

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 112.

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MANUFACTURES.

VERMONT.

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 Vermont 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.

These statistics were gathered partly by the enumerators and partly by special agents. Mr. Walter B. Gates, of Bennington, who was supervisor in charge of the population returns for the state of Vermont and also special agent in charge of the collection of the manufacturing statistics for the city of Burlington, has rendered valuable assistance in the preparation of the text for the accompanying report. A number of cities and towns in the state were withdrawn from the enumerators and their manufacturing statistics collected by special agents, in accordance with the further provision of section 7 of the Census Act. There is no city in Vermont with a population of 20,000 or more, and for the Twelfth Census the detailed statistics of cities by in-

dustries have been confined to those of that size. Wherever the phrase "urban manufactures" is used in this bulletin, it applies only to those cities and towns which were withdrawn from the enumerators and committed to special agents, and only to manufacturing establishments within the corporate limits of such places.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 statistics for Vermont are presented in 7 tables: Table 1 showing comparative figures for the state at the several censuses; Table 2 showing all the industries of the state divided between the hand trades and manufactures proper, and also the statistics of a governmental establishment 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 10 leading industries of the state for 1890 and 1900; Table 4 showing the urban manufactures of the state in comparison with the totals for the entire state exclusive of the cities and towns withdrawn from the enumerators; Table 5 showing the statistics for the state by counties; Table 6 showing the statistics for the state by specified industries; Table 7 showing the totals for all industries in the cities and towns withdrawn from the enumerators.

Table 1 shows the growth of manufactures in Vermont 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 methods of taking the census, comparisons between the earlier and later decades, presented in Table 1, should be drawn only in the most general way. Nevertheless the rate of growth in Vermont manufactures may be fairly inferred from the figures presented.

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., 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, and this number may appear excessive as compared

with the amount of salaries paid. The seeming inconsistency is due to the large number of establishments reporting clerks employed but a short period, who received salaries that would be small if reckoned as for the entire year.

The reports show a capital of \$48,547,964 invested in manufactures and mechanical industries in the 4,071 establishments reporting for the state. 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 \$57,646,715; to produce which involved an outlay of \$1,620,876 for salaries of officials, clerks, etc.; \$12,237,684 for wages; \$3,482,448 for miscellaneous expenses, including rent, taxes, etc.; and \$29,882,744 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 products 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, \$57,646,715, 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 values 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, in this state, the gross value of products for 1900 was \$57,646,715. The value of materials purchased in a partly manufactured form was \$16,863,515. The difference between them, \$40,783,200, 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.

VERMONT.

Table 1 shows the manufacturing and mechanical industries of the state of Vermont 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	4,071	3,081	2,874	3,270	1,883	1,849	34.3	5.5	112.1	73.7	1.8
Capital	\$48,547,984	\$32,768,291	\$23,295,224	\$20,329,637	\$9,498,617	\$5,001,377	48.2	40.8	14.4	114.0	89.9
Salaries of officials, clerks, etc., number	1,772	2,776	(³)	(³)	(³)	(³)	38.1				
Salaries	\$1,620,376	\$1,668,996	(³)	(³)	(³)	(³)	12.9				
Wage-earners, average number	29,455	22,119	17,540	18,686	10,497	8,445	33.2	26.1	16.1	78.0	24.8
Total wages	\$12,237,684	\$8,427,553	\$5,164,479	\$6,264,551	\$3,004,986	\$2,202,848	45.2	63.2	117.6	108.4	36.4
Men, 16 years and over	24,714	18,885	14,438	16,901	8,563	6,894	30.2	31.5	111.4	90.4	24.2
Wages	\$11,027,185	\$7,587,075	(³)	(³)	(³)	(³)	45.8				
Women, 16 years and over	4,478	2,745	(³)	(³)	(³)	(³)	63.1	20.9	21.3	13.2	24.7
Wages	\$1,166,491	\$784,156	(³)	(³)	(³)	(³)	48.8				
Children, under 16 years	263	889	831	518			32.4	53.2	62.0		
Wages	\$44,008	\$56,322	(³)	(³)	(³)	(³)	121.9				
Miscellaneous expenses	\$3,482,448	\$2,188,826	(³)	(³)	(³)	(³)	59.1				
Cost of materials used	\$29,882,744	\$20,483,174	\$18,350,677	\$17,007,769	\$7,608,858	\$4,172,552	46.2	11.5	7.8	123.5	82.4
Value of products, including custom work and repairing	\$57,646,715	\$38,340,066	\$31,854,366	\$32,184,606	\$14,687,807	\$3,570,920	50.4	22.3	12.6	119.9	70.8
Total population	348,641	332,422	332,286	330,551	315,038	314,120	3.4	(⁵)	0.5	4.9	0.3
Wage-earners engaged in manufactures	29,455	22,119	17,540	18,686	10,497	8,445	33.2	26.1	16.1	78.0	24.8
Per cent of total population	8.6	6.7	5.3	5.7	3.3	2.7					
Assessed value of real estate	\$118,950,024	\$112,895,125	\$71,436,623	\$80,993,100	\$65,639,973	\$57,820,369	5.4	58.0	111.8	28.4	14.5
Value of land and buildings invested in manufactures ⁷	\$14,828,028	\$8,602,033	(³)	(³)	(³)	(³)					
Per cent of assessed value	12.5	7.6									

¹ Decrease.

² Includes proprietors and firm members, with their salaries; number only reported in 1900. (See Table 6.)

³ Not reported separately.

⁴ Not reported.

⁵ Less than one-tenth of 1 per cent.

⁶ As given in State and City Supplement, Dana's Commercial and Financial Chronicle, April 13, 1901.

⁷ Does not include the value of rented property.

Table 1 reveals the generally steady growth of the manufacturing industries of Vermont during the half century, a growth which is striking when compared with the small increase of population.

The total population of the state in 1850 was 314,120, and in 1900, 348,641, an increase of only 29,521, or 9.4 per cent, while the average number of wage-earners employed in manufacturing establishments has increased from 8,445 in 1850, to 29,455 in 1900, or 248.8 per cent, embracing in 1900, 8.6 per cent of the population as compared with 2.7 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 40,160, or 11.7 per cent of the total population of the state.

The increase in the value of products from 1850 to 1860 was 70.8 per cent; from 1860 to 1870, 119.9 per cent; from 1880 to 1890, 22.3 per cent; and from 1890 to 1900, 50.4 per cent. From 1870 to 1880, there was a decrease of 2.6 per cent. The values however for 1870 were expressed in a currency which was at a discount in gold, and should, therefore, be reduced about one-fifth for purposes of comparison with other census years.

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 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.	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	4,817	\$48,962,114	5,367	29,575	\$12,249,695	\$8,498,656	\$29,965,851	\$11,292,370	\$16,939,006	\$1,734,475	\$57,872,769
Hand trades ¹	1,470	1,941,500	1,627	2,409	1,028,435	200,586	1,766,003	16,061	1,676,190	73,752	4,311,983
Governmental establishment	1	38,598		4	2,037	183	17,858		16,143	1,715	29,098
Establishments with a product of less than \$500	745	375,552	793	116	9,914	16,025	65,249	5,823	59,318	78	196,956
All other establishments	2,601	46,606,464	2,947	27,046	11,209,249	8,281,862	28,116,741	11,270,486	15,187,325	1,658,930	53,331,782

¹ Includes bicycle and tricycle repairing, 40; blacksmithing and wheelwrighting, 613; boots and shoes, custom work and repairing, 101; carpentering, 78; clothing, men's, custom work and repairing, 68; clothing, women's, dressmaking, 80; dyeing and cleaning, 3; furniture, cabinetmaking, repairing, and upholstering, 50; lock and gun smithing, 5; masonry, brick and stone, 29; millinery, custom work, 151; painting, house, sign, etc., 90; paper hanging, 2; plumbing, and gas and steam fitting, 56; sewing machine repairing, 1; taxidermy, 3; watch, clock, and jewelry repairing, 91.

Of the 4,817 establishments of all classes, shown in this table, 2,215, or 46 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 \$4,508,889, or only 7.8 per cent of the total products of the state.

In addition to the 4,817 active establishments in the state during the census year, with a capital of \$48,962,114, shown in Table 2, there were 23 idle establishments, with a capital of \$104,160, divided as follows:

INDUSTRIES.	Number of idle establishments.	Capital.
Foundry and machine shop products	2	\$12,000
Lumber, planing mill products, including sash, doors, and blinds	1	82,000
Marble and stone work	1	11,500
Paper and wood pulp	1	15,000
Woolen goods	8	13,370
All other industries	15	20,290

Comparative statistics for the 10 leading industries in Vermont are presented in Table 3.

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	1,618	\$29,260,101	15,000	\$6,681,018	\$1,645,682	\$20,052,558	\$34,366,777
	1890	1,413	20,804,840	13,638	5,013,498	1,014,833	13,778,997	23,947,627
Increase, 1890 to 1900		205	8,455,261	1,312	1,667,520	630,844	6,273,561	10,419,760
Per cent of increase		14.5	40.6	9.6	33.3	62.2	45.5	43.5
Per cent of total of all industries in state	1900	39.7	60.3	50.9	54.6	47.3	67.1	59.6
	1890	46.6	63.5	61.9	59.5	46.4	67.4	62.5
Cheese, butter, and condensed milk, factory product	1900	255	1,222,892	522	256,377	66,992	4,835,289	5,656,265
	1890	123	367,353	263	77,403	14,947	1,387,445	1,602,641
Flouring and grist mill products	1900	211	1,289,497	190	81,863	48,985	2,679,793	3,222,347
	1890	217	1,343,356	251	95,685	49,906	2,452,944	2,890,174
Foundry and machine shop products	1900	61	2,507,813	1,288	626,794	274,520	773,107	2,185,510
	1890	61	1,398,576	733	369,014	60,310	488,953	1,199,067
Hosiery and knit goods	1900	14	1,589,786	1,041	389,067	108,006	1,115,324	1,834,685
	1890	10	754,882	705	256,085	63,188	649,004	1,105,958
Lumber and timber products	1900	658	7,051,523	3,625	1,184,904	176,026	3,877,181	6,131,808
	1890	779	7,789,874	6,054	1,501,776	294,463	3,854,670	6,958,674
Lumber, planing mill products, including sash, doors, and blinds	1900	46	2,095,507	814	301,215	121,913	1,856,136	2,598,581
	1890	81	1,050,757	628	270,484	56,403	1,354,214	1,868,760
Marble and stone work	1900	54	3,603,111	1,773	912,614	183,696	805,476	2,484,551
	1890	46	993,236	1,353	674,317	1,437	582,202	1,656,637
Monuments and tombstones	1900	268	1,844,015	2,974	1,773,103	268,391	1,143,008	4,045,611
	1890	96	650,513	1,095	638,240	59,552	1,492,384	
Paper and wood pulp	1900	27	4,853,806	1,216	571,018	265,569	1,634,922	3,384,778
	1890	21	3,151,911	1,065	487,529	235,742	1,280,722	2,449,049
Wool manufactures	1900	24	3,202,151	1,557	603,963	131,575	1,732,372	2,822,646
	1890	29	3,304,382	1,541	582,965	178,385	1,435,163	2,723,683

The 10 leading industries of the state in 1900, as shown in Table 3, embrace 1,618 establishments, or 39.7 per cent of the total number in the state; \$29,260,101, or 60.3 per cent of the total capital; 15,000, or 50.9 per cent of the total average number of wage-earners; \$6,681,018, or 54.6 per cent of the total wages; and \$34,366,777, or 59.6 per cent of the total products. In the discussion which follows, these industries are ranked with reference to the value of the products.

Table 3 shows that the manufacture of lumber and timber is the most important in the state. The 658 establishments reported for this industry gave employment to 3,625 persons, or 12.3 per cent of the wage-earners in the state, and paid in wages, \$1,184,904, or 9.7 per cent of the total wages of the state. The value of the products was \$6,131,808, or 10.6 per cent of the value of all the products of the state. In 1890 the establishments numbered 779, the wage-earners, 6,054, and the value of the products was \$6,958,674.

Allied to the manufacture of lumber and timber is the manufacture of planing mill products, including sash, doors, and blinds. For this industry 46 establishments were reported, an increase of 48.4 per cent over 1890, when the number was 31. The number of wage-earners increased from 628 in 1890 to 814 in 1900, or 29.6 per cent; and the value of the products from \$1,868,760 to \$2,598,581, or 39.1 per cent. Sawmills were among the first mechanical establishments in the state. At the close of the Revolutionary war, Lake Champlain became the principal avenue of commerce between the settlements along the lake and Canada. Large quantities of pine and oak timber were cut in the forests that skirted the lake and larger rivers, and were floated in rafts by means of jury-mast and sail down the lake, thence by the Richelieu and St. Lawrence rivers to Quebec, and shipped to Europe.¹ With the removal of the natural barriers to navigation in the Richelieu River and the opening of the railroad from Burlington to the New England markets, Burlington became the center of a large lumber trade. In 1882 the sales of the Burlington lumber market amounted to 117,000,000 feet,¹ the city ranking third in importance as a lumber market in the United States. Since the establishment of all-rail connections from Canadian mills to the Boston market, permitting winter shipments and avoiding reshipment, there has been a gradual decrease in the city's lumber trade, which, however, still remains its most important industry.

Next in importance stands the factory manufacture of cheese, butter, and condensed milk. In the decade from 1890 to 1900 the number of establishments increased from 123 to 255, or 107.3 per cent; the capital from \$367,353 to \$1,222,892, or 232.9 per cent; the wage-earners from 263 to 522, or 98.5 per cent; and the products from \$1,602,641 to \$5,656,265, or 252.9 per cent.

The manufacture of monuments and tombstones is third in importance, and also shows a notable increase in all

particulars, the percentages of gain being nearly the same in number of establishments, average number of wage-earners, and value of products. In 1890, 96 establishments were reported, and in 1900, 268, an increase of 179.2 per cent. The wage-earners in 1890 numbered 1,095, and in 1900, 2,974, an increase of 171.6 per cent. The value of products in 1890 was \$1,492,384, and in 1900, \$4,045,611, an increase of 171.1 per cent. The showing for marble and stone work, an allied industry, is also satisfactory. The number of establishments in 1890 was 46, compared with 54 in 1900, an increase of only 17.4 per cent; but the value of products, \$1,656,637 in 1890, amounted to \$2,484,551 in 1900, an increase of 50 per cent. Both industries owe their importance to extensive quarries.² A large proportion of the marble used in the United States is obtained from quarries in Vermont. It was not until 1785 that the first quarry was opened by Isaac Underhill on land in Dorset. In 1805 a quarry was started in Middlebury. The largest producing quarries are on Otter Creek, Proctor and West Rutland being the principal quarrying towns. Quarries are operated at different points in the western part of the state, extending from Isle La Motte, where black marble is found, to Bennington county. These marbles are very beautiful in finish and texture. The manufacture of marble monuments as an important industry dates from 1808. The stock was first taken from the top or outer edge of the layers, where the strata could readily be split into sheets of suitable thickness. These sheets were cut down with a chisel into the desired shape. Marble was first sawed in South Dorset in 1818, and found a market in Boston, New York, Philadelphia, Cleveland, and intermediate points.

The quarrying of granite began in 1812.³ During the past twenty-five years quarries have been opened in Barre, Hardwick, Williamstown, Dummerston, Berlin, Woodbury, and Ryegate.³ The city of Barre had the largest per cent of increase in population of any place in the state in the last decade, due almost entirely to the development of these quarries and the manufactures allied to them.

It is interesting to note in this connection that the quarrying and cutting of slate is an important industry of southwestern Vermont. The first quarry was opened in 1839 at Fair Haven and was worked eight years before roofing slate was manufactured.⁴ There were 23 establishments in the state in 1900 (see Table 6), engaged in the manufacture of roofing and roofing materials. These reported a capital of \$545,914; 1,604 wage-earners; and products valued at \$907,744. In 1890 there were only 2 establishments reported for the industry.

The 27 establishments reported in 1900 as engaged in the manufacture of paper and wood pulp had a capital of \$4,853,806, and gave employment to 1,216 wage-earners, with total wages of \$571,018. The products were valued at \$3,384,773. The increase over 1890 in number of estab-

² Ibid., pages 1514-1518.

³ Report of the Vermont State Board of Agriculture, 1894, pages 293 and 295.

⁴ History of Rutland County, Vermont, by H. P. Smith and W. S. Rann, pages 192 and 193.

¹ The New England States, edited by W. T. Davis, Vol. III, pages 1524-1526.

lishments was 28.6 per cent; in number of wage-earners, 14.2 per cent; and in value of products, 38.2 per cent. This industry is largely located at Bellows Falls on the Connecticut River, and is favored by unfailing waterpower and adjacent forests.

The manufacture of flouring and grist mill products in a total of 211 establishments, with a capital of \$1,289,497, gave employment to 190 wage-earners in 1900, and paid in wages \$81,363. The value of the products amounted to \$3,222,347. In 1890 there were 217 establishments having a capital of \$1,343,356; 251 wage-earners with total wages of \$95,685; and products valued at \$2,890,174.

In wool manufactures 24 establishments were reported in 1900, with a capital of \$3,202,151; 1,557 wage-earners, with total wages of \$603,963; and products valued at \$2,822,646. In 1890 there were 29 establishments having a capital of \$3,304,382, and products to the value of \$2,723,683. The pioneer woolen manufacturer was Joel Valentine, who began the business in 1824.¹

The 61 establishments reported for the manufacture of foundry and machine shop products in 1900, had a capital of \$2,507,813; 1,288 wage-earners, with total wages of \$626,794; and products valued at \$2,185,510. While the number of establishments remained the same as in 1890, the capital was larger by 79.3 per cent, and the value of products increased 82.3 per cent.

The manufacture of hosiery and knit goods showed an increase in establishments from 10 in 1890 to 14 in 1900, or 40 per cent, and in value of products, an increase from \$1,105,958 in 1890 to \$1,834,685 in 1900, or 65.9 per cent.

Table 4 presents the totals for the manufacturing industries of the 21 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.

¹ The New England States, Vol. III, page 1551.

TABLE 4.—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.....	4,071	\$48,547,964	4,574	29,455	\$12,237,684	\$8,482,448	\$29,882,744	\$57,046,715
Total for urban manufactures	1,617	26,361,298	1,885	17,617	7,665,220	2,516,564	14,779,810	31,861,298
Barre.....	239	1,843,544	366	2,123	1,315,790	215,116	993,625	8,242,274
Bennington.....	82	3,129,196	85	1,855	701,080	161,755	1,443,830	2,805,608
Brandon.....	61	205,645	69	289	83,472	11,816	158,691	328,249
Brattleboro.....	119	1,334,492	132	854	376,647	90,213	665,599	1,544,457
Burlington.....	196	5,066,377	199	2,794	1,008,188	1,064,709	3,751,186	7,094,538
Colchester.....	31	1,298,233	29	932	251,499	81,797	764,284	1,258,603
Derby.....	19	215,924	17	184	71,200	7,101	351,220	531,462
Fair Haven.....	62	381,736	77	346	137,056	13,391	213,330	438,853
Lyndon.....	38	159,129	42	71	20,501	24,352	91,049	221,290
Montpelier.....	121	950,624	158	1,019	510,450	66,065	614,969	1,591,958
Newport.....	23	293,336	34	245	84,837	19,504	353,444	549,522
Northfield.....	56	356,110	64	276	112,263	14,933	339,433	561,673
Poultney.....	49	437,656	58	349	112,689	11,789	190,564	408,379
Proctor.....	5	2,465	5	2	625	125	3,079	6,010
Rockingham.....	53	664,902	65	359	163,457	143,297	504,028	961,023
Rutland.....	186	2,112,530	207	1,791	773,304	133,616	1,044,566	2,456,677
St. Albans.....	79	1,192,785	76	1,178	519,292	93,355	1,034,772	1,850,590
St. Johnsbury.....	89	3,790,028	91	1,195	568,619	132,521	951,643	2,338,906
Springfield.....	46	985,356	40	602	236,195	76,870	540,859	1,210,286
Swanton.....	46	306,698	55	259	80,546	23,643	295,193	480,601
West Rutland.....	17	2,134,582	16	944	487,560	125,541	474,446	1,440,334
Total for state, exclusive of urban manufactures.....	2,454	22,186,666	2,689	11,838	4,572,464	965,884	15,102,934	25,785,417
Per cent of urban manufactures to total for state.....	39.7	54.3	41.2	59.8	62.6	72.3	49.5	55.3

Of the 4,071 establishments in the state, 1,617, or 39.7 per cent, are located in these 21 cities and towns. The capital reported for these establishments is \$26,361,298, or 54.3 per cent of that for the entire state. They furnished employment to 17,617 wage-earners, or 59.8 per cent of the total number; paid \$7,665,220 in wages, or 62.6 per cent of the total amount; and the value of their products,

\$31,861,298, formed 55.3 per cent of the total for the state.

Table 5 shows the totals for the state by counties.

Table 6 shows the totals for the state by specified industries.

Table 7 shows the totals for all industries in the cities and towns withdrawn from the enumerators.

TABLE 5.—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.		Num-ber.	Salaries.	Total.	
											Average number.	Wages.
1	The State.....	4,071	\$48,547,964	\$6,738,461	\$8,089,567	\$11,682,873	\$22,037,063	4,574	1,772	\$1,620,876	29,455	\$12,237,684
2	Addison.....	223	1,473,374	334,631	203,026	353,776	581,941	247	74	60,201	818	303,890
3	Bennington.....	235	5,341,345	708,740	806,122	1,897,825	2,428,658	241	146	156,601	2,894	1,075,589
4	Caledonia.....	326	5,282,545	632,765	1,046,274	1,081,013	2,622,493	370	183	139,443	2,089	986,984
5	Chittenden.....	388	7,178,072	497,674	1,107,053	1,673,225	3,900,120	388	308	362,249	4,175	1,434,046
6	Essex.....	71	1,511,014	726,728	266,425	206,012	311,851	75	20	16,250	477	160,119
7	Franklin.....	301	2,735,020	369,463	441,927	875,666	1,047,964	329	169	131,490	2,107	804,053
8	Grand Isle.....	18	40,805	1,000	11,250	20,140	8,475	14	1	120	10	5,611
9	Lamoille.....	166	994,757	203,470	138,785	220,590	481,912	189	21	12,888	548	196,421
10	Orange.....	280	741,286	78,263	166,518	225,285	271,220	247	40	16,302	498	194,680
11	Orleans.....	210	1,544,547	182,466	242,248	356,150	763,683	229	51	43,367	1,104	378,013
12	Rutland.....	588	6,706,800	1,429,860	1,270,591	1,396,712	2,609,637	673	310	242,264	5,598	2,278,636
13	Washington.....	606	3,846,303	468,307	440,092	914,674	2,022,635	795	145	115,592	3,933	2,129,735
14	Windham.....	356	6,612,572	884,432	1,107,593	1,862,368	2,748,129	899	186	185,382	2,690	1,209,757
15	Windsor.....	358	4,539,459	370,614	781,063	1,099,437	2,288,345	378	118	138,727	2,514	1,080,700

TABLE 6.—MANUFACTURES BY

1 All industries.....	4,071	\$48,547,964	\$6,738,461	\$8,089,567	\$11,682,873	\$22,037,063	4,574	1,772	\$1,620,876	29,455	\$12,237,684
2 Agricultural implements.....	17	484,277	20,500	64,700	67,776	381,301	19	24	18,267	211	85,846
3 Awnings, tents, and sails.....	3	7,750			2,500	5,250	5			11	5,500
4 Baskets, and rattan and willow ware.....	3	21,200	3,450	6,000	5,950	5,800	5			39	15,975
5 Bicycle and tricycle repairing.....	40	50,390	5,850	8,725	17,185	18,680	45	1	300	32	12,568
6 Blacksmithing and wheelwrighting.....	613	582,113	63,712	183,060	122,511	212,830	652	2	800	230	99,501
7 Bookbinding and blank book making.....	4	10,000			3,350	1,650	5			21	5,093
8 Boots and shoes, custom work and repairing.....	101	51,556	6,890	14,425	13,158	17,588	106	1	50	43	16,429
9 Boots and shoes, factory product.....	6	478,184	4,800	42,393	77,596	353,395	2	40	32,114	355	128,771
10 Bottling.....	7	39,120	4,600	11,000	17,100	6,420	8	3	1,296	20	9,216
11 Boxes, wooden packing.....	34	207,719	14,712	23,982	44,550	124,475	33	9	4,400	201	70,020
12 Bread and other bakery products.....	50	259,847	21,050	45,550	82,907	110,340	54	33	25,438	148	59,298
13 Brick and tile.....	15	99,298	14,700	23,520	14,525	46,553	15	5	3,864	115	42,722
14 Brooms and brushes.....	3	55,215	2,350	9,100	8,575	35,190	3	3	2,250	50	14,650
15 Carpentering.....	78	239,837	22,725	33,965	57,240	125,907	92	4	1,640	800	370,727
16 Carriages and wagons.....	86	357,085	41,000	105,550	55,010	155,475	105	8	1,275	196	95,516
17 Cars and general shop construction and repairs by steam railroad companies.....	7	711,261	92,100	274,200	216,458	128,503		32	23,744	779	446,017
18 Cheese, butter, and condensed milk, factory product.....	255	1,222,892	53,712	315,163	494,522	359,495	142	137	87,514	522	236,377
19 Clothing, men's, custom work and repairing.....	63	141,508	6,350	17,775	10,120	107,263	76	6	5,960	209	80,335
20 Clothing, men's, factory product.....	7	424,507	1,500	21,789	32,167	869,051	8	32	43,765	526	145,334
21 Clothing, women's, dressmaking.....	86	48,643	5,200	10,710	9,630	23,103	100	2	1,880	179	89,115
22 Clothing, women's, factory product.....	5	47,420	600	1,900	8,100	36,820	6	10	5,005	202	53,123
23 Confectionery.....	11	234,600	24,663	65,000	27,961	116,976	14	40	26,908	115	36,174
24 Cooperage.....	9	53,505	2,450	7,300	17,575	26,180	15			81	24,705
25 Cotton goods.....	5	1,982,938	188,754	451,745	796,312	496,172		20	26,579	1,015	259,758
26 Dyeing and cleaning.....	3	6,253	1,600	3,900	250	503	3			1	170
27 Electrical construction and repairs.....	5	18,032	800	2,000	2,500	13,232	7	3	751	15	5,266
28 Flouring and grist mill products.....	211	1,239,497	172,155	327,215	276,826	513,301	251	29	20,664	190	81,363
29 Food preparations.....	4	115,376	10,700	32,545	27,637	44,494	2	15	7,832	53	13,727
30 Foundry and machine shop products.....	61	2,507,813	224,061	292,728	660,557	1,330,469	53	143	135,395	1,238	626,794
31 Fruits and vegetables, canning and preserving.....	3	68,528		13,500	20,316	34,712	6	4	4,100	111	21,762
32 Fur goods.....	3	27,536			1,303	26,233	4	1	730	16	5,763
33 Furnishing goods, men's.....	4	85,574	300	7,000	21,505	56,769	1	36	22,027	200	46,989
34 Furniture, cabinetmaking, repairing, and upholstering.....	50	98,229	12,350	32,050	9,410	44,419	58	2	900	48	19,439
35 Furniture, factory product.....	24	1,040,223	34,000	225,245	221,187	559,791	24	61	61,146	987	358,342
36 Gas, illuminating and heating.....	7	477,099	38,950	48,000	341,277	58,872		13	6,515	15	7,337
37 Hardware.....	5	64,000	4,200	4,850	18,405	36,545	5	3	3,600	71	22,334
38 Hosiery and knit goods.....	14	1,589,786	21,300	92,380	485,822	990,234	9	32	42,024	1,041	339,667
39 House furnishing goods, not elsewhere specified.....	4	28,466	50	2,500	7,718	18,198	5	3	2,336	29	10,347
40 Krollin and other earth grinding.....	3	13,550	1,600	12,500	2,200	3,250	2			22	6,017
41 Leather, tanned, curried, and finished.....	8	160,906	4,900	13,500	7,250	135,256	10	5	5,450	63	31,225
42 Lime and cement.....	13	176,825	51,900	81,450	19,925	73,550	17	2	1,400	182	57,257
43 Lock and gun smithing.....	5	4,532	100	800	2,540	1,092	6			2	430
44 Looking-glass and picture frames.....	14	15,400	150	400	1,725	13,125	16	3	625	11	3,308
45 Lumber and timber products.....	658	7,051,523	2,064,800	755,210	1,663,022	2,668,491	815	84	53,243	3,625	1,184,904
46 Lumber, planing mill products, including sash, doors, and blinds.....	46	2,095,507	189,625	276,029	213,282	1,466,571	54	53	52,568	314	301,215
47 Mantels, slate, marble, and marbleized.....	4	13,010	700	3,100	1,210	8,000	8	1	480	7	2,880
48 Marble and stone work.....	54	3,603,111	1,223,833	303,900	724,031	851,347	77	129	131,933	1,773	912,614
49 Masonry, brick and stone.....	29	23,393	2,400	4,400	8,422	8,171	37			159	76,959
50 Millinery, custom work.....	164	208,770	12,110	35,665	7,092	153,903	171	12	6,034	176	44,933
51 Mineral and soda waters.....	12	74,760	4,300	17,200	14,500	88,766	20	9	6,478	28	12,171

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 number.	Wages.	Average number.	Wages.	Average number.	Wages.										
24,714	\$11,027,185	4,478	\$1,166,491	263	\$44,008	\$3,482,448	\$295,512	\$236,018	\$2,688,837	\$262,081	\$29,882,744	\$29,046,271	\$386,473	\$57,646,715	1
780	284,197	79	17,478	9	1,715	52,813	9,589	5,668	87,056	50	803,779	788,453	17,326	1,567,740	2
1,860	759,760	957	302,149	77	13,680	227,188	29,196	19,673	165,397	12,922	2,458,592	2,395,674	62,918	4,727,244	3
2,015	968,890	70	17,528	4	566	212,510	16,338	28,964	130,744	41,464	2,113,821	2,066,052	47,769	4,934,108	4
8,114	1,180,720	1,007	243,736	54	9,590	1,178,415	44,479	81,266	1,019,965	82,705	5,662,940	5,568,794	94,146	10,014,681	5
376	184,042	89	28,233	12	2,844	87,153	2,455	4,863	29,835		443,808	440,469	3,339	807,666	6
1,653	724,443	438	77,606	16	2,004	190,406	13,592	13,582	158,563	4,669	2,166,795	2,105,417	61,378	3,775,284	7
9	5,411	1	200			757	45	223	489		116,670	114,214	2,456	136,459	8
521	190,137	23	5,694	4	590	89,878	3,578	5,814	30,486		809,012	802,403	6,609	1,279,504	9
466	187,646	29	6,574	3	460	23,817	5,189	4,482	19,146		851,049	834,175	16,874	1,344,326	10
944	340,432	146	35,368	14	2,213	58,802	5,454	7,742	48,513	2,093	1,756,092	1,742,767	18,325	2,701,625	11
5,014	2,159,022	557	115,965	27	3,649	361,172	60,501	37,233	244,387	19,051	3,156,367	3,039,207	117,160	7,408,812	12
3,714	2,075,776	215	53,109	4	850	336,294	47,269	22,049	184,146	82,830	2,856,308	2,761,070	95,288	6,799,986	13
2,272	1,083,697	402	124,105	16	1,955	492,434	33,777	33,589	421,906	3,322	3,428,917	3,228,125	205,792	6,410,540	14
2,026	933,012	465	143,746	23	8,942	266,309	24,100	26,120	203,114	12,975	3,258,594	3,166,451	92,143	5,739,540	15

SPECIFIED INDUSTRIES: 1900.

