,515 for labor.

These 65 florists' establishments have 653,861 square feet of glass surface, equivalent to 490,396 square feet of land under glass. In addition, 131 farms have 693,714 square feet of land under glass, making the total for the state, 1,184,110 square feet.

LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was \$2,667,260, an average of \$45 per farm. The average was highest on the most intensively cultivated farms, being \$789 for nurseries, \$608 for florists' establishments, \$83 for market gardens, \$47 for dairy farms, \$45 for fruit farms, \$35 for live-stock farms, and \$31 for hay and grain farms. Managers expended, on an average, \$166; owners, \$43; share tenants, \$35; and cash tenants, \$34 per farm. White farmers expended \$45 per farm, and colored farmers \$13.

Fertilizers purchased in 1899 cost \$819,680, an average of \$14 per farm, and an increase since 1890 of 79.6 per cent. The average expenditure was greatest for nurseries and least for hay and grain farms, the amounts being \$152 and \$6, respectively. For vegetable farms the average was \$52; for florists' establishments, \$44; for fruit farms, \$10; for dairy farms, \$11; and for live-stock farms, \$9.

CENSUS BULLETIN.

No. 140.

WASHINGTON, D. C.

February 20, 1902.

MANUFACTURES.

SOUTH CAROLINA.

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 South Carolina 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 12 cities and towns 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 towns which were withdrawn from the enumerators and committed to special agents, and only to manufacturing establishments within the corporate limits of such places.

Two cities in South Carolina contain a population exceeding 20,000 each: Charleston and Columbia. The manufacturing statistics of these 2 cities are presented by specified industries, and the statistics of Charleston are presented in comparison with the returns of the Tenth and Eleventh censuses. The statistics of Columbia were not shown separately in 1880 or 1890, and comparisons with those years are, therefore, not possible in this case.

Mr. Ellison A. Smyth, of Pelzer, S. C., rendered valuable assistance in the preparation of the text for the accompanying report.

The statistics of South Carolina 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 and eleemosynary 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 8 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the city of Charleston at the censuses of 1880, 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 towns 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 of Charleston and Columbia by specified industries; and Table 9 showing the totals for all industries in each of the cities and towns withdrawn from the enumerators (exclusive of those shown in Table 8).

Table 1 shows the growth of manufactures in South Carolina 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 South Carolina 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 number of salaried officials, clerks, etc., is the greatest number reported employed at any one time during the year. For the cotton-ginning industry this number may appear excessive as compared with the amount of salaries paid; but allowance should be made for the fact that a consider-

able number of clerks are employed for only a part of the year; consequently the amount they receive would be small if reckoned as an annual salary.

The reports show a capital of \$67,356,465 invested in manufactures and mechanical industries in the 3,762 establishments reporting for the state of South Carolina. 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 \$58,748,731, to produce which involved an outlay of \$1,327,052 for salaries of officials, clerks, etc.; \$9,455,900 for wages; \$3,111,587 for miscellaneous expenses, including rent, taxes, etc.; and \$34,027,795 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 South Carolina, \$58,748,731, 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 South Carolina, the gross value of products for 1900 was \$58,748,731. The value of materials purchased in a partly manufactured form was \$10,573,366. The difference, \$48,175,365, is the net or true value of products, and represents the increase in the value of raw materials resulting from the various processes of manufacture.

Very respectfully,



Chief Statistician for Manufactures.

SOUTH CAROLINA.

Table 1 shows the manufacturing and mechanical industries of the state of South Carolina 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 the manu-

facturing 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	3,762	2,382	2,078	1,584	1,230	1,430	57.9	14.6	31.2	28.8	114.0
Capital	\$67,856,465	\$29,276,261	\$11,205,894	\$5,400,418	\$6,931,756	\$6,053,265	130.1	161.3	107.5	122.1	14.5
Salaried officials, clerks, etc., number	1,525	1,914	(*)	(*)	(*)	(*)	120.3	(*)	(*)	(*)	(*)
Salaries	\$1,327,032	\$1,116,244	(*)	(*)	(*)	(*)	18.9	(*)	(*)	(*)	(*)
Wage-earners, average number	48,135	22,748	15,828	8,141	6,994	7,066	111.6	43.7	94.4	16.4	11.0
Total wages	\$9,456,900	\$5,474,739	\$2,836,289	\$1,543,715	\$1,380,027	\$1,127,712	72.7	93.0	83.7	11.9	22.4
Men, 16 years and over	29,823	10,664	13,687	7,099	6,090	5,992	79.0	21.8	92.8	16.5	1.7
Wages	\$6,921,865	\$4,516,437	(*)	(*)	(*)	(*)	53.2	(*)	(*)	(*)	(*)
Women, 16 years and over	9,762	3,775	1,023	578	808	1,074	158.8	269.0	77.0	135.6	116.4
Wages	\$1,035,139	\$730,696	(*)	(*)	(*)	(*)	128.7	(*)	(*)	(*)	(*)
Children, under 16 years	8,500	2,309	1,118	464	(*)	(*)	270.7	106.5	140.9	(*)	(*)
Wages	\$849,406	\$221,006	(*)	(*)	(*)	(*)	283.8	(*)	(*)	(*)	(*)
Miscellaneous expenses	\$3,111,587	\$1,792,366	(*)	(*)	(*)	(*)	78.6	(*)	(*)	(*)	(*)
Cost of materials used	\$34,027,795	\$18,873,666	\$9,885,538	\$5,855,736	\$5,198,881	\$2,787,534	80.3	90.9	68.8	12.6	86.5
Value of products, including custom work and repairing	\$58,748,781	\$31,926,681	\$16,738,008	\$9,858,981	\$8,615,195	\$7,045,477	84.0	90.7	69.8	14.4	22.3
Total population	1,340,316	1,151,149	995,577	705,006	703,708	668,507	16.4	15.6	41.1	0.8	5.3
Wage-earners engaged in manufactures	48,135	22,748	15,828	8,141	6,994	7,066	111.6	43.7	94.4	16.4	11.0
Per cent of total population	3.6	2.0	1.6	1.2	1.0	1.1	13.4	16.2	135.2	17.9	22.7
Assessed value of real estate	\$102,187,777	\$90,042,723	\$77,461,670	\$119,494,675	\$129,772,681	\$105,787,492	78.7	(*)	(*)	(*)	(*)
Value of land and buildings invested in manufactures ¹	\$15,316,413	\$8,578,156	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Per cent of assessed value	15.0	9.5	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)

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 As given in the Report of the Comptroller-General of the State of South Carolina, for the year 1900, page 145.

⁶ Does not include value of rented property.

Although South Carolina is an agricultural state, Table 1 shows that there has been a considerable growth in its manufacturing and mechanical industries during the half century. The population during these years increased from 668,507 to 1,340,316, or 100.5 per cent, while the average number of wage-earners employed in manufacturing establishments increased from 7,066 to 48,135, or 581.2 per cent, embracing, in 1900, 3.6 per cent of the entire population, compared with 1.1 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 62,908, or 4.7 per cent of the total population of the state. Measured by the value of products, the greatest percentage of increase, 90.7, was during the decade ending with 1890, although the greatest absolute increase was between the years 1890 and 1900.

South Carolina produces the raw material needed for several industries, and possesses excellent facilities for marketing products. Sailing and steam vessels, with a total tonnage of 86,757, engaged in foreign trade, cleared from the harbors of Charleston and Beaufort during the census year.¹ The Savannah River is navigable for 158

miles; the Santee, for its entire length; the Pedee, for 120 miles; the Congaree, nearly to the city of Columbia; and the Wateree, to Camden. The value placed upon water communication is indicated by the expenditure by the state, between the years 1816 and 1826, of \$1,712,626 upon internal improvements, a large part of which amount was appropriated for building canals around the rapids of 5 of its rivers.² Since 1878, \$6,083,692 has been expended by the United States Government upon 7 rivers and 3 harbors, and further improvements are contemplated.³ The abundant waterpower, chiefly in the Piedmont region, in 1880 estimated to exceed 300,000 horsepower,⁴ was neglected for years, but has been greatly developed during the past decade. In three instances electricity generated by waterpower is successfully transmitted to points where it has been found advantageous to locate mills. The first extensive use of electrically transmitted power in cotton manufacturing in the United States was made, it is claimed, at Columbia, where 1,340 horsepower is now developed, and the second, with 3,000 horsepower, at

² South Carolina, Resources, Population, Institutions, and Industries, by Harry Hammond, page 196.

³ War Department: Report of the Chief of Engineers, 1900, Part 3, pages 1841 to 1876.

⁴ South Carolina, Resources, Population, Institutions, and Industries, page 206.

¹ Treasury Department: Commerce and Navigation of the United States, 1900, Vol. I, page 1183.