24,714	\$11,027,185	4,478	\$1,166,491	263	\$44,008	\$3,482,448	\$295,512	\$236,018	\$2,688,837	\$262,081	\$29,882,744	\$29,046,271	\$386,478	\$57,646,715	1
204	84,124	7	1,722			15,909	169	2,303	13,437		168,515	154,060	9,455	369,637	2
7	3,630	4	1,870			845	660	30	155		10,226	9,991	235	23,030	3
37	15,475					2,130		300	1,830		6,049	6,049		33,870	4
32	12,568	2	500			5,226	2,721	862	2,023	115	24,760	23,794	966	65,737	5
229	99,306			1	195	27,184	14,406	4,080	8,653	45	217,252	198,002	18,250	740,976	6
6	2,543	15	2,550			2,007	740	63	1,104		1,676	1,506	170	14,475	7
40	16,077	3	852			6,950	5,194	376	1,380	100	86,960	85,611	1,349	105,650	8
199	86,719	155	41,952	1	100	25,970	1,060	547	24,313	45	561,786	558,555	3,231	792,707	9
20	9,216					5,310	372	243	4,695		81,696	81,233		133,300	10
184	66,451	16	8,492	1	77	6,834	2,822	724	3,238		188,084	184,705	3,379	284,286	11
120	51,781	24	6,880	4	687	27,889	9,688	2,514	15,159	28	206,419	196,688	9,731	417,269	12
114	42,622			1	100	5,474	495	493	2,386	1,600	18,287	1,532	16,755	99,625	13
47	14,250			3	400	6,513		603	6,910		69,784	68,913	821	111,508	14
800	370,727					47,131	2,338	1,842	5,438	37,613	593,010	590,053	2,957	1,245,607	15
196	95,516					14,535	2,234	2,902	3,718	631	110,709	104,690	6,119	821,315	16
779	446,017					4,614		2,092	2,522		350,401	338,849	11,552	824,776	17
509	232,894	13	3,483			66,992	4,905	5,373	54,511	2,203	4,835,289	4,827,130	58,169	5,656,205	18
91	46,994	118	33,841			15,697	9,162	1,049	4,636	350	122,769	120,234	2,475	312,625	19
73	39,309	453	106,025			32,076	3,480	544	28,052		359,813	356,843	2,970	723,652	20
4	2,050	175	87,065			8,196	6,658	272	1,241	25	54,222	52,039	2,133	103,259	21
26	7,475	176	45,648			2,076	375	126	1,575		115,429	114,548	881	197,995	22
58	24,576	56	11,473	1	125	28,822	3,736	1,411	23,675		124,870	119,750	5,120	284,259	23
81	24,705					2,039	80	141	1,318		86,112	85,383	729	105,965	24
438	131,465	495	114,375	82	13,913	43,282		5,650	37,632		526,235	506,009	20,226	999,886	25
		1	170			249	150	66	33		304	150	164	1,968	26
15	5,266					1,859	1,280	57	522		27,672	27,606	66	45,672	27
187	80,818	2	445	1	100	48,985	8,245	9,790	30,950		2,679,793	2,663,039	11,694	3,222,347	28
32	9,480	21	4,247			42,248	100	46	42,102		61,768	60,391	1,377	124,370	29
1,279	624,732	8	1,732	1	330	274,529	9,943	15,490	224,788	24,358	773,107	741,440	31,667	2,185,510	30
64	15,140	45	6,362	2	260	3,390	450	210	2,730		83,361	82,161	1,200	166,184	31
6	3,329	10	2,434			1,638	1,175	150	313		12,260	12,100	160	23,848	32
37	14,378	161	32,258	2	353	18,963	3,414	545	7,606	7,398	82,063	81,052	1,011	191,027	33
45	19,066	2	283	1	90	8,298	3,492	918	3,888		43,299	41,810	1,489	100,112	34
944	343,944	15	3,136	28	6,262	69,167	6,660	3,267	53,929	5,311	555,448	544,238	11,210	1,252,743	35
15	7,837					13,950	175	2,675	11,100		20,191	19,054	1,137	71,015	36
42	16,736	27	5,139	2	459	3,134	470	114	1,350	1,200	39,439	37,764	1,675	91,325	37
887	161,507	661	227,842	3	318	103,006	12,519	3,220	92,267		1,115,324	1,093,073	22,251	1,834,685	38
22	8,334	7	1,413			3,618	659	231	2,288	440	34,486	33,541	945	54,515	39
22	6,017					446		121	325		3,847	3,437	410	21,450	40
68	31,225					10,694	1,000	837	8,807		300,162	297,371	2,791	365,099	41
182	57,257					9,367	10	841	8,616		95,552	50,440	45,112	207,524	42
2	430					632	427	12	193		1,036	924	112	4,648	43
11	3,808					2,186	1,254	134	798		14,894	14,691	103	31,177	44
8,486	1,166,227	99	13,411	40	5,266	176,026	9,444	40,001	126,581		3,377,131	3,376,536	595	6,131,808	45
794	297,819	14	2,470	6	926	121,913	2,385	6,264	100,644	12,620	1,856,136	1,847,619	8,517	2,598,581	46
7	2,880					474	98	45	331		12,882	12,627	255	26,708	47
1,773	912,614					183,696	5,915	22,896	145,460	9,425	805,476	776,375	29,101	2,484,551	48
159	75,959					13,412	315	330	347	12,420	44,736	44,500	236	175,186	49
2	1,335	173	43,523	1	75	30,000	21,452	1,358	7,190		211,755	208,928	2,827	404,676	50
26	11,776	1	300	1	95	3,703	1,180	373	2,150		45,333	44,811	572	104,565	51

TABLE 6.—MANUFACTURES BY

	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.		Number.	Salaries.	Total.	
											Average number.	Wages.
52	Monuments and tombstones	268	\$1,844,015	\$142,400	\$193,561	\$428,905	\$1,079,149	450	86	\$73,291	2,974	\$1,773,103
53	Painting, house, sign, etc.	90	76,414	7,690	18,965	13,095	35,664	99			226	108,701
54	Paper and wood pulp	27	4,853,806	1,162,959	997,646	1,878,484	1,314,717	16	88	129,498	1,216	571,018
55	Patent medicines and compounds ..	24	758,291	29,575	103,450	74,405	550,861	26	98	160,482	279	110,150
56	Paving and paving materials	8	13,489	2,500	700	5,430	4,809	3			23	10,280
57	Photography	70	110,461	8,800	27,725	48,839	25,097	72			35	12,986
58	Pickles, preserves, and sauces	8	48,520	3,700	5,000	13,350	21,470	9	3	1,550	18	6,877
59	Plumbing, and gas and steam fitting ..	56	298,456	20,700	33,250	86,625	207,881	72	25	12,606	249	133,071
60	Printing and publishing, book and job ..	41	176,447	2,450	8,475	104,300	61,222	47	22	14,710	145	58,251
61	Printing and publishing, newspapers and periodicals.	61	500,698	25,987	52,208	288,029	139,474	54	71	50,135	436	176,748
62	Roofing and roofing materials	23	545,914	123,790	57,360	131,155	233,609	87	89	26,310	1,604	542,086
63	Saddlery and harness	124	153,405	12,472	30,435	18,733	91,715	185	2	575	73	31,999
64	Shoddy	8	245,982	11,200	25,800	15,500	193,482	4	1	1,000	93	45,345
65	Soap and candles	7	28,280	5,050	11,600	5,675	5,955	7	1	1,000	12	4,550
66	Taxidermy	3	4,875	50	500	175	4,150	3				
67	Tinsmithing, coppersmithing, and sheet-iron working.	87	298,555	15,355	75,650	42,925	164,625	102	16	10,694	190	70,868
68	Tobacco, cigars and cigarettes	21	42,941	805	1,325	2,560	38,251	23	2	1,728	52	26,226
69	Tools, not elsewhere specified	5	27,254	510	1,040	8,384	17,320	6	3	1,800	14	8,180
70	Toys and games	3	95,880	3,125	26,500	21,815	44,440	9	9	7,954	121	52,027
71	Vinegar and cider	26	23,885	1,395	7,055	11,570	3,865	26			9	2,460
72	Watch, clock, and jewelry repairing ..	91	106,541	6,950	14,900	35,003	49,688	104			49	28,591
73	Wirework, including wire rope and cable.	3	60,105	10,400	11,200	14,005	24,500	4	2	6,500	38	13,660
74	Wood, turned and carved	25	251,840	10,175	30,865	48,750	162,050	82	9	9,250	265	89,646
75	Woodenware, not elsewhere specified ..	6	41,254	3,200	9,600	14,300	14,154	7	2	1,200	51	15,792
76	Woolen goods	23	3,001,347	133,625	473,114	781,290	1,663,318	21	51	70,908	1,484	577,249
77	All other industries	62	6,315,794	376,046	1,096,026	1,221,836	3,621,886	44	187	209,755	2,767	1,176,887

¹ Embraces boxes, cigar, 1; boxes, fancy and paper, 2; brass castings and brass finishing, 1; carriage and wagon materials, 1; carriages and sleds, children's, 2; cars and general shop construction and repairs by street railroad companies, 1; chemicals, 2; clocks, 2; coffee and spice, roasting and grinding, 2; coffins, burial cases, and undertakers' goods, 2; cutlery and edge tools, 1; electroplating, 1; explosives, 1; grease and tallow, 1; hardware, saddlery, 1; hones and whetstones, 1; instruments, professional and scientific, 1; iron and steel, nails and spikes, cut and wrought, including wire nails, 1; ironwork, architectural and ornamental, 1;

TABLE 7.—MANUFACTURES IN CITIES AND

	Total for cities and towns	1,617	\$26,361,298	\$2,462,445	\$4,134,913	\$6,172,746	\$13,591,194	1,855	1,161	\$1,137,306	17,617	\$7,665,220
2	Barre	239	1,343,544	95,100	140,340	329,512	778,592	366	55	47,724	2,123	1,815,790
3	Bennington	82	3,129,196	151,475	366,380	899,289	1,722,052	85	88	101,805	1,855	701,030
4	Brandon	61	205,645	36,880	28,540	58,849	81,376	69	11	5,414	239	83,472
5	Brattleboro	119	1,334,492	61,175	200,812	275,357	797,148	132	63	68,861	854	376,647
6	Burlington	196	5,066,377	308,512	727,437	1,137,553	2,892,875	199	243	301,689	2,794	1,008,188
7	Colchester	31	1,298,283	91,529	206,561	321,893	678,250	29	42	41,115	932	251,499
8	Derby	19	215,924	7,250	37,350	62,750	108,574	17	10	9,490	184	71,200
9	Fair Haven	62	381,736	86,038	72,756	102,238	120,704	77	12	7,805	346	137,056
10	Lyndon	38	159,129	17,250	51,500	15,859	74,520	42	39	18,424	71	20,501
11	Montpelier	121	950,624	80,100	98,400	264,268	512,856	158	57	53,433	1,019	510,450
12	Newport	23	293,336	12,100	32,523	70,813	177,900	34	12	16,016	245	84,837
13	Northfield	56	856,110	26,345	51,891	81,675	150,199	64	11	9,100	276	112,263
14	Poultney	49	437,656	119,425	66,275	85,090	166,866	58	9	7,530	349	112,689
15	Proctor	5	2,465	450	810	305	900	5			2	625
16	Rockingham	53	604,902	15,170	77,053	208,053	364,626	65	47	33,920	359	163,457
17	Rutland	186	2,112,530	200,374	328,996	421,285	1,161,875	207	189	103,563	1,791	778,804
18	St. Albans	79	1,192,735	97,252	202,097	488,869	404,517	76	95	78,499	1,178	519,292
19	St. Johnsbury	89	3,790,028	220,875	735,804	731,234	2,102,115	91	96	93,105	1,195	568,619
20	Springfield	46	985,856	77,420	128,488	174,993	604,450	40	38	47,602	602	286,195
21	Swanton	46	306,698	54,225	60,650	66,386	185,437	55	27	17,286	259	80,546
22	West Rutland	17	2,134,582	703,500	545,250	376,470	509,362	16	67	74,925	944	487,560

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.										
2,971	\$1,772,565			8	\$538	\$268,391	\$29,625	\$7,652	\$125,524	\$105,590	\$1,143,008	\$1,075,342	\$67,666	\$4,045,611	52
226	108,701					6,505	8,369	382	2,804		81,464	80,811	1,158	266,177	53
1,129	545,066	86	\$25,794	1	158	265,569	975	26,806	237,813	975	1,684,922	1,477,658	207,264	3,384,778	54
124	69,991	154	39,994	1	165	806,360	2,234	5,137	797,404	1,585	690,610	635,634	4,976	2,125,016	55
23	10,280					1,989	70	79	1,840		10,126	9,136	990	27,854	56
19	7,052	16	5,884			12,458	7,626	460	4,022	350	87,068	35,814	1,754	123,154	57
13	5,077	5	1,800			1,933	705	203	1,025		25,717	24,586	1,131	43,808	58
247	182,636	1	260	1	175	17,499	7,599	1,942	7,958		310,278	306,901	3,377	603,861	59
106	48,848	36	8,913	3	490	16,696	6,797	798	8,301	800	72,967	68,914	4,053	230,120	60
280	183,532	144	41,445	12	1,771	58,113	9,717	2,783	32,013	8,600	115,285	106,209	9,076	546,991	61
1,596	540,756			8	1,330	33,916	19,360	1,646	12,910		175,196	121,003	54,193	907,744	62
73	81,999					11,821	6,890	1,097	8,274	60	107,874	105,638	2,236	229,795	63
67	83,142	26	7,203			7,609		1,168	6,441		268,712	263,034	5,678	882,852	64
11	4,600			1	50	1,973	350	203	1,426		10,141	9,426	715	26,110	65
						255	205	5	45		465	350	115	2,925	66
189	70,618	1	250			16,508	6,028	2,755	7,695	25	170,616	166,885	3,731	849,893	67
47	25,136	4	974	1	116	11,869	2,620	315	8,434		30,700	30,218	482	80,223	68
14	8,180					1,062	400	102	560		16,921	15,067	1,254	38,150	69
109	48,598	9	2,334	3	500	1,950	800	319	881		49,355	49,156	799	152,688	70
9	2,460					441	150	144	147		16,171	15,906	265	36,918	71
44	22,541	4	1,000	1	50	18,197	8,147	862	4,128	60	20,185	18,641	1,544	105,404	72
30	12,600	8	1,060			1,471		329	1,142		34,993	34,666	327	63,486	73
252	87,538	12	1,828	1	280	11,074	2,181	1,266	7,627		132,839	129,216	3,623	305,425	74
46	14,732	5	1,060			2,102	860	214	1,528		20,676	19,911	765	56,765	75
1,030	435,955	427	135,982	27	5,812	98,541	7,000	10,452	81,014	75	1,554,625	1,505,601	48,924	2,572,646	76
2,168	1,030,733	591	134,217	18	2,937	265,362	8,797	25,368	203,613	27,584	1,988,602	1,933,640	54,962	4,994,608	77

kindling wood, 1; lard, refined, 2; lasts, 2; mattresses and spring beds, 2; musical instruments, organs and materials, 2; musical instruments, pianos and materials, 1; needles and pins, 1; paints, 2; paper goods, not elsewhere specified, 2; paper hanging, 2; perfumery and cosmetics, 1; photographic materials, 1; pottery, terra cotta, and fire-clay products, 1; pumps, not including steam pumps, 1; refrigerators, 1; scales and balances, 2; sewing machine repairing, 1; ship and boat building, wooden, 2; shirts, 2; sporting goods, 2; sugar and molasses, refining, 1; surgical appliances, 1; window shades, 1; wool pulling, 2; worsted goods, 1.

TOWNS UNDER 20,000 IN POPULATION: 1900.

14,111	\$6,776,287	8,886	\$868,704	120	\$20,229	\$2,516,564	\$209,020	\$126,011	\$1,962,591	\$218,942	\$14,779,810	\$14,416,855	\$362,955	\$31,861,208	1
2,089	1,305,066	31	10,224	8	500	215,116	25,226	7,191	111,799	70,900	993,625	937,536	56,089	3,242,274	2
994	429,732	840	267,178	21	4,120	161,755	25,811	8,131	114,891	12,922	1,443,830	1,407,233	36,597	2,805,608	3
195	75,856	33	6,446	11	1,170	11,816	2,441	997	6,517	1,861	158,031	155,681	3,010	326,249	4
681	239,374	263	85,999	10	1,274	90,213	18,851	6,400	68,055	1,907	665,599	644,338	21,261	1,644,467	5
2,058	836,887	690	162,867	46	8,434	1,064,709	38,193	22,117	954,223	50,171	3,751,186	3,696,421	54,765	7,094,588	6
623	177,943	303	72,630	6	926	81,797	1,595	4,359	48,459	27,384	764,284	750,042	14,242	1,258,603	7
181	70,600			3	600	7,101	1,328	1,139	4,634		351,220	350,196	1,024	531,462	8
303	128,097	41	8,500	2	459	13,391	2,778	1,628	6,330	2,155	213,330	204,439	8,891	438,858	9
54	17,038	16	3,323	1	135	24,352	1,913	1,034	21,055	300	91,049	90,093	956	221,200	10
919	485,566	99	24,534	1	350	66,065	17,779	5,971	37,435	4,830	614,969	591,509	23,460	1,691,958	11
184	73,279	54	10,661	7	897	19,504	2,097	1,263	16,144		353,444	349,182	4,262	549,522	12
209	97,843	67	14,420			14,933	1,410	1,554	12,019		339,433	333,950	5,483	561,673	13
343	111,719	6	970			11,789	4,065	903	6,271	550	190,564	181,442	9,122	405,379	14
		2	625			125	75	19	31		3,079	3,000	79	6,010	15
324	152,927	34	10,426	1	104	143,297	8,914	8,317	130,746	320	504,028	490,466	13,562	961,023	16
1,335	676,963	451	95,651	5	690	133,616	31,655	9,928	81,513	10,525	1,044,566	1,014,060	30,506	2,456,677	17
900	465,421	278	53,871			98,355	7,438	5,942	81,776	3,199	1,034,772	1,012,590	22,182	1,850,590	18
1,149	556,141	45	12,310	1	168	132,521	9,292	17,477	82,784	22,968	951,643	926,246	25,397	2,338,906	19
536	267,577	65	18,288	1	330	76,870	4,920	3,902	54,148	8,900	640,859	627,916	12,943	1,210,286	20
192	71,023	66	9,451	1	72	23,648	3,006	1,841	18,801		295,193	276,881	18,312	480,601	21
942	487,235	2	325			125,541	233	15,853	109,455		474,446	473,634	812	1,440,334	22

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 113.

WASHINGTON, D. C.

November 20, 1901.

AGRICULTURE.

NEW HAMPSHIRE.

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 Hampshire, 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.

New Hampshire has a total land area of 9,005 square miles, of which 5,640 square miles, or 62.6 per cent, are included in farms. The surface of the southeastern portion of the state, extending about 25 miles inland from the coast, is level, with only occasional hills.

North and west of this region the valleys of the rivers, which flow from north to south, are separated by highlands, which grow more and more rugged above the central part of the state, and in the north develop into the forest-clad peaks and ridges of the White Mountains.

The soil along the coast and in the river valleys is very fertile, much of it being periodically enriched and renewed by alluvial deposits. Here are found some of

the finest meadow lands in the world. The soil of the highlands, when properly cared for, is fairly productive, but without skillful and energetic management its use for the cultivation of vegetables or cereals is not generally profitable. The northern part of the state, which includes the White Mountain region, with an area of over 1,300 square miles, has a rocky and unproductive soil, better adapted for grazing than for raising grain or vegetables.

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 Hampshire, June 1, 1900, numbered 29,324, and had a value of \$70,124,360, of which amount \$34,625,600, or 49.4 per cent, represents the value of buildings, and \$35,498,760, or 50.6 per cent, the value of the land and improvements other than buildings. On the same date the value of farm implements and machinery was \$5,163,090, and of live stock, \$10,554,646. These values, added to that of farms, give the "total value of farm property," \$85,842,096.

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. This valuation for 1899 was \$21,929,988, of which amount \$9,654,694, or 44.0 per cent, represents the value of products of the live-stock industry, and \$12,275,294, or 56.0 per cent, the value of crops, including forest products. Since 1890 there has been an increase in the value of farm products of \$8,168,938, or 59.4 per cent. A large part of this 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, while cereal production and the raising of live stock continue to decrease in importance.

The value of "net farm products" or the "gross farm income" is obtained by deducting from the 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 \$6,010,910, leaving \$15,919,078 as the gross farm income. The percentage which this sum is of the "total value of farm property" is referred to in the text of the bulletin as the "percentage of income on investment." For New Hampshire 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 HAMPSHIRE

GENERAL STATISTICS.

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 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.....	29,324	3,609,864	1,076,879	2,532,985	123.1	29.8
1890.....	29,151	3,459,018	1,727,887	1,731,631	118.7	49.9
1880.....	32,181	3,721,173	2,308,112	1,413,061	115.6	62.0
1870.....	29,642	3,605,994	2,334,487	1,271,507	121.7	64.7
1860.....	30,501	3,744,625	2,367,034	1,377,591	122.8	63.2
1850.....	29,229	3,392,414	2,251,488	1,140,926	116.1	66.4

The number of farms has fluctuated slightly from decade to decade, and is now only 95 more than in 1850. A corresponding variation is shown in total farm acreage, which is at present only 6.4 per cent greater than it was fifty years ago. A marked change has taken place, however, in the relative areas of improved and unimproved land, the percentage of farm land improved having decreased from 66.4 in 1850 to 29.8 in 1900, while the unimproved area has increased in a corresponding degree. The constant decrease since 1860 in the acreage of improved land marks a gradual readjustment of farm methods to meet the growing competition of western agriculture. General farming and the extensive cultivation of hay and cereals have been gradually giving place to dairying, poultry raising, market gardening, and fruit growing—branches of agriculture which involve the intensive cultivation of small areas of the most fertile soil. These changes have led in many cases to the partial or complete abandonment of the cultivation of cereals, and to the classification of a large

acreage formerly used in their production as unimproved land.

FARM PROPERTY AND PRODUCTS.

The total value of farm property, and the values of farm land and improvements, implements and machinery, live stock, and farm products, are given in Table 2 for each census year, beginning with 1850.

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

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implements and machinery.	Live stock.	Farm products. ¹
1900.....	\$85,842,096	\$70,124,360	\$5,163,090	\$10,551,646	\$21,929,988
1890.....	80,207,575	66,162,600	8,594,850	10,460,125	13,761,050
1880.....	88,715,693	75,834,389	8,069,240	9,812,064	13,474,330
1870 ²	99,295,801	80,589,313	8,459,948	15,246,545	³ 22,473,547
1860.....	88,297,400	69,689,761	2,688,012	10,924,627
1850.....	66,432,023	55,245,997	2,314,125	8,871,901

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.

Since 1850 the total value of farm property has increased \$19,410,073, and in the last decade, \$5,634,521. Of this amount \$3,961,760, or 70.3 per cent, represents the increase in the value of land and buildings; \$1,568,240, or 27.8 per cent, that of implements and machinery; and \$104,521, or 1.9 per cent, that of live stock. The value of the farm products of 1899 was 59.4 per cent greater than in 1889. A portion of this increase, and also of that noted in the case of implements and machinery, is doubtless the result of a more detailed enumeration of these items in 1900 than heretofore.

COUNTY STATISTICS OF AGRICULTURE.

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

TABLE 3.—NUMBER AND AREA OF FARMS, AND VALUES OF FARM PROPERTY, JUNE 1, 1900, 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 buildings.	Total.	Improved.	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		Labor.	Fertilizers.
The State.....	29,324	28,795	3,609,864	1,076,879	\$35,498,760	\$34,625,600	\$5,163,090	\$10,551,646	\$15,919,078	\$2,304,520	\$367,980
Belknap.....	1,864	1,817	206,049	60,278	2,043,090	1,916,360	310,640	602,771	885,939	111,110	18,460
Carroll.....	2,413	2,373	364,007	72,797	2,564,910	2,318,760	319,090	673,457	872,684	126,310	24,310
Cheshire.....	2,660	2,588	368,883	95,978	3,515,220	3,489,710	491,290	1,011,725	1,573,267	228,960	35,750
Coos.....	1,895	1,861	329,066	124,786	2,484,490	2,180,300	393,380	1,048,992	1,207,845	193,140	26,730
Grafton.....	4,173	4,070	619,988	222,367	4,565,100	4,425,570	797,980	1,832,960	2,577,380	346,180	57,080
Hillsboro.....	4,137	4,058	454,214	145,000	5,700,580	5,405,960	761,180	1,498,008	2,407,471	387,440	65,750
Merrimack.....	3,893	3,815	476,794	125,588	4,771,850	4,346,470	657,020	1,314,613	2,168,000	271,710	48,800
Rockingham.....	4,240	4,195	331,450	102,058	5,632,800	6,211,580	772,390	1,236,791	2,194,628	371,310	41,630
Strafford.....	2,216	2,216	197,089	65,305	2,488,290	2,568,910	348,730	617,692	1,109,461	144,360	28,690
Sullivan.....	1,833	1,802	262,324	62,722	1,732,430	1,760,980	311,390	722,637	922,393	124,000	20,780

The number of farms in the state was 173 greater, June 1, 1900, than ten years before. Increases were reported in six counties, ranging from less than 1 per cent in Carroll, Cheshire, and Coos counties, to 6.6 per cent in Hillsboro county, 8.5 per cent in Belknap county, and 23.2 per cent in Strafford county. The counties having fewer farms than in 1890 were Merrimack, Rockingham, Grafton, and Sullivan, the decreases having been 2.2 per cent, 3.7 per cent, 4.9 per cent, and 9.8 per cent, respectively.

The portion of the land surface of each county included in farms ranged from 28.4 per cent in Coos county to 81.3 per cent in Hillsboro county, and the average size of farms from 78.2 acres in Rockingham to 173.6 in Coos.

The decrease since 1890 in total area of improved land, shown in Table 1, was distributed among all the counties. The greatest percentages of decrease were in Sullivan, Belknap, and Rockingham counties in the order named, and the smallest percentage was in Strafford county.

The value of farms decreased in Sullivan, Belknap, and Rockingham counties, the loss having been greatest in Rockingham, where it amounted to 7.6 per cent. This county has the most highly improved farms, and is the only county in which the value of farm buildings exceeds, to any considerable degree, the value of the land and other improvements.

The total value of live stock was 1.0 per cent greater in 1900 than in 1890. There was a decrease in Rockingham county of 14.9 per cent, the loss having been due principally to a decrease in the number of sheep, swine, and poultry. A decrease of 9.6 per cent in Sullivan county was distributed among all classes of live stock. The largest relative increases were reported by Strafford, Hillsboro, and Coos counties.

The increase in the valuation of implements and machinery was general, ranging from 27.2 per cent in Merrimack county to 58.3 per cent in Carroll county. A more complete enumeration in 1900 than heretofore is believed to explain a large part of this gain. The percentage of gross farm income varied from 14.9 in Carroll county to 22.2 in Grafton county.

The average expenditure per farm for labor, including the value of board furnished, was \$79 for the state, and varied from \$52 in Carroll county to \$102 in Coos county.

The average expenditure per farm for fertilizers increased from \$8.45 in 1890 to \$12.55 in 1900. The relative increase was greatest in Coos county, where it amounted to 120.0 per cent, and least in Cheshire, where it was only 19.5 per cent. In the decade from 1880 to 1890, also, Coos county showed the greatest relative increase, and the expenditure for fertilizers in that county was nearly five times as great in 1899 as in 1879. The very general use of commercial fertilizers in recent years in connection with the raising of cereals and

potatoes, both grown extensively in Coos county, accounts for this somewhat remarkable increase. The average expenditure per farm for fertilizers in 1899 was highest in Hillsboro county, where it amounted to \$15.89, and lowest in Belknap, Carroll, and Rockingham counties, in each of which it was approximately \$10.

FARMS CLASSIFIED BY RACE OF FARMER AND BY 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. The farms classified in Table 4 as "farms operated by owners," are subdivided in Table 5 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.....	29,324	27,139	1,639	546	92.5	5.6	1.9
1890.....	29,151	26,827	1,811	1,013	92.0	4.5	3.5
1880.....	32,181	29,506	1,237	1,378	91.9	3.8	4.3

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

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

RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The State.	29,324	25,775	569	106	689	1,639	546
White.....	29,314	25,768	568	106	689	1,637	546
Colored.....	10	7	1	—	—	2	—

Since 1880 the number of farms operated by owners has decreased 2,427, or 8.2 per cent, and the number operated by tenants, 430, or 16.4 per cent. The per cent of farms operated by owners is slightly greater than in 1880. The decrease in the number of tenant-operated farms was entirely in the share-tenant class, the number of cash tenants being 402 greater in 1900 than in 1880. In 1880, 52.7 per cent of all tenants were share tenants; in 1890, 43.6 per cent; and in 1900, but 25.0 per cent. This somewhat remarkable change in

the relative number of cash tenants 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 Coos county, 43.9 per cent of all tenants are share tenants, while in Rockingham county the corresponding per cent is but 16.2.

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

OWNERSHIP OF RENTED FARMS.

The ownership of 1,998 of the 2,185 rented farms in New Hampshire was ascertained by the enumerators; that of 187 was unreported. Titles to the 1,998 rented farms were vested in 1,933 owners, an average of approximately 103 farms to every 100 owners. Of the 1,933 owners, 1,887 possess 1 farm each. The others hold titles to from 2 to 8 farms each, as follows: 34, 2; 9, 3; 2, 4; and 1, 8. Of the 1,933 owners, 1,555, possessing 4,615 farms, reside in New Hampshire. The owners of 1,409 of these farms reside in the same counties in which their farms are located. Of the nonresident owners, 342 reside in the North Atlantic states, 15 in the North Central states, 10 in the Western states, 7 in the South Atlantic states, 3 in foreign countries, and 1 resides in a South Central state. The total value of the 383 farms owned by nonresidents, of whom only 5 own more than 1 farm, is \$881,783, or an average of \$2,302. This small average, when taken in connection with the fact that only 1 farm in 77 is owned by a nonresident, shows how groundless, so far as New Hampshire is concerned, is the popular belief that there is a large and growing class of nonresident landlords supported in luxury by rentals.

Of the rented farms of the state, 7 were worth \$25,000 and over, with an aggregate value of \$248,000, or an average of \$35,429; 32 were worth \$10,000 and less than \$25,000, with an aggregate value of \$428,500, or an average of \$13,391; and 2,146 were worth less than \$10,000, with an aggregate value of \$3,810,460, or an average of \$1,776. It follows that very few persons are supported wholly or even mainly by the rentals of New Hampshire farms.

FARM AREA, PROPERTY, AND PRODUCTS, CLASSIFIED BY RACE OF FARMER AND BY TENURE.

Table 6 gives the number and area of farms, and the value of property on farms operated by white and colored farmers, respectively, and also the same items for

farms classified by tenure. Table 7, with the same classification of farms, gives the average values of the several forms of farm property, and of the products not fed to live stock, together with the percentage of gross income upon total investment.

TABLE 6.—NUMBER AND AREA 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.....	29,324	123.1	3,609,864	100.0	\$85,842,096	100.0
White farmers.....	29,314	123.1	3,609,302	100.0	85,829,476	100.0
Colored farmers.....	10	56.2	562	(1)	12,620	(1)
Owners.....	25,775	118.2	3,047,360	84.4	72,023,544	83.9
Part owners.....	569	210.5	119,770	3.3	2,384,928	2.8
Owners and tenants.....	106	181.9	19,233	0.5	390,892	0.5
Managers.....	689	245.7	169,308	4.7	5,011,440	6.5
Cash tenants.....	1,639	111.5	182,695	5.1	4,064,740	4.7
Share tenants.....	546	130.9	71,448	2.0	1,366,552	1.6

¹ Less than one-tenth of 1 per cent.

TABLE 7.—AVERAGE VALUES OF FARM PROPERTY AND PRODUCTS, CLASSIFIED BY RACE OF FARMER AND BY TENURE.

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and im- prove- ments (except build- ings).	Build- ings.	Imple- ments and ma- chinery.	Live stock.		
The State.....	\$1,210	\$1,181	\$176	\$360	\$543	18.5
White farmers.....	1,211	1,181	176	360	543	18.5
Colored farmers.....	474	635	85	168	272	21.6
Owners.....	1,187	1,136	173	348	534	19.1
Part owners.....	1,741	1,689	281	580	841	20.1
Owners and tenants..	1,390	1,419	209	580	771	20.9
Managers.....	3,394	3,162	352	736	889	10.9
Cash tenants.....	1,122	952	110	287	428	17.2
Share tenants.....	982	1,010	143	368	507	20.2

The value of the farms owned by negroes, including implements, machinery, and live stock, together with the value of the implements, machinery, and live stock upon the farms which other negroes operate as tenants, is \$11,520. This amount is probably somewhat in excess of the actual wealth of the negro farmers of New Hampshire.

Farms conducted by managers have the largest average area, 245.7 acres, and those operated by cash tenants the smallest, 111.5 acres. Of the 164 farms each containing 1,000 acres or over, 121 are operated by "owners," 9 by "part owners," 23 by "managers," 8 by "cash tenants," and 3 by "share tenants."

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 their average values, shown in Table 7, are much larger than those for any other class of farms grouped by tenure. The ratio which the gross income of these farms bears to the total value of the farm property is, however, smaller than for the other groups. This is due to the high average valuation above noted and to the fact that very few of these farms are cultivated for profit.

FARMS CLASSIFIED BY AREA.

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

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

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	29,324	123.1	3,609,864	100.0	\$85,842,096	100.0
Under 3 acres.....	369	2.6	970	(1)	489,818	0.6
3 to 9 acres.....	1,703	6.9	11,803	0.3	2,611,300	3.0
10 to 19 acres.....	1,927	14.3	27,500	0.8	3,367,156	3.9
20 to 49 acres.....	4,765	34.2	163,060	4.5	9,210,789	10.7
50 to 99 acres.....	7,123	70.6	503,049	13.9	15,745,632	18.4
100 to 174 acres.....	7,430	125.9	935,586	25.9	21,470,861	25.0
175 to 259 acres.....	3,298	208.5	687,545	19.1	13,413,867	15.6
260 to 499 acres.....	2,035	335.1	681,856	18.9	11,607,709	13.5
500 to 999 acres.....	510	605.4	308,766	8.6	4,760,219	5.6
1,000 acres and over ..	164	1,766.7	289,739	8.0	3,166,250	3.7

¹ Less than one-tenth of 1 per cent.

TABLE 9.—AVERAGE VALUES OF FARM PROPERTY AND PRODUCTS, CLASSIFIED BY AREA.

AREA.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State.....	\$1,210	\$1,181	\$176	\$300	\$543	18.5
Under 3 acres.....	374	824	62	66	255	19.3
3 to 9 acres.....	615	855	66	97	185	12.1
10 to 19 acres.....	640	893	86	124	208	11.9
20 to 49 acres.....	727	980	108	168	282	14.6
50 to 99 acres.....	861	988	144	208	415	18.8
100 to 174 acres.....	1,174	1,135	189	301	590	20.4
175 to 259 acres.....	1,706	1,529	303	569	819	20.1
260 to 499 acres.....	2,568	1,973	342	821	1,121	19.7
500 to 999 acres.....	4,343	3,245	436	1,259	1,797	19.2
1,000 acres and over ..	11,388	6,297	623	1,993	3,219	16.7

The largest of the groups classified by area is that of farms containing from 100 to 174 acres each. This group comprises also the largest percentage of the total

acreage, and of the total value of farm property, and shows the largest percentage of gross income upon investment.

The average values of farm property given in Table 9 are lowest for farms containing less than 3 acres, and rise in unbroken series to those containing 1,000 acres and over. Except for farms of less than 3 acres each, the average values of products not fed to live stock vary in the same manner. The average values per acre of such products for the various groups classified by area are as follows: Farms under 3 acres, \$97.23; 3 to 9 acres, \$26.72; 10 to 19 acres, \$14.54; 20 to 49 acres, \$8.23; 50 to 99 acres, \$5.88; 100 to 174 acres, \$4.68; 175 to 259 acres, \$3.93; 260 to 499 acres, \$3.35; 500 to 999 acres, \$2.97; and 1,000 acres and over, \$1.82. The large gross income per acre shown for farms under 3 acres is explained by the fact that this group includes 28 florists' establishments and 51 city dairies, which make use of valuable land having upon it very costly improvements, and that their operation requires a relatively large amount of labor, and in some cases, involves large expenditures for fertilizers and feed for live stock. The same conditions are true with respect to many farms containing from 3 to 10 acres each.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

Tables 10 and 11 present the leading facts concerning the number, area, value, and average value of 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. Farms with no income in 1889 are classified according to the agricultural operations upon other farms in the same locality.

TABLE 10.—NUMBER AND AREA 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.....	29,324	123.1	3,609,864	100.0	\$85,842,096	100.0
Hay and grain	3,547	106.9	379,085	10.5	8,499,202	9.9
Vegetables	1,505	74.7	112,424	3.1	3,647,920	4.2
Fruit	482	79.9	34,526	1.0	1,174,910	1.4
Live stock	7,634	105.3	803,508	22.3	19,064,461	22.2
Dairy products.....	9,788	132.3	1,294,967	35.9	33,862,433	39.5
Tobacco	30	140.9	4,227	0.1	147,750	0.2
Sugar	3	99.0	297	(1)	3,700	(1)
Flowers and plants....	60	23.1	1,886	(1)	286,162	0.3
Nursery products.....	8	53.4	427	(1)	83,880	(1)
Miscellaneous	6,317	155.0	979,017	27.1	19,121,678	22.8

¹ Less than one-tenth of 1 per cent.

TABLE 11.—AVERAGE VALUES OF FARM PROPERTY AND PRODUCTS, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except build-ings).	Build-ings.	Imple-ments and ma-chinery.	Live stock.		
The State.....	\$1,210	\$1,181	\$176	\$360	\$543	18.5
Hay and grain	1,182	1,043	79	92	225	9.4
Vegetables	981	1,057	158	228	844	14.2
Fruit	1,107	1,242	139	232	384	14.1
Live stock	968	1,019	162	348	460	18.4
Dairy produce	1,350	1,379	221	510	677	19.6
Tobacco	2,290	1,783	291	561	1,394	28.3
Sugar	433	617	66	117	180	14.6
Flowers and plants	2,119	2,314	234	102	2,047	42.9
Nursery products	1,875	2,125	194	41	814	19.2
Miscellaneous	1,351	1,157	183	386	658	21.6

The percentages of improved land in the farms of the various classes shown in Table 10 vary from 25 to 35, except for maple-sugar farms and florists' establishments, for which the percentages are 13.5 and 59.3, respectively.

For the several classes of farms the average values per acre of the products not fed to live stock are: Flowers and plants, \$88.63; nursery products, \$15.24; tobacco, \$9.89; dairy produce, \$5.12; fruit, \$4.81; vegetables, \$4.60; live stock, \$4.38; miscellaneous, \$4.22; hay and grain, \$2.10; and sugar, \$1.82. A comparison shows that the average gross income per acre is largest for the farms of smallest average area. It should be noted, however, that the small farms with relatively high incomes are devoted to those branches of agriculture which involve the greatest original investments, and which require in their operation the largest relative amount of labor and expense.

Of the 3,547 hay and grain farms, only 1,522, or 42.9 per cent, report any domestic animals, and many report no products except small quantities of hay or trifling crops of other kinds. These facts are evidence that many such farms were partially abandoned in 1899, and explain the relatively small per cent of gross income shown in Table 11 for this group.

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 AREA 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.....	29,324	123.1	3,609,864	100.0	\$85,842,096	100.0
\$0.....	146	86.7	12,661	0.4	\$51,981	0.4
\$1 to \$49	1,305	40.0	52,198	1.4	1,578,324	1.8
\$50 to \$99	2,198	48.9	107,471	3.0	3,075,124	3.6
\$100 to \$249	7,372	68.8	506,832	14.0	12,586,269	14.7
\$250 to \$499	7,944	106.8	844,654	23.4	19,406,904	22.6
\$500 to \$999	6,477	158.8	1,028,800	28.5	22,907,661	26.7
\$1,000 to \$2,499	3,295	235.2	776,038	21.5	18,943,443	22.1
\$2,500 and over	587	480.8	282,210	7.8	6,992,450	8.1

TABLE 13.—AVERAGE VALUES OF FARM PROPERTY AND PRODUCTS, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and im- prove- ments (except build- ings).	Build- ings.	Imple- ments and ma- chinery.	Live stock.		
The State.....	\$1,210	\$1,181	\$176	\$360	\$548	18.5
\$0.....	1,046	1,059	110	196
\$1 to \$49	505	566	47	61	84	2.8
\$50 to \$99	569	693	57	80	76	5.4
\$100 to \$249	717	782	87	141	162	9.5
\$250 to \$499	984	1,028	152	279	361	14.8
\$500 to \$999	1,431	1,381	230	495	696	19.7
\$1,000 to \$2,499	2,365	2,147	372	865	1,423	24.7
\$2,500 and over	5,582	4,036	667	1,627	4,170	35.0

Of the farms of the state, 146, ranging in area from 3 to 1,000 acres, report no income. The average values of the land and improvements, buildings, implementments and machinery, and live stock of these farms are relatively very high, exceeding in the first two cases those of farms with reported incomes from \$250 to \$499. This, and the fact that 117 of the farms of this class are operated by their owners, lead to the conclusion 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 1,305 farms with reported incomes of less than \$50 each, probably belong to the above class, the only crops raised having been for home consumption. Some are farms that were partially abandoned in 1899, while others had changed owners or tenants, and the farmers in charge, June 1, 1900, were unable to give any definite

information concerning the products of the preceding year. To this extent the reports fall short of giving a complete exhibit of farm income in 1899.

With the exception of the group reporting no gross income, the average values of the several items of farm property increase with the value of products not fed to live stock. The percentages of gross income upon investments form a continuous upward series from the group with the smallest value of products to that with the largest.

CLASSIFICATION, NUMBER, AND VALUE OF 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 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 obtained at preceding decennial periods.

Table 14 gives the number, value, and average value of the various classes of live stock on farms and the number of domestic animals not on farms.

TABLE 14.—NUMBER AND VALUE OF DOMESTIC ANIMALS, FOWLS, AND BEES, JUNE 1, 1900.

LIVE STOCK.	Age in years.	ON FARMS.			NOT ON FARMS.
		Num-ber.	Value.	Average value.	
Calves	Under 1	40,484	\$305,895	\$7.57	327
Steers	1 and under 2	9,028	139,802	15.43	91
Steers	2 and under 3	6,997	178,283	25.48	50
Steers	3 and over	7,571	413,250	54.58	68
Bulls	1 and over	5,050	112,992	22.37	14
Heifers	1 and under 2	29,574	462,468	15.64	404
Cows kept for milk	2 and over	115,086	3,615,354	31.43	3,715
Cows and heifers not kept for milk	2 and over	13,102	819,086	24.35	410
Colts	Under 1	702	23,847	33.97	71
Horses	1 and under 2	1,543	90,816	58.86	64
Horses	2 and over	52,621	3,726,007	70.81	22,232
Mule colts	Under 1	12	232	19.33
Mules	1 and under 2	13	630	48.46
Mules	2 and over	72	5,210	72.36	30
Asses and burros	All ages	27	1,565	57.96	11
Lambs	Under 1	89,795	92,525	2.33	254
Sheep (ewes)	1 and over	61,295	201,388	3.29	325
Sheep (rams and wethers)	1 and over	4,023	15,588	3.86	10
Swine	All ages	51,211	357,578	6.98	5,759
Goats	All ages	208	916	4.40	45
Fowls: ¹					
Chickens ²		870,461			
Turkeys		2,386	467,104		
Geese		1,289			
Ducks		3,803			
Bees (swarms of)		5,520	24,665	4.47	
Value of all live stock			10,554,646		

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

² Including Guinea fowls.

As in other New England states, the value of steers 3 years old and over is comparatively high, due to including in this class the valuable working oxen still used in certain districts. The number so employed is rapidly decreasing. In 1850, 59,027 working oxen were reported; in 1860, 51,512; in 1870, 40,513; in 1880,

29,152; in 1890, 23,648; while in 1900 the total number of steers over 2 years old was only 14,568, and it is probable that many of these were not working oxen.

In comparing the poultry report of 1900 with that of the Eleventh Census, it should be borne in mind that in 1900 the enumerators were instructed not to report fowls less than 3 months old, while in 1890 no such limitation was made. This fact explains, in part, the decrease in the number of all kinds of fowls. It is the opinion of poultry experts, however, that, owing to western competition and the difficulty of keeping stock free from disease, the raising of turkeys, geese, and ducks is being gradually abandoned. Compared with the figures for 1890, the present census shows decreases in the number of fowls as follows: Chickens, 6.6 per cent; turkeys, 76.6 per cent; geese, 53.9 per cent; ducks, 77.7 per cent.

The total value of all live stock on farms was \$10,554,646, of which 36.4 per cent represents the value of horses, 34.3 per cent that of dairy cows, 18.3 per cent that of other neat cattle, 4.4 per cent that of poultry, and 6.6 per cent that of all other live stock. No reports were secured of the value of live stock not on farms, but it is probable that such animals have higher average values than those on farms. Allowing the same averages, the total value of all live stock in the state, exclusive of poultry and bees not on farms, is substantially \$12,320,000.

CHANGES IN THE LIVE-STOCK INDUSTRY IN FIFTY YEARS.

The following table shows the progress of the live-stock industry since 1850:

TABLE 15.—NUMBER OF DAIRY COWS, OTHER NEAT CATTLE, HORSES, MULES AND ASSES, SHEEP, AND SWINE: 1850 TO 1900.

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep. ¹	Swine.
1900.....	115,086	111,756	54,866	124	65,818	51,211
1890.....	109,423	118,465	52,458	123	131,611	58,585
1880.....	90,564	141,841	46,773	87	211,825	53,437
1870.....	90,583	132,218	39,095	87	248,760	33,127
1860.....	94,880	169,587	41,101	10	310,534	51,935
1850.....	94,277	173,633	34,233	19	384,756	63,487

¹ Lambs not included.

Two significant movements since 1850 are the increase in the number of "dairy cows" and "horses" and the nearly constant decrease in the number of "other neat cattle" and "sheep." These changes are in keeping with two general phases of the revolution in the character of New England agriculture in the last half century. The farmer has met the demands of a rapidly growing urban population for dairy produce, vegetables, and fruit by keeping more cows and by devoting a larger portion of his time and capital to market gardening and to horticulture, which industries require

much new and improved machinery and consequently more horsepower. The decrease in the number of beef cattle, sheep, and swine is incident to the supplanting of oxen by horses and to the shifting of the meat-producing industry to the western states.

Since 1850 the number of dairy cows has increased 22.0 per cent, and in the last decade 6.0 per cent. The number reported in 1900 is exclusive of 13,102 "cows and heifers not kept for milk," most of which were doubtless milch cows dry at the time of enumeration. The number of calves reported in 1900 was 40,434. If calves were not included in the reports for previous census years, the decrease from 1890 to 1900 in the number of "other neat cattle" was relatively greater than in any preceding decade. The number of sheep reported in 1900 was 83.0 per cent less than in 1850, and 50.4 per cent less than in 1890. The decrease in the number of swine has been less marked, owing to the fact that these animals can be raised with profit in connection with dairy farms.

ANIMAL PRODUCTS.

The quantities and values of wool, mohair, dairy produce, and other animal products, including the value of fowls raised and animals sold and slaughtered for food, are given in Table 16.

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

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool.....	Pounds.....	402,360	\$81,045
Mohair and goat hair.....	Pounds.....	30	9
Milk.....	Gallons.....	1 60,724,690	
Butter.....	Pounds.....	6,385,611	5,591,272
Cheese.....	Pounds.....	104,339	
Eggs.....	Dozens.....	7,005,180	1,213,703
Poultry.....			610,696
Honey.....	Pounds.....	89,200	
Wax.....	Pounds.....	3,350	17,686
Animals sold.....			1,345,941
Animals slaughtered.....			794,312
Total.....			9,654,694

¹Includes all milk produced.

The value of animal products in 1899 was \$9,654,694, or 44.0 per cent of the value of all farm products and 60.6 per cent of the gross farm income. Of the above amount, 57.9 per cent represents the value of dairy products; 22.2 per cent, that of animals sold and slaughtered; 18.9 per cent, that of poultry and eggs; and 1.0 per cent, that of wool, and honey and wax.

In no other branch of agriculture has there been such rapid development in the last decade as in dairying. The production of milk in 1899 was 18,091,322 gallons greater than in 1889, an increase of 42.4 per cent. It is significant that in the same period the quantities of

butter and cheese produced on farms decreased 19.6 per cent and 69.4 per cent, respectively. The gradual transfer of the production of these commodities from the farm to the creamery and cheese factory, and the fact that they are more open to western competition than are milk and cream, partially explain this decrease. A more important factor, perhaps, is the increased demand for milk and cream in cities, resulting in the widely adopted use of rapid transit milk trains.

Of the \$5,591,272 given in Table 16 as the value of all dairy products in 1899, \$1,092,698, or 19.5 per cent, represents the value of such products consumed on farms, and \$4,498,574, or 80.5 per cent, the amount realized from dairy produce sold. Of the latter sum, \$3,235,732 was derived from the sale of 28,988,306 gallons of milk; \$1,019,192, from 4,548,617 pounds of butter; \$233,913, from 552,916 gallons of cream; and \$9,737, from 77,057 pounds of cheese.

The production of wool has decreased steadily since 1860, and in 1899 it was 43.9 per cent less than ten years before. The average weight of fleeces in 1889 was 5.8 pounds, and in 1899, 6.1 pounds.

DISTRIBUTION OF HORSES AND DAIRY COWS ON FARMS BY SPECIFIED CLASSES.

Table 17 presents, for the leading groups of farms, the number of farms reporting horses and dairy cows, the total number for each group, 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.—DISTRIBUTION OF HORSES AND DAIRY COWS, BY SPECIFIED CLASSES OF FARMS, JUNE 1, 1900.

CLASSES.	HORSES.			DAIRY COWS.		
	Farms reporting.	Number.	Average per farm.	Farms reporting.	Number.	Average per farm.
Total.....	24,156	54,806	2.3	22,519	115,036	5.1
White farmers.....	24,146	54,852	2.3	22,512	115,011	5.1
Colored farmers.....	10	14	1.4	7	25	3.6
Owners ¹	21,892	48,741	2.2	20,569	103,414	5.0
Managers.....	513	2,419	4.7	478	3,942	8.2
Cash tenants.....	1,305	2,701	2.1	1,053	5,302	5.0
Share tenants.....	446	1,005	2.3	419	2,378	5.7
Under 20 acres.....	2,513	3,560	1.4	1,756	2,804	1.6
20 to 99 acres.....	9,587	10,432	1.7	9,005	27,987	3.1
100 to 174 acres.....	6,504	15,459	2.4	6,333	36,254	5.7
175 to 259 acres.....	3,023	8,581	2.8	2,939	22,025	7.5
260 acres and over.....	2,523	10,331	4.3	2,486	25,966	10.4
Hay and grain.....	1,310	2,512	1.9	724	1,840	2.5
Vegetable.....	1,214	2,763	2.3	693	2,302	3.4
Fruit.....	308	597	1.9	182	586	3.2
Live stock.....	6,649	14,111	2.1	5,367	20,467	3.8
Dairy.....	9,139	22,143	2.4	9,788	70,788	7.2
Miscellaneous ²	5,636	12,740	2.3	5,200	18,998	3.6

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

²Including florists' establishments and nurseries.

ACREAGE AND PRODUCTION OF CROPS.

The following table gives the acreage, quantities, and values of the crops of 1899:

TABLE 18.—ACRES, QUANTITIES, AND VALUES OF VEGETABLE PRODUCTS: 1899.

PRODUCTS.	Acres.	Unit of measure.	Quantity.	Value.
Corn.....	25,694	Bushels.....	1,080,720	\$538,788
Wheat.....	271	Bushels.....	4,035	3,428
Oats.....	12,589	Bushels.....	497,110	184,025
Barley.....	1,596	Bushels.....	46,680	25,189
Rye.....	350	Bushels.....	6,320	3,529
Buckwheat.....	1,885	Bushels.....	43,360	19,334
Grass seed.....		Bushels.....	45	111
Clover seed.....		Bushels.....	2	10
Hay and forage.....	615,042	Tons.....	654,973	6,336,252
Miscellaneous.....				10,638
Tobacco.....	109	Pounds.....	181,644	27,920
Dry beans.....	2,892	Bushels.....	29,900	62,799
Dry pease.....	146	Bushels.....	1,533	2,210
Potatoes.....	19,422	Bushels.....	2,420,668	1,090,495
Sweet potatoes.....	1	Bushels.....	6	6
Onions.....	95	Bushels.....	28,004	15,747
Miscellaneous vegetables.....	7,262			611,524
Maple sugar.....		Pounds.....	441,870	44,312
Maple sirup.....		Gallons.....	41,588	38,314
Small fruits.....	734			116,830
Grapes.....	1325			214,462
Orchard fruits.....	152,109			707,729
Nuts.....				6,329
Forest products.....				2,299,327
Flowers and plants.....	38			108,161
Seeds.....	3			855
Nursery products.....	84			7,012
Hops.....	(4)	Pounds.....	60	6
Peanuts.....	(4)	Bushels.....	2	2
Total.....	740,547			12,276,294

¹ Estimated from number of vines or trees.

² Including value of raisins, wine, etc.

³ Including value of cider and vinegar.

⁴ Less than 1 acre.

Of the total value of vegetable products, hay and forage contributed 51.6 per cent; cereals, 6.3 per cent; vegetables, including potatoes, sweet potatoes, and onions, 14.0 per cent; fruits and nuts, 6.9 per cent; forest products, 18.7 per cent; and all other products, 2.5 per cent.

Owing to more favorable climatic conditions in 1899, the yield per acre of most crops was greater than in 1889. The latter year was especially unfavorable to the growing of potatoes, the yield per acre having been but 86.8 bushels. In 1899 the yield was 124.6 bushels.

The average yield per acre of hay and forage was 1.1 tons, and the average values were \$9.67 per ton and \$10.30 per acre. The acreage devoted to hay and forage was 83.1 per cent of the total area devoted to crops, but yielded only 51.6 per cent of the total receipts. The average values per acre of other crops were as follows: Flowers and plants, \$2,846.34; tobacco, \$256.15; nursery products, \$206.24; onions, \$165.76; miscellaneous vegetables, \$84.21; potatoes, \$56.15; cereals, \$18.29; and orchard fruits, \$13.58. The crops yielding the highest returns per acre were grown upon land in a very high state of improvement. Their production required a relatively large amount of labor and, in addition, large expenditures for fertilizers.

CEREALS.

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

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

PART 1.—ACREAGE.

YEAR. ¹	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899.....	1,596	1,885	25,694	12,589	350	271
1889.....	4,934	3,117	23,746	26,618	1,056	2,027
1879.....	3,461	4,535	36,612	29,485	3,218	11,218

¹ No statistics of acreage were secured prior to 1879.

PART 2.—BUSHELS PRODUCED.

YEAR.	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899.....	46,680	43,360	1,080,720	497,110	5,320	4,035
1889.....	112,378	76,048	988,806	892,243	11,932	25,192
1879.....	77,877	94,090	1,350,248	1,017,620	34,638	169,316
1869.....	103,822	100,034	1,277,768	1,146,451	47,420	193,621
1859.....	121,193	89,068	1,414,628	1,320,233	123,247	238,965
1849.....	70,256	65,205	1,573,670	973,381	183,117	185,658

Cereal production in New Hampshire reached its highest point shortly after the middle of the last century. The decline which then began and which has continued ever since is due to the opening of a great body of fertile land in the West, better suited for the production of cereals than most of the land in New Hampshire, and to the development of our modern system of railroads, whereby western grain is brought to the markets of the East at slight expense. With the gradual abandonment of cereal production the farmers of the state turned their attention to supplying the growing demand of their own urban population for small fruits, vegetables, and dairy produce.

Since 1879 the total area devoted to grains has decreased from 88,559 acres to 42,335 acres, the percentages of decrease for the various cereals being as follows: Wheat, 97.6; rye, 89.1; buckwheat, 59.5; oats, 57.3; barley, 53.9, and corn, 29.8. Between 1889 and 1899 the acreage devoted to cereals decreased in every county of the state and more rapidly than in any preceding decade. This decrease was most marked in those counties where the most intensive cultivation prevails, while Coos and Grafton counties, where agriculture is least developed, contained a larger per cent of the total area devoted to cereals in 1899 than in 1889.

The second part of the table shows that with some exceptions the decrease in the production of cereals has been continuous since 1859, becoming more marked in the last two decades. The production of buckwheat increased in the decade 1859-1869; that of corn, in 1869-1879; and that of barley, in 1879-1889. Between 1889 and 1899 there was a marked decrease in the production of all cereals except corn, which shows an increase in acreage as well as in production.

The 25,694 acres, given in Table 19 as the area devoted to corn in 1899, does not include the acreage of corn, nonsaccharine sorghum, and similar crops grown for forage or ensilage. In 1899 there was used in the growing of such crops 11,391 acres, an area nearly one-half as great as that devoted to corn grown for its grain.

The fact that Grafton county, which shows the largest acreage of forage crops and the greatest increase since 1889 in the acreage of corn, also reports the largest increase in the number of dairy cows, indicates that there is a close relation between the increase in corn production and the recent development in dairying.

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	2,034,398	1,744,779	1,978,797	2,283,347
Apricots	141	191	2
Cherries	6,700	7,164	1,183	564
Peaches	48,819	19,057	6,054	1,204
Pears	38,287	39,378	19,841	19,288
Plums and prunes	18,137	10,151	4,942	842

The value of the orchard fruits grown in 1899 was \$707,729, divided among the several counties as follows: Rockingham, \$120,176; Hillsboro, \$117,218; Merrimack, \$102,383; Cheshire, \$91,141; Strafford, \$76,542; Grafton, \$63,687; Carroll, \$44,293; Belknap, \$41,858; Sullivan, \$40,948; and Coos, \$9,483. In 1900, 94.8 per cent, and in 1890, 95.8 per cent of all the fruit trees in the state were apple trees. In ten years the number of these trees increased 16.6 per cent, the increase having been general, except in Grafton and Sullivan counties, where decreases were reported. Peaches flourish only in the southeastern part of the state, Hillsboro and Rockingham counties reporting, June 1, 1900, 71.8 per cent of the peach trees and 70.0 per cent of the crop. Between 1890 and 1900 the total number of peach trees increased 156.2 per cent. During the same period cherry trees decreased 6.5 per cent and pear trees 2.8 per cent, while plum and prune trees increased 78.7 per cent, every county except Hillsboro sharing in the gain.

As the quantity of fruit produced is determined largely by the nature of the season, which varies more or less from year to year in all the New England states, no valid comparisons can be made between the crops of 1889 and 1899. The former year was evidently more favorable to the apple crop than was 1899, for, although there was an increase in the number of trees, there was a decrease of 13.3 per cent in the quantity of fruit reported. Cherry, peach, pear, and plum trees, on the other hand, bore more abundantly in 1899 than in 1889, especially in Cheshire and Rockingham counties.

VEGETABLES AND SMALL FRUITS.

The value of all vegetables produced in the state in 1899, including potatoes, sweet potatoes, and onions, was \$1,717,772, of which 63.5 per cent represents the

value of potatoes. Aside from the land devoted to potatoes, sweet potatoes, and onions, 7,262 acres were used in the growing of miscellaneous vegetables. Of this area 5,678 acres were included in family gardens or farms, the vegetable products of which were not reported in detail. Of the remaining 1,584 acres, concerning which detailed reports were received, 731 were devoted to sweet corn; 310, to cabbages; 124, to tomatoes; 64, to turnips; 58, to cucumbers; and 297, to other vegetables.

The total area devoted to small fruits in 1899 was 734 acres, distributed among 3,235 farms, and the value of the fruits grown was \$116,830, an average of \$159 per acre. As in the case of orchard trees, the area reported in the northern part of the state is relatively small. Hillsboro and Rockingham counties together report approximately one-half the totals for the state. The acreage and production of berries were as follows: Blackberries and dewberries, 65 acres and 105,290 quarts; cranberries, 23 acres and 31,136 quarts; currants, 27 acres and 34,060 quarts; raspberries and loganberries, 80 acres and 124,760 quarts; strawberries, 307 acres and 568,640 quarts; gooseberries, 5 acres and 3,540 quarts; and other small fruits, 227 acres and 393,750 quarts.

CULTURE OF FLOWERS, AND USE OF GLASS IN AGRICULTURE.

The total area devoted to the cultivation of flowers and plants in 1899 was 38 acres, and the products sold therefrom were valued at \$108,161.

The proprietors of 60 of the 83 establishments reported, made commercial floriculture their principal business. They had a capital of \$286,162, of which amount \$127,125 represents the value of land; \$138,825, buildings; \$14,047, implements; and \$6,165, live stock. The receipts from products sold by these 60 establishments were \$127,267, of which \$101,559 was from the sale of flowers and plants and \$25,708 from the sale of miscellaneous products. The amount spent for fertilizers was \$1,977, and for labor \$20,070.

Florists reported greenhouses with a glass surface of 452,963 square feet, covering 339,722 square feet of land. In addition, 97 farmers had an area under glass of 214,258 square feet, used principally for growing vegetables and plants, making the total area under glass in the state 553,980 square feet. Florists had an average glass-covered area of 5,662 square feet, and farmers and market gardeners 2,209 square feet.