Pelzer.¹ Coal is not mined in South Carolina, but the development of the Alabama fields in recent years² has benefited manufacturers dependent upon steam for power.

Table 1 shows that the number of children employed in manufacturing increased 270.7 per cent during the last decade, while the number of men increased only 79 per cent. There is no statute fixing the minimum age at which children may work in the mills, and, in some instances, such employees are under 12 years of age.³ Many of the mills, however, have reading rooms and libraries for the use of their employees,⁴ and nearly all contribute regularly to the support of the local schools. Answers from 65 cotton mills in 1901 show that they had invested \$86,164 in

school buildings and equipment, for the support of which they paid \$44,802 in taxes annually, and \$27,512 in special contributions, and the average school term in these localities was 8.86 months, or twice that in the other portions of the state.⁵ The importance of technical education is much appreciated, and an agricultural and industrial college for boys and an industrial school for girls have been established during the last decade.

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 and eleemosynary 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.

¹Transactions of the New England Cotton Manufacturers' Association, 1895, page 236.

²United States Geological Survey: Mineral Resources, 1899; Metallic Products, Coal and Coke, page 358.

³Report of the Industrial Commission, 1900, Vol. VII, pages 484, 491, and 492.

⁴Ibid., page 482.

⁵Report of a Committee of Textile Manufacturers of South Carolina to the Legislature, September 10, 1901.

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	7,980	\$70,056,299	8,825	55,117	\$9,683,651	\$3,151,237	\$84,284,482	\$21,891,507	\$10,768,983	\$1,628,992	\$59,682,110
Hand trades ¹	785	\$40,607	877	1,597	\$65,604	104,886	1,081,801	172	1,049,738	\$1,891	2,323,574
Governmental establishments	2	901,603		107	\$48,467		27,867	600	24,198	3,069	89,311
Educational and eleemosynary institutions	3	13,800	1	7	\$3,140	381	15,598	1,490	12,189	1,919	23,627
Establishments with a product of less than \$500	4,163	1,784,431	4,536	6,868	\$126,144	39,269	213,222	57,538	154,230	1,454	\$20,441
All other establishments	2,977	\$66,515,858	3,211	46,588	\$8,990,296	3,006,701	\$2,945,994	\$21,831,707	9,528,028	1,590,669	\$56,425,157

¹Includes bicycle and tricycle repairing, 43; blacksmithing and wheelwrighting, 316; boots and shoes, custom work and repairing, 81; carpentering, 40; clothing, men's, custom work and repairing, 43; clothing, women's, dressmaking, 36; dyeing and cleaning, 6; furniture, cabinetmaking, repairing, and upholstering, 25; lock and gun smithing, 13; masonry, brick and stone, 2; millinery, custom work, 79; painting, house, sign, etc., 17; plumbing, and gas and steam fitting, 16; sewing machine repairing, 2; watch, clock, and jewelry repairing, 66.

Of the 7,980 establishments of all classes shown in this table, 4,948, or 62.4 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

\$3,144,015, or only 5.3 per cent of the total value of the products of the state.

In addition to the 7,930 active establishments in the state during the census year, with a capital of \$70,056,299, shown in Table 2, there were 58 idle establishments, with a capital of \$115,115, divided as follows:

INDUSTRIES.	Number of idle establishments.	Capital.	INDUSTRIES.	Number of idle establishments.	Capital.
Brick and tile	3	\$9,220	Lumber and timber products	7	\$19,485
Chemicals	1	41,500	Lumber, planing mill products, including sash, doors, and blinds	2	5,750
Cotton, ginning	34	18,478	All other industries	5	5,592
Flouring and grist mill products	5	10,090			
Hosiery and knit goods	1	5,000			

The 8 leading industries of the state in 1900, as shown by Table 3, embraced 1,640 establishments, or 43.6 per cent of the total number in the state; used a capital of \$58,538,373, or 86.9 per cent of the total; gave employment to 39,066 wage-earners, or 81.2 per cent of the total

number; and paid \$6,965,935, or 73.7 per cent of the total wages. The value of their products was \$48,041,940, or 81.8 per cent of the total. In the discussion of Table 3 these industries are ranked with reference to the value of their products.

TABLE 3.—COMPARATIVE SUMMARY OF EIGHT LEADING INDUSTRIES.

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.			
Total for selected industries for state	1900 1890	1,640 1,169	\$58,538,373 21,771,113	39,066 15,565	\$6,965,935 3,008,722	\$2,472,263 1,278,679	\$29,272,774 14,301,942	\$48,041,940 21,927,038
Increase, 1890 to 1900		471	36,767,260	23,501	3,957,213	1,193,584	14,970,832	26,114,842
Per cent of increase		40.3	168.9	151.0	131.5	93.8	104.7	119.1
Per cent of total of all industries in state	1900 1890	48.6 49.1	86.9 74.4	81.2 68.4	73.7 55.0	79.5 71.3	86.0 75.8	81.8 68.7
Cotton goods	1900 1890	80 34	39,258,946 11,141,833	30,201 8,071	5,066,840 1,510,494	1,507,824 528,203	17,268,882 6,819,320	29,723,919 9,800,798
Fertilizers	1900 1890	22 20	10,505,048 5,920,218	1,772 1,102	479,449 386,385	675,589 490,335	3,107,710 2,754,407	4,882,506 4,417,658
Flouring and grist mill products	1900 1890	556 512	652,553 984,791	281 680	70,458 86,416	15,742 31,854	1,958,658 1,726,896	2,347,790 2,083,126
Lumber and timber products	1900 1890	729 352	5,187,727 1,848,155	4,585 2,590	897,899 420,588	107,445 93,717	2,629,805 986,289	5,207,184 2,146,750
Lumber, planing mill products, including sash, doors, and blinds	1900 1890	58 27	412,128 850,471	495 370	146,580 182,017	20,042 16,606	621,831 396,242	1,016,328 711,838
Oil, cottonseed and cake	1900 1890	50 17	1,959,872 505,372	734 416	143,332 56,354	127,462 59,136	2,862,837 740,605	3,103,425 827,772
Rice, cleaning and polishing	1900 1890	18 6	293,885 354,400	112 143	25,243 37,700	9,832 26,767	856,790 190,800	978,132 315,056
Turpentine and rosin	1900 1890	132 201	268,719 605,878	886 2,243	135,575 378,768	8,297 32,056	471,261 677,893	787,656 1,524,100

Table 3 shows that the manufacture of cotton goods is the most important industry in the state. The 80 establishments reported in 1900 gave employment to 30,201 wage-earners, or 62.7 per cent of the wage-earners employed in the state, and the products were valued at \$29,723,919, or 50.6 per cent of the total value of the products of the state. In 1890 there were 34 establishments, 8,071 wage-earners, and products valued at \$9,800,798. The increase in the value of products during the decade was \$19,923,121, or 203.3 per cent.

Cotton manufacturing in South Carolina dates back nearly to the colonial period, but it is only during the last two decades that the remarkable advantages of the state for this industry have been demonstrated. A factory for weaving cotton homespun was established at Murray's Ferry, in Williamsburg county, by Scotch-Irish settlers, some years previous to 1790.¹ In 1860 there were 17 mills in the state, with products valued at \$712,950; in 1870 there were 12 mills, with products valued at \$1,529,937; and in 1880 the number of mills had increased to 14 and the value of products to \$2,895,789. In the value of its cotton-mill products South Carolina, in 1870, 1880, and 1890, ranked second among the Southern states, Georgia ranking first, and among all the states in 1900 became second only to Massachusetts. During the decade from 1890 to 1900, the absolute increase in the value of its cotton-mill products was greater than that of any other state. As a rule, only the coarser grades of cotton goods are manufactured, and large quantities have been exported to China in recent years. A beginning has been made in the construction of

mills which will gin the cotton, crush the seed, extract the oil, and manufacture the fiber into cloth. A plant of this kind, having a spinning capacity of 3,000 bales of cotton a year, has been erected at Edgefield. Three causes have contributed to the remarkable growth in the manufacture of cotton goods in South Carolina: abundant waterpower, low cost of living, and accessibility to the raw material. The superiority, in each of these particulars, of the Piedmont region, in the central and western parts of the state, has led to the construction in that section of the largest number of mills—Columbia, Union, Pelzer, Anderson, and Clifton being important centers. There were 876,545 commercial bales of cotton grown in South Carolina during the year 1899,² while the consumption of the local mills during the census year 1899–1900 was 485,024 bales. In spite of this large surplus in excess of local consumption, 119,100 bales of cotton were brought into the state during the census year, for the use of its mills, from North Carolina, Georgia, Alabama, and Mississippi.³

The manufacture of lumber and timber products ranks second among the industries of the state, with 729 establishments, 4,585 wage-earners, and products valued at \$5,207,184. In 1890 there were 352 establishments, 2,590 wage-earners, and products valued at \$2,146,750. The increase in the value of products during the decade was \$3,060,434, or 142.6 per cent. Lumbering has always been an important industry in South Carolina. The state includes a part of the great longleaf pine forest of the South. Cypress, which ranks second in importance, is found chiefly in marshes and waste places, where it attains

¹South Carolina, Resources, Population, Institutions, and Industries, page 574.

²See special report on Cotton Ginning, 1899.

³Department of Agriculture: The Cotton Crop of 1899–1900, page 19.

great size. Staves were for years the leading export.¹ During the census year the lumber industry was carried on largely in Berkeley, Lexington, Darlington, and Williamsburg counties, in the eastern and central parts of the state.

There were 22 establishments engaged in the manufacture of fertilizers in 1900, the industry third in rank, with 1,772 wage-earners, and products valued at \$4,882,506. In 1890 there were 20 establishments, 1,102 wage-earners, and products valued at \$4,417,658. The increase in the value of products during the decade was \$464,848, or 10.5 per cent. The phosphate rock of South Carolina has long been famous; it was discovered in 1837 by Prof. Francis S. Holmes, who, however, was not able to demonstrate its value until 1867.² The first phosphate mining and manufacturing company was formed in that year, and for over twenty years the state was the chief source of the world's supply. In 1888 phosphate rock was discovered in Florida,³ and the production there in 1899 was more than double that of South Carolina.⁴ But South Carolina's large production of cottonseed meal, which is often combined with ground phosphate rock, and the large local demand for fertilizers in the growing of cotton, have enabled its fertilizer industry to hold its own.

There were 50 establishments engaged in the manufacture of cottonseed oil and cake in 1900, with 784 wage-earners, and products valued at \$3,103,425. In 1890 there were 17 establishments, 416 wage-earners, and products valued at \$927,772. The increase in the value of products during the decade was \$2,175,653, or 234.5 per cent. This industry appeared in 1890 for the first time in the manufacturing statistics of South Carolina. In 1880 cottonseed was used almost exclusively as a fertilizer, but by 1883, 3 mills for the extraction of oil from the seed had been built, and the price of the seed rose from 10 or 12 cents per bushel to 18 cents.⁵ The industry has developed extensively, although, of the 418,553 tons of seed grown in the state during the census year, 156,642 tons, or only 37.4 per cent, were crushed for oil extraction. Much of the seed which does not reach the oil mill is still used as a fertilizer.

There were 556 establishments engaged in the manufacture of flouring and grist mill products in 1900, with 281 wage-earners, and products valued at \$2,347,790. In 1890 there were 512 establishments, 630 wage-earners, and products valued at \$2,083,126. The increase in the value of

products during the decade was \$264,664, or 12.7 per cent. There were 3 merchant mills in South Carolina before the year 1800, located on Pinetree Creek. One of these had a daily capacity of 50 barrels of flour.⁶ In 1870 and 1880 flour and grist milling was the leading industry in the state, using, in the latter year, nearly one-half of the waterpower developed for manufacturing purposes, and reporting products valued at \$3,779,470. The industry has declined, and the production is no longer sufficient for local needs, Charleston being principally dependent upon the West for its supply of flour.⁷

There were 53 establishments engaged in the manufacture of planing mill products in 1900, with 495 wage-earners, and products valued at \$1,016,328. In 1890 there were 27 establishments, 370 wage-earners, and products valued at \$711,838. The increase in the value of products during the decade was \$304,490, or 42.8 per cent.

There were 18 establishments engaged in the cleaning and polishing of rice in 1900, with 112 wage-earners, and products valued at \$973,132. In 1890 there were 6 establishments, 143 wage-earners, and products valued at \$315,056. The increase in the value of products during the decade was \$658,076, or 208.9 per cent. More rice is grown on the extensive tidal marshes of South Carolina than in any other state, Louisiana excepted.⁸ Rice culture began in South Carolina in 1694, the seed having been brought from Madagascar.⁹ Rice, when gathered, is covered with a thick hull. This is broken off by pounding, and the fine powder which remains attached to the grains is removed by means of rotary brushes.¹⁰ The power machines invented for this purpose in South Carolina have served as models, it is said, for the machines now used in this industry the world over.¹¹

There were 132 establishments engaged in the manufacture of turpentine and rosin in 1900, with 886 wage-earners, and products valued at \$787,656. In 1890 there were 201 establishments, 2,243 wage-earners, and products valued at \$1,524,100. The decrease in the value of products during the decade was \$736,444, or 48.3 per cent. This decrease is due to the partial exhaustion of the forests. The value of products reported in 1900 is only slightly greater than that shown for 1870.

Table 4 shows the totals for the manufacturing and mechanical industries of the city of Charleston, as returned at the censuses of 1880, 1890, and 1900, with the percentages of increase.

¹ Charleston, Her Commercial and Manufacturing Advantages, by J. E. Land, page 34.

² Ibid., page 62.

³ United States Geological Survey: Mineral Resources of the United States, 1899; Nonmetallic Products, except Coal and Coke, page 484.

⁴ Ibid., page 482.

⁵ South Carolina, Resources, Population, Institutions, and Industries, page 597.

⁶ Ibid., page 574.

⁷ Charleston, Her Commercial and Manufacturing Advantages, page 33.

⁸ Department of Agriculture, Division of Botany, Bulletin No. 22, 1899, page 9.

⁹ Ibid., page 8.

¹⁰ Ibid., page 34.

¹¹ South Carolina, Resources, Population, Institutions, and Industries, page 574.

TABLE 4.—COMPARATIVE SUMMARY, CHARLESTON, 1880, 1890, AND 1900, WITH PER CENT OF INCREASE.

	DATE OF CENSUS.			PER CENT OF INCREASE.	
	1900	1890	1880	1890 to 1900	1880 to 1890
Number of establishments	864	566	191	135.7	191.8
Capital	\$12,478,187	\$7,345,459	\$1,718,300	69.8	327.5
Wage-earners, average number	5,027	4,684	2,146	7.8	118.3
Total wages	\$1,489,966	\$1,779,789	\$639,030	116.8	178.5
Miscellaneous expenses	\$796,578	\$464,172	(²)	71.6	
Cost of materials used	\$5,633,578	\$4,753,396	\$1,468,375	18.5	223.7
Value of products, including custom work and repairing	\$9,562,387	\$9,005,421	\$2,732,590	6.2	229.6

¹ Decrease.² Not reported.

It appears from Table 4 that the number of establishments in the city of Charleston decreased during the decade ending with 1900 from 566 to 364, or 35.7 per cent, while the average number of wage-earners increased from 4,684 to 5,027, or 7.8 per cent, and the value of products increased from \$9,005,421 to \$9,562,387, or 6.2 per cent. The number of establishments, number of wage-earners, and value of products, in this city in 1900, constituted 9.7,

10.4, and 16.3 per cent, respectively, of the totals for the state.

Table 5 presents the totals for the manufacturing industries of the 12 cities and towns withdrawn from the enumerators, places them in comparison with the totals for the entire state and the state exclusive of these cities and towns, and shows their rank in population and in value of products.

TABLE 5.—URBAN MANUFACTURES.

	Num- ber of estab- lish- ments.	Capital.	Propri- etors and firm men- bers.	WAGE-EARNERS.		Miscella- neous 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	3,762	\$67,356,465	4,088	48,135	\$9,455,900	\$3,111,587	\$34,027,795	\$58,748,731	-----	100.0	1,340,316	-----	100.0
Total for urban manufactures	886	27,770,884	856	16,231	3,761,380	1,592,991	13,521,451	23,014,527	-----	39.2	186,514	-----	10.2
Anderson	52	1,280,111	65	910	166,313	58,753	637,879	1,127,483	6	1.9	5,498	6	0.4
Beaufort	18	84,331	18	29	6,833	2,146	21,894	46,981	12	0.1	4,110	10	0.3
Camden	26	304,289	26	349	61,769	25,845	125,826	241,632	11	0.4	2,441	12	0.2
Charleston	364	12,478,187	363	5,027	1,489,966	796,578	5,633,578	9,562,387	1	16.3	65,807	1	4.2
Chester	26	480,624	31	584	114,108	41,367	376,980	645,444	8	1.1	4,075	11	0.3
Columbia	92	5,277,806	89	3,250	759,200	330,626	2,474,628	4,243,030	2	7.2	21,108	2	1.6
Greenville	64	2,858,388	65	2,153	370,392	94,417	1,414,574	2,224,990	3	3.8	11,860	3	0.9
Newberry	34	1,386,625	32	811	176,178	91,724	640,204	1,200,892	5	2.1	4,607	8	0.3
Orangeburg	34	239,695	37	284	65,486	15,303	313,582	493,860	10	0.8	4,455	9	0.3
Rock Hill	29	826,941	25	1,050	197,080	28,827	566,703	1,007,216	7	1.7	5,485	7	0.4
Spartanburg	45	2,351,175	48	1,875	276,042	83,721	923,217	1,680,275	4	2.8	11,395	4	0.9
Sumter	52	308,272	57	409	79,013	23,689	392,386	590,337	9	1.0	5,673	5	0.4
Total for state exclusive of urban manufactures	2,926	39,585,581	3,232	31,904	5,694,520	1,518,596	20,506,344	35,734,204	-----	60.8	1,203,802	-----	89.8
Per cent of urban manufac- tures to total for state	22.2	41.2	20.9	33.7	39.8	51.2	39.7	39.2	-----	-----	10.2	-----	-----

Of the 3,762 establishments in the state, 886, or 22.2 per cent, were located in these 12 cities and towns. The capital reported for these establishments was \$27,770,884, or 41.2 per cent of that for the entire state. They furnished employment to 16,231 wage-earners, or 33.7 per cent of the total number, and the value of their products, \$23,014,527, formed 39.2 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 of Charleston and Columbia by specified industries.