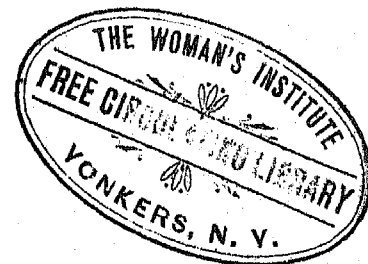
LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was \$2,304,520, an average of \$79 per farm. The average was highest on the most intensively cultivated farms, having been

\$334 for florists' establishments, \$255 for tobacco farms, \$196 for nurseries, \$111 for dairy farms, and \$38 for hay and grain farms. Managers expended \$289, owners \$74, cash tenants \$55, and share tenants \$57 per farm. White farmers expended \$79 and colored farmers \$23 per farm.

Fertilizers purchased in 1899 cost \$367,980, an aver-

age of \$12.55 per farm, and an increase since 1890 of 49.4 per cent. The average expenditure was greatest for tobacco farms, and least for hay and grain farms, the amounts being \$71 and \$6, respectively. For florists' establishments the average was \$33; for nurseries, \$56; for vegetable farms, \$15; and for dairy farms, \$16.



Twelfth Census of the United States.

CENSUS BULLETIN.

No. 114.

WASHINGTON, D. C.

November 20, 1901.

MANUFACTURES.

IOWA.

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 Iowa 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 39 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.

Eight cities in Iowa contain a population exceeding 20,000 each: Burlington, Cedar Rapids, Clinton, Council Bluffs, Davenport, Des Moines, Dubuque, and Sioux City. The manufacturing statistics of all these cities are presented by specified industries, and the statistics of Burlington, Council Bluffs, Davenport, Des Moines, Dubuque, and Sioux City are presented in comparison with the returns of the Eleventh Census. The statistics of Cedar Rapids and Clinton were not shown separately in 1890, and com-

parisons with that year are, therefore, not possible in these cases.

Prof. W. R. Patterson of the University of Iowa rendered valuable assistance in the preparation of the text for the accompanying report.

The statistics of Iowa 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, eleemosynary, and penal 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 11 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the cities of Burlington, Council Bluffs, Davenport, Des Moines, Dubuque, and Sioux City 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 Burlington, Cedar Rapids, Clinton, Council Bluffs, Davenport, Des Moines, Dubuque, and Sioux City 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 Iowa 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 Iowa 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. This number may appear excessive as compared with the amount of salaries paid; but allowance should be made for

the fact that a considerable 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 \$102,783,103 invested in manufactures and mechanical industries in the 14,819 establishments reporting for the state of Iowa. 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 \$164,617,877, to produce which involved an outlay of \$4,486,117 for salaries of officials, clerks, etc.; \$23,981,680 for wages; \$7,988,767 for miscellaneous expenses, including rent, taxes, etc.; and \$101,170,357 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 Iowa, \$164,617,877, 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 Iowa, the gross value of products for 1900 was \$164,617,877. The value of materials purchased in a partly manufactured form was \$44,118,832. The difference, \$120,499,045, 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.

IOWA.

Table 1 shows the manufacturing and mechanical industries of the state of Iowa 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 1900	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860
Number of establishments	14,819	7,440	6,921	6,566	1,889	522	99.2	7.5	5.4	238.6	271.5
Capital	\$102,783,108	\$77,518,097	\$33,987,886	\$22,420,183	\$7,247,180	\$1,292,875	32.5	128.1	51.6	209.4	460.5
Salaried officials, clerks, etc., number	5,664	8,187	(²)	(²)	(²)	(²)	³ 30.4				
Salaries	\$4,486,117	\$5,449,377	(²)	(²)	(²)	(²)	³ 17.7				
Wage-earners, average number	58,553	61,037	23,372	25,032	6,807	1,707	14.7	79.9	13.8	296.9	269.5
Total wages	\$23,981,680	\$20,429,620	\$9,725,962	\$6,893,292	\$1,922,417	\$473,016	17.1	110.5	41.1	258.6	806.4
Men, 16 years and over	48,417	44,210	25,382	23,395	6,142	1,687	9.5	74.2	8.5	280.9	264.1
Wages	\$21,893,988	\$19,232,655	(²)	(²)	(²)	(²)	13.8				
Women, 16 years and over	8,243	5,183	1,431	951	165	20	59.1	262.2	50.5	476.4	725.0
Wages	\$1,766,858	\$909,806	(²)	(²)	(²)	(²)	76.7				
Children, under 16 years	1,838	1,644	1,559	636	(²)	(²)	14.8	5.4	127.3		
Wages	\$270,889	\$197,159	(²)	(²)	(²)	(²)	37.4				
Miscellaneous expenses	\$7,988,767	\$5,782,206	(⁴)	(⁴)	(⁴)	(⁴)	39.4				
Cost of materials used	\$101,170,357	\$79,202,407	\$48,704,311	\$27,682,096	\$8,612,259	\$2,356,881	27.6	62.8	75.9	221.4	265.4
Value of products, including custom work and repairing	\$164,617,877	\$125,049,183	\$71,045,926	\$46,584,322	\$13,971,825	\$3,551,783	31.6	76.0	52.7	233.1	298.4
Total population	⁵ 2,231,468	1,911,896	1,624,615	1,194,020	674,913	192,214	16.7	17.7	36.1	76.9	251.1
Wage-earners engaged in manufactures	58,553	61,037	23,372	25,032	6,807	1,707	14.7	79.9	13.8	296.9	269.5
Per cent of total population	2.6	2.7	1.7	2.1	0.9	0.9					
Assessed value of real estate	⁶ \$440,769,962	\$370,921,446	\$297,254,342	\$226,610,638	\$140,438,423	\$15,672,332	18.8	24.8	31.2	51.6	853.5
Value of land and buildings invested in manufactures ⁷	\$80,255,515	\$21,697,899	(²)	(²)	(²)	(²)	89.4				
Per cent of assessed value	6.9	5.9									

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 Exclusive of 385 Indians and other persons on Indian reservations, which classes were not included at previous censuses.

⁶ As given for the year 1900 in Dunn's supplement, "State and City," to the Commercial and Financial Chronicle, under date of April 13, 1901.

⁷ Does not include value of rented property.

Although agriculture is the leading pursuit of Iowa, manufacturing and mechanical industries have had a steady and significant growth during the last half century.

The population of the state in 1850 was 192,214, and in 1900, 2,231,468, an increase in the fifty years of 2,039,254, or 1,060.9 per cent. The average number of wage-earners employed in manufacturing establishments increased from 1,707 in 1850 to 58,553 in 1900, an increase of 3,330.2 per cent in the fifty years, and embraced, in the latter year, 2.6 per cent of the entire population, as compared with nine-tenths of one per cent in 1850. In the thirty years since 1870, however, the difference in the rate of growth of the wage-earning class as compared with that of the total population has been much less pronounced, the population having increased 86.9 per cent and the wage-earners 133.9 per cent. It is furthermore noticeable that the gain, during this period, in per cent of average number of wage-earners over population, is limited to the decade ending in 1890. 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 85,982, or 3.9 per cent of the total population of the state.

During the decade from 1860 to 1870 the value of the products increased 233.1 per cent. The values for 1870, however, were expressed in a currency which was at a discount in gold and should be reduced about one-fifth for purposes of comparison with other census years.

Iowa has good transportation facilities, and an abundance of coal. Its manufacturing enterprises are evenly distributed over the state, and are diversified in character. No one portion or particular city of the state can lay claim to a dominant interest in manufactures or a monopoly of any one of its leading industries. The southern and eastern portions were settled first and still have the denser population, yet in the northwestern portion is located the leading manufacturing city.

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

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	18,429	\$104,343,592	20,571	59,367	\$23,988,057	\$8,083,729	\$101,667,061	\$53,240,444	\$44,560,901	\$3,865,716	\$165,776,791
Hand trades ¹	6,924	8,722,661	8,051	11,088	4,629,786	1,269,740	9,931,978	120,423	9,429,121	882,484	22,286,774
Educational, eleemosynary, and penal institutions	21	169,690	104	55	18,476	11,671	194,741	12,898	170,639	11,204	261,344
Establishments with a product of less than \$500.	3,589	1,440,799	3,848	759	37,901	83,291	301,963	28,784	271,430	1,799	897,570
All other establishments	7,895	94,010,442	8,568	47,465	19,301,894	6,719,027	91,238,379	53,078,389	34,689,711	3,470,279	142,381,103

¹ Includes bicycle and tricycle repairing, 130; blacksmithing and wheelwrighting, 2,408; boots and shoes, custom work and repairing, 475; carpentering, 740; clothing, men's, custom work and repairing, 500; clothing, women's, dressmaking, 291; dyeing and cleaning, 31; furniture, cabinetmaking, repairing, and upholstering, 103; lock and gun smithing, 41; masonry, brick and stone, 170; millinery, custom work, 926; painting, house, sign, etc., 338; paper hanging, 28; plastering and stuccowork, 68; plumbing, and gas and steam fitting, 196; sewing machine repairing, 6; typewriter repairing, 1; watch, clock, and jewelry repairing, 482.

Of the 18,429 establishments of all classes shown in this table, 10,513, or 57 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

\$23,064,344, or only 13.9 per cent of the total value of the products of the state.

In addition to the 18,429 active establishments in the state during the census year, with a capital of \$104,343,592, shown in Table 2, there were 77 idle establishments, with a capital of \$1,293,220, divided as follows:

INDUSTRIES.	Number of idle establishments.	Capital.	INDUSTRIES.	Number of idle establishments.	Capital.
Agricultural implements	3	\$14,800	Paper and wood pulp	1	\$30,000
Brick and tile	17	34,425	Plumbers' supplies	1	41,000
Cheese, butter, and condensed milk, factory product	9	85,200	Pottery, terra cotta, and fire-clay products	1	11,000
Flouring and grist mill products	12	79,500	Scales and balances	1	85,000
Lime and cement	2	114,500	Slaughtering, wholesale, not including meat packing	1	235,000
Liquors, distilled	1	18,200	Starch	2	489,000
Lumber, planing mill products, including sash, doors, and blinds	3	11,450	Woolen goods	8	19,500
Malt	1	50,000	All other industries	16	22,545
Oil, linseed	8	65,500			

TABLE 3.—COMPARATIVE SUMMARY OF ELEVEN 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	3,821	\$51,286,287	27,103	\$11,882,568	\$2,938,455	\$67,199,454	\$95,924,681
	1890	2,618	43,811,727	28,767	11,030,592	2,915,553	66,130,094	79,751,171
Increase, 1890 to 1900		1,208	2,474,560	1,659	202,006	22,902	11,069,360	16,173,510
Per cent of increase		46.2	5.1	15.8	1.7	0.8	19.7	20.3
Per cent of total of all industries in state	1900	25.8	49.9	46.3	49.4	36.8	66.4	58.3
	1890	85.1	63.0	56.4	56.9	50.9	70.8	63.8
Carriages and wagons	1900	211	4,087,400	1,692	713,901	243,794	1,863,988	3,931,067
	1890	294	2,765,207	1,602	769,923	142,236	1,449,922	3,168,545
Cars and general shop construction and repairs by steam railroad companies.	1900	58	3,277,617	5,497	2,948,947	124,453	2,896,269	6,221,378
	1890	41	2,404,648	3,812	2,121,824	800	2,244,274	4,478,089
Cheese, butter, and condensed milk, factory product	1900	907	3,459,017	1,133	588,633	153,990	13,501,556	15,846,077
	1890	497	2,074,177	2,355	944,895	121,160	8,360,689	10,545,182
Clay products:								
Total	1900	356	3,437,613	2,220	892,159	140,459	517,580	2,224,920
	1890	289	2,114,863	2,788	724,999	105,934	332,393	1,775,165
Brick and tile	1900	339	3,076,355	1,986	768,860	115,897	460,313	1,976,823
	1890	260	1,802,942	2,543	628,588	84,811	282,431	1,537,890
Pottery, terra cotta, and fire-clay products	1900	17	361,258	234	98,290	24,562	57,267	243,697
	1890	29	311,921	245	96,411	24,123	49,962	237,275
Flouring and grist mill products	1900	702	6,421,078	1,285	526,479	304,256	11,272,217	13,823,083
	1890	441	6,696,759	1,218	507,414	363,998	9,786,174	11,833,787
Food preparations	1900	16	2,501,521	609	209,031	196,297	2,388,003	3,604,031
	1890	8	579,866	147	59,864	35,700	706,739	900,811
Foundry and machine shop products	1900	190	3,732,774	2,372	1,088,312	200,918	2,189,660	4,460,914
	1890	126	3,032,277	2,142	1,066,715	172,788	1,454,164	3,432,360

¹ Decrease.

TABLE 3.—COMPARATIVE SUMMARY OF ELEVEN 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.			
Lumber and timber products -----	1900	254	\$8,762,219	2,793	\$1,046,181	\$342,386	\$6,824,034	\$8,677,058
	1890	143	17,630,336	6,819	2,101,648	639,890	7,960,286	12,056,302
Lumber, planing mill products, including sash, doors, and blinds -----	1900	65	3,576,805	2,372	983,924	255,979	3,195,243	5,295,546
	1890	46	3,044,145	1,933	825,435	182,242	2,062,125	3,688,856
Printing and publishing: -----								
Total -----	1900	1,025	5,679,390	4,248	1,656,844	533,937	1,494,260	6,145,563
	1890	699	4,084,430	3,296	1,385,680	621,645	1,118,165	4,651,543
Book and job -----	1900	115	976,341	855	345,665	89,247	411,711	1,210,110
	1890	56	582,720	442	182,495	74,085	254,841	732,925
Newspapers and periodicals -----	1900	910	4,703,049	3,393	1,311,179	444,690	1,082,549	4,935,453
	1890	643	3,601,710	2,854	1,203,185	547,460	803,764	3,818,623
Slaughtering: -----								
Total -----	1900	27	6,351,353	2,887	1,208,167	441,086	21,556,644	25,695,044
	1890	29	4,485,020	2,575	1,122,695	526,765	20,655,223	23,425,576
Slaughtering and meat packing, wholesale -----	1900	20	6,264,578	2,874	1,201,681	437,103	21,195,036	25,296,513
	1890	25	4,105,020	2,013	862,075	452,147	17,376,828	19,615,336
Slaughtering, wholesale, not including meat packing -----	1900	7	86,775	13	6,486	4,833	361,578	393,525
	1890	4	380,000	562	260,620	74,618	3,279,395	3,810,190

During recent years there has been a marked change in the character of the industries of the state. In the early period of settlement the principal products manufactured were lumber, flour, leather, and woolen goods, all of which, with the exception of flour, have since declined, while slaughtering and the factory manufacture of butter and cheese have taken their places in the list of leading industries. In the discussion of Table 3, which follows, the industries are ranked with reference to the value of products.

Table 3 shows that wholesale slaughtering and meat packing is the most important industry in the state. The 27 establishments reported for this industry gave employment to 2,887 wage-earners, or 4.9 per cent of the wage-earners employed in the state, and the products were valued at \$25,695,044, or 15.6 per cent of the total value of the products of the state. In 1890 there were 29 establishments reported, with 2,575 wage-earners, and products valued at \$23,425,576. The increase in the value of products during the decade was 9.7 per cent.

The factory manufacture of butter, cheese, and condensed milk ranks second in importance, with 907 establishments for 1900, 1,133 wage-earners, and products valued at \$15,846,077. In 1890 there were 497 establishments engaged in this industry, with 2,355 wage-earners, and products valued at \$10,545,182. The increase in the value of products during the decade was 50.3 per cent.

Flour and grist milling holds the third place among the manufacturing industries of the state. There were 702 establishments engaged in this industry in 1900, with 1,285 wage-earners, and products valued at \$13,823,083. In 1890 there were 441 establishments, 1,248 wage-earners, and products valued at \$11,833,737. The increase in the value of products during the decade was 16.8 per cent.

There were 264 establishments engaged in the manufacture of lumber and timber products in 1900, with 2,793 wage-earners, and products valued at \$8,677,058. In 1890, 143 establishments were reported, with 6,819 wage-earners, and products valued at \$12,056,302. The decrease in the

value of products during the decade was 28 per cent. This decline in the lumber and timber industry is very significant, if quality and quantity of product be considered. In the earlier decades the lumber companies operated along the banks of the rivers, cutting only the larger trees, and culling from an extended area the finer woods. As a result, the present lumber supply is gained largely from trees of smaller diameter, which formerly would have been rejected. Walnut and oak have almost entirely disappeared, while logs of all kinds must be conveyed considerable distances to ship or raft.

Allied to the lumber and timber industry is the manufacture of planing mill products, including sash, doors, and blinds. There were 65 establishments engaged in this industry in 1900, with 2,372 wage-earners, and products valued at \$5,295,546. In 1890 there were 46 establishments, 1,933 wage-earners, and products valued at \$3,688,856. There has been an increase of 47.6 per cent in the value of products during the decade.

There were 58 establishments engaged in car construction and repairs by steam railroad companies in 1900, with 5,497 wage-earners, and products valued at \$6,221,378. In 1890 there were 41 establishments, 3,812 wage-earners, and products valued at \$4,473,089. The increase in the value of products during the decade was 39.1 per cent. In the number of wage-earners and amount paid in wages, this industry ranks first among the manufacturing industries of the state. The location of the state is such that it is a highway for the transfer of commodities between the East and West, while extensive transportation facilities are necessary to place its own products on the market. As a result of these conditions, extensive car construction and repair shops have been located at Burlington, Davenport, Boone, Belle Plaine, Waterloo, Oelwein, and other cities.

There were 1,025 establishments engaged in printing and publishing in 1900, with 4,248 wage-earners, and products valued at \$6,145,563. In 1890 there were 699 establishments, 3,296 wage-earners, and products valued

at \$4,551,548. The increase in the value of products during the decade was 35 per cent.

There were 190 foundries and machine shops in the state in 1900, with 2,372 wage-earners, and products valued at \$4,460,914, while in 1890, 126 such establishments were reported, with 2,142 wage-earners, and products valued at \$3,432,360. There has been an increase of 30 per cent in the value of products during the decade.

There were 211 establishments engaged in the manufacture of carriages and wagons in 1900, with 1,692 wage-earners, and products valued at \$3,931,067. In 1890 there were 294 establishments, 1,602 wage-earners, and products valued at \$3,168,545. The value of products increased 24.1 per cent during the decade.

There were 16 establishments engaged in the manufacture of food preparations in 1900, with 609 wage-earners, and products valued at \$3,604,031. In 1890 there were 8 establishments, with 147 wage-earners, and products valued at \$900,811. The value of products increased 300.1 per cent during the decade.

In 1900, 356 establishments were reported as engaged in the manufacture of clay products, with 2,220 wage-earners, and products valued at \$2,224,920. In 1890 there were 289 establishments, 2,788 wage-earners, and products valued at \$1,775,165. The value of products increased 25.3 per cent during the decade.

An industry of recent origin, peculiar to Iowa, is the manufacture of pearl buttons from the shells of the native fresh-water mussel. The statistics of this industry appear in Table 7, under the classification "buttons." There were 53 establishments reported in 1900, with 1,402 wage-earners, and products valued at \$866,538. The leading center of the industry is Muscatine, which, in 1898, had 5 completely organized plants and 28 saw works; but almost every town on the Mississippi from Sabula to Fort Madison, a distance of 167 miles, is provided with plants,

Davenport and Clinton being secondary centers. The industry has been pursued also at Cedar Rapids, Vinton, and Charles City on the Cedar River; at Coralville on the Iowa River; and at West Liberty, What Cheer, and Oskaloosa.¹ The credit for introducing the industry into the state is given to Mr. J. F. Boepple, who learned the trade in his native city of Hamburg, Germany. Assured of the excellence of the mussels in the Mississippi and the rivers of Iowa, he located his factory at Muscatine in 1891. The success of the industry was at once assured; by 1898 no less than 1,000 persons were engaged in the mussel fishery between Fort Madison and Sabula. The fear that the mussel beds will soon be exhausted seems well founded. The beds opposite Muscatine and New Boston are already worked out. No attention is paid to the spawning season of the principal species; multitudes of small mussels that can not be utilized are left upon the banks or ice to die, although, even when proper care is taken, it requires from ten to eighteen years to grow serviceable shell. At present, however, the industry is in a fairly prosperous condition, and the Mississippi River buttons are sold in every state in the Union, as well as in Canada and England. Only a portion of the product sold, however, is finished in Iowa or the adjoining section of Illinois. Several of the larger button factories of the East have "saw works" located here, which cut out the rough blanks and ship them east for final manufacture. In a few cases the rough shells have been shipped.

URBAN MANUFACTURES.

Table 4 shows the totals for the manufacturing and mechanical industries of the cities of Burlington, Council Bluffs, Davenport, Des Moines, Dubuque, and Sioux City, as returned at the censuses of 1890 and 1900, with the percentages of increase.

¹ Report of the Iowa Bureau of Labor Statistics, 1897-1898, page 96.

TABLE 4.—COMPARATIVE SUMMARY, BURLINGTON, COUNCIL BLUFFS, DAVENPORT, DES MOINES, DUBUQUE, AND SIOUX CITY, 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	14,819	\$102,733,103	58,553	\$23,931,680	\$7,938,767	\$101,170,357	\$164,617,877
Per cent of increase.....	1890	7,440	77,513,037	51,037	20,420,620	5,732,206	79,292,407	125,049,183
		99.2	32.5	14.7	17.1	39.4	27.6	31.6
Burlington.....	1900	340	5,235,624	2,598	1,013,908	414,819	2,809,536	5,334,106
Per cent of increase.....	1890	223	3,963,986	2,935	1,157,414	250,615	3,090,200	5,413,188
		52.5	32.1	11.5	12.4	59.8	10.3	11.5
Council Bluffs.....	1900	198	1,176,408	1,179	609,905	160,871	1,224,814	2,506,830
Per cent of increase.....	1890	123	1,292,283	1,469	701,723	92,836	1,272,946	2,527,388
		54.7	19.0	19.7	13.1	73.2	13.8	2.7
Davenport.....	1900	416	10,774,707	4,348	1,892,737	855,397	6,854,677	11,573,670
Per cent of increase.....	1890	475	8,732,122	4,461	1,640,495	780,201	6,098,349	10,357,232
		112.4	23.4	12.5	15.4	9.6	12.4	11.7
Des Moines.....	1900	494	7,911,764	4,657	1,942,509	894,691	4,975,563	10,488,189
Per cent of increase.....	1890	330	8,877,140	3,420	1,631,107	442,162	4,468,377	7,931,272
		49.7	104.1	33.2	19.1	102.3	12.9	32.2
Dubuque.....	1900	460	8,117,353	5,508	2,012,153	1,028,245	5,930,017	10,952,204
Per cent of increase.....	1890	262	7,016,802	4,198	1,715,876	564,377	5,984,431	9,894,860
		75.6	15.7	31.1	17.3	32.2	10.9	10.7
Sioux City.....	1900	329	5,691,644	3,104	1,485,066	664,486	10,669,072	15,469,702
Per cent of increase.....	1890	196	5,222,626	2,629	1,520,576	494,489	10,295,190	14,119,843
		67.9	9.0	18.1	12.3	34.4	3.6	9.6
Total for 6 cities.....	1900	2,237	33,907,505	21,289	8,956,368	4,018,509	32,461,284	56,414,791
Per cent of increase.....	1890	1,614	30,104,959	19,112	8,367,191	2,633,730	31,168,493	50,243,733
		38.6	29.2	11.4	7.0	52.6	4.2	12.3
Per cent of 6 cities to total for state.....	1900	15.1	37.9	36.4	37.4	50.3	32.1	34.3
	1890	21.7	33.8	37.4	41.0	45.9	39.3	40.2

¹ Decrease.

It appears from Table 4 that there has been a considerable increase during the past decade in the manufactures of the 6 principal cities of the state. The number of establishments increased from 1,614 to 2,237, or 38.6 per cent; the average number of wage-earners from 19,112 to 21,289, or 11.4 per cent; and the value of products from \$50,243,733 to \$56,414,791, or 12.3 per cent. In each of these particulars, however, the increase for these cities is less than for the state as a whole (see Table 3), showing that the development of manufactures has been more rapid in the smaller cities and towns of the state. The city of Des Moines shows the greatest growth, as measured by the value of products, which increased from \$7,931,272 in 1890 to \$10,488,189 in 1900, or 32.2 per cent. In Sioux

City, the leading manufacturing city in the state, the number of establishments increased during the decade from 196 to 329, or 67.9 per cent; the number of wage-earners from 2,629 to 3,104, or 18.1 per cent; and the value of products from \$14,119,843 to \$15,469,702, or 9.6 per cent. The number of establishments, the number of wage-earners, and the value of products, in this city in 1900, constituted 2.2, 5.3, and 9.4 per cent, respectively, of the totals for the entire state.

Table 5 presents the totals for the manufacturing industries of the 39 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 products and in population.

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	14,819	\$102,733,103	16,619	58,553	\$23,931,680	\$7,988,767	\$101,170,857	\$164,617,677	-----	100.0	12,231,468	-----	100.0
Total for urban manufactures.	5,408	77,012,586	6,011	44,472	18,436,540	6,549,137	71,820,352	118,468,509	-----	72.0	470,965	-----	21.1
Belle Plaine	41	89,742	55	135	58,338	8,819	122,413	232,581	86	0.1	3,283	34	0.1
Boone	114	400,260	146	680	315,833	28,725	471,794	975,045	20	0.6	8,880	17	0.4
Burlington	340	5,235,624	353	2,598	1,013,998	414,319	2,899,536	5,334,196	9	3.2	23,201	7	1.0
Cedar Falls	67	658,605	75	315	123,090	55,380	673,000	1,049,557	18	0.6	5,319	21	0.2
Cedar Rapids	241	6,256,801	281	3,105	1,313,821	513,455	3,969,992	12,715,897	2	7.7	25,656	6	1.2
Centerville	54	173,910	59	203	82,667	14,695	163,272	341,169	31	0.2	5,256	22	0.2
Chariton	46	126,090	52	175	64,837	12,068	155,346	323,900	32	0.2	3,939	23	0.2
Charles City	61	288,313	73	184	77,479	15,021	231,804	433,985	23	0.3	4,227	25	0.2
Clarinda	44	126,706	57	85	33,449	9,434	97,158	179,996	39	0.1	3,276	35	0.1
Clinton	224	4,537,200	208	3,080	1,137,019	370,141	4,247,057	6,989,473	7	4.2	22,698	8	1.0
Council Bluffs	193	1,176,408	213	1,179	609,905	160,871	1,224,814	2,596,830	12	1.6	25,802	5	1.2
Creese	55	135,030	69	98	34,910	7,554	168,133	291,772	34	0.2	2,803	37	0.1
Creston	103	398,925	105	418	177,476	29,743	314,910	688,739	23	0.4	7,732	19	0.4
Davenport	416	10,774,707	456	4,343	1,892,737	855,397	6,854,677	11,673,670	3	7.0	35,264	3	1.6
Decorah	85	818,540	97	174	75,619	23,762	221,213	443,345	26	0.3	3,246	36	0.1
Des Moines	494	7,911,764	515	4,557	1,942,509	894,691	4,975,568	10,488,189	5	6.4	62,139	1	2.3
Dubuque	460	8,117,553	523	5,303	2,012,153	1,025,245	5,930,017	10,952,204	4	6.7	36,207	2	1.6
Fort Dodge	82	908,834	88	527	224,124	35,642	793,265	1,263,335	16	0.8	12,162	13	0.5
Fort Madison	83	1,546,574	75	995	403,351	95,455	870,482	1,737,254	14	1.1	9,278	15	0.4
Grinnell	81	812,940	102	334	145,664	37,045	426,632	1,004,642	19	0.6	3,850	29	0.2
Independence	57	312,405	56	159	57,375	14,766	163,291	314,179	33	0.2	3,656	31	0.2
Iowa City	129	1,003,909	130	680	299,314	89,077	731,730	1,511,065	15	0.9	7,987	13	0.4
Keokuk	188	2,103,335	197	1,665	614,580	190,578	1,882,227	3,690,947	11	2.2	14,641	10	0.7
Le Mars	69	555,662	73	190	55,816	52,658	690,559	955,680	21	0.6	4,146	26	0.2
Marion	55	113,970	69	79	35,066	9,627	117,978	244,545	35	0.2	4,102	27	0.2
Marshalltown	147	5,366,270	170	1,399	654,227	190,154	3,120,658	4,587,240	10	2.8	11,544	14	0.5
Mason City	89	351,868	103	376	187,211	21,013	330,110	705,460	22	0.4	6,746	20	0.3
Muscatine	247	3,725,971	295	2,395	1,055,904	212,703	3,773,379	5,791,110	8	3.5	14,073	11	0.6
Newton	86	443,133	106	312	121,831	44,768	244,402	666,727	25	0.4	3,632	30	0.2
Oelwein	37	614,599	41	611	279,922	10,081	337,360	674,637	24	0.4	5,142	23	0.2
Osage	37	82,090	45	68	29,895	6,795	120,174	202,405	37	0.1	2,734	39	0.1
Oskaloosa	143	552,230	171	583	262,223	67,733	490,932	1,063,584	17	0.7	9,212	16	0.4
Ottumwa	100	3,403,321	183	2,085	804,215	200,073	7,093,063	9,129,362	6	5.5	13,197	9	0.8
Shenandoah	56	236,623	65	213	87,078	12,076	200,213	382,740	30	0.2	3,573	32	0.2
Sioux City	329	5,691,644	376	3,104	1,435,066	664,486	10,669,672	15,469,702	1	9.4	33,111	4	1.5
Vinton	63	198,237	81	231	70,001	31,384	206,150	440,137	27	0.3	3,499	33	0.2
Waterloo	147	1,287,056	142	1,042	471,603	81,642	1,555,578	2,499,331	13	1.5	12,530	12	0.6
Webster City	33	343,455	36	205	73,297	16,863	188,170	415,163	29	0.3	4,613	24	0.2
What Cheer	41	132,403	51	53	25,927	6,578	93,167	184,436	33	0.1	2,746	38	0.1
Total for state exclusive of urban manufactures	9,411	25,720,517	10,608	14,081	5,495,140	1,439,630	29,350,005	46,149,368	-----	-----	1,761,103	-----	-----
Per cent of urban manufactures to total for state	36.5	75.0	36.2	76.0	77.0	82.0	71.0	72.0	-----	280.0	-----	-----	73.9

1 Exclusive of 385 Indians and other persons on Indian reservations, which classes were not included at previous censuses.