Table 9 shows the totals for all industries in the cities and towns 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 imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
1	The State.....	3,762	\$67,356,465	\$3,448,643	\$11,867,770	\$26,096,981	\$25,948,121	4,088	1,525	\$1,327,052	48,135	\$9,455,900
2	Abbeville	82	963,924	33,613	221,218	458,117	250,976	88	27	18,725	637	147,417
3	Aiken	85	3,559,745	156,188	1,024,872	1,360,352	1,018,888	95	34	48,713	2,498	487,303
4	Anderson	107	3,622,904	88,863	507,551	1,719,712	1,806,778	177	77	64,740	3,396	608,360
5	Bamberg	36	255,981	18,150	41,853	188,268	47,655	84	6	4,600	304	52,148
6	Barnwell	106	331,824	108,652	39,742	138,684	49,746	113	12	4,018	389	60,135
7	Beaufort	41	1,138,332	16,230	111,816	77,874	982,912	44	29	34,250	443	91,812
8	Berkeley	58	575,780	88,127	27,260	147,450	312,943	55	33	16,657	383	87,916
9	Charleston	417	13,217,940	648,578	2,129,296	1,980,286	8,404,780	423	279	292,696	5,239	1,525,461
10	Cherokee	48	2,374,358	81,639	879,926	1,118,858	793,935	45	43	44,728	1,579	284,090
11	Chester	75	647,554	32,022	123,101	297,745	194,686	88	29	15,100	802	150,481
12	Chesterfield	72	115,752	30,037	12,078	57,490	16,147	88	8	860	126	19,948
13	Clarendon	56	503,068	44,375	140,983	171,590	146,120	57	81	23,373	289	67,263
14	Colleton	69	732,890	52,864	110,418	234,315	385,293	88	20	12,120	475	74,084
15	Darlington	67	1,471,839	177,981	197,231	578,527	523,100	70	33	29,485	797	139,213
16	Dorchester	38	115,490	21,065	8,545	47,580	38,300	47	11	5,075	309	63,113
17	Edgefield	50	223,734	10,233	52,811	110,233	50,457	51	7	5,432	253	54,244
18	Fairfield	39	461,121	92,122	61,811	234,745	72,443	45	11	9,292	343	64,958
19	Florence	81	274,203	35,730	45,030	125,130	68,313	98	27	14,895	492	126,896
20	Georgetown	34	587,079	174,395	47,880	177,278	187,528	39	20	19,960	351	65,840
21	Greenville	182	4,698,325	164,560	838,560	2,082,890	1,662,315	187	99	98,887	4,277	684,804
22	Greenwood	76	957,473	26,790	194,205	501,574	234,904	87	29	20,213	722	137,456
23	Hampton	55	173,800	44,104	16,138	86,288	27,270	69	15	6,875	415	81,322
24	Horry	72	245,178	83,218	21,593	76,304	64,063	71	26	10,664	215	48,599
25	Kershaw	88	439,047	79,692	73,210	198,236	87,909	102	12	6,122	598	117,074
26	Lancaster	41	358,821	10,950	73,316	204,336	70,220	50	6	5,740	472	77,946
27	Laurens	90	540,566	32,746	110,673	288,538	108,609	121	88	26,580	1,066	188,511
28	Lexington	154	1,271,491	175,288	163,014	577,812	355,347	175	25	14,075	908	173,648
29	Marion	85	238,949	19,948	37,335	141,963	39,703	86	22	10,790	408	75,962
30	Marlboro	112	1,129,980	45,158	170,118	624,813	289,891	111	81	16,539	1,217	169,403
31	Newberry	86	1,416,868	32,888	276,353	422,545	685,082	96	81	20,540	891	187,529
32	Oconee	133	902,145	27,970	230,916	406,553	236,706	138	28	17,237	931	144,168
33	Orangeburg	171	495,347	73,686	63,888	222,995	135,078	184	21	12,180	583	110,571
34	Pickens	87	890,476	22,245	90,724	196,280	81,227	102	14	7,735	411	73,156
35	Richland	130	5,422,615	174,140	1,028,865	2,554,237	1,605,373	132	96	114,892	3,479	818,039
36	Saluda	26	61,690	5,930	8,685	31,720	15,355	30	4	1,800	60	9,585
37	Spartanburg	178	11,059,468	285,233	2,078,846	5,184,333	3,511,056	184	138	149,598	7,176	1,277,065
38	Sumter	143	502,114	29,215	62,067	307,582	103,250	159	32	18,265	647	184,299
39	Union	51	3,287,134	44,610	601,835	1,591,479	1,049,210	50	38	42,643	1,786	310,128
40	Williamsburg	83	421,825	137,539	36,947	162,338	85,001	97	27	14,541	483	83,315
41	York	108	2,129,685	32,219	408,056	1,064,851	624,559	112	63	46,967	2,285	393,199

TABLE 7.—MANUFACTURES BY

1 All industries.....	3,762	\$67,356,465	\$3,448,643	\$11,867,770	\$26,096,981	\$25,948,121	4,088	1,525	\$1,827,052	48,185	\$9,455,900
2 Agricultural implements.....	5	14,575	450	1,750	2,975	9,400	7	—	—	10	2,606
3 Awnings, tents, and sails.....	3	1,750	—	—	410	1,340	3	—	—	2	1,280
4 Baskets, and rattan and willow ware.....	4	105,700	15,000	24,759	6,300	59,551	2	10	9,486	203	22,126
5 Bicycle and tricycle repairing.....	43	50,538	4,650	7,700	15,850	22,338	54	4	1,250	58	15,921
6 Blacksmithing and wheelwrighting.....	316	179,305	31,247	29,158	42,060	76,840	360	—	—	293	69,237
7 Boots and shoes, custom work and repairing.....	81	80,517	3,730	3,690	7,427	15,670	83	—	—	42	10,263
8 Bottling.....	3	25,800	1,500	1,800	8,000	14,500	3	1	500	24	9,800
9 Bread and other bakery products.....	35	235,213	47,250	89,050	24,155	124,763	39	27	12,446	246	75,983
10 Brick and tile.....	76	340,960	42,680	50,130	108,961	141,189	107	41	19,606	1,145	241,106
11 Carpentering.....	40	124,765	7,950	13,735	31,280	71,800	40	10	5,270	549	185,757
12 Carriages and wagons.....	59	317,550	72,597	52,316	80,572	162,065	61	15	12,780	856	95,950
13 Cars and general shop construction and repairs by steam railroad companies.....	6	354,842	24,050	86,833	78,903	165,056	—	27	21,379	776	368,041
14 Clothing, men's, custom work and repairing.....	43	69,510	10,300	14,800	6,006	33,404	48	3	8,600	113	48,266
15 Clothing, men's, factory product.....	5	128,000	1,000	500	8,000	118,500	7	12	5,117	176	37,401
16 Clothing, women's, dressmaking.....	36	20,375	3,800	4,700	4,145	7,730	39	—	—	118	17,149
17 Coffins, burial cases, and undertakers' goods.....	3	72,028	4,000	7,983	10,695	49,850	4	4	3,600	58	14,460
18 Confectionery.....	7	14,170	1,000	2,500	3,820	7,350	8	—	—	12	2,208
19 Cooperage.....	15	140,549	10,520	21,505	50,910	57,614	13	6	9,120	134	30,350
20 Cotton, compressing.....	3	274,000	47,000	104,000	77,000	46,000	—	1	1,000	55	15,512
21 Cotton, ginning ¹	670	968,658	31,019	179,723	745,091	12,825	775	86	6,695	870	122,778
22 Cotton goods.....	80	39,258,946	805,742	7,705,755	18,748,418	11,999,081	5	415	537,193	30,201	5,066,840
23 Dyeing and cleaning.....	6	9,585	—	—	4,100	5,485	6	—	—	8	2,740
24 Fertilizers.....	22	10,505,043	109,441	1,642,600	487,117	8,265,885	5	85	164,716	1,772	479,449
25 Flouring and grist mill products.....	556	652,553	50,195	153,614	383,934	64,810	581	22	8,843	281	70,458
26 Foundry and machine shop products.....	26	316,166	41,300	42,500	114,441	117,925	27	18	17,316	324	141,283

¹ Does not include many gineries operated in connection with saw, grist, and cottonseed-oil mills, or for the use exclusively of plantations on which they are located. For the full number of gineries in operation reference should be made to the special report on cotton ginning.