Of the 14,819 establishments in the state, 5,408, or 36.5 per cent, were located in these 39 cities. The capital reported for these establishments was \$77,012,586, or 75 per cent of that for the entire state. They furnished employment to 44,472 wage-earners, or 76 per cent of the total for the state; paid \$18,436,540, or 77 per cent of the total wages; and the value of their products, \$118,468,509, formed 72 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 Burlington, Cedar Rapids, Clinton, Council Bluffs, Davenport, Des Moines, Dubuque, and Sioux City, 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

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	14,819	\$102,738,103	\$11,701,330	\$18,554,185	\$26,150,011	\$46,327,577	16,619	5,664	\$4,486,117	58,553	\$23,931,630	
2 Adair	77	122,026	7,908	36,741	44,785	32,597	95	3	864	68	24,001	
3 Adams	59	160,487	21,130	27,385	59,255	52,767	67	6	3,176	79	29,475	
4 Allamakee	116	365,709	40,666	85,971	101,897	137,175	135	18	4,809	211	80,809	
5 Appanoose	125	252,000	33,780	57,655	101,523	64,702	138	17	8,351	246	96,533	
6 Audubon	62	182,460	10,190	30,465	47,760	44,035	64	7	627	80	32,164	
7 Benton	138	466,102	52,090	123,850	123,084	167,128	217	21	11,872	466	166,212	
8 Blackhawk	274	2,104,542	238,214	366,196	524,334	915,798	273	152	105,978	1,435	625,649	
9 Boone	184	536,701	61,010	78,400	135,726	261,535	224	33	21,322	762	346,234	
10 Bremer	145	400,822	45,240	105,060	118,401	132,181	152	33	7,262	189	71,411	
11 Buchanan	163	506,090	60,190	102,475	174,620	168,805	172	20	8,282	264	96,481	
12 Buena Vista	107	235,566	29,060	59,014	78,855	68,637	124	8	3,810	102	42,112	
13 Butler	140	331,873	35,155	82,855	93,714	122,154	149	20	8,273	116	49,483	
14 Calhoun	119	263,693	30,700	43,040	80,740	114,113	184	9	5,555	205	100,244	
15 Carroll	125	327,945	28,363	54,760	97,802	147,020	129	10	5,717	152	63,454	
16 Cass	138	386,454	42,355	74,475	102,640	167,014	183	7	3,680	285	109,111	
17 Cedar	125	449,209	50,215	98,430	129,390	165,174	145	5	3,520	233	117,100	
18 Cerro Gordo	162	510,319	72,740	105,502	137,108	194,969	189	80	20,586	425	185,226	
19 Cherokee	83	214,761	22,690	45,815	70,997	75,784	92	2	1,400	96	43,320	
20 Chickasaw	133	299,617	33,071	67,823	98,072	100,651	136	22	5,968	157	58,927	
21 Clarke	38	87,686	14,350	12,855	27,600	32,881	45	6	2,100	46	20,220	
22 Clay	53	167,613	24,615	36,410	59,227	47,361	61	5	3,800	56	21,268	
23 Clayton	213	644,521	37,555	101,840	194,390	307,736	235	29	8,403	362	119,202	
24 Clinton	320	4,756,638	516,496	387,261	811,423	8,011,453	319	207	235,512	3,147	1,161,486	
25 Crawford	77	222,037	24,030	46,165	74,760	77,082	90	1	1,000	94	34,863	
26 Dallas	124	316,963	32,355	76,505	103,430	108,696	158	8	5,648	152	58,099	
27 Davis	87	164,959	32,100	23,665	58,722	50,472	105	6	1,582	114	30,786	
28 Decatur	92	203,383	16,915	49,230	61,503	75,735	109	8	3,030	103	38,165	
29 Delaware	155	415,434	52,825	104,170	133,565	124,874	159	28	8,119	222	92,157	
30 Des Moines	370	5,074,811	1,321,484	669,505	1,333,863	2,239,954	390	338	228,417	3,178	1,808,537	
31 Dickinson	54	163,884	16,063	33,300	57,595	57,905	65	1	150	42	20,763	
32 Dubuque	609	8,478,553	900,837	1,354,364	1,342,822	4,880,530	675	612	459,393	5,662	2,076,398	
33 Emmet	51	176,162	9,004	41,325	53,853	72,430	53	8	2,530	69	32,343	
34 Fayette	220	1,022,954	65,940	431,804	257,715	277,495	245	35	15,320	742	349,890	
35 Floyd	118	411,891	69,755	91,002	108,146	142,988	134	12	5,896	253	101,770	
36 Franklin	56	165,013	16,525	26,044	58,569	66,044	62	5	2,315	58	26,337	
37 Fremont	120	249,046	25,501	45,870	89,429	88,246	153	3	1,100	135	43,492	
38 Greene	85	239,632	26,450	65,067	64,787	83,328	109	6	4,120	137	59,950	
39 Grundy	86	178,286	11,430	49,470	67,218	60,113	107	2	840	65	27,216	
40 Guthrie	104	275,509	20,590	75,970	92,743	86,206	114	5	1,370	158	51,226	
41 Hamilton	86	467,471	42,270	105,573	129,362	190,276	91	29	15,942	261	98,434	
42 Hancock	79	173,703	20,400	44,210	56,283	52,810	80	6	1,400	75	31,048	
43 Hardin	195	520,276	63,840	107,423	167,364	182,149	223	14	5,529	285	123,546	
44 Harrison	125	308,191	30,200	66,760	87,972	123,169	130	18	11,243	566	274,649	
45 Henry	136	347,855	21,780	65,347	143,191	112,637	163	13	7,121	181	59,551	
46 Howard	116	283,803	20,569	66,600	70,050	120,589	139	13	5,803	145	53,398	
47 Humboldt	95	239,377	21,295	54,025	86,328	78,229	96	12	3,860	76	30,833	
48 Ida	72	265,096	21,190	49,175	75,090	120,541	88	4	2,423	94	38,087	
49 Iowa	114	247,008	23,045	65,870	83,480	74,613	142	7	2,091	112	43,259	
50 Jackson	207	655,345	64,514	128,535	201,349	260,947	228	23	9,666	404	158,629	
51 Jasper	185	684,469	41,410	123,143	181,159	419,757	210	70	46,680	405	156,667	
52 Jefferson	76	537,929	21,700	61,020	120,209	335,000	83	27	13,164	230	84,642	
53 Johnson	184	1,275,968	107,810	219,440	358,001	590,717	138	165	72,529	747	324,109	
54 Jones	169	568,481	63,242	162,383	177,166	165,699	179	17	6,668	303	111,853	
55 Keokuk	181	377,600	32,825	101,540	106,102	137,133	231	18	9,391	233	93,069	
56 Kossuth	86	256,168	21,830	62,073	87,775	84,490	80	17	3,723	99	46,166	
57 Lee	329	4,192,064	237,730	609,573	990,822	2,353,939	341	426	533,955	2,842	1,104,748	
58 Linn	470	6,657,981	509,865	1,411,522	1,541,733	3,194,856	546	341	239,103	3,390	1,424,523	
59 Louisa	48	158,117	9,200	32,200	36,070	80,047	53	7	3,135	155	44,171	
60 Lucas	78	157,642	11,570	23,647	36,303	86,037	85	8	5,049	200	73,467	
61 Lyon	68	199,763	16,940	44,006	63,045	70,172	75	1	600	59	28,806	
62 Madison	90	156,011	16,700	25,280	44,031	70,000	101	6	1,827	137	52,645	
63 Mahaska	200	672,834	67,005	110,705	182,113	312,951	239	52	30,794	663	284,072	
64 Marion	123	408,254	27,845	60,700	100,523	219,131	152	15	6,111	227	65,525	
65 Marshall	226	6,245,481	1,507,980	1,656,605	1,817,785	1,263,061	262	116	115,946	1,715	742,979	
66 Mills	78	175,701	13,330	42,000	64,524	55,847	84	8	4,332	145	54,338	
67 Mitchell	96	225,768	33,585	53,010	72,800	66,373	105	11	4,600	130	50,667	
68 Monona	75	172,517	13,175	35,100	43,480	80,762	85	2	813	62	19,030	
69 Monroe	82	130,066	10,685	24,840	38,525	56,516	91	3	1,650	113	42,558	
70 Montgomery	127	414,032	30,440	91,300	132,846	159,446	149	20	12,189	260	94,247	
71 Muscatine	315	3,880,703	231,745	343,051	724,847	2,587,000	377	141	132,875	2,920	1,089,760	
72 O'Brien	108	327,134	22,075	67,000	96,153	141,901	117	6	3,910	119	41,005	
73 Osceola	44	90,874	11,250	24,255	30,476	40,762	47	1	—	37	14,869	
74 Page	176	497,915	55,060	103,547	141,302	103,006	208	14	7,716	362	144,153	
75 Palo Alto	101	243,377	23,849	47,935	73,784	102,739	106	20	6,356	143	57,731	
76 Plymouth	141	769,499	133,130	174,010	219,382	242,427	140	35	20,075	259	109,574	

BY COUNTIES: 1900.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not including internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
48,417	\$21,893,983	8,248	\$1,766,858	1,888	\$270,839	\$7,988,767	\$1,166,879	\$547,635	\$5,592,216	\$682,087	\$101,170,357	\$98,911,434	\$2,258,923	\$164,617,877	1
55	21,509	9	1,998	4	589	9,158	2,751	771	5,528	108	162,832	157,474	5,858	236,923	2
68	26,706	10	2,719	1	50	10,371	2,765	755	6,851		235,504	223,284	7,220	339,404	3
195	76,845	14	3,558	2	406	18,266	5,235	1,884	10,882	285	480,121	422,350	7,771	682,479	4
198	87,726	41	8,007	7	800	18,019	4,576	2,524	5,669	5,260	215,921	207,658	8,363	447,415	5
62	29,446	17	2,628	1	90	7,543	3,017	993	3,513	25	274,815	263,104	6,711	386,073	6
375	147,398	75	16,249	16	2,565	49,384	7,544	3,198	34,880	3,762	529,189	511,778	17,411	988,908	7
1,210	584,698	196	36,710	29	4,241	144,504	29,097	13,384	101,737	286	2,641,551	2,604,766	86,785	4,071,821	8
664	329,615	68	14,005	30	2,614	83,702	15,911	4,350	18,006	435	601,547	577,834	24,213	1,194,270	9
162	65,430	19	4,660	8	1,321	19,344	6,799	1,747	9,911	887	681,321	668,066	13,255	929,293	10
215	90,070	28	4,975	11	1,436	22,514	7,166	2,730	12,468	150	654,684	641,759	12,875	959,277	11
85	88,938	16	3,124	1	50	13,058	4,413	1,325	7,145	170	318,791	307,840	10,951	469,623	12
98	45,281	15	3,842	3	860	19,070	6,411	1,944	10,565	150	581,932	569,635	12,297	796,660	13
174	94,290	22	4,829	9	1,155	14,029	5,271	1,732	6,776	250	295,359	288,904	6,455	509,407	14
120	56,864	22	5,260	10	1,330	19,674	6,454	1,606	11,614		327,212	319,269	7,943	548,486	15
206	95,560	70	11,760	9	1,791	27,305	9,647	2,977	14,671	10	490,238	481,203	9,035	817,079	16
211	112,571	17	3,404	5	1,185	15,591	5,197	2,136	5,298	2,960	288,958	274,455	14,503	548,252	17
365	173,280	57	11,729	3	217	26,999	9,092	3,066	13,716	1,125	443,220	422,154	21,066	899,879	18
80	39,958	15	3,137	1	225	16,372	4,662	1,253	10,457		167,910	160,814	7,096	811,432	19
130	53,486	24	5,054	3	387	20,483	4,667	1,791	11,188	2,839	683,371	670,519	12,852	912,868	20
40	19,395	5	700	1	125	4,909	1,079	657	2,545	28	83,613	80,903	2,710	151,847	21
43	20,358	8	870	5	540	9,093	1,568	1,199	4,825	1,501	240,963	235,888	5,097	340,449	22
327	113,189	29	5,469	6	604	25,844	7,219	2,852	15,073	700	1,060,045	1,045,656	14,389	1,514,540	23
2,794	1,090,863	254	53,164	99	17,459	377,521	82,807	50,704	290,460	8,550	4,469,469	4,400,940	58,529	7,265,252	24
80	32,411	9	1,937	5	515	11,115	3,756	1,647	5,692	120	241,021	229,685	11,386	387,232	25
128	48,160	19	4,221	5	718	18,989	5,375	1,792	10,982	840	302,710	285,774	16,936	510,968	26
82	26,156	28	4,290	4	340	8,215	3,264	981	3,780	240	95,026	92,827	2,199	208,037	27
83	34,006	14	3,305	6	814	10,044	3,012	1,089	5,793	150	93,050	88,342	4,768	212,368	28
180	85,305	37	6,325	5	527	21,969	8,399	1,971	16,599		758,979	743,426	15,553	1,085,520	29
2,774	1,239,860	315	56,994	89	12,153	450,603	53,958	30,648	332,371	33,631	8,247,247	8,181,804	65,943	6,145,776	30
37	13,274	3	1,260	2	229	6,447	2,206	1,086	2,648	507	207,178	200,164	7,014	296,062	31
4,883	1,846,411	1,164	211,778	115	18,209	1,044,201	90,738	54,688	785,227	113,548	6,366,965	6,261,987	104,978	11,614,240	32
65	31,841	4	1,002			9,908	3,477	851	4,880	700	163,845	157,285	6,110	242,376	33
674	338,835	49	9,358	19	1,697	87,556	10,011	3,289	23,896	666	1,065,235	1,034,779	30,456	1,729,214	34
226	96,380	20	4,884	7	506	20,976	6,838	2,352	12,226	530	393,308	383,781	9,527	666,717	35
51	24,067	7	2,320			8,220	2,811	839	5,070		184,587	178,908	5,629	278,293	36
110	39,740	17	2,873	8	879	13,768	4,568	1,739	7,206	200	194,662	184,299	10,363	351,889	37
104	53,245	33	6,705			10,577	4,106	1,352	4,809	310	220,266	211,275	8,991	388,633	38
57	25,120	7	1,920	1	175	10,514	4,651	1,080	4,753	80	322,298	313,883	8,465	450,816	39
126	45,882	20	3,802	12	1,542	15,515	4,378	1,700	9,282	160	312,045	299,452	12,593	489,678	40
218	80,383	17	5,586	16	2,465	22,156	4,015	2,175	15,966		416,266	393,156	23,110	718,406	41
59	29,520	15	1,498	1	30	8,149	3,126	1,174	3,832	17	166,933	162,161	4,772	271,219	42
248	120,274	35	8,097	2	169	35,029	7,761	3,393	15,245	8,625	684,819	670,411	14,408	1,060,422	43
523	267,709	34	6,070	9	870	16,413	6,233	2,664	7,576	40	499,232	407,500	21,672	898,661	44
185	52,881	37	5,814	9	956	24,951	10,051	2,102	11,658	1,140	219,557	210,152	9,405	414,966	45
180	60,096	11	2,506	4	737	13,119	4,474	1,720	6,303	622	407,694	400,424	8,270	681,037	46
62	28,228	11	1,805	3	305	9,943	2,430	1,536	5,860	117	285,218	277,924	7,294	423,798	47
79	34,956	12	2,781	3	400	11,143	3,435	1,605	6,028	75	317,029	309,122	7,907	463,223	48
101	41,030	8	1,675	3	584	13,188	3,598	1,537	7,007	446	231,209	219,290	11,919	368,795	49
357	148,255	43	9,408	4	966	43,656	7,315	3,794	38,649	8,793	620,490	607,420	13,070	971,117	50
809	141,806	91	14,269	5	532	64,060	10,938	4,122	37,367	11,633	430,250	410,653	13,597	990,950	51
183	77,246	34	6,795	13	601	26,510	4,807	1,741	19,962		297,453	281,654	15,799	549,829	52
598	297,287	136	24,044	13	2,178	98,149	13,420	6,403	72,501	825	865,459	847,830	17,629	1,075,869	53
243	99,923	47	10,400	13	1,524	26,617	8,019	3,171	14,282	1,145	780,735	762,895	17,840	1,120,533	54
203	86,973	23	5,303	7	793	18,333	6,599	2,457	9,092	185	290,050	277,941	13,109	583,895	55
87	44,012	6	1,335	6	819	12,755	3,119	1,764	7,847	525	465,582	454,297	11,285	606,940	56
2,266	985,368	485	100,795	91	12,585	325,663	30,603	23,900	208,594	59,506	3,090,156	3,020,399	75,757	5,907,571	57
2,780	1,295,770	475	103,808	135	24,945	545,508	54,057	20,840	418,624	52,572	9,513,005	9,349,615	113,790	13,632,423	58
102	34,687	20	4,780	33	4,701	7,178	2,864	900	3,599	15	152,820	148,131	4,689	298,390	59
167	68,392	28	4,595	5	480	14,015	6,285	859	5,670	1,200	181,406	176,836	4,630	377,501	60
50	27,276	3	630	6	900	9,435	3,462	1,277	4,384	312	306,244	300,969	5,275	446,012	61
114	48,514	17	3,571	6	650	17,677	5,098	926	4,138	7,460	112,739	109,869	2,870	258,3	

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	Pocahontas.....	76	\$176,039	\$16,580	\$41,555	\$60,786	\$57,218	88	2	\$180	77	\$30,295
78	Polk.....	547	8,050,689	576,157	934,341	2,398,147	4,142,044	569	742	606,010	4,780	2,058,095
79	Pottawattamie.....	324	1,425,472	134,050	283,755	451,158	604,509	355	184	116,844	1,282	652,164
80	Poweshiek.....	144	961,275	26,707	74,378	98,373	761,812	176	84	23,807	339	166,355
81	Ringgold.....	76	87,005	8,950	19,765	29,540	28,750	91	2	198	48	18,436
82	Sac.....	115	264,203	21,755	63,154	89,745	89,549	135	4	1,146	88	36,640
83	Scott.....	470	10,990,549	1,904,188	2,227,351	2,980,196	3,878,814	517	462	457,333	4,410	1,918,593
84	Shelby.....	72	150,115	11,947	30,300	55,338	52,530	70	10	2,200	70	28,583
85	Sioux.....	145	877,886	32,660	95,235	112,793	137,198	162	12	7,070	169	67,341
86	Story.....	148	342,645	29,715	80,500	96,780	135,650	169	15	4,093	175	72,968
87	Tama.....	147	529,082	70,505	107,120	222,088	129,374	182	20	10,960	320	122,137
88	Taylor.....	117	170,907	15,523	37,475	54,896	63,013	130	3	410	123	19,650
89	Union.....	137	451,870	30,465	144,642	174,470	102,293	140	32	23,725	457	191,129
90	Van Buren.....	124	594,371	37,785	116,997	164,581	275,098	156	30	22,341	349	100,858
91	Wapello.....	208	3,472,604	99,670	567,780	477,623	2,327,631	250	211	178,538	2,136	819,579
92	Warren.....	103	205,941	28,607	43,625	58,686	75,073	131	4	1,900	106	35,232
93	Washington.....	137	442,276	47,735	92,375	101,649	139,917	157	10	3,910	283	105,948
94	Wayne.....	102	196,345	18,805	41,805	57,050	79,185	130	8	2,465	121	42,549
95	Webster.....	172	1,536,942	150,654	343,725	564,059	478,504	177	121	84,034	746	326,378
96	Winnebago.....	78	230,456	16,000	37,825	96,466	80,166	82	13	3,235	142	57,868
97	Winneshiek.....	174	601,851	52,418	141,845	148,223	259,370	180	23	12,016	287	115,556
98	Woodbury.....	398	5,950,223	535,968	1,158,774	1,508,541	2,746,940	449	329	297,997	3,183	1,514,180
99	Worth.....	72	155,503	16,015	40,775	55,135	43,581	71	8	1,005	55	23,276
100	Wright.....	104	281,030	18,715	68,120	85,936	108,259	115	14	6,638	267	128,095

TABLE 7.—MANUFACTURES BY

		14,819	\$102,733,103	\$11,701,830	\$18,554,185	\$26,150,011	\$46,327,577	16,619	5,664	\$4,486,117	58,558	\$23,931,680
1	All industries.....											
2	Agricultural implements.....	24	1,878,090	71,940	214,367	195,067	1,396,716	16	154	123,472	644	243,489
3	Awnings, tents, and sails.....	22	59,715	11,500	6,550	7,735	33,930	23	5	6,169	45	12,519
4	Axle grease.....	3	66,389	3,100	10,800	6,206	46,283	2	17	15,534	20	12,476
5	Baking and yeast powders.....	4	10,500	100	500	1,500	8,400	1	8	4,038	11	3,547
6	Bicycle and tricycle repairing.....	180	125,070	14,850	15,425	41,470	53,825	149	2	1,070	107	42,745
7	Blacksmithing and wheelwrighting.....	2,408	2,774,287	495,118	688,833	670,094	920,102	2,745	6	2,230	1,177	503,236
8	Bookbinding and blank book making.....	16	39,700		20,295	19,405	19,405	19	17	14,380	50	15,909
9	Boots and shoes, custom work and repairing.....	476	195,836	31,745	60,664	63,643	59,834	492			144	61,727
10	Boots and shoes, factory product.....	7	506,757	12,100	57,840	86,471	350,346	7	40	35,832	566	191,783
11	Bottling.....	10	22,007	200	350	10,960	10,587	13	8	2,596	32	9,589
12	Boxes, cigar.....	9	50,953	1,650	4,000	9,167	42,136	7	4	4,180	76	20,485
13	Boxes, fancy and paper.....	7	31,644			16,667	14,977	8			94	19,822
14	Boxes, wooden packing.....	16	878,550	35,737	48,927	71,924	221,962	15	15	14,240	363	116,157
15	Brass castings and brass finishing.....	3	367,310	20,000	30,000	99,610	217,700	4	18	12,010	204	66,197
16	Bread and other bakery products.....	194	1,301,902	142,914	227,800	549,936	831,752	217	171	112,344	846	331,324
17	Brick and tile.....	339	3,076,355	574,097	1,086,217	727,441	738,600	441	94	65,068	1,986	763,860
18	Bridges.....	13	127,520	25,900	13,400	26,120	68,000	17	2	2,200	125	65,260
19	Brooms and brushes.....	71	161,577	17,816	34,405	19,140	90,656	83	17	14,330	240	76,323
20	Buttons.....	53	324,315	15,685	24,931	171,727	171,912	61	42	26,306	1,402	458,086
21	Carpentering.....	740	1,172,124	130,608	144,597	224,579	672,040	925	39	16,967	2,092	1,423,132
22	Carpets, rag.....	75	50,355	11,805	13,975	17,567	7,503	83	3	2,550	77	22,651
23	Carriage and wagon materials.....	14	144,551	16,900	41,800	23,175	62,670	14	23	7,995	127	45,338
24	Carrriages and wagons.....	211	4,087,400	338,147	451,661	504,239	2,798,853	270	140	112,704	1,692	713,901
25	Cars and general shop construction and repairs by steam railroad companies.....	58	3,277,617	282,825	1,365,929	816,126	862,737		278	249,943	5,497	2,948,947
26	Cars and general shop construction and repairs by street railroad companies.....	3	62,825	11,300	20,500	15,300	9,725		6	8,400	85	51,207
27	Cheese, butter, and condensed milk, factory product.....	907	3,459,017	145,198	1,095,429	1,499,183	719,207	565	413	81,425	1,133	588,653
28	China decorating.....	3	1,425	25	200	175	1,025	3				
29	Clothing, men's, custom work and repairing.....	500	727,034	69,746	89,160	76,263	491,865	531	33	25,464	1,303	568,041
30	Clothing, men's, factory product.....	18	600,514	10,000	30,000	74,545	545,969	8	138	101,818	1,340	303,286
31	Clothing, women's, dressmaking.....	201	120,200	16,915	34,770	25,724	41,791	337	3	2,145	775	127,451
32	Clothing, women's, factory product.....	7	23,899			4,800	19,599	11	10	3,520	65	9,706
33	Coffee and spice, roasting and grinding.....	12	403,313	9,100	30,610	46,497	317,106	15	64	59,474	80	31,270
34	Coffins, burial cases, and undertakers' goods.....	5	814,286	19,700	51,070	21,676	221,940	3	27	27,238	175	78,063
35	Confectionery.....	64	577,197	84,590	65,535	186,762	290,310	70	111	91,612	559	145,420
36	Cooperage.....	71	326,434	31,080	59,745	60,186	175,423	80	12	8,457	440	165,904
37	Druggists' preparations, not including prescriptions.....	6	44,710	2,000	8,200	4,110	30,400	5	7	6,060	10	3,556
38	Dyeing and cleaning.....	31	50,080	10,250	19,500	17,175	9,155	39	12	6,216	64	24,740
39	Electrical construction and repairs.....	12	40,485	250	800	5,965	33,470	11	9	6,520	41	19,575
40	Fancy articles, not elsewhere specified.....	3	1,940			40	1,900	3			41	7,700
41	Flavoring extracts.....	4	6,050			750	5,300	4	13	6,980	7	1,610

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 num- ber.	Wages.	Average num- ber.	Wages.	Average num- ber.	Wages.												
55	\$26,719	14	\$2,718	8	\$858	\$8,823	\$3,040	\$1,177	\$4,606	-----	\$184,000	\$176,392	\$7,608	\$300,711	77		
3,855	1,841,414	819	199,101	106	17,580	901,105	184,902	43,650	615,412	\$107,111	5,173,612	4,996,198	177,419	10,856,986	78		
1,124	617,776	130	30,125	23	4,263	178,344	30,216	9,674	133,910	4,544	1,491,763	1,444,871	46,892	3,029,528	79		
816	144,163	71	21,936	2	256	43,128	6,170	2,025	21,898	13,035	537,308	527,953	9,355	1,192,863	80		
87	16,301	6	1,365	5	680	5,444	2,482	710	2,247	5	80,682	77,384	3,298	169,495	81		
75	33,562	11	2,870	2	208	19,667	3,475	1,412	8,170	610	341,303	332,061	9,242	509,404	82		
3,892	1,632,915	854	212,665	164	23,013	861,387	77,317	45,405	655,182	83,383	6,921,917	6,722,617	199,300	11,720,441	83		
63	27,730	2	408	5	460	81,654	1,671	715	3,224	-----	179,436	171,271	8,165	289,954	84		
143	61,962	15	3,419	11	1,960	34,054	4,959	2,766	26,323	-----	561,776	487,806	13,970	778,244	85		
136	66,348	26	5,160	13	1,460	19,329	6,022	1,807	10,477	1,023	461,652	389,124	12,528	666,552	86		
249	111,106	40	6,698	31	4,393	29,141	7,295	2,418	18,689	789	329,798	309,074	20,724	662,929	87		
103	17,714	16	811	9	1,125	10,546	3,706	1,067	5,949	5,824	227,212	220,454	6,758	376,193	88		
398	182,084	59	9,045	-----	-----	84,654	18,043	5,864	13,787	1,850	460,511	458,164	11,347	879,283	89		
228	78,201	109	21,514	12	1,093	28,311	3,268	2,939	20,198	1,906	424,728	415,800	8,928	717,314	90		
1,754	738,632	231	60,405	151	20,542	205,929	28,955	13,746	161,406	1,822	7,169,468	7,110,906	58,562	9,281,773	91		
86	32,350	9	1,712	11	1,170	11,818	2,846	1,309	4,568	2,600	240,496	235,654	4,842	384,588	92		
258	100,777	24	4,258	6	913	35,782	5,072	2,561	10,146	17,403	398,528	386,678	11,955	680,501	93		
93	37,820	20	3,835	8	835	10,373	4,488	1,223	4,212	450	179,421	172,571	6,850	310,707	94		
637	298,903	98	25,890	11	1,585	100,682	17,839	6,453	48,486	27,354	1,041,381	978,629	62,752	1,813,400	95		
118	52,077	20	5,063	4	728	14,082	3,998	1,339	8,595	150	418,685	409,153	9,532	589,652	96		
251	108,102	34	7,274	2	180	34,247	8,278	3,271	21,654	1,044	779,112	765,666	13,446	1,177,067	97		
2,679	1,407,356	448	97,187	61	9,687	670,166	75,067	26,695	552,989	15,415	10,832,963	10,694,451	138,542	15,801,189	98		
48	21,957	6	1,139	1	180	6,828	1,742	1,187	2,814	1,055	262,704	256,041	6,663	353,300	99		
246	124,760	13	3,133	8	802	18,289	5,004	2,179	6,106	-----	370,206	356,441	13,765	621,568	100		

SPECIFIED INDUSTRIES: 1900.

48,417	\$21,893,983	8,248	\$1,766,858	1,888	\$270,839	\$7,938,767	\$1,166,879	\$547,635	\$5,592,216	\$682,037	\$101,170,357	\$98,911,434	\$2,258,923	\$164,617,877	1
641	242,538	1	421	2	500	96,540	1,807	7,085	87,545	103	669,989	650,012	19,977	1,504,667	2
22	7,242	23	5,277	-----	-----	3,097	2,736	408	4,958	-----	48,038	47,604	430	101,303	3
20	12,475	-----	-----	-----	-----	21,932	36	209	21,687	-----	47,506	47,506	351	132,101	4
7	2,440	4	1,107	-----	-----	4,384	610	33	3,741	-----	13,133	13,098	35	28,395	5
103	42,192	-----	-----	4	553	20,496	12,941	088	6,713	854	86,014	83,201	2,813	218,554	6
1,162	501,317	-----	-----	15	1,919	124,716	60,475	18,021	44,961	1,259	1,004,390	904,547	99,843	3,361,298	7
21	9,769	25	5,529	4	611	8,143	2,510	256	1,841	8,536	27,649	26,980	669	83,391	8
144	61,727	-----	-----	-----	-----	29,418	24,049	1,233	3,946	170	150,285	145,530	4,755	432,336	9
272	115,659	227	65,557	67	10,567	13,718	1,732	2,174	14,812	-----	507,492	502,329	4,663	786,141	10
82	9,589	-----	-----	-----	-----	8,110	2,195	800	5,615	-----	60,530	59,793	737	114,666	11
24	9,208	46	10,347	6	930	3,721	598	280	2,843	-----	60,125	49,873	752	90,544	12
15	7,150	76	12,272	3	400	3,068	2,340	211	517	-----	26,503	25,437	1,066	59,990	13
803	106,967	20	2,200	40	7,000	27,219	915	1,976	20,548	3,780	542,745	511,238	1,507	852,687	14
177	62,147	27	4,050	27	2,418	138	906	22,374	132,737	-----	135,387	132,737	2,600	268,099	15
564	275,061	257	49,969	25	6,294	119,837	40,052	8,857	69,567	1,361	1,427,765	1,386,048	41,717	2,673,788	16
1,942	761,868	1	360	43	7,132	115,897	11,509	14,462	83,732	6,194	400,313	31,413	378,900	1,976,323	17
125	65,260	-----	-----	-----	-----	28,067	1,155	462	178,867	2,240	179,412	178,867	545	306,844	18
171	62,951	43	9,201	26	4,171	8,838	3,542	811	4,530	-----	151,621	149,067	2,554	348,448	19
87	361,062	441	86,550	74	10,474	37,252	4,624	1,255	26,758	4,620	196,842	183,810	13,032	866,538	20
2,937	1,422,031	2	635	3	466	500,540	24,075	6,367	34,265	444,833	3,627,095	3,615,648	11,447	6,872,398	21
47	17,153	22	4,685	8	913	4,419	2,781	312	1,324	2	22,353	20,683	1,670	101,246	22
120	48,682	7	1,706	-----	-----	8,275	1,234	1,126	5,855	60	153,715	151,434	2,281	259,523	23
1,655	704,689	32	7,452	5	1,760	243,734	19,378	24,471	198,475	1,470	1,863,988	1,826,384	37,604	3,931,067	24
5,488	2,946,013	4	1,284	5	1,050	124,468	-----	36,894	87,559	-----	2,896,269	2,795,055	101,214	6,221,378	25
85	51,207	-----	-----	-----	-----	880	-----	380	500	-----	36,699	32,309	4,300	97,186	26
1,090	582,144	22	4,951	12	1,558	153,990	12,089	17,039	121,816	3,046	13,501,556	13,255,944	245,612	15,846,067	27
1,030	497,380	261	68,989	12	1,672	122,672	108	2	15	7,414	715	610	105	2,300	28
147	66,182	1,178	235,304	15	1,800	95,446	12,854	5,361	77,231	-----	910,106	903,944	6,162	1,534,697	29
21	9,700	753	117,655	1	96	25,380	20,413	952	4,003	12	112,087	108,963	4,019	459,157	30
4	2,466	61	7,240	-----	-----	1,639	983	3	550	103	25,284	24,798	486	46,998	31
48	23,405	31	7,709	1	156	16,966	4,409	2,521	10,036	-----	795,613	789,734	5,829	970,962	32
149	66,851	26	6,212	-----	-----	13,785	-----	2,158	11,627	-----	226,400	225,285	1,115	399,402	33
249	95,637	307	49,273	3	510	56,311	19,670	2,807	33,834	-----	716,901	705,713	11,188	1,264,580	34
421	162,804	1	250	18	2,850	16,077	3,231	2,376	452,196	-----	457,477	452,196	5,281	719,035	35
7	2,830	8	676	-----	-----	8,272	595	185	7,492	-----	17,851	17,696	155	45,844	36
43	19,369	19	5,035	2	336	14,219	5,181	399	8,639	-----	12,716	9,205	3,511	96,528	37
41	19,575	-----	-----	-----	-----	4,415	2,662	227	1,526	-----	80,243	79,600	648	134,385	38
7	5,000	34	2,700	-----	-----	834	341	125	3,895	-----	5,895	5,870	25	10,850	39
1	200	6	1,320	-----	-----	2,199	1,260	76	863	-----	15,731	15,656	75	30,340	40

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.	
42 Flouring and grist mill products.....	702	\$6,421,978	\$762,943	\$1,481,670	\$2,379,941	\$1,796,521	806	210	\$160,476	1,285	\$526,479	
43 Food preparations.....	16	2,501,521	164,100	702,500	840,071	794,850	21	54	49,510	609	203,031	
44 Foundry and machine shop products.....	190	8,732,774	310,487	569,516	1,027,782	1,824,989	216	221	204,069	2,372	1,083,812	
45 Fruits and vegetables, canning and preserving.....	26	1,027,821	57,900	190,900	311,869	459,652	15	46	27,305	699	184,710	
46 Fur goods.....	14	52,955	2,500	5,000	3,955	41,500	17	2	930	65	23,225	
47 Furnishing goods, men's.....	3	25,162			2,741	22,421	1	10	7,020	33	7,119	
48 Furniture, cabinetmaking, repairing, and upholstering.....	103	170,742	20,575	34,700	22,433	93,034	124	8	3,870	98	49,232	
49 Furniture, factory product.....	26	1,021,658	86,010	161,180	176,002	593,466	11	105	84,676	850	292,080	
50 Furs, dressed.....	6	15,250	825	2,025	8,100	3,900	8			14	7,640	
51 Gas, illuminating and heating.....	26	4,129,384	241,333	258,452	3,325,820	304,374		90	70,120	226	118,307	
52 Gas machines and motors.....	6	29,700	100	3,200	3,500	22,900	8	6	4,750	11	5,100	
53 Gloves and mittens.....	9	277,008	22,000	35,000	22,500	197,508	17	43	31,193	174	56,953	
54 Grease and tallow.....	8	23,392	4,070	5,650	6,250	6,422	10	5	1,530	10	3,937	
55 Hairywork.....	7	9,045	1,000	2,500	345	5,200	9			14	3,826	
56 Hardware.....	5	240,139	13,149	39,470	73,204	118,256	4	27	24,561	244	61,539	
57 Ice, artificial.....	3	165,300	23,000	29,800	88,000	24,500	3	10	8,055	33	15,007	
58 Ironwork, architectural and ornamental.....	12	372,305	26,200	37,103	83,699	225,293	10	25	22,166	189	79,613	
59 Jewelry.....	3	12,275	1,100	2,050	3,250	5,875	7	2	1,150	16	3,865	
60 Kindling wood.....	3	22,000	6,314	3,874	5,562	6,250	2	4	3,000	30	7,433	
61 Lime and cement.....	28	663,330	89,100	159,325	261,785	153,620	27	33	26,638	302	145,352	
62 Liquors, malt.....	21	2,420,515	215,005	973,110	417,677	814,723	18	53	84,136	321	189,916	
63 Liquors, vinous.....	6	2,100	160	910	715	315	6			2	578	
64 Lock and gun smithing.....	41	31,173	4,275	3,315	16,875	7,203	44			16	7,499	
65 Looking-glass and picture frames.....	35	34,150	2,200	3,300	5,450	23,200	42	6	2,715	40	16,167	
66 Lumber and timber products.....	264	8,762,219	1,978,335	273,966	813,282	5,696,636	327	145	173,768	2,703	1,046,181	
67 Lumber, planing mill products, including sash, doors, and blinds.....	65	3,576,305	232,177	395,621	494,335	2,454,172	66	187	180,435	2,372	933,924	
68 Marble and stone work.....	39	370,479	60,425	57,900	103,977	143,177	47	11	7,700	352	161,363	
69 Masonry, brick and stone.....	170	624,713	32,102	23,287	130,689	433,635	216	29	24,632	1,124	570,560	
70 Mattresses and spring beds.....	7	54,531	5,700	3,000	8,622	37,309	5	17	10,972	49	16,733	
71 Millinery, custom work.....	926	1,235,043	145,840	233,325	55,535	800,343	1,127	90	26,617	1,253	232,940	
72 Mineral and soda waters.....	73	398,447	63,155	57,645	132,470	145,177	33	34	25,006	152	58,757	
73 Models and patterns.....	4	11,720	1,660	3,070	5,040	1,950	6	3	2,700	11	3,786	
74 Monuments and tombstones.....	139	637,637	53,475	67,275	35,942	430,895	183	71	39,480	323	177,535	
75 Musical instruments and materials, not specified.....	6	15,125			5,950	9,176	8	3	150	9	4,740	
76 Oil, linseed.....	4	647,029	85,000	57,000	192,000	313,029		24	42,696	34	44,973	
77 Painting, house, sign, etc.....	338	281,402	32,495	29,295	54,477	165,135	413	33	13,055	766	331,670	
78 Paints.....	6	207,435	7,242	22,550	20,313	156,880	9	31	23,480	40	14,739	
79 Paper and wood pulp.....	4	182,045	20,000	10,000	124,400	27,645	2	11	11,770	180	63,589	
80 Paper hanging.....	28	76,196	6,760	5,990	4,625	58,921	23	17	7,641	121	65,177	
81 Patent medicines and compounds.....	41	512,019	20,416	5,460	30,739	455,354	45	296	396,531	102	65,784	
82 Paying and paving materials.....	38	146,032	20,235	5,472	34,335	85,490	51	9	4,400	330	114,410	
83 Perfumery and cosmetics.....	6	79,350	2,000	9,000	3,500	64,850	11	69	31,968	33	9,611	
84 Photography.....	406	490,359	63,735	115,100	207,247	104,777	441	10	3,641	194	72,555	
85 Pickles, preserves, and sauces.....	15	471,171	43,726	117,701	87,169	217,575	10	45	47,665	322	69,003	
86 Plastering and stucco work.....	58	24,084	1,025	1,600	4,913	16,541	73	3	1,810	151	64,570	
87 Plumbing, and gas and steam fitting.....	196	575,937	29,300	34,750	86,627	421,260	259	46	24,992	729	374,470	
88 Pottery, terra cotta, and fire-clay products.....	17	361,253	85,550	111,567	71,100	93,041	17	13	13,359	234	93,299	
89 Printing and publishing, book and job.....	115	976,341	29,300	100,214	513,312	333,015	121	141	103,761	855	345,665	
90 Printing and publishing, newspapers and periodicals.....	910	4,703,049	239,560	405,976	2,451,255	1,606,258	1,033	523	398,965	3,393	1,311,179	
91 Roofing and roofing materials.....	29	92,071	12,825	10,250	12,735	56,261	34	6	3,010	97	31,334	
92 Rubber and elastic goods.....	3	2,436			684	1,752	2	1	520	3	1,070	
93 Saddlery and harness.....	932	2,977,146	294,833	496,393	216,350	1,969,560	1,097	115	56,954	1,230	403,651	
94 Sausage.....	4	13,300	5,000	6,600	2,600	4,100	6			13	6,500	
95 Scales and balances.....	7	65,492	2,100	3,400	15,500	44,492	4	1	400	37	18,704	
96 Sewing machine repairing.....	6	1,042			677	365	6					
97 Ship and boat building, wooden.....	10	28,996	8,400	5,625	6,200	8,771	9	7	4,700	38	13,430	
98 Shirts.....	5	10,300			3,750	6,550	7			33	11,232	
99 Show cases.....	3	4,960			1,760	3,200	4	1	200	9	5,410	
100 Slaughtering and meat packing, wholesale.....	20	6,264,578	161,750	1,193,153	499,375	4,415,300	13	190	196,056	2,374	1,201,631	
101 Slaughtering, wholesale, not including meat packing.....	7	86,775	26,300	33,900	15,700	10,875	6	3	1,320	13	6,436	
102 Soap and candles.....	12	317,410	25,300	41,650	61,167	133,693	14	33	30,072	105	33,383	
103 Starch.....	4	700,064	30,000	225,000	205,234	239,830		35	37,342	327	114,831	
104 Steam fittings and heating apparatus.....	4	34,317	4,500	9,000	23,000	47,317	5	10	8,340	53	24,107	
105 Sugar and molasses, refining.....	33	107,582	12,050	29,130	23,230	43,172	40	17	13,460	63	20,000	
106 Tinsmithing, coppersmithing, and sheet-iron working.....	624	1,439,276	191,977	312,378	303,834	676,037	733	46	32,550	942	423,170	
107 Tobacco, cigars and cigarettes.....	403	1,264,097	52,180	67,437	65,026	1,079,474	453	126	117,006	1,356	700,777	
108 Tools, not elsewhere specified.....	4	154,365	5,000	17,600	24,300	107,465	4	15	11,191	65	26,637	
109 Trunks and valises.....	7	30,340	6,000	1,650	3,130	19,500	7	2	1,100	17	6,192	
110 Upholstering materials.....	7	61,505	1,900	3,323	22,269	25,017	2	6	4,490	54	13,477	
111 Vinegar and cider.....	8	136,957	14,905	37,670	40,733	33,594	4	25	23,539	29	10,630	

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.										
1,224 366 2,296 821	\$512,119 163,908 1,077,040 114,630	49 208 14 266	\$13,570 41,001 2,180 54,575	12 35 62 112	\$790 4,122 9,142 15,505	\$304,256 196,297 200,918 63,185	\$18,387 2,026 22,534 225	\$45,865 2,152 19,184 3,852	\$239,832 192,119 148,782 57,503	\$672 10,418 1,000	\$11,272,217 2,388,003 2,189,660 767,231	\$11,075,461 2,355,730 2,094,681 755,874	\$196,756 32,273 94,979 11,857	\$13,823,683 3,004,031 4,460,914 1,359,958	42 43 44 45
9	6,496	56	16,729			10,435	5,279	415	4,741		63,840	63,700	140	136,788	46
4 93	1,356 47,998	29 4	5,763 1,078			6,821 14,013	1,071 9,214	165 1,145	5,685 3,654		53,329 123,191	53,133 121,432	196 1,759	78,700 266,213	47 48
766 11 225	274,869 6,588 118,161	24 3	6,396 1,052	60 1	10,815 156	108,309 1,932 269,017	10,391 444	6,374 53 80,295	74,096 1,430 228,722	17,948	746,674 6,615 203,961	734,412 5,131 190,731	12,162 1,484 13,230	1,419,862 24,598 807,787	49 50 51
11 60 10 2 223	5,100 29,310 8,987 936 59,830					1,602 15,009 1,632 1,700 80,708	557 1,572 120 1,202 348	90 1,087 135 58 557	955 12,300 1,427 440 29,808		15,748 124,754 77,725 4,760 108,511	15,603 122,575 76,204 4,631 103,915	145 2,179 1,521 135 4,596	82,835 283,920 92,423 10,410 311,737	52 53 54 55 56
33 187	15,067 79,427			2	186	9,014 20,080	696 1,248	875 1,059	7,443 7,996		10,530 300,714	2,758 293,005	7,772 2,709	38,400 512,909	57 58
16 30 300	8,865 7,383 144,662					632 2,362 68,488	520 81 7,072	17 54 2,580	95 2,227 27,672		8,654 8,938 181,514	8,368 8,658 139,950	286 275 41,564	32,900 23,554 543,207	59 60 61
817 2 14 36 2,677	189,866 578 7,256 14,976 1,028,758			4 5	1,191 1,229	736,550 322 3,218 7,652 342,386	15,050 123 4,117 4,114 7,102	12,775 47 1,036 367 65,549	703,725 150 1,036 1,871 299,785		335,164 1,410 11,220 45,195 6,324,034	331,304 1,410 10,286 44,674 6,328,984	53,860 4,119 934 521 50	1,713,911 4,119 43,747 94,255 8,677,058	62 63 64 65 66
2,826	972,611			46	11,313	255,979	11,521	23,027	221,431		3,195,243	3,172,827	22,416	5,295,546	67
344 1,123 88 5	160,016 570,456 13,463 4,170			8 1 1,244	1,347 104 277,942	15,957 44,492 10,611 170,220	1,799 6,359 1,935 116,735	1,742 993 193 9,760	11,016 17,075 7,908 42,930	1,400 20,000 425 795	102,503 1,022,997 88,468 1,390,783	95,841 1,021,894 86,738 1,375,797	6,662 1,003 1,670 14,986	355,046 1,919,219 148,660 2,624,182	68 69 70 71
144 7 327 9	57,638 2,756 177,225 4,740	3 3 1	419 780 860	5 1	700 250	42,007 948 43,117 2,864	5,350 336 13,886 1,259	2,601 114 4,815 52	33,951 493 29,666 1,553	96 250	146,803 2,865 630,514 82,552	142,881 1,941 626,901 82,396	3,922 1,941 8,613 156	428,913 13,175 1,207,459 70,148	72 73 74 75
84	44,973					61,932		4,809	57,123		1,456,798	1,441,403	15,395	1,612,798	76
762 34 132 121 102	330,118 13,510 55,374 65,177 46,480	2 6 28 89	1,292 1,229 4,964 19,204	2 20 1	260 3,251 100	38,286 19,833 13,350 10,374 201,898	22,285 20 2,500 5,795 8,853	1,471 783 115 593 2,038	14,490 19,030 10,735 8,981 190,444	100	337,395 255,510 106,615 34,045 300,833	335,825 250,952 89,078 83,810 298,174	1,570 4,558 17,537 235 2,709	1,010,669 336,367 243,776 210,904 1,360,643	77 78 79 80 81
826 10 95 164 151	113,428 4,111 43,209 43,634 64,570	2 23 98 151	600 4,820 29,271 25,012	2 5 1 7	382 680 75 460	7,293 20,216 70,009 39,651 7,344	1,469 1,544 45,051 1,789 1,557	250 406 2,973 4,005 62	5,574 18,266 20,627 33,857 965		157,740 39,985 213,677 414,637 77,717	156,747 39,588 204,860 409,314 77,601	993 377 8,817 5,323 116	358,485 121,129 712,215 762,435 200,414	82 83 84 85 86
724 233	373,620 93,024	2	516	3 1	334 275	67,186 24,562	31,483 2,093	4,133 2,093	30,923 22,219	642 250	925,992 57,267	919,276 10,811	6,716 46,456	1,730,035 248,597	87 88
677 2,324	301,999 1,107,349	156 596	40,700 148,477	22 473	2,960 55,353	89,247 444,690	31,342 101,133	6,310 22,154	44,529 286,431	7,066 34,972	411,711 1,082,549	393,957 1,014,827	17,754 67,722	1,210,110 4,035,453	89 90
96	31,562	1	272			5,979	2,695	338	2,946		84,088	83,367	721	165,474	91
2 1,210 13 37	800 490,626 6,500 18,704	1 9	270 1,919			587 163,252 1,000 3,528 637	285 72,838 660 1,705 272		202 67,768 85 1,333 365		2,905 1,705,432 47,835 22,401 1,260	2,878 1,681,581 47,430 21,139 1,190	27 23,851 405 1,262 70	5,871 3,273,972 67,800 53,214 3,780	92 93 94 95 96
38 2 9 2,630	13,430 836 5,410 1,156,935					1,180 1,344 1,300 437,103	315 991 1,230 4,130	228 39 70 19,345	637 314 70 418,628		13,207 6,509 6,859 21,105,066	12,603 6,219 6,694 21,054,250	604 290 165 140,816	42,665 32,338 16,427 25,296,513	97 98 99 100
13	6,486					4,833		331	4,052		361,578	360,523	1,050	398,526	101
76 248 53 42 393	34,047 97,050 24,107 15,260 416,271	22 77 20 41	8,651 17,831 4,620 5,568	7 2 1 8	690 500 120 1,331	34,722 59,192 5,381 14,627 99,450	3,965 180 540 21 42,721	1,427 2,375 266 13,591 9,068	29,330 56,637 4,575 13,591 47,061		407,150 623,814 37,029 130,675 1,058,971	400,041 586,630 36,179 127,315 1,039,638	7,109 37,184 850 3,330 19,333	600,715 896,831 93,429 215,388 2,208,289	102 103 104 105 106
1,143 50 16 54 23	586,622 22,347 6,053 13,477 9,627	559 14	144,534 4,200	154 1 1	19,621 150 104	412,818 3,394 4,010 1,179 11,470	52,343 125 2,032 50 887	8,647 872 299 124 665	351,178 2,337 1,679 1,005 9,918	150	948,991 95,440 16,300 26,362 62,802	940,300 92,249 15,804 25,120 58,685	8,691 3,191 496 1,242 4,117	2,576,384 132,187 42,006 70,827 130,453	107 108 109 110 111

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 imple- ments.	Cash and sundries.		Num- ber.	Salaries.	Total.	
											Average number.	Wages.
112	Washing machines and clothes wring- ers.	8	\$19,500	\$1,000	\$1,300	\$5,200	\$12,000	5	1	\$520	80	\$10,120
113	Watch, clock, and jewelry repairing	482	531,603	69,440	101,811	158,278	202,074	492	4	1,887	264	132,586
114	Windmills	8	161,104	16,800	12,689	13,843	117,772	7	4	5,200	72	43,111
115	Window shades	8	8,150	600	500	250	1,900	2			2	1,024
116	Wirework, including wire rope and cable.	25	186,510	6,850	16,525	76,987	86,198	34	20	11,134	108	40,984
117	Wood, turned and carved	13	48,000	3,680	6,860	14,475	22,985	21	1	600	48	14,590
118	Woolen goods	12	494,074	24,990	67,850	143,350	257,884	11	26	16,611	256	61,506
119	All other industries ¹	73	11,509,227	2,866,907	2,991,102	3,074,218	2,577,005	78	177	189,415	1,555	703,282

¹ Embraces artificial limbs, 1; baskets, and rattan and willow ware, 2; bells, 1; bicycles and tricycles, 1; brassware, 1; butter, reworking, 1; charcoal, 2; cleansing and polishing preparations, 2; cordage and twine, 1; cutlery and edge tools, 1; dentists' materials, 2; electrical apparatus and supplies, 2; electroplating, 2; enameling and enameled goods, 1; engraving, wood, 1; explosives, 1; fertilizers, 1; gas and lamp fixtures, 2; glass, cutting, staining, and ornamenting, 2; glucose, 2; hand stamps, 2; hardware, saddlery, 1; hats and caps, not including fur hats, and wool hats, 1; hosiery and knit goods, 2; lamps and reflectors, 2; lead, smelting and refining, 1; leather, tanned, curried, and finished, 2; malt, 2; mantels, slate, marble, and marbleized, 1; mirrors, 1; musical instruments, organs and materials, 1;

TABLE 8.—MANUFACTURES IN CITIES

BURLINGTON.

1 All industries	840	\$5,235,624	\$1,284,792	\$499,200	\$1,169,568	\$2,282,069	358	303	\$203,540	2,598	\$1,013,998
2 Blacksmithing and wheelwrighting	12	10,065	2,175	3,175	2,220	2,495	16			14	6,624
3 Boots and shoes, custom work and repairing.	16	4,165	800	700	1,490	1,175	18			5	2,156
4 Bread and other bakery products.	7	14,150	1,200	2,150	6,100	4,700	10	10	8,902	42	17,539
5 Carpentering.	33	36,970	2,145	2,350	5,410	27,065	36			148	81,134
6 Carpets, rag.	3	7,360	1,675	3,160	1,600	1,025	4			2	936
7 Carriage and wagon materials.	3	58,250	6,500	12,800	16,100	17,850	2			38	25,727
8 Carriages and wagons.	9	260,444	31,000	41,139	40,976	156,329	6	11	13,636	186	73,615
9 Cars and general shop construction and repairs by steam railroad companies.	3	53,544	3,200	85,150	10,570	4,624		7	6,240	60	82,336
10 Clothing, men's, custom work and repairing.	13	29,797	3,500	1,000	1,560	23,737	17	3	3,360	61	24,971
11 Clothing, women's, dressmaking.	18	8,895	20	40	1,470	2,365	22			60	7,785
12 Confectionery.	3	138,041			88,150	49,891	1	28	17,025	71	19,418
13 Foundry and machine shop products.	3	371,084	19,047	70,328	120,508	161,801	2	9	11,850	310	149,763
14 Furniture, cabinetmaking, repairing, and upholstering.	4	1,568			248	1,320	6	1	650	5	2,783
15 Furniture, factory product.	6	332,921	19,100	53,000	68,263	192,558	2	41	24,124	287	75,837
16 Liquors, malt.	3	123,000	12,000	63,000	24,000	24,000	4	2	2,000	28	15,500
17 Liquors, vinous.	6	2,100	160	910	715	315	6			2	578
18 Lock and gun smithing.	4	4,335	2,800	400	800	835	5			1	200
19 Lumber and timber products.	3	2,163,698	1,050,795	46,469	85,244	971,190	1	18	13,940	220	83,418
20 Marble and stone work.	3	2,500	600	200	500	1,200	3			10	8,750
21 Masonry, brick and stone.	13	2,985			1,005	1,980	16			32	13,933
22 Millinery, custom work.	11	21,454			1,554	19,900	12			33	8,621
23 Monuments and tombstones.	4	28,990	2,000	150	1,690	25,150	5	5	2,800	17	8,590
24 Painting, house, sign, etc.	23	19,543	625	730	4,433	13,755	29	8	2,730	57	24,463
25 Paper hanging.	4	7,430			470	7,010	8	1	400	7	3,747
26 Paving and paving materials.	3	11,260			160	11,100	3			12	7,153
27 Photography.	6	7,800			3,800	4,000	8	1	100	5	2,132
28 Plastering and stuccowork.	6	880			770	60	6			10	3,270
29 Plumbing, and gas and steam fitting.	5	30,401	3,000	3,000	3,250	21,151	5	8	1,219	27	11,513
30 Printing and publishing, book and job.	5	63,362			42,245	21,117	2	20	14,694	60	16,791
31 Printing and publishing, newspapers and periodicals.	6	111,351	1,000	2,500	74,000	33,851	3	35	20,730	56	85,801
32 Saddlery and harness.	10	59,655			11,630	48,025	11	26	6,500	78	24,532
33 Tinsmithing, coppersmithing, and sheet-iron working.	10	13,230	400	1,250	3,080	8,500	9	1	624	29	14,617
34 Tobacco, cigars and cigarettes.	22	45,299	3,150	2,000	2,011	38,138	21	8	5,330	126	47,674
35 Watch, clock, and jewelry repairing.	10	5,325			3,225	2,100	10			7	4,490
36 All other industries ¹ .	50	1,194,172	113,000	163,599	540,316	382,257	55	70	51,686	497	182,607

¹ Embraces awnings, tents, and sails, 1; baskets, and rattan and willow ware, 1; bells, 1; bicycle and tricycle repairing, 2; bookbinding and blank book making, 2; bottling, 1; boxes, cigar, 2; boxes, wooden packing, 2; brick and tile, 2; brooms and brushes, 2; buttons, 1; clothing, men's, factory product, 1; coffee and spice, roasting and grinding, 2; coffins, burial cases, and undertakers' goods, 1; cooperage, 2; dyeing and cleaning, 1; flouring and grist mill products, 1; fruits and vegetables, canning and preserving, 1; fur goods, 1; gas, illuminating and heating, 1; looking-glass and picture frames, 1; lumber, planing mill products, including sash,

CEDAR RAPIDS.

1 All industries	241	\$6,256,801	\$475,675	\$1,314,867	\$1,390,512	\$3,076,747	281	336	\$236,448	3,105	\$1,313,821
2 Bicycle and tricycle repairing.	9	5,130			1,495	3,635	12			8	3,000
3 Blacksmithing and wheelwrighting.	14	18,595	8,800	4,010	2,175	8,610	16			18	10,220
4 Boots and shoes, custom work and repairing.	8	1,290	350	50	695	165	9				
5 Bread and other bakery products.	8	134,110	28,100	27,000	13,320	60,690	9	21	15,140	122	40,114
6 Brick and tile.	8	19,900	4,900	4,800	5,100	5,100	4	1	890	20	9,415

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.										
25	\$9,600			5	\$520	\$1,878	\$396	\$92	\$1,300		\$22,900	\$21,745	\$1,155	\$46,550	112
254	180,017	4	\$1,055	6	614	65,264	44,041	4,585	15,161	\$1,527	147,361	141,191	6,170	625,283	118
69	41,705	8	1,406			7,431	652	1,006	5,773		62,016	61,030	986	129,689	114
2	1,024					285	105	30	100		3,545	3,545		6,200	115
100	89,884			3	1,100	24,708	2,592	608	21,508		226,015	222,419	3,596	870,669	116
48	14,590					1,606	237	187	1,182		18,280	16,546	1,734	64,036	117
126	89,576	128	24,647	2	378	16,831	650	2,726	18,455		175,426	169,883	6,013	296,500	118
1,379	673,680	146	26,141	30	3,441	850,842	21,172	12,148	270,009	47,613	3,621,494	3,403,420	218,074	5,700,387	119

oil, not elsewhere specified, 1; oysters, canning and preserving, 1; paper goods, not elsewhere specified, 2; paper hangings, 1; pens, fountain, and stylographic, 1; photographic materials, 2; pipes, tobacco, 1; plumbers' supplies, 1; printing and publishing, music, 2; pumps, not including steam pumps, 2; refrigerators, 1; saws, 1; shipbuilding, iron and steel, 1; stereotyping and electrotyping, 2; surgical appliances, 2; tobacco, chewing, smoking, and snuff, 2; toys and games, 1; typewriters and supplies, 1; typewriter repairing, 1; woodenware, not elsewhere specified, 2.

BY SPECIFIED INDUSTRIES: 1900.

BURLINGTON.

2,199	\$945,808	812	\$56,744	87	\$11,951	\$414,819	\$58,785	\$22,360	\$305,053	\$38,631	\$2,809,636	\$2,753,641	\$55,895	\$5,334,196	1
18	6,426			1	98	928	832	47	49		4,643	4,131	512	24,814	2
5	2,156					1,238	964	9	205		4,735	4,576	160	13,455	3
86	16,264			6	1,275	6,347	2,432	58	3,862		36,768	35,686	1,082	81,678	4
148	81,134					32,933	1,577	58	1,359	29,939	156,092	156,685	57	314,925	5
2	936					221	44	30	147		1,010	899	111	4,600	6
82	25,313	1	414			2,541	84	727	1,730		114,209	112,563	1,646	162,875	7
182	72,853	4	762			8,453	1,640	2,216	4,632		248,867	246,470	1,897	429,201	8
60	92,835					730		290	440		34,947	33,003	1,944	74,302	9
56	23,920	3	791	2	260	4,330	2,623	332	1,370		28,829	28,538	491	83,299	10
		60	7,785			2,120	1,814	57	249		4,008	3,740	268	22,947	11
30	13,600	41	6,613			16,508	2,700	304	13,694		90,038	87,773	2,865	197,563	12
209	149,563			1	200	7,724	260	1,232	6,232		224,205	209,970	14,235	476,315	13
5	2,783					368	265	10	93		4,517	4,492	25	11,080	14
206	71,325	8	1,200	23	3,362	17,061	3,950	1,305	12,406		177,656	173,196	4,460	332,935	15
28	15,500					31,487		770	30,717		22,295	19,595	2,700	96,275	16
2	578					322	125	47	150		1,410	1,410		4,119	17
				1	200	473	420	35	18		408	266	142	3,100	18
219	83,135	1	283			127,727		3,769	123,958		539,804	539,804		877,485	19
10	8,750					52		10	42		3,075	3,072	3	7,700	20
32	13,983					1,437	1,057		380		20,508	20,508		45,286	21
		83	8,621			5,482	4,641	204	637		29,288	29,086	202	55,020	22
17	8,590					4,211	590	113	3,208		31,549	31,321	228	60,966	23
57	24,463					3,978	2,213	101	1,604		23,581	23,466	115	73,995	24
7	3,747					857	460	84	313		6,525	6,495	30	14,925	25
12	7,153					427	260	2	165		7,663	7,663		27,750	26
2	1,092	3	1,040			2,087	1,368		669		4,763	4,533	230	24,965	27
10	3,270					644	455	3	186		5,300	5,300		12,705	28
27	11,513					2,188	1,125	250	813		25,423	25,813	110	51,277	29
33	12,550	23	8,785	4	456	4,645	1,972	513	2,100		22,243	20,858	1,385	71,100	30
50	84,336	4	1,300	2	165	9,231	2,108	280	6,801	42	51,627	49,067	2,560	150,088	31
75	24,038			3	494	10,778	2,567	495	7,716		80,908	80,030	933	160,558	32
29	14,617					1,820	1,214	79	127	400	17,235	16,850	385	40,210	33
92	43,454			34	4,220	22,864	3,850	243	18,771		58,133	57,760	364	149,606	34
7	4,490					2,092	1,330	20	92	50	1,003	938	20	13,000	35
856	186,436	181	24,950	10	1,221	79,840	7,940	8,662	60,038	3,200	725,511	703,781	16,730	1,163,674	36

doors and blinds, 2; mantels, slate, marble, and marbleized, 1; mineral and soda waters, 2; models and patterns, 1; musical instruments, organs and materials, 1; patent medicines and compounds, 1; pens, fountain, and stylographic, 1; perfumery and cosmetics, 1; pickles, preserves, and sauces, 2; rubber and elastic goods, 1; ship and boat building, wooden, 2; shirts, 1; slaughtering and meat packing, wholesale, 1; soap and candles, 1; trunks and valises, 1; wirework, including wire rope and cable, 1; wood, turned and carved, 1.

CEDAR RAPIDS.