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 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.										
29,823	\$6,921,355	9,752	\$1,685,139	8,560	\$349,406	\$3,111,587	\$141,258	\$391,065	\$2,465,245	\$114,019	\$34,027,795	\$32,924,236	\$1,103,559	\$58,748,731	1
884	114,906	118	23,220	185	9,291	36,954	1,993	3,686	31,045	230	504,502	486,137	18,365	834,598	2
1,438	295,421	732	132,966	328	58,916	122,336	4,861	20,783	96,683	9	1,568,432	1,509,068	54,424	2,996,274	3
1,709	360,334	827	153,265	860	89,711	200,287	5,553	21,765	171,119	1,850	2,306,902	2,230,325	76,577	4,005,526	4
194	37,301	55	9,244	55	5,603	8,509	483	2,472	5,442	112	134,161	124,056	10,105	284,611	5
328	51,535	84	5,740	27	2,860	13,865	1,503	1,832	10,130	400	244,919	238,245	6,674	432,192	6
405	89,147	30	1,865	8	800	83,149	1,591	9,529	72,029		389,403	371,271	18,132	703,957	7
380	87,736			3	180	22,743	1,130	1,536	20,077		280,752	279,690	1,062	559,182	8
4,215	1,374,117	804	185,087	220	16,257	801,963	45,886	86,612	658,094	11,371	5,693,011	5,555,137	137,874	9,714,495	9
790	193,026	339	54,341	450	36,723	113,762	3,293	21,020	89,449		819,759	788,740	36,019	1,588,258	10
487	107,023	187	31,065	128	12,393	44,665	1,229	5,562	37,874		585,672	557,885	27,787	955,075	11
124	19,788			2	160	2,238	753	572	913		120,718	119,721	997	188,089	12
238	55,971	23	7,932	28	3,860	7,972	164	2,598	5,210		179,057	176,814	2,743	365,948	13
392	66,292	34	4,711	49	3,031	34,938	499	4,302	30,137		326,213	320,575	5,638	523,565	14
554	115,437	111	13,794	132	9,982	39,735	1,316	6,349	23,070	9,000	675,069	639,283	35,786	1,181,003	15
304	62,598	1	150	4	865	4,117	930	752	2,375	60	105,427	98,542	6,885	230,549	16
177	40,361	53	10,026	23	3,857	6,724	675	1,453	4,421	175	177,672	167,507	10,165	291,684	17
237	46,220	39	8,738	67	10,000	8,330	332	1,763	6,235		143,888	135,048	8,840	291,123	18
458	124,350	33	2,500	1	40	11,748	1,423	2,379	7,916		323,244	316,451	6,793	573,322	19
232	59,930	44	3,940	25	1,970	10,126	349	1,682	8,095		367,283	363,667	3,616	571,539	20
2,263	441,313	1,041	159,051	970	83,940	199,111	6,942	23,270	165,049	3,850	2,836,730	2,770,370	66,360	4,559,329	21
419	87,588	155	35,798	143	14,070	30,350	1,776	6,356	21,608	610	510,836	487,730	23,106	941,996	22
407	80,704			8	618	8,714	449	1,146	2,119		179,251	178,076	1,175	373,801	23
201	46,654			14	1,945	8,700	504	1,117	1,829	250	204,001	201,740	2,261	356,060	24
515	103,104	49	8,123	34	5,847	28,934	1,341	2,640	24,688	265	357,540	346,322	11,218	634,686	25
211	44,041	108	17,100	153	16,805	21,391	410	2,109	18,412	460	267,816	258,377	9,439	471,250	26
616	100,659	198	55,648	252	32,204	44,214	4,973	4,905	34,336		540,694	518,518	28,176	1,027,478	27
716	153,416	79	10,757	113	9,475	19,587	1,347	2,210	15,160	870	505,507	480,674	24,833	923,571	28
316	62,875	20	4,217	72	8,870	9,938	794	1,899	7,145	100	244,481	234,689	9,792	419,406	29
591	103,284	393	50,409	233	15,710	36,498	2,717	3,658	30,123		688,149	659,150	28,999	1,065,299	30
535	114,743	206	53,484	150	19,302	92,813	3,478	9,151	80,184		731,812	704,618	27,194	1,389,455	31
576	100,270	206	34,607	149	9,291	28,116	820	3,886	23,410		889,519	883,328	6,191	775,153	32
497	96,221	47	9,550	39	4,800	20,565	2,553	4,455	13,557		455,677	443,740	11,928	896,107	33
265	52,877	78	12,890	68	7,889	23,520	1,000	1,729	20,766	25	239,755	231,709	8,046	439,644	34
2,367	651,448	569	112,032	543	49,559	348,872	21,486	25,050	250,086	52,250	2,515,517	2,441,868	103,703	4,454,911	35
55	8,870	3	620	2	95	2,076	53	307	1,715		55,593	53,918	1,675	88,605	36
3,408	755,855	1,894	823,201	1,874	193,009	392,183	4,011	62,529	293,771	31,872	5,276,811	5,152,488	124,323	8,308,778	37
567	121,850	53	10,429	22	2,020	29,786	6,885	2,973	19,678	250	554,598	541,921	13,677	922,236	38
636	174,263	537	82,015	613	53,850	120,834	2,208	19,335	99,211		1,034,748	995,006	39,742	1,976,597	39
470	82,065			13	1,250	19,902	985	5,370	13,597		276,469	273,395	3,074	476,209	40
1,093	237,717	647	102,124	545	53,358	61,263	2,523	10,273	48,457	10	1,181,033	1,114,028	67,005	2,066,267	41

SPECIFIED INDUSTRIES: 1900.

20,823	\$6,921,355	9,752	\$1,685,139	8,560	\$849,406	\$3,111,587	\$141,258	\$391,065	\$2,465,245	\$114,019	\$34,027,795	\$32,924,236	\$1,103,559	\$58,748,731	1
10	2,606					931	300	31	600		5,394	5,223	171	14,090	2
2	1,280					258	223		30		4,705	4,705		8,400	3
188	21,100			15	1,026	13,504	1,635	1,040	10,329		43,629	42,814	815	106,792	4
50	14,679			8	1,342	7,589	5,568	480	1,541		51,815	50,956	859	117,289	5
280	68,457			13	830	13,376	8,778	1,893	2,600	105	108,225	99,239	8,986	359,431	6
36	10,037			6	226	6,426	4,658	683	1,055	25	26,437	25,899	538	84,059	7
24	9,800					1,313	800	363	150		91,460	91,435	25	142,500	8
219	72,550	18	2,545	9	888	17,110	5,558	3,754	7,798		323,390	318,264	5,126	524,908	9
1,085	235,294	5	563	55	5,249	25,162	7,474	3,095	13,893	700	181,615	17,784	113,831	578,438	10
545	185,607	1	100	3	150	30,639	2,234	1,234	1,871	25,200	513,408	512,535	873	863,387	11
331	91,650	7	2,000	18	2,300	15,995	2,113	2,540	11,323	9	211,039	207,247	3,792	428,082	12
774	362,681	2	360			12,555		4,503	8,047		294,334	286,099	8,235	691,361	13
101	40,966	7	1,851	5	449	6,958	3,932	636	1,990	350	68,384	67,266	1,118	173,659	14
15	6,250	158	30,668	3	483	14,656	1,720	865	1,500	10,671	186,889	186,529	360	306,250	15
2	468	97	15,995	14	686	4,372	3,002	310	1,060		26,761	26,446	315	69,045	16
58	14,460					3,203	500	353	2,350		33,115	31,790	1,325	63,725	17
2	824	7	1,184	3	200	2,035	1,756	203	71		17,086	16,662	424	34,200	18
132	30,250			2	100	4,750	202	1,143	8,160	250	90,600	90,551	49	163,449	19
55	15,612					8,745	200	5,900	2,615		3,675	775	2,900	46,000	20
870	121,693	7	935	2	150	16,393	1,573	5,966	8,854		92,195	53,408	38,787	573,823	21
18,418	2,785,285	8,673	1,477,021	8,110	803,934	1,507,824		206,855	1,267,597	83,872	17,263,882	16,652,680	611,202	29,723,919	22
7	2,240	1	500			1,177	828	122	227		1,656	1,288	263	9,100	23
1,772	479,449					675,589	1,050	53,200	621,339		3,107,710	3,018,924	88,786	4,882,506	24
281	70,458					15,742	2,094	5,427	8,161	60	1,958,658	1,943,070	15,588	2,347,790	25
320	140,813			4	470	16,758	2,826	2,935	11,497		166,849	167,027	9,822	403,493	26