2,543	\$1,193,715	442	\$97,026	120	\$23,080	\$518,455	\$43,800	\$18,033	\$403,458	\$48,164	\$3,969,992	\$3,874,586	\$95,406	\$12,715,897	1
8	3,000					1,233	933	8	257		5,866	5,797	69	15,835	2
18	10,220					1,624	910	232	482		9,941	8,779	1,162	36,448	3
						586	528	5	8		2,437	2,330	57	7,700	4
61	30,974	61	9,140			11,279	1,356	1,323	7,234	1,361	229,762	224,772	4,990	395,237	5
20	9,415					635	200	200	235		4,591	755	3,836	28,000	6

TABLE 8.—MANUFACTURES IN CITIES

CEDAR RAPIDS—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
7 Carpentering.....	23	\$118,760	\$19,500	\$14,425	\$12,810	\$72,525	23	4	\$2,300	308	\$131,246
8 Carpets, rag.....	3	8,645	2,000	1,000	440	105	3			5	1,650
9 Carriages and wagons.....	3	80,250	8,600	8,800	1,850	16,000	7			19	18,290
10 Clothing, men's, custom work and repairing.....	8	28,216			2,810	25,406	9	1	936	57	19,798
11 Clothing, women's, dressmaking.....	3	3,095			595	2,500	3			15	3,270
12 Confectionery.....	8	45,400	6,000	400	5,700	33,300	3	10	8,800	39	14,170
13 Dyeing and cleaning.....	3	5,950		900	8,600	1,450	3			8	4,824
14 Flouring and grist mill products.....	4	73,500	13,500	10,000	32,000	18,000	4	5	5,200	19	10,985
15 Foundry and machine shop products.....	8	319,752	22,000	24,850	36,916	235,986	8	16	17,320	105	46,200
16 Furniture, cabinetmaking, repairing, and upholstering.....	8	2,700		1,300	550	850	4			2	1,500
17 Furniture, factory product.....	5	100,413	12,000	18,376	21,750	47,787	4	13	12,840	123	38,545
18 Masonry, brick and stone.....	4	23,150	2,500	2,500	1,250	16,900	4	2	1,000	40	24,995
19 Millinery, custom work.....	8	20,575	1,000	2,500	2,075	15,000	11	4	1,032	46	12,419
20 Monuments and tombstones.....	5	33,250	5,000	4,750	1,100	22,400	5	13	4,360	11	6,825
21 Painting, house, sign, etc.....	5	43,030	12,000	6,000	2,080	22,950	8	5	2,530	33	17,440
22 Paving and paving materials.....	5	36,200	10,800	2,000	5,900	17,500	7	1	300	63	29,312
23 Photography.....	9	15,875	4,000	4,050	4,650	2,875	9			7	2,680
24 Plumbing, and gas and steam fitting.....	6	28,225	2,000	4,000	2,725	17,500	11	3	1,177	29	15,200
25 Printing and publishing, book and job.....	5	42,514			26,914	15,700	6	3	8,028	54	21,898
26 Printing and publishing, newspapers and periodicals.....	10	144,270	10,000	16,000	60,154	58,116	7	41	40,847	105	46,106
27 Saddlery and harness.....	5	22,313	250	250	1,100	20,713	7	3	1,640	10	4,486
28 Tinsmithing, coppersmithing, and sheet-iron working.....	13	105,425	26,200	17,300	14,625	47,800	19	4	8,000	58	30,684
29 Tobacco, cigars and cigarettes.....	9	11,032	1,000	1,500	660	7,872	11	1	200	22	9,594
30 Watch, clock, and jewelry repairing.....	9	27,725	7,750	4,450	5,825	9,700	12	1	900	14	7,325
31 All other industries.....	40	4,794,741	272,425	1,133,156	1,115,148	2,274,012	38	184	162,758	1,750	731,975

¹ Embraces awnings, tents, and sails, 2; bookbinding and blank book making, 1; bottling, 1; boxes, fancy and paper, 1; brooms and brushes, 1; cars and general shop construction and repairs by steam railroad companies, 2; cheese, butter, and condensed milk, factory product, 2; cleansing and polishing preparations, 1; clothing, men's, factory product, 1; clothing, women's, factory product, 1; coffee and spice, roasting and grinding, 1; cutlery and edge tools, 1; electrical construction and repairs, 1; food preparations, 2; fruits and vegetables, canning and preserving, 1; fur goods, 1; furs, dressed, 1; gas, illuminating and heating, 1; hairwork, 1;

CLINTON.

1 All industries.....	224	\$4,587,200	\$488,115	\$333,806	\$777,119	\$2,938,160	208	202	\$232,612	3,080	\$1,187,019
2 Bicycle and tricycle repairing.....	3	2,200			900	1,300	3			5	2,000
3 Blacksmithing and wheelwrighting.....	13	12,725	8,900	4,200	2,325	2,800	16			12	7,240
4 Boots and shoes, custom work and repairing.....	16	4,510	550	1,100	1,635	1,225	16			4	1,300
5 Bread and other bakery products.....	9	57,602	2,814	17,000	13,224	24,564	9	6	7,941	42	13,781
6 Carpentering.....	7	12,750		100	3,125	9,625	7			89	34,760
7 Carriages and wagons.....	4	261,700	18,000	5,000	22,200	216,500	3	11	14,150	118	52,461
8 Clothing, men's, custom work and repairing.....	12	36,178	4,000	8,300	2,472	21,406	13	2	1,800	56	18,215
9 Clothing, women's, dressmaking.....	6	3,500	500	2,000	1,200	4,800	6			60	12,846
10 Confectionery.....	3	7,600		200	4,300	8,100	3			9	3,040
11 Flouring and grist mill products.....	5	31,150	8,400	6,500	8,600	12,650	5	3	2,040	12	6,420
12 Foundry and machine shop products.....	5	81,910	10,300	12,000	36,610	23,000	6	5	4,500	42	16,155
13 Furniture, cabinetmaking, repairing, and upholstering.....	8	3,700	500	1,800	500	900	8			1	400
14 Furniture, factory product.....	4	155,469	19,000	27,507	13,400	90,562	1	14	15,682	186	41,397
15 Lumber, planing mill products, including sash, doors, and blinds.....	3	626,950	27,500	39,400	58,330	504,720	3	21	25,600	415	148,191
16 Masonry, brick and stone.....	5	5,095	4,000		1,095		5			20	8,935
17 Millinery, custom work.....	9	15,940	1,200	3,800	390	10,550	10	2	1,100	36	8,486
18 Monuments and tombstones.....	3	7,300	2,500	500	450	4,850	3			5	2,550
19 Painting, house, sign, etc.....	13	16,115	200	500	2,970	11,445	14			38	17,612
20 Photography.....	7	10,375		150	5,100	5,025	8			9	2,330
21 Plumbing, and gas and steam fitting.....	5	14,415	1,800		1,515	11,100	6	1	600	16	7,410
22 Printing and publishing, book and job.....	3	23,300	1,500	3,500	14,000	6,300	2	3	4,475	15	4,963
23 Printing and publishing, newspapers and periodicals.....	8	109,050	3,650	7,100	46,101	52,199	5	19	19,443	89	31,176
24 Saddlery and harness.....	5	81,475	500	2,000	5,675	73,300	3	6	6,950	41	14,594
25 Tinsmithing, coppersmithing, and sheet-iron working.....	12	33,000	5,900	8,775	5,550	12,775	9	1	540	31	15,779
26 Tobacco, cigars and cigarettes.....	12	24,775	2,200	4,000	875	17,700	12			30	11,090
27 Watch, clock, and jewelry repairing.....	8	3,620	300	750	2,400	5,170	5			10	5,210
28 All other industries ¹	41	2,882,796	373,901	177,624	620,177	1,811,094	32	108	127,786	1,730	646,730

¹ Embraces awnings, tents, and sails, 1; boxes, wooden packing, 2; brick and tile, 2; bridges, 1; brooms and brushes, 2; buttons, 2; cars and general shop construction and repairs by steam railroad companies, 1; cooperage, 1; dyeing and cleaning, 2; fur goods, 2; gas, illuminating and heating, 1; grease and tallow, 1; hairwork, 1; hardware, 1; ironwork, architectural and ornamental, 1; kindling wood, 2; liquors, malt, 2; looking-glass and picture frames, 2; lumber and timber

BY SPECIFIED INDUSTRIES: 1900—Continued.

CEDAR RAPIDS—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.										
308	\$131,246					\$38,365	\$2,322	\$640	\$1,844	\$33,550	\$435,959	\$434,903	\$966	\$307,300	7
3	1,250	2	\$400			311	118	33	160		979	914	65	4,600	8
19	18,200					822	240	142	440		14,680	14,190	490	48,390	9
55	19,443	1	200	1	\$150	4,661	3,906	123	632		20,208	28,881	327	84,980	10
1	300	14	2,970			1,430	684	100	646		12,899	12,775	124	20,100	11
16	9,170	23	5,000			4,655	1,920	160	2,575		54,170	53,110	1,060	94,880	12
6	3,700	2	624			1,642	936	12	694		1,865	1,405	460	18,800	13
19	10,985					5,772	60	744	4,968		224,344	221,549	2,795	271,483	14
103	45,550	2	650			9,281	1,150	1,176	6,705	250	80,107	76,656	3,451	192,450	15
2	1,500					499	306	25	168		9,145	9,080	65	18,000	16
107	33,950	1	315	15	4,280	12,619	300	468	11,611	240	120,540	118,430	2,110	270,460	17
40	24,995					3,540	850	50	440	2,700	30,370	29,870	500	77,686	18
1	300	44	11,903	1	156	4,948	3,650	207	1,091		44,629	44,565	64	91,026	19
11	6,825					1,360	630	126	604		31,010	30,895	115	73,800	20
33	17,440					2,222	678	267	1,277		33,150	33,125	25	70,080	21
60	28,400	2	600	1	312	920	222	98	600		24,424	24,124	300	68,780	22
3	1,460	4	1,220			3,390	2,844	144	302	100	4,520	4,350	170	22,760	23
29	15,260					1,446	755	187	504		35,242	35,005	237	67,125	24
44	19,298	10	2,600			4,417	2,600	295	1,462		23,563	22,907	1,256	71,803	25
83	40,026	21	5,900	1	180	19,692	4,157	628	9,344	5,563	43,134	41,317	1,817	191,062	26
10	4,486					2,273	1,110	195	968		12,707	12,592	115	28,808	27
47	20,309	6	1,375			6,315	1,176	692	4,447		102,698	101,323	1,275	188,825	28
17	8,474	5	1,220			6,141	1,195	80	4,866		14,559	14,339	220	38,353	29
14	7,325					1,460	860	242	353		6,950	6,800	150	25,240	30
1,405	661,124	244	52,849	101	18,002	364,947	7,589	9,417	343,541	4,400	7,326,643	7,259,508	67,135	9,510,896	31

lime and cement, 1; liquors, malt, 1; lumber and timber products, 1; marble and stone work, 1; mattresses and spring beds, 1; mineral and soda waters, 2; oil, linseed, 1; patent medicines and compounds, 2; photographic materials, 1; pumps, not including steam pumps, 1; roofing and roofing materials, 1; slaughtering and meat packing, wholesale, 1; wirework, including wire rope and cable, 2; woodenware, not elsewhere specified, 1.

CLINTON.

2,738	\$1,068,104	245	\$51,608	97	\$17,307	\$370,141	\$30,379	\$49,552	\$286,690	\$3,650	\$4,247,057	\$4,194,957	\$52,100	\$6,939,473	1
5	2,000					670	500	5	165		3,275	3,260	15	8,400	2
12	7,240					1,273	845	103	320		7,142	6,580	562	26,980	3
4	1,300					1,058	937	28	93		3,664	3,500	164	13,028	4
20	10,007	21	3,674	1	50	13,067	973	230	11,864		83,317	81,084	2,233	155,295	5
89	34,750					769	99		670		89,620	89,400	220	190,420	6
112	51,480	5	781	1	200	86,474	780	602	35,092		142,930	138,550	4,380	318,940	7
41	14,630	15	3,585			3,145	1,930	170	1,045		31,435	30,885	550	73,350	8
6	3,120	69	12,846			336	211	36	89		23,220	23,115	105	41,750	9
12	6,420	3	520			1,549	864	50	635		12,452	12,008	444	23,000	10
42	16,155					3,661	1,050	284	2,277	50	80,866	78,608	2,258	102,770	11
1	400					2,724	84	430	2,210		23,605	22,215	1,390	58,680	12
120	38,339					470	360	40	70		1,850	1,760	90	4,775	13
399	143,494	5	784	11	2,274	14,120	925	1,133	12,062		113,011	110,977	2,034	202,600	14
20	8,935	16			4,700	77,764	240	4,274	73,250		561,047	560,822	225	1,063,851	15
						1,650	24	75	51	1,500	2,810	2,810		16,850	16
5	2,550	36	8,486			3,167	1,996	143	1,028		28,667	28,672	195	55,050	17
28	17,612					298	98	60	150		11,270	11,230	40	18,310	18
2	1,280	7	1,550			1,326	884	21	421		16,789	16,729	60	54,490	19
						1,887	1,220	36	631		5,865	5,655	210	19,100	20
16	7,410					1,799	924	140	735		22,455	22,385	70	40,000	21
10	4,188	4	580	1	200	1,022	194	185	643		7,327	6,820	507	21,820	22
57	24,486	14	5,350	18	1,340	9,375	1,471	405	7,499		21,608	20,181	1,327	95,496	23
39	14,194	2	400			6,046	1,795	203	3,958		42,125	41,835	240	85,172	24
30	15,695			1	84	1,372	754	162	450		34,347	33,850	497	69,785	25
22	10,730	3	535	5	675	6,131	1,041	182	4,908		17,308	17,078	230	45,425	26
10	5,210					831	603	53	175		5,330	5,295	35	18,700	27
1,626	626,479	61	12,467	43	7,784	178,157	9,577	40,417	126,168	2,000	2,853,622	2,819,603	34,019	4,165,936	28

products, 2; mineral and soda waters, 2; paper and wood pulp, 2; patent medicines and compounds, 1; paving and paving materials, 1; pickles, preserves, and sauces, 1; sewing machine repairing, 1; ship and boat building, wooden, 1; slaughtering and meat packing, wholesale, 1; soap and candles, 1; wirework, including wire rope and cable, 1.

TABLE 8.—MANUFACTURES IN CITIES

COUNCIL BLUFFS.

	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.....	198	\$1,176,408	\$118,838	\$188,162	\$378,428	\$400,980	213	126	\$110,013	1,179	\$609,905
2	Bicycle and tricycle repairing.....	4	2,850		150	1,175	1,525	3	1	270	6	2,800
3	Blacksmithing and wheelwrighting.....	18	9,520	1,100	3,000	2,900	2,520	21			13	7,050
4	Boots and shoes, custom work and repairing.....	14	3,410		525	1,700	1,125	11			5	2,795
5	Bread and other bakery products.....	8	20,900	8,000	7,000	3,150	2,750	9	1	300	15	7,820
6	Brick and tile.....	6	70,650	10,400	23,000	8,250	29,000	8			42	21,500
7	Carpentering.....	11	25,800	5,150	5,050	9,300	6,300	20			75	38,975
8	Carriages and wagons.....	3	109,582	7,500	22,500	9,075	70,507	5	4	2,073	51	31,898
9	Cars and general shop construction and repairs by steam railroad companies.....	8	47,049	6,700	13,050	9,350	17,939		8	7,050	250	149,699
10	Clothing, men's, custom work and repairing.....	11	14,475		450	1,500	12,525	13			26	13,050
11	Dyeing and cleaning.....	8	11,600	4,400	5,000	1,150	1,050	3	6	2,800	10	3,050
12	Millinery, custom work.....	8	19,700	4,000	3,000	400	12,300	7	1	400	22	9,790
13	Monuments and tombstones.....	3	13,100		200	700	12,200	5			10	8,350
14	Painting, house, sign, etc.....	9	14,350	4,000	2,000	1,480	6,870	9	1	500	25	13,424
15	Photography.....	6	3,070		150	2,000	920	6			3	1,350
16	Plumbing, and gas and steam fitting.....	4	22,750			3,900	18,850	4	4	3,600	29	15,400
17	Printing and publishing, book and job.....	4	10,950			9,100	1,850	5			11	4,854
18	Printing and publishing, newspapers and periodicals.....	3	76,250	10,500	6,000	39,400	20,350	1	13	9,600	51	22,690
19	Saddlery and harness.....	5	12,500	2,000	3,000	1,200	6,300	8			10	5,460
20	Tinsmithing, coppersmithing, and sheet-iron working.....	9	21,175	8,000	4,000	4,225	4,950	6	8	10,000	34	16,181
21	Tobacco, cigars and cigarettes.....	15	15,090	1,500	900	915	11,775	17			38	16,015
22	Watch, clock, and jewelry repairing.....	6	4,200	400	400	2,750	650	3			4	2,700
23	All other industries.....	46	647,407	45,188	88,787	264,708	248,724	49	79	73,420	446	215,086

¹ Embraces agricultural implements, 1; awnings, tents, and sails, 1; axle grease, 1; baskets, and rattan and willow ware, 1; bookbinding and blank book making, 1; bottling, 1; bridges, 1; carpets, rag, 1; carriage and wagon materials, 1; cheese, butter, and condensed milk, factory product, 1; clothing, men's, factory product, 1; clothing, women's, dressmaking, 2; confectionery, 2; cooperage, 2; flouring and grist mill products, 2; food preparations, 1; foundry and machine shop products, 2; furniture, cabinetmaking, repairing, and upholstering, 2; furs, dressed, 1; gas, illuminating and heating, 1; lamps and reflectors, 2; looking-glass and

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1	All industries.....	416	\$10,774,707	\$1,862,998	\$2,157,400	\$2,921,106	\$9,838,194	456	458	\$155,082	4,348	\$1,892,787
2	Bicycle and tricycle repairing.....	6	3,700			2,300	1,400	7			10	4,800
3	Blacksmithing and wheelwrighting.....	24	21,714	5,850	4,700	4,140	7,524	27			31	17,216
4	Bookbinding and blank book making.....	3	4,600			3,200	1,400	5			8	2,435
5	Boots and shoes, custom work and repairing.....	17	5,190	1,200	1,700	1,245	1,045	20			8	8,200
6	Bread and other bakery products.....	15	315,222	8,500	25,400	175,489	105,833	16	26	10,076	147	58,082
7	Brick and tile.....	4	26,000	4,000	7,700	5,400	9,800	5	1	800	24	10,785
8	Brooms and brushes.....	3	18,875	50	350	2,275	16,200	2	9	9,747	45	13,829
9	Buttons.....	5	69,484	4,000	6,128	17,567	41,789	4	7	5,121	235	74,785
10	Carpentering.....	34	71,606	10,955	7,795	16,446	30,410	42			190	102,937
11	Carpets, rag.....	5	10,730	1,400	1,500	6,700	1,130	5	2	1,800	17	5,468
12	Carriages and wagons.....	10	505,589	700	32,450	290,363	272,136	16	15	14,810	150	77,813
13	Clothing, men's, custom work and repairing.....	19	19,760	2,750	600	2,035	14,375	24			85	37,690
14	Clothing, women's, dressmaking.....	13	7,675	600	2,500	1,675	2,900	18			46	11,746
15	Confectionery.....	3	3,700			2,625	875	3	2	600	7	2,650
16	Cooperage.....	4	34,500	4,200	8,700	4,800	16,800	4	2	1,400	32	10,896
17	Electrical construction and repairs.....	3	12,140			840	11,300	3	5	3,850	18	7,115
18	Flouring and grist mill products.....	5	184,800	17,600	62,800	58,000	56,400	4	11	10,568	24	13,427
19	Foundry and machine shop products.....	11	632,970	68,675	75,100	159,631	330,164	7	45	48,607	494	205,046
20	Furniture, cabinetmaking, repairing and upholstering.....	7	8,353			1,658	6,695	5	3	800	15	8,786
21	Lock and gun smithing.....	3	2,050			1,600	450	3			2	1,224
22	Lumber, planing mill products, including sash, doors, and blinds.....	3	94,882	3,000	9,220	11,850	70,812	2	8	8,300	74	39,297
23	Masonry, brick and stone.....	10	115,020	10,737	1,500	6,405	96,378	13	5	9,780	188	75,615
24	Millinery, custom work.....	10	18,160	1,000	900	200	16,060	12	3	1,400	53	14,695
25	Monuments and tombstones.....	4	32,715			3,265	29,450	6	3	2,000	28	12,550
26	Painting, house, sign, etc.....	19	12,355	2,600	5,515	1,670	2,510	20			41	23,120
27	Paper hanging.....	6	1,350									
28	Photography.....	8	7,525	10	190	300	850	7	6	2,000	33	17,500
29	Plastering and stucco work.....	5	3,780			4,450	3,075	9			14	8,125
30	Plumbing, and gas and steam fitting.....	10	32,168	1,700	4,300	4,820	21,348	11	4	1,005	53	26,122
31	Printing and publishing, book and job.....	11	104,828	4,000	12,000	51,661	37,167	16	12	12,568	87	39,376
32	Printing and publishing, newspapers and periodicals.....	7	129,650	3,000	4,500	60,050	61,500	3	37	28,498	97	59,411
33	Saddlery and harness.....	9	42,130	8,050	12,400	2,480	19,200	9	3	1,072	39	18,810
34	Slaughtering and meat packing, wholesale.....	3	227,750	25,000	75,000	20,000	107,750	1	8	6,700	63	24,634

BY SPECIFIED INDUSTRIES: 1900—Continued.

COUNCIL BLUFFS.

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.										
1,034	\$578,270	121	\$27,865	24	\$1,770	\$160,871	\$26,780	\$8,129	\$125,962	-----	\$1,224,814	\$1,188,049	\$36,765	\$2,596,880	1
6	2,800	-----	-----	-----	-----	658	465	15	173	-----	1,788	1,743	40	7,200	2
12	6,900	-----	-----	1	150	1,899	1,501	125	273	-----	12,912	12,245	687	38,285	3
5	2,795	-----	-----	-----	-----	1,098	876	37	185	-----	5,185	5,080	105	16,551	4
13	7,150	-----	-----	2	670	2,825	1,470	875	980	-----	35,180	33,800	1,880	56,700	5
42	21,500	-----	-----	-----	-----	1,431	175	340	916	-----	12,856	686	12,170	49,200	6
75	88,975	-----	-----	-----	-----	975	260	246	469	-----	80,200	80,165	85	153,600	7
49	30,396	5	1,500	-----	-----	5,214	180	854	4,710	-----	74,456	73,206	1,250	155,300	8
250	149,699	-----	-----	-----	-----	4,546	-----	519	4,027	-----	78,743	72,819	5,924	240,038	9
26	13,050	-----	-----	-----	-----	2,662	2,162	57	443	-----	18,908	18,627	281	49,920	10
5	2,200	5	850	-----	-----	5,070	120	145	4,805	-----	1,345	805	540	20,000	11
-----	-----	22	9,790	-----	-----	2,255	1,560	310	385	-----	25,520	25,425	95	50,885	12
10	8,350	-----	-----	-----	-----	7,009	852	257	5,900	-----	28,130	28,110	20	50,000	13
25	13,424	-----	-----	-----	-----	1,503	592	125	786	-----	11,855	11,725	180	37,500	14
2	1,200	1	150	-----	-----	1,965	1,160	25	780	-----	2,443	2,423	20	18,550	15
20	15,400	-----	-----	-----	-----	2,843	1,440	196	1,207	-----	54,480	54,345	135	100,000	16
10	4,674	-----	-----	1	180	1,226	531	52	643	-----	4,240	3,984	256	15,560	17
44	21,200	2	710	5	750	3,875	168	162	3,545	-----	16,344	15,384	960	88,810	18
10	5,460	-----	-----	-----	-----	1,185	715	155	205	-----	15,730	15,600	130	28,425	19
33	16,081	-----	-----	1	100	4,461	1,296	205	2,960	-----	26,167	25,685	482	78,850	20
30	14,770	-----	-----	8	1,245	9,413	1,975	113	7,325	-----	20,692	20,638	54	60,022	21
4	2,700	-----	-----	-----	-----	900	810	15	75	-----	1,567	1,557	10	8,230	22
354	199,546	86	14,865	6	675	97,888	8,472	4,301	85,110	-----	696,073	684,497	11,681	1,283,251	23

picture frames, 2; lumber, planing mill products, including sash, doors, and blinds, 2; malt, 1; masonry, brick and stone, 2; mineral and soda waters, 1; paper hanging, 1; patent medicines and compounds, 2; roofing and roofing materials, 1; rubber and elastic goods, 1; scales and balances, 1; soap and candles, 1; sugar and molasses, refining, 1; toys and games, 1; wirework, including wire rope and cable, 1.

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3,330	\$1,657,089	859	\$212,065	159	\$22,983	\$355,397	\$76,598	\$44,681	\$650,795	\$33,383	\$6,854,677	\$6,665,896	\$188,781	\$11,573,670	1
10	4,800					1,685	1,140		495	50	7,687	7,632	55	19,500	2
31	17,216					3,654	2,963	285	874	32	22,702	21,375	1,327	71,661	3
3	1,660	4	770	1	105	822	410	27	195	190	8,371	3,305	66	10,300	4
6	2,886			2	320	1,605	1,391	46	68		6,088	5,878	165	18,558	5
83	42,092	64	16,590			22,180	3,581	705	17,908		244,249	238,116	6,133	463,506	6
22	10,485			2	300	1,952	500	121	1,331		4,505	189	4,816	19,416	7
22	10,000	7	1,276	16	2,553	2,180	972	53	1,155		20,124	19,779	345	53,250	8
33	45,457	125	26,180	27	3,148	11,954	100	247	11,607		18,116	19,844	1,728	117,459	9
190	102,987					64,642	1,210	286	2,390	60,656	209,881	208,457	1,874	433,229	10
17	5,408					1,029	529	43	457		1,816	1,424	392	12,901	11
147	76,713			3	1,100	68,951	6,152	3,522	53,952	325	229,648	228,146	6,502	408,288	12
61	31,305	24	6,275			6,839	4,926	187	1,326	400	40,459	40,176	283	104,885	13
12	6,000	34	5,746			2,209	1,732	76	461		5,249	5,110	139	85,905	14
5	2,200	2	450			1,885	1,450	23	412		9,368	9,283	85	19,100	15
82	10,836					1,171	320	311	540		20,722	20,492	230	36,902	16
18	7,115					1,040	750	110	180		51,455	51,855	100	77,010	17
24	13,427					6,650	240	1,850	5,060		283,872	277,884	5,988	327,793	18
436	196,793	6	960	52	7,238	45,865	1,477	3,000	40,848	540	597,610	578,421	19,189	1,038,837	19
12	8,070	2	500	1	156	2,208	1,675	70	463		9,927	9,909	18	30,401	20
2	1,224					449	444		5		619	320	299	3,790	21
69	37,947			5	1,350	5,545	2,910	1,080	1,555		105,172	108,992	1,180	170,750	22
188	75,615					8,900	50	200	2,790	5,860	129,777	129,777		239,981	23
1	600	49	13,745	3	350	6,447	4,910	192	1,345		58,320	58,230	90	92,900	24
28	12,550					2,219	1,888	300	531		50,675	50,855	820	74,823	25
43	23,020			1	100	1,532	857	93	582		13,805	13,790	15	53,805	26
33	17,500					2,132	1,895	87	150		20,320	20,320		50,850	27
8	5,189	6	2,936			2,624	2,380	20	224		8,128	8,032	96	30,350	28
20	11,167					4,175					13,765	13,705	50	55,026	29
62	25,972			1	150	5,091	1,846	190	2,980		72,226	72,073	153	125,628	30
71	35,707	15	3,439	1	230	11,654	2,607	730	7,817	500	40,683	39,116	1,567	193,573	31
88	56,782	4	2,025	5	604	21,783	8,240	556	13,287	4,700	28,898	25,646	3,252	157,745	32
39	13,810					4,019	1,611	356	2,022		39,724	39,414	310	77,967	33
63	24,634					12,650	800	1,710	10,140		543,434	540,284	3,200	675,810	34

TABLE 8.—MANUFACTURES IN CITIES

DAVENPORT—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.	
35 Tinsmithing, coppersmithing, and sheet-iron working.	16	\$44,111	\$8,500	\$9,880	\$8,388	\$17,343	21	4	\$2,818	89	\$21,541	
36 Tobacco, cigars and cigarettes.	32	805,595	4,870	8,055	16,065	276,805	37	37	58,350	389	142,891	
37 Watch, clock, and jewelry repairing	11	8,910	1,000	8,000	2,460	2,460	12			10	5,520	
38 All other industries ¹	58	7,545,020	1,659,691	1,783,626	1,969,383	2,132,420	45	199	202,503	1,529	681,997	

¹ Embraces agricultural implements, 1; awnings, tents, and sails, 2; baking and yeast powders, 1; boots and shoes, factory product, 2; boxes, cigar, 2; boxes, fancy and paper, 2; boxes, wooden packing, 1; cars and general shop construction and repairs by steam railroad companies, 1; cars and general shop construction and repairs by street railroad companies, 1; clothing, men's, factory product, 2; coffee and spice, roasting and grinding, 2; cordage and twine, 1; dyeing and cleaning, 1; flavoring extracts, 1; food preparations, 1; fruits and vegetables, canning and preserving, 1; fur goods, 1; furniture, factory product, 1; gas and lamp fixtures, 1; gas, illuminating and heating, 1; glucose, 1; ice, artificial, 1; ironwork, architectural and ornamental, 1; jewelry, 1; liquors, malt, 2; looking-glass

DIES MOINES.