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.
27	Fruits and vegetables, canning and preserving.	12	\$23,862	\$1,525	\$2,075	\$6,718	\$13,544	13	0	\$1,030	64	\$7,410
28	Furniture, cabinetmaking, repairing, and upholstering.	25	20,929	3,300	7,300	2,800	7,529	29	1	600	26	6,797
29	Gas, illuminating and heating.	4	961,033	42,000	81,067	664,237	173,729	23	11,649	104	30,127	
30	Hosiery and knit goods.	6	345,212	4,112	43,200	200,000	97,900	15	13,520	359	73,872	
31	Ice, artificial.	13	407,400	25,225	102,550	241,000	38,625	3	10,182	73	23,781	
32	Leather, tanned, curried, and finished.	5	5,595	545	1,875	875	2,300	5			10	2,000
33	Liquors, distilled.	22	20,893	503	2,355	13,250	4,785	22	1	500	31	4,792
34	Lock and gun smithing.	13	29,625	10,320	10,885	2,620	5,800	14	1	950	11	4,509
35	Looking-glass and picture frames.	3	13,850	5,000	3,000	3,350	2,500	4			4	1,314
36	Lumber and timber products.	729	5,187,727	1,410,050	434,076	1,754,808	1,588,793	918	217	134,449	4,585	897,899
37	Lumber, planing mill products, including sash, doors, and blinds.	53	412,128	46,995	49,010	126,705	189,413	67	25	17,264	495	146,599
38	Marble and stone work.	8	306,415	90,098	13,010	157,349	45,958	6	7	10,080	175	48,230
39	Mattresses and spring beds.	9	63,507	1,350	9,150	12,407	40,600	5	15	8,516	64	14,586
40	Millinery, custom work.	79	165,303	20,670	27,300	6,193	111,140	90	10	3,645	149	36,591
41	Mineral and soda waters.	11	24,304	550	1,125	13,000	9,629	11	5	1,881	27	4,883
42	Monuments and tombstones.	22	69,950	5,825	6,475	5,155	52,495	27	6	3,180	72	32,211
43	Oil, cottonseed and cake.	50	1,959,872	66,767	369,601	877,784	645,720	18	163	108,798	734	143,932
44	Painting, house, sign, etc.	17	14,390	1,000	3,250	2,720	7,420	17			93	22,705
45	Patent medicines and compounds.	4	14,850	500	500	5,415	8,885	2	2	2,000	9	2,150
46	Photography.	30	39,885	250	1,600	13,605	19,430	31			33	12,850
47	Plumbing, and gas and steam fitting.	16	48,655	8,700	8,100	9,325	22,530	20			87	29,395
48	Pottery, terra cotta, and fire-clay products.	10	25,751	7,350	8,185	5,740	4,476	12	2	840	46	10,000
49	Printing and publishing, book and job.	22	245,308	5,300	4,200	137,570	97,788	26	28	19,600	212	79,265
50	Printing and publishing, newspapers and periodicals.	98	434,255	22,550	37,550	226,582	147,573	99	56	42,631	413	156,924
51	Rice, cleaning and polishing.	18	293,385	46,012	97,958	51,090	98,325	22	18	15,762	112	25,243
52	Roofing and roofing materials.	5	6,112	1,200	1,500	1,947	1,465	5	1	600	29	10,791
53	Saddlery and harness.	24	54,097	4,950	8,875	9,720	30,552	24	2	970	42	17,923
54	Sugar and molasses, refining.	22	2,363	153	379	1,827	4	24			11	1,820
55	Tinsmithing, coppersmithing, and sheet-iron working.	40	113,473	11,100	17,550	24,360	60,463	48	12	5,825	146	56,992
56	Tobacco, cigars and cigarettes.	6	12,510	1,500	1,700	1,710	7,600	6	1	900	29	9,400
57	Turpentine and rosin.	132	268,719	94,997	13,945	55,996	103,781	171	36	8,291	886	135,575
58	Watch, clock, and jewelry repairing.	66	74,510	9,850	13,400	22,895	23,865	73			47	17,600
59	Wood, turned and carved.	4	8,175	2,475	1,300	4,800	2,100	4	2	800	21	3,028
60	All other industries ¹ .	41	1,421,769	181,450	243,123	430,718	616,478	38	71	62,582	1,106	247,752

¹ Embraces bags, other than paper, 1; boxes, wooden packing, 1; brooms and brushes, 2; carpets and rugs, other than rag, 1; clothing, women's, factory product, 1; electrical apparatus and supplies, 1; electrical construction and repairs, 2; electroplating, 1; engraving and diesinking, 1; fancy articles, not elsewhere specified, 1; fish, canning and preserving, 1; furnishing goods, men's, 2; hairwork, 1; hand stamps, 1; ironwork, architectural and ornamental, 2; jute and jute goods, 1; lead.

TABLE 8.—MANUFACTURES IN CITIES

CHARLESTON.

		364	\$12,473,187	\$515,003	\$2,047,951	\$1,322,032	\$3,038,201	363	268	\$291,148	5,027	\$1,489,966
1	All industries.	364	\$12,473,187	\$515,003	\$2,047,951	\$1,322,032	\$3,038,201	363	268	\$291,148	5,027	\$1,489,966
2	Awnings, tents, and sails.	3	1,750	—	—	410	1,340	3	—	—	2	1,280
3	Baskets, and rattan and willow ware.	3	101,100	15,000	24,759	2,330	58,951	1	10	9,486	193	21,526
4	Bicycle and tricycle repairing.	10	9,190	100	400	8,100	5,500	12	3	750	21	8,887
5	Blacksmithing and wheelwrighting.	25	40,620	9,300	5,650	5,630	19,930	26	—	—	79	23,917
6	Boots and shoes, custom work and repairing.	47	20,497	3,000	3,000	3,357	11,140	47	—	—	17	4,546
7	Bread and other bakery products.	25	246,140	33,150	73,450	21,875	117,665	29	26	12,296	212	64,713
8	Carpentering.	11	27,690	5,500	7,500	4,630	10,060	12	4	1,470	136	75,050
9	Clothing, men's, custom work and repairing.	18	36,400	2,500	6,500	2,415	24,985	21	3	5,000	67	29,720
10	Clothing, men's, factory product.	5	123,000	1,000	500	8,000	118,500	7	12	5,117	176	37,401
11	Clothing, women's, dressmaking.	23	18,250	3,800	4,700	2,545	7,205	29	—	—	84	11,497
12	Confectionery.	4	6,570	1,000	2,500	1,920	1,150	4	—	—	7	1,400
13	Cooperage.	5	134,179	10,000	20,000	50,165	54,014	4	5	8,520	109	25,150
14	Dyeing and cleaning.	3	9,100	—	—	3,900	5,200	3	—	—	7	2,500
15	Fertilizers.	11	7,868,639	76,500	1,239,350	298,700	6,254,039	—	56	118,164	1,353	370,078
16	Foundry and machine shop products.	4	179,258	12,500	19,200	64,541	83,017	1	10	18,062	167	88,400
17	Furniture, cabinetmaking, repairing, and upholstering.	12	5,865	800	800	1,190	2,575	13	—	—	14	3,336
18	Lock and gun smithing.	6	16,400	4,000	6,500	1,450	4,450	6	1	950	8	2,865
19	Lumber and timber products.	4	238,740	40,000	19,000	21,500	153,240	1	13	12,850	142	44,050
20	Lumber, planing mill products, including sash, doors, and blinds.	6	88,425	9,000	15,000	27,200	87,225	6	7	4,864	103	41,564
21	Mattresses and spring beds.	3	10,505	—	3,000	5,305	2,200	2	3	1,416	8	2,036
22	Millinery, custom work.	14	29,165	1,000	500	915	26,750	17	—	—	53	11,344
23	Monuments and tombstones.	5	35,050	3,500	3,500	3,250	24,800	5	1	1,000	32	18,800
24	Painting, house, sign, etc.	9	11,920	800	2,800	2,160	6,160	9	—	—	59	15,984
25	Photography.	4	21,000	—	—	8,000	13,000	4	—	—	13	7,050

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.										
15	\$2,625	27	\$2,835	22	\$1,950	\$503		\$185	\$318		\$15,169	\$14,879	\$290	\$28,505	27
23	6,637	2	110	1	50	2,052	\$1,430	182	440		11,097	10,821	276	34,189	28
104	30,127					45,792	6,802	10,626	28,364		38,440	37,725	715	172,005	29
73	25,200	158	32,792	128	15,880	38,857	25	1,162	11,100	\$26,600	237,622	233,300	4,322	592,237	30
78	23,781					18,225	460	3,107	14,658		37,327	12,322	25,005	116,357	31
10	2,000					625		100	425		12,743	12,716	27	18,857	32
81	4,792					54,121	16	97	54,008		81,285	28,226	3,059	105,788	33
10	4,484			1	25	1,671	484	350	827	10	6,845	6,677	168	22,908	34
4	1,314					615	250	265	100		4,973	4,973		9,467	35
4,545	893,686	4	300	36	3,913	107,445	5,732	22,354	79,259	100	2,629,805	2,628,525	1,280	5,207,181	36
481	145,295			14	1,244	20,042	3,657	3,131	11,514	1,740	621,831	616,025	5,206	1,016,323	37
175	48,230					17,034	320	1,484	15,230		9,860	5,795	4,065	124,152	38
49	12,778	5	983	10	875	3,480	715	320	2,445		62,090	61,359	740	122,847	39
1	350	144	86,031	4	210	13,785	9,364	1,488	2,333		157,681	157,057	621	304,749	40
26	4,783			1	100	5,754	4,580	241	983		20,186	20,075	121	45,479	41
71	31,911	1	300			3,948	1,569	644	1,735		50,229	49,923	306	120,090	42
733	143,682	1	250			127,462	600	14,563	102,829	9,765	2,362,837	2,281,208	78,629	3,103,425	43
93	22,705					2,103	1,111	128	614	250	22,418	22,403	15	58,740	44
9	2,150					1,572	480	82	950	60	9,580	9,350	530	21,793	45
24	10,238	9	2,612			7,097	3,703	531	2,763	100	18,873	18,565	368	67,392	46
84	29,191			3	204	3,746	2,055	561	1,130		62,170	61,557	613	118,736	47
45	9,800			1	200	1,162	167	110	710	175	5,371	1,978	3,393	23,255	48
168	71,002	44	8,263			15,802	5,644	1,836	7,822		89,790	86,249	3,541	278,547	49
368	149,400	27	6,128	18	1,396	40,367	9,290	3,631	24,901	2,545	97,776	91,370	6,406	510,529	50
112	25,243					9,862	235	4,785	4,842		856,790	850,423	6,367	973,132	51
28	10,716			1	75	759	548	154	57		11,949	11,885	64	32,150	52
42	17,923					3,961	2,605	364	992		58,815	58,476	339	124,175	53
11	1,820					18	1	12	5		9,492	9,351	541	13,677	54
138	66,120			8	872	9,458	5,015	1,454	2,689	300	128,583	127,551	1,032	265,945	55
25	8,400	3	800	1	200	4,614	565	242	3,807		9,647	9,572	75	31,550	56
867	133,650	18	1,805	1	120	8,297	2,210	1,839	4,073	625	471,261	464,469	6,792	787,656	57
43	17,219	1	150	3	281	10,713	6,257	1,109	2,852	495	19,214	18,497	717	95,407	58
21	3,028					436	12	92	220	112	4,852	4,137	715	18,776	59
744	186,866	325	57,508	37	3,378	107,719	6,772	11,180	89,767		1,018,064	985,041	33,023	1,667,429	60

bar, pipe, and sheet, 1; lime and cement, 1; liquors, malt, 1; masonry, brick and stone, 2; oysters, canning and preserving, 1; paper and wood pulp, 1; paper goods, not elsewhere specified, 1; perfumery and cosmetics, 1; sausage, 2; sewing machine repairing, 2; ship and boat building, wooden, 2; slaughtering, wholesale, not including meat packing, 1; soap and candles, 1; tobacco, stemming and rehandling, 1; umbrellas and canes, 1; upholstering materials, 1; woolen goods, 1.

BY SPECIFIED INDUSTRIES: 1900.

CHARLESTON.

4,017	\$1,340,062	790	\$133,647	220	\$16,257	\$796,573	\$45,787	\$35,226	\$654,329	\$11,231	\$5,638,578	\$5,499,100	\$134,478	\$9,562,387	1
2	1,280					258	228		30		4,705	4,705		8,400	2
178	20,500			15	1,026	13,134	1,335	990	10,809		42,504	41,724	780	104,432	3
15	5,325			6	1,062	2,928	2,036	137	705		14,381	14,080	301	37,600	4
72	23,346			7	571	3,703	2,208	624	871		22,824	21,634	1,190	76,873	5
11	4,320			6	226	4,334	3,308	548	980		13,662	13,273	379	48,912	6
191	62,216	13	1,645	8	852	14,434	3,868	3,406	7,160		289,890	285,506	4,384	462,993	7
132	74,800	1	100	3	150	1,850	460	825	565		92,308	92,213	95	190,600	8
63	29,320			4	400	4,181	2,104	454	1,273	350	44,828	44,425	403	115,421	9
15	6,250	158	30,698	3	483	14,656	1,720	865	1,500	10,571	186,889	186,529	360	306,250	10
2	463	68	10,343	14	686	3,740	2,500	800			18,175	12,925	250	44,945	11
1	860	3	840	3	200	586	380	173	33		4,872	4,745	127	10,900	12
109	25,150					4,361	176	1,103	3,082		72,695	72,090	25	185,024	13
6	2,009	1	500			1,016	670		120		1,130	912	218	7,300	14
1,353	370,678					504,032	1,050	31,038	471,974		2,338,615	2,260,613	69,002	3,697,090	15
167	38,400					10,853	822	1,384	8,697		90,420	86,689	3,731	223,082	16
18	3,286			1	50	1,328	933	95	300		3,810	3,720	90	15,299	17
7	2,840			1	25	1,525	400	335	790		4,925	4,850	75	16,000	18
142	44,050					4,865	640	1,325	2,900		184,860	187,660	1,200	294,350	19
93	40,564			10	1,000	8,485	650	1,310	6,525		108,822	108,020	202	199,900	20
7	1,828	1	208			1,030	605	135	290		14,380	14,110	270	22,175	21
1	350	48	10,784	4	210	5,385	3,740	330	1,315		29,780	29,635	145	60,585	22
32	18,800					2,100	575	325	1,200		15,335	15,135	200	48,000	23
59	15,984					1,566	650	118	648		13,549	13,539	10	35,850	24
10	5,900	3	1,150			3,055	1,050	230	1,775	250	6,755	6,640	115	23,800	25

TABLE 8.—MANUFACTURES IN CITIES

CHARLESTON—Continued.

	MANUFACTURING AND MECHANICAL INDUSTRIES, AND CITIES AND TOWNS.	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.
26	Plumbing, and gas and steam fitting.....	7	\$20,350	\$4,700	\$4,100	\$1,850	\$9,700	8	-----	-----	39	\$15,592
27	Printing and publishing, book and job.....	7	182,417	-----	-----	103,080	79,337	6	22	\$15,990	121	49,542
28	Printing and publishing, newspapers and periodicals.	6	89,700	12,000	19,000	36,700	22,000	10	11	11,218	80	49,769
29	Saddlery and harness.....	4	11,950	1,000	1,500	2,050	7,400	4	-----	-----	7	3,286
30	Tinsmithing, coppersmithing, and sheet-iron working.	15	56,425	6,500	12,000	9,300	28,625	17	6	3,200	81	35,542
31	Tobacco, cigars and cigarettes.....	4	9,410	1,500	1,700	1,510	4,700	4	-----	-----	17	5,600
32	Watch, clock, and jewelry repairing.....	14	18,950	1,100	1,700	5,000	11,150	19	-----	-----	15	5,815
33	All other industries ¹	42	2,805,722	255,753	549,942	1,117,944	882,083	33	75	67,195	1,605	413,026

¹ Embraces bags, other than paper, 1; bottling, 1; carriages and wagons, 2; cars and general shop construction and repairs by steam railroad companies, 1; clothing, women's, factory product, 1; cotton, compressing, 2; cotton goods, 1; electrical construction and repairs, 2; electroplating, 1; engraving and die-sinking, 1; fancy articles, not elsewhere specified, 1; flouring and grist mill products, 2; furnishing goods, men's, 1; gas, illuminating and heating, 1; hairwork, 1; hand stamps, 1; ice, artificial, 2; ironwork, architectural and ornamental, 1; jute and jute goods, 1; liquors, malt, 1; looking-glass and picture frames, 2; masonry, brick

COLUMBIA.

1	All industries.....	92	\$5,277,806	\$153,891	\$1,017,150	\$2,465,062	\$1,641,203	89	87	\$108,021	3,250	\$759,200
2	Bicycle and tricycle repairing.....	5	4,125	—	—	2,575	1,550	7	—	—	14	3,655
3	Blacksmithing and wheelwrighting.....	10	5,685	625	575	2,285	2,200	12	—	—	16	3,819
4	Bread and other bakery products.....	3	15,950	5,250	4,000	750	5,350	3	—	—	20	8,108
5	Carpentering.....	6	35,350	—	—	7,650	27,700	5	8	2,700	213	45,643
6	Carriages and wagons.....	3	9,000	1,000	300	1,100	6,600	3	—	—	25	7,680
7	Clothing, men's, custom work and repairing.	7	26,268	7,500	8,000	2,162	8,606	8	—	—	26	8,725
8	Confectionery.....	3	7,600	—	—	1,400	6,200	4	—	—	5	808
9	Cotton goods.....	4	3,815,156	68,116	721,742	2,034,240	991,058	—	24	38,633	2,021	369,226
10	Foundry and machine shop products.....	3	53,450	20,000	11,000	10,500	11,950	3	1	780	54	20,210
11	Lumber, planing mill products, including sash, doors, and blinds.	3	28,050	400	100	9,350	18,200	7	—	—	20	4,368
12	Photography.....	3	4,675	—	—	2,450	2,225	3	—	—	7	2,312
13	Plumbing, and gas and steam fitting.....	3	4,050	—	—	1,650	2,400	5	—	—	16	5,360
14	Printing and publishing book and job....	6	17,190	—	—	7,240	9,950	4	5	3,100	61	20,550
15	Printing and publishing, newspapers and periodicals.	4	52,332	—	—	28,132	24,200	8	14	15,800	49	26,736
16	Watch, clock, and jewelry repairing.....	7	14,325	5,000	4,000	3,675	1,650	8	—	—	10	5,300
17	All other industries ¹	22	1,184,100	46,000	266,833	349,903	521,361	14	40	47,008	693	228,700

¹ Embraces brooms and brushes, 1; cars and general shop construction and repairs by steam railroad companies, 1; cotton, compressing, 1; fertilizers, 2; furniture, cabinetmaking, repairing, and upholstering, 2; gas, illuminating and heating, 1; hosiery and knit goods, 1; ice, artificial, 1; lock and gun smithing, 1;

TABLE 9.—MANUFACTURES IN CITIES AND

1	Total for cities and towns.....	880	\$10,020,991	\$363,270	\$1,776,495	\$4,341,197	\$3,539,429	404	231	\$212,826	7,954	\$1,512,214
2	Anderson.....	52	1,280,111	29,563	222,026	580,087	448,435	65	26	22,325	910	166,313
3	Beaufort.....	18	31,331	5,500	5,500	16,130	7,201	18	1	990	29	6,833
4	Camden.....	26	304,289	38,100	62,250	136,455	67,484	26	8	4,902	349	61,769
5	Chester.....	26	480,624	25,042	91,591	180,685	183,806	31	18	12,492	584	114,108
6	Greenville.....	64	2,858,388	85,732	503,039	1,125,311	1,144,256	65	55	63,418	2,163	370,392
7	Newberry.....	34	1,330,625	29,100	262,283	368,060	677,182	32	27	19,840	811	175,178
8	Orangeburg.....	34	239,635	30,400	23,785	100,100	80,400	37	7	6,600	284	65,486
9	Rock Hill.....	29	826,941	10,613	167,787	358,098	300,443	25	36	28,524	1,050	197,080
10	Spartanburg.....	45	2,351,175	100,170	408,109	1,282,774	560,122	48	34	41,060	1,375	276,042
11	Sumter.....	62	308,272	9,050	85,125	193,497	70,600	57	19	12,765	409	79,013

BY SPECIFIED INDUSTRIES: 1900—Continued.

CHARLESTON—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.									
36	\$15,388			3	\$204	\$1,709	\$964	\$295	\$450		\$17,204	\$16,974	\$230	\$14,854
84	42,874	37	\$6,668			11,145	3,330	1,327	6,488		72,390	69,921	2,469	268,032
77	49,237	2	480	1	52	8,180	487	1,227	6,406	\$60	17,210	14,775	2,435	128,081
7	3,286					1,020	525	115	380		26,790	26,630	160	47,100
78	84,670			8	872	4,802	1,690	977	2,135		52,477	51,942	585	128,500
16	5,400			1	200	2,493	435	215	1,843		6,035	6,000	35	18,450
14	5,740			1	75	3,446	1,646	355	1,445		8,205	8,015	190	35,320
1,029	335,452	455	70,261	121	7,913	149,849	4,604	34,545	110,700		1,814,163	1,769,301	44,362	2,768,289

and stone, 1; mineral and soda waters, 2; oil, cottonseed and cake, 1; patent medicines and compounds, 1; perfumery and cosmetics, 1; rice, cleaning and polishing, 2; roofing and roofing materials, 2; ship and boat building, wooden, 1; slaughtering and meat packing, wholesale, 1; soap and candles, 1; umbrellas and canes, 1; upholstering materials, 1.

COLUMBIA.

2,140	\$597,709	569	\$112,082	541	\$49,459	\$330,626	\$20,376	\$23,854	\$234,146	\$52,250	\$2,474,628	\$2,385,712	\$88,916	\$4,248,030	1
12	3,375			2	280	1,541	946	73	522		10,002	9,795	207	19,953	2
10	3,819					458	370	54	20		7,377	7,045	332	19,000	3
15	7,208	5	900			1,787	1,380	150	227		20,639	20,284	355	39,955	4
213	45,643					25,485	150	15	320	25,000	221,842	221,142	200	367,425	5
25	7,680					820	600	120	100		9,750	9,500	250	26,150	6
24	8,520	1	156	1	49	1,673	996	65	612		11,025	10,692	334	29,543	7
1	464	4	344			1,449	1,376	35	38		12,214	11,917	297	23,300	8
1,023	223,704	482	97,742	516	47,780	170,901		10,634	160,267		1,075,339	1,020,006	55,333	1,956,089	9
51	19,950			3	260	2,082	28	874	1,180		17,463	16,747	716	33,300	10
20	4,368					518	240	63	215		42,580	42,400	180	74,600	11
7	2,312					1,137	860	30	247		1,857	1,829	28	8,737	12
16	5,360					926	587	20	319		11,421	11,391	30	21,533	13
57	19,430	4	1,120			1,808	908	179	721		9,173	8,731	442	41,580	14
45	25,736	4	1,000			14,181	1,722	553	11,156	750	23,393	22,363	1,035	90,968	15
10	5,300					1,209	866	60	233		2,315	2,125	190	13,785	16
605	214,840	69	10,770	19	1,090	104,686	9,338	10,929	57,919	26,500	998,682	969,745	28,937	1,454,111	17

mineral and soda waters, 1; monuments and tombstones, 1; oil, cottonseed and cake, 2; painting, house, sign, etc., 2; saddlery and harness, 2; tinsmithing, coppersmithing, and sheet-iron working, 2; tobacco, cigars and cigarettes, 1.

TOWNS UNDER 20,000 IN POPULATION: 1900.

4,484	\$1,015,073	1,782	\$317,326	1,688	\$179,815	\$465,792	\$29,703	\$59,930	\$372,619	\$3,480	\$5,413,245	\$5,187,432	\$225,813	\$9,209,110	1
471	108,052	184	32,389	255	25,872	53,753	4,422	7,477	45,354	1,500	637,879	599,625	38,254	1,127,483	2
27	6,633			2	200	2,146	1,417	480	240		21,894	20,517	1,377	46,981	3
250	47,824	45	8,123	48	5,822	25,845	1,720	1,832	23,103	140	125,826	115,920	9,906	241,632	4
369	83,850	117	20,565	98	9,698	41,967	1,152	3,597	36,618		376,980	355,460	21,520	645,444	5
1,178	248,332	483	74,225	492	47,335	94,417	6,084	12,131	75,602	600	1,414,574	1,368,218	46,361	2,224,900	6
455	102,392	206	53,434	150	19,302	91,724	3,430	8,697	79,597		640,204	615,482	24,722	1,200,892	7
199	51,836	46	9,350	39	4,800	15,803	2,304	2,982	10,017		313,582	300,975	6,607	493,860	8
521	132,307	284	41,256	245	23,517	28,827	1,690	5,857	21,280		566,708	541,249	25,454	1,007,216	9
679	107,283	350	67,505	337	41,254	83,721	3,459	14,863	64,350	1,040	923,217	881,649	41,568	1,630,275	10
820	66,564	58	10,429	22	2,020	23,689	5,085	1,955	16,449	200	392,386	382,342	10,044	500,337	11