1 All industries	494	\$7,911,764	\$568,677	\$887,160	\$2,318,422	\$4,107,505	615	730	\$596,750	4,557	\$1,942,509
2 Bicycle and tricycle repairing	10	11,775			4,375	7,400	12			24	9,518
3 Blacksmithing and wheelwrighting	42	44,598	14,100	6,175	7,455	16,868	59	1	180	38	20,233
4 Boots and shoes, custom work and repairing.	25	5,434	800	625	3,135	1,374	25			8	3,842
5 Bread and other bakery products	17	130,473	29,500	37,250	32,125	31,598	20	26	16,213	90	41,935
6 Brick and tile	14	503,401	62,140	194,892	117,481	128,888	10	21	21,440	256	106,349
7 Carpentering	15	57,638	6,250	3,900	10,125	37,363	20	15	4,960	222	85,843
8 Carpets, rag	3	8,760		900	1,150	1,110	4	1	750	28	8,760
9 Carriages and wagons	6	208,281	11,500	16,000	12,582	168,199	2	20	18,688	129	67,724
10 Cars and general shop construction and repairs by steam railroad companies.	8	70,700	81,000	20,700	18,000	6,000		5	4,645	99	61,021
11 Clothing, men's, custom work and repairing.	35	52,481	1,800	2,100	7,385	41,196	36	6	5,088	160	84,088
12 Clothing, women's, dressmaking	5	2,800			1,750	1,050	6			30	8,200
13 Confectionery	7	53,725	1,000	6,500	7,550	88,675	6	10	8,850	86	18,931
14 Druggists' preparations, not including prescriptions.	3	16,200			2,000	14,200		7	6,000	8	2,650
15 Dyeing and cleaning	7	9,725	1,900	8,100	2,475	2,250	9	3	2,150	14	5,320
16 Flouring and grist mill products	6	130,165	14,650	14,300	16,315	84,900	7	11	10,300	27	13,710
17 Food preparations	3	2,500	100	200	750	1,450	3	1	180	2	890
18 Foundry and machine shop products	12	376,600	31,630	80,350	132,750	131,870	15	84	29,932	184	97,918
19 Furniture, factory product	3	161,810	10,000	15,000	16,450	120,360	1	11	12,565	137	47,443
20 Lock and gun smithing	5	1,300			575	725	5			1	300
21 Lumber and timber products	3	83,300	100	1,200	6,200	25,800	4	2	1,212	31	12,335
22 Lumber, planing mill products, including sash, doors, and blinds.	4	122,110	18,500	21,000	19,500	68,110	2	5	4,952	99	49,818
23 Marble and stone work	3	13,700	2,800	4,800	2,000	4,100	4			18	8,467
24 Masonry, brick and stone	5	22,400	3,100	2,400	2,900	14,000	7	3	850	81	37,423
25 Millinery, custom work	12	59,450	4,000	6,000	1,950	46,100	12	21	6,304	112	32,534
26 Monuments and tombstones	5	106,279	3,000	6,000	4,225	98,051	2	5	3,244	21	12,079
27 Painting, house, sign, etc.	13	34,000	1,500	1,500	4,385	26,725	17	15	9,821	98	45,545
28 Patent medicines and compounds	8	416,327	18,266	1,000	21,490	874,671	11	82	57,631	109	31,886
29 Photography	13	7,415	310	725	6,100	480	14			16	7,009
30 Plumbing, and gas and steam fitting.	15	53,963		3,200	5,718	50,045	22	3	5,926	126	70,384
31 Printing and publishing, book and job.	22	313,060	15,000	15,000	181,656	101,404	19	40	36,164	357	155,160
32 Printing and publishing, newspapers and periodicals.	22	421,350	18,000	40,500	187,450	175,400	19	133	105,499	279	135,502
33 Roofing and roofing materials	3	8,700		800	2,500	5,400	4	1	890	23	6,106
34 Saddlery and harness	14	109,095	25	9,395	99,675		14	24	8,570	91	30,826
35 Scales and balances	4	62,742	2,000	3,000	13,800	43,942		1	400	35	17,954
36 Tinsmithing, coppersmithing, and sheet-iron working.	18	40,816	200	9,100	20,246	11,270	19	4	2,350	46	19,486
37 Tobacco, cigars and cigarettes	14	114,896	7,500	3,800	3,665	100,031	14	16	13,300	146	67,380
38 Watch, clock, and jewelry repairing	18	17,235	500	500	7,625	8,600	19			21	9,844
39 All other industries ¹	77	4,107,310	257,431	362,618	1,453,939	2,028,322	72	203	198,136	1,310	528,090

¹ Embraces agricultural implements, 1; artificial limbs, 1; awnings, tents, and sails, 1; axle grease, 1; baking and yeast powders, 1; bicycles and tricycles, 1; boxes, fancy and paper, 1; brass castings and brass finishing, 1; brassware, 1; brooms and brushes, 2; cars and general shop construction and repairs by street railroad companies, 1; cheese, butter, and condensed milk, factory product, 1; cleansing and polishing preparations, 1; clothing, men's, factory product, 2; coffee and spice, roasting and grinding, 1; cooperage, 2; electrical apparatus and supplies, 1; electrical construction and repairs, 1; electroplating, 1; flavoring extracts, 2; fur goods, 2; furnishing goods, men's, 2; furniture, cabinetmaking, repairing, and upholstering, 1; furs, dressed, 1; gas and lamp fixtures, 1; gas, illuminating and heating, 1; glass, cutting, staining, and ornamenting, 1; gloves and mittens, 1; hairwork, 1; hand stamps, 1; hats and caps, not including fur hats, and wool hats, 1;

DUBUQUE.

1 All industries	460	\$8,117,858	\$855,053	\$1,262,088	\$1,231,064	\$4,769,153	520	579	\$455,806	5,503	\$2,012,153
2 Awnings, tents, and sails	3	7,335	2,500	50	560	4,225	3	1	624	3	875
3 Bicycle and tricycle repairing	3	4,600			1,700	2,900	4			2	400
4 Blacksmithing and wheelwrighting	12	15,346	5,338	1,200	2,175	6,635	17			13	7,985
5 Boots and shoes, custom work and repairing.	26	11,049	2,750	2,750	2,960	2,589	29			11	5,065
6 Boots and shoes, factory product	3	140,274		7,000	27,702	105,572	4	18	13,334	150	46,141

BY SPECIFIED INDUSTRIES: 1900—Continued.

DAVENPORT—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.										
88	\$21,386	1	\$155			\$3,561	\$1,823	\$159	\$1,579		\$39,187	\$38,649	\$538	\$84,876	85
147	72,854	220	68,215	16	\$1,822	90,697	4,526	1,720	84,451		161,647	160,690	957	515,580	86
9	5,370			1	150	2,439	1,520	125	294	\$500	6,455	6,100	355	22,895	87
1,217	615,402	290	63,343	22	3,252	426,090	12,273	26,671	381,766	5,380	3,738,325	3,610,361	127,964	5,758,788	88

and picture frames, 2; lumber and timber products, 2; malt, 1; mineral and soda waters, 2; mirrors, 1; musical instruments and materials, not specified, 1; paints, 1; paving and paving materials, 2; perfumery and cosmetics, 1; pickles, preserves, and sauces, 2; plumbers' supplies, 1; show cases, 1; slaughtering, wholesale, not including meat packing, 1; soap and candles, 1; tobacco, chewing, smoking, and snuff, 1; trunks and valises, 1; vinegar and cider, 1; washing machines and clothes wringers, 2; wood, turned and carved, 1; woolen goods, 1.

DES MOINES.

8,640	\$1,727,094	817	\$198,522	100	\$16,893	\$894,691	\$138,185	\$12,041	\$612,354	\$107,111	\$4,075,508	\$4,805,477	\$170,091	\$10,488,189	1
21	9,080			3	438	4,400	2,309	115	1,676	300	8,209	7,649	500	25,042	2
34	19,631			4	602	6,009	5,294	405	810		26,509	24,548	1,901	98,780	3
8	8,842					2,839	2,629	49	41	120	8,903	8,788	115	26,595	4
61	35,142	23	4,463	6	2,330	9,868	4,376	1,204	4,288		176,530	172,114	4,416	332,795	5
253	105,753	1	300	2	286	20,712	2,040	1,525	13,767	2,780	69,940	6,920	63,020	302,666	6
220	85,477			2	366	82,887	2,472	565	11,650	68,200	234,031	238,450	581	566,108	7
16	6,300	9	2,010	3	450	713	540	41	132		2,835	2,615	220	15,008	8
121	55,366	8	2,353			20,795	4,185	1,126	15,484		146,631	148,968	2,063	288,984	9
94	49,871			5	1,650	896			890		49,617	48,727	920	106,209	10
110	68,912	47	14,664	3	512	23,611	11,329	420	6,495	5,367	121,429	120,490	939	292,772	11
2	1,600	28	6,600			1,524	1,332	12	180		9,660	9,600	60	29,730	12
42	12,717	44	6,214			4,941	2,835	339	1,657		59,555	57,629	1,926	111,850	13
5	1,980	3	676			6,922	470	35	6,417		12,896	12,766	70	36,550	14
8	3,922	5	1,322	1	76	2,878	1,896	103	879		2,687	2,327	360	20,720	15
26	13,210	1	500			7,776	420	751	6,605		379,777	376,122	4,655	469,467	16
1	680	1	210			1,034	329	5	700		1,870	1,855	15	5,400	17
183	97,743			1	175	18,316	2,226	2,863	13,027	200	244,954	238,859	6,095	439,872	18
98	44,546	9	2,897			24,078	5,192	861	18,025		225,626	224,136	830	335,759	19
1	300					722	672	13	37		1,749	1,630	69	4,805	20
31	12,335					540	210	45	285		68,660	68,660		109,925	21
99	49,818					2,719	950	660	1,109		64,953	63,241	1,712	144,171	22
13	8,467					400	5	175	220		9,419	9,239	180	26,745	23
31	37,423					5,053	276	155	722	3,900	57,036	57,036		117,500	24
		112	32,534			11,107	5,969	903	4,235		95,442	95,287	155	199,612	25
21	12,079					8,405	2,496	572	5,337		25,935	25,935	621	81,459	26
97	45,445			1	100	7,312	4,335	258	3,219		41,009	41,019	80	129,290	27
43	17,776	66	14,110			159,831	2,662	452	156,717		132,287	130,656	1,631	652,444	28
9	4,382	7	2,627			4,712	3,211	85	1,312	103	12,341	12,270	71	41,000	29
124	69,808	2	516			7,678	4,452	338	2,808		95,129	95,218	911	250,216	30
296	133,527	56	20,958	5	675	27,616	11,826	1,905	13,344	381	170,413	164,748	5,665	463,934	31
231	124,965	25	6,278	23	4,259	91,311	9,103	2,463	66,463	13,277	158,942	152,700	6,242	600,130	32
22	5,950	1	156			1,596	625	21	950		14,079	14,050	20	31,515	33
91	30,826					7,154	5,122	395	1,112	625	129,962	120,307	655	199,000	34
35	17,954					3,355	1,615	482	1,258		20,058	18,884	1,174	51,964	35
45	19,330	1	156			3,924	2,572	211	1,141		51,104	50,517	587	140,059	36
111	57,811	26	8,225	9	1,344	28,886	4,084	998	23,304		57,829	57,528	301	190,247	37
18	9,580			3	264	5,116	3,456	328	462	870	8,719	8,519	200	43,752	38
969	453,986	342	70,638	29	3,416	277,155	19,020	20,987	226,060	11,083	1,978,842	1,917,931	60,411	3,412,072	39

hosiery and knit goods, 2; ice, artificial, 1; ironwork, architectural and ornamental, 2; looking-glass and picture frames, 1; mineral and soda waters, 2; models and patterns, 1; oil, linseed, 1; oysters, canning and preserving, 1; paper hanging, 1; paper hangings, 1; perfumery and cosmetics, 2; pickles, preserves, and sauces, 1; plastering and stucco work, 1; pottery, terra cotta, and fire-clay products, 1; sewing machine repairing, 1; shirts, 1; show cases, 2; slaughtering, wholesale, not including meat packing, 2; soap and candles, 2; starch, 1; steam fittings and heating apparatus, 2; stereotyping and electrotyping, 2; surgical appliances, 1; trunks and valises, 2; typewriters and supplies, 1; windmills, 2; wirework, including wire rope and cable, 2; woolen goods, 1.

DUBUQUE.

4,242	\$1,785,760	1,150	\$208,829	111	\$17,564	\$1,028,245	\$86,627	\$53,043	\$775,227	\$113,848	\$5,930,017	\$5,836,084	\$93,933	\$10,952,204	1
2	600	1	275			1,053	230	62	761		4,162	4,162		14,300	2
2	400					774	600	24	161		3,165	2,990	175	6,746	3
13	7,985					1,649	1,358	105	186		8,593	7,993	570	31,437	4
11	5,065					1,392	1,268	35	89		8,724	8,589	135	24,458	5
83	31,336	62	11,438	14	3,367	7,762	1,610	664	5,488		120,200	118,919	1,281	208,034	6

TABLE 8.—MANUFACTURES IN CITIES

DUBUQUE—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
7 Bread and other bakery products.....	13	\$149,002	\$17,200	\$19,800	\$72,513	\$33,489	13	21	\$15,093	72	\$28,977
8 Brick and tile.....	6	51,831	23,815	8,800	6,856	12,360	8			41	19,507
9 Carpentering.....	46	48,289	8,310	6,552	7,038	26,389	55	1	720	107	81,970
10 Carpets, rag.....	3	1,318			750	568	4			5	1,450
11 Carriages and wagons.....	8	711,725	94,700	53,100	9,825	554,100	13	46	13,900	891	107,876
12 Clothing, men's, custom work and repairing.....	20	43,391	2,000	2,000	2,520	36,871	26	2	3,000	72	28,439
13 Clothing, men's, factory product.....	4	267,964			30,245	237,719	2	91	59,230	683	139,346
14 Clothing, women's, dressmaking.....	29	6,732	30	300	2,054	4,348	32			108	15,535
15 Confectionery.....	6	80,420	10,000	10,000	18,300	42,120	5	15	17,176	69	15,840
16 Cooperage.....	5	26,895	4,100	5,500	8,595	8,200	4	1	1,200	36	13,978
17 Foundry and machine shop products.....	9	312,188	30,000	47,582	87,881	146,725	6	22	15,570	144	62,858
18 Furniture, cabinetmaking, repairing, and upholstering.....	5	6,675			375	6,300	7			6	2,581
19 Furniture, factory product.....	4	105,501	18,075	24,437	20,602	42,387	1	10	6,770	130	43,543
20 Liquors, malt.....	3	951,710	48,000	454,000	100,000	310,710	1	21	38,800	121	62,000
21 Lock and gun smithing.....	3	2,025	500	500	600	425	3			1	500
22 Looking-glass and picture frames.....	5	4,395			570	3,825	4	1	250	7	2,000
23 Lumber and timber products.....	3	1,136,084	267,348	20,500	45,907	802,329	29	31,768		302	106,146
24 Lumber, planing mill products, including sash, doors, and blinds.....	7	1,824,323	81,000	122,007	98,722	1,022,594	8	55	59,890	720	287,516
25 Marble and stone work.....	4	10,250		500	5,550	4,200	7			12	11,784
26 Masonry, brick and stone.....	27	18,607	840	25	6,594	11,148	38			113	50,017
27 Millinery, custom work.....	11	26,045	3,000	5,500	520	17,025	14			36	6,434
28 Mineral and soda waters.....	3	8,700	1,600	1,700	3,300	2,100	4	1	468	7	3,520
29 Monuments and tombstones.....	3	18,215	1,500	500	637	16,578	4	2	2,100	7	3,783
30 Painting, house, sign, etc.....	30	18,708	400	515	5,265	12,628	33	2	620	106	41,618
31 Paving and paving materials.....	4	3,725			1,300	2,425	8			21	10,161
32 Photography.....	5	10,000			8,050	2,040	5			7	2,425
33 Plastering and stucco work.....	9	2,190			750	1,440	9			20	9,204
34 Plumbing, and gas and steam fitting.....	13	56,315	5,000	1,000	4,300	46,015	19	5	1,684	54	33,020
35 Printing and publishing, book and job.....	5	44,833	3,000	7,000	21,300	12,988	6	5	3,280	46	21,906
36 Printing and publishing, newspapers and periodicals.....	9	97,489	800	2,200	60,187	34,232	8	50	27,894	108	64,816
37 Roofing and roofing materials.....	3	10,150			1,950	8,200	3	2	1,200	34	7,600
38 Saddlery and harness.....	9	71,242	12,500	10,500	9,390	38,852	12	8	3,124	51	14,364
39 Sausage.....	4	13,300	5,000	6,000	2,600	4,100	6			13	6,500
40 Slaughtering and meat packing, wholesale.....	4	139,200	21,000	61,200	13,000	44,000	2	7	5,170	61	22,790
41 Tinsmithing, coppersmithing, and sheet-iron working.....	11	63,570	8,300	8,900	10,245	36,125	16			40	19,687
42 Tobacco, cigars and cigarettes.....	15	85,607	3,400	3,800	8,825	74,582	18	4	3,048	149	30,772
43 Watch, clock, and jewelry repairing.....	9	16,225	8,250	1,550	6,250	5,175	9	2	675	15	7,565
44 Window shades.....	3	3,150	500	500	250	1,900	2			2	1,024
45 All other industries.....	53	1,992,175	169,299	364,020	507,751	951,105	54	151	123,718	1,368	563,464

¹ Embraces bookbinding and blank book making, 1; bottling, 2; boxes, cigar, 1; boxes, fancy and paper, 2; boxes, wooden packing, 1; brass castings and brass finishing, 1; brooms and brushes, 2; buttons, 1; carriage and wagon materials, 2; cars and general shop construction and repairs by steam railroad companies, 2; coffee and spice, roasting and grinding, 2; coffins, burial cases, and undertakers' goods, 2; dentists' materials, 2; dyeing and cleaning, 2; flouring and grist mill products, 1; fur goods, 2; furs, dressed, 1; gas, illuminating and heating, 1; glass, cutting, staining, and ornamenting, 1; gloves and mittens, 1; hairwork, 1; hand

SIOUX CITY.

1 All industries.....	329	\$5,691,644	\$502,823	\$1,108,779	\$1,416,046	\$2,664,496	376	322	\$295,157	3,104	\$1,485,066
2 Awnings, tents, and sails.....	3	14,285	5,000	2,500	1,685	5,100	3	2	2,845	7	1,822
3 Blacksmithing and wheelwrighting.....	20	18,015	4,965	2,505	3,760	6,785	22			13	6,954
4 Boots and shoes, custom work and repairing.....	14	5,533		656	2,675	2,202	18			7	3,983
5 Bread and other bakery products.....	8	270,757	8,000	4,000	181,145	77,612	8	20	26,061	127	46,421
6 Brick and tile.....	6	877,252	175,886	109,690	41,082	50,594	4	9	7,950	83	46,816
7 Carpentering.....	15	20,920	8,650	3,475	8,800	4,995	19			81	46,847
8 Carriages and wagons.....	10	71,064	40,000	14,600	4,939	11,525	17			33	19,310
9 Clothing, men's, custom work and repairing.....	20	44,587			5,458	39,129	27	3	2,320	81	43,891
10 Clothing, women's, dressmaking.....	20	10,969	500	1,500	3,230	5,739	24			65	12,653
11 Confectionery.....	5	45,892	8,000	16,000	4,327	17,565	5	3	1,370	55	16,211
12 Electrical construction and repairs.....	3	19,070			2,800	16,870	1	3	2,550	9	5,510
13 Flouring and grist mill products.....	5	220,979	13,200	35,600	59,600	113,579	6	16	15,328	53	21,053
14 Foundry and machine shop products.....	10	59,895	250	1,996	22,495	35,064	11	13	10,616	105	42,478
15 Furniture, cabinetmaking, repairing, and upholstering.....	4	12,375	7,000	3,000	600	2,275	7			6	3,234
16 Grease and tallow.....	3	12,447	2,750	3,950	2,800	2,947	4	5	1,530	7	2,504
17 Ironwork, architectural and ornamental.....	3	11,267		500	4,200	6,567	4	1	720	22	9,188
18 Lock and gun smithing.....	4	4,750			3,000	1,750	5			7	3,700
19 Looking-glass and picture frames.....	3	3,540			1,140	2,400	3	4	2,340	11	4,668
20 Masonry, brick and stone.....	6	23,305	1,000	1,610	6,445	14,250	9	2	352	49	24,361
21 Millinery, custom work.....	9	32,100	5,000	4,000	3,355	19,745	13	8	2,685	42	11,465

BY SPECIFIED INDUSTRIES: 1900—Continued.

DUBUQUE—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.											
50	\$24,928	17	\$3,143	5	\$306	\$8,476	\$4,376	\$1,119	\$2,981		\$106,670	\$103,365	\$3,305	\$223,017	7	
41	19,507					2,701	250	1,775	676		6,675	165	6,510	83,125	8	
167	81,970					63,193	1,060	284	952	\$60,897	197,802	197,717	85	891,045	9	
3	1,050	2	400			280	252		28		709	567	142	5,648	10	
361	107,876					46,935	480	9,003	37,352	100	276,718	271,970	4,748	636,963	11	
60	25,491	12	2,948			6,846	5,989	218	639		40,458	39,837	571	103,458	12	
48	17,750	680	120,596	10	1,000	74,984	6,870	3,750	64,364		390,188	387,258	2,980	700,199	13	
		108	15,555			1,602	1,513		89		9,928	9,700	228	41,678	14	
26	8,975	42	6,625	1	210	3,708	785	513	2,410		108,242	106,627	1,615	154,575	15	
86	13,678					1,283	76	125	1,082		31,789	31,339	400	57,958	16	
141	62,441			3	417	14,068	2,464	2,222	9,382		114,538	108,167	6,371	244,774	17	
6	2,584					511	476	25	40		4,800	4,665	135	10,910	18	
124	42,644			6	899	4,630	24	947	3,659		39,674	38,260	1,414	99,538	19	
121	62,000					337,000	13,550	5,600	317,950		127,150	111,538	15,612	632,320	20	
1	500					352	176	100	76		587	527	60	2,707	21	
7	2,000					947	653	24	270		8,450	8,295	155	14,585	22	
300	105,600			2	516	42,566	3,720	6,866	31,980		1,001,189	1,004,189		1,295,324	23	
700	284,384			20	3,132	76,115	4,940	7,082	64,093		1,153,061	1,151,333	2,828	1,729,301	24	
12	11,734					486	84	5	397		20,983	20,743	240	40,740	25	
113	50,017					2,543	626	19	1,838		62,031	62,003	28	138,765	26	
		36	6,434			8,978	3,091	142	740		31,099	31,010	89	54,601	27	
7	3,520					605	240	115	250		5,647	5,347	300	19,527	28	
7	3,783					751	501	55	192		13,285	13,230	55	28,046	29	
106	41,613					3,600	1,993	44	1,468		30,862	30,737	125	98,414	30	
21	10,164					304	173		131	100	11,651	11,651		27,660	31	
1	550	6	1,875			2,217	1,330	37	850		5,524	5,524		16,375	32	
20	9,201					582	214	1	67	310	6,743	6,723	20	20,259	33	
54	33,020					6,812	2,181	223	4,405		57,987	57,895	592	115,872	34	
36	19,286	6	2,007	4	613	3,605	1,570	441	1,595		22,127	20,812	1,315	70,895	35	
97	61,866	10	2,168	1	282	25,500	8,214	625	18,225	8,436	50,487	46,143	4,344	228,409	36	
						753	390	45	318		20,780	20,625	155	48,056	37	
48	13,864	3	500			5,544	1,461	508	1,502	2,070	57,873	57,318	555	108,222	38	
13	6,500					1,000	600	255	85		47,885	47,480	405	87,800	39	
61	22,790					2,817	180	1,082	1,555		378,710	376,111	2,599	470,646	40	
39	19,537			1	150	4,110	1,204	539	2,367		70,217	68,890	1,327	125,018	41	
22	11,757	117	17,995	10	1,020	21,614	2,210	519	18,885		57,935	57,804	131	129,836	42	
15	7,565					962	775	116	71		6,170	6,058	112	21,252	43	
2	1,024					235	105	30	100		3,515	3,515		6,200	44	
1,236	541,602	98	16,870	34	4,992	241,874	11,696	7,799	175,444	46,435	1,201,479	1,168,708	32,771	2,458,461	45	

stamps, 1; hardware, 2; ironwork, architectural and ornamental, 2; lead, smelting and refining, 1; lime and cement, 2; mattresses and spring beds, 1; models and patterns, 1; oil, linseed, 1; sewing machine repairing, 1; shipbuilding, iron and steel, 1; ship and boat building, wooden, 2; slaughtering, wholesale, not including meat packing, 1; soap and candles, 1; tobacco, chewing, smoking, and snuff, 1; trunks and valises, 1; vinegar and cider, 1; wirework, including wire rope and cable, 2.

SIOUX CITY.

2,610	\$1,380,013	438	\$95,925	56	\$9,128	\$664,486	\$78,230	\$25,611	\$550,221	\$15,415	\$10,609,672	\$10,489,555	\$180,117	\$15,469,702	1
3	775	4	1,047			1,499	221	127	1,151		6,265	6,150	115	15,425	2
13	6,954					1,847	1,014	178	635		11,996	11,195	801	39,868	3
7	3,983					1,752	1,347	8	402		6,974	6,974	25	19,395	4
72	36,218	54	10,022	1	184	22,598	6,881	1,765	13,952		234,226	229,150	5,076	393,013	5
82	46,146			1	200	14,977	500	600	13,811		33,324	488	82,841	111,350	6
81	46,847					12,947	772	222	849	11,104	104,887	104,887		186,842	7
33	19,310					3,415	952	711	1,752		22,098	21,066	1,032	58,268	8
73	41,281	6	2,246	2	364	10,318	5,944	205	4,669		48,141	47,990	151	132,639	9
		65	12,653			3,492	2,875		617		15,891	15,311	80	48,324	10
24	10,975	30	5,080	1	156	3,166	2,120	183	863		80,195	79,404	791	138,553	11
9	5,510					1,993	1,152		841		12,290	11,913	383	24,183	12
53	21,053					17,094	120	1,073	15,901		641,713	631,037	10,676	752,203	13
105	42,478					9,884	4,484	199	6,041	160	60,215	56,202	4,013	153,475	14
6	3,284					770	367	13	390		5,408	5,408		12,406	15
7	2,504					1,074	50	64	960		49,156	48,035	1,121	56,446	16
20	9,038			2	150	1,890	548	80	885	377	8,635	8,137	498	27,430	17
7	3,700					1,595	1,092	30	478		3,580	3,515	65	11,445	18
9	4,064	2	604			2,490	636		554	1,300	9,553	9,553		23,430	19
49	21,364					1,911	346	37	1,528		38,631	38,631		75,304	20
		42	11,465			9,914	3,625	182	6,107		46,558	46,648	10	99,283	21

TABLE 8.—MANUFACTURES IN CITIES

SIOUX CITY—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES, AND UTILITIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
22 Mineral and soda waters.....	3	\$36,919	\$2,200	\$3,950	\$5,020	\$25,749	2	3	\$4,200	10	\$1,065
23 Painting, house, sign, etc.....	13	10,988		550	2,395	8,043	18	1	46	30	17,403
24 Paper hanging.....	5	35,050	6,000	4,000	1,100	23,950	7	3	1,648	29	18,709
25 Paving and paving materials.....	8	45,897		857	11,500	33,540	4	1	900	22	14,421
26 Photography.....	8	13,575			8,900	4,675	8	2	1,145	10	6,181
27 Plumbing, and gas and steam fitting.....	8	38,288		150	5,350	32,788	9	7	3,533	50	26,047
28 Printing and publishing, book and job.....	9	179,421		36,264	55,602	87,555	10	12	12,420	78	28,143
29 Printing and publishing, newspapers and periodicals.....	13	263,447	42,022	19,448	106,180	95,797	11	32	28,938	182	109,884
30 Roofing and roofing materials.....	3	8,475		300	546	7,629	2	1	720	9	5,088
31 Saddlery and harness.....	8	117,948		1,000	8,432	108,516	9	11	7,382	36	16,711
32 Tinsmithing, coppersmithing, and sheet-iron working.....	8	8,345			4,375	3,970	7	1	600	23	13,618
33 Tobacco, cigars and cigarettes.....	12	76,721	300		1,752	74,669	20	4	8,420	93	50,010
34 Watch, clock, and jewelry repairing.....	12	14,315			8,075	6,240	12			21	12,419
35 All other industries ¹	53	3,562,243	177,600	836,678	838,283	1,715,682	47	146	153,538	1,648	789,762

¹ Embraces agricultural implements, 1; baking and yeast powders, 1; bicycle and tricycle repairing, 2; bottling, 2; boxes, cigar, 1; boxes, fancy and paper, 1; bridges, 1; brooms and brushes, 1; butter, reworking, 1; carriage and wagon materials, 1; cars and general shop construction and repairs by steam railroad companies, 2; cheese, butter, and condensed milk, factory product, 1; clothing, men's, factory product, 1; coffee and spice, roasting and grinding, 1; cooperage, 1; dyeing and cleaning, 1; fancy articles, not elsewhere specified, 1; food preparations, 1; fur goods, 2; furs, dressed, 1; gas, illuminating and heating, 1; hairwork, 2; ice, artificial, 1; liquors, malt, 1; lumber, planing mill products, including sash, doors, and blinds, 2; marble and stone work, 1; mattresses and spring beds, 1;

TABLE 9.—MANUFACTURES IN CITIES

1	Total for cities.....	2,706	\$27,311,080	\$3,058,481	\$5,001,403	\$6,288,329	\$12,962,867	3,078	1,626	\$1,435,808	10,998	\$7,029,332
2	Belle Plaine.....	41	89,742	15,500	20,125	20,425	33,002	55	4	2,787	185	58,338
3	Boone.....	114	400,260	40,875	46,290	89,736	223,359	146	29	19,590	680	315,833
4	Cedar Falls.....	67	658,605	144,855	134,550	140,410	238,790	76	33	23,703	815	123,090
5	Centerville.....	54	173,910	29,850	43,450	74,245	26,365	59	13	6,931	203	82,667
6	Chariton.....	46	126,090	8,770	17,890	24,338	75,092	52	5	3,549	175	64,837
7	Charles City.....	61	288,313	59,400	58,907	60,581	109,365	73	6	4,326	184	77,479
8	Clarinda.....	44	126,708	8,325	27,860	31,206	59,315	57	4	1,659	85	33,449
9	Cresco.....	55	135,030	9,185	81,390	29,435	65,020	69	6	1,425	96	84,910
10	Creston.....	103	398,925	25,735	132,202	157,675	83,313	105	29	22,295	418	177,476
11	Decorah.....	85	818,540	26,750	69,175	78,805	144,310	97	8	5,491	174	75,619
12	Fort Dodge.....	88	903,834	81,389	171,875	303,774	346,796	83	89	62,621	527	224,121
13	Fort Madison.....	83	1,546,574	86,395	272,923	338,276	848,980	75	74	92,388	966	409,351
14	Grinnell.....	81	812,940	14,437	39,853	46,658	711,992	102	33	23,207	334	145,664
15	Independence.....	57	312,405	35,800	58,850	109,530	108,225	56	8	5,000	159	57,375
16	Iowa City.....	129	1,003,969	85,750	153,000	253,436	511,783	136	148	70,399	680	299,314
17	Keokuk.....	138	2,103,385	107,565	219,295	551,371	1,225,104	197	349	436,067	1,665	614,580
18	Le Mars.....	69	555,662	91,600	125,375	156,487	181,200	78	16	16,700	190	85,804
19	Marion.....	55	113,970	12,700	23,955	35,760	41,555	69	2	1,800	79	35,066
20	Marshalltown.....	147	5,866,270	1,476,580	1,607,495	1,696,668	1,126,527	170	107	109,286	1,399	654,227
21	Mason City.....	89	351,868	56,300	63,817	87,238	145,013	108	26	19,336	876	167,211
22	Muscatine.....	247	3,725,971	211,295	308,201	651,707	2,554,768	295	140	132,675	2,835	1,055,904
23	Newton.....	86	443,188	21,425	34,000	49,822	337,886	106	64	43,165	312	121,843
24	Oelwein.....	37	614,599	21,400	846,479	95,470	151,250	41	15	10,660	511	270,922
25	Osage.....	37	82,090	12,650	16,400	18,700	84,340	45	1	420	68	29,895
26	Oskaloosa.....	143	552,289	53,600	73,840	146,518	278,281	171	49	29,821	588	262,228
27	Ottumwa.....	160	3,403,321	96,670	555,785	457,588	2,293,328	188	208	177,022	2,095	804,215
28	Shenandoah.....	56	236,623	28,675	46,662	73,171	88,115	65	5	4,330	213	87,073
29	Vinton.....	63	198,287	15,855	46,325	66,473	79,584	81	8	6,470	231	76,001
30	Waterloo.....	147	1,287,056	136,800	194,946	335,224	620,086	142	108	80,014	1,042	471,608
31	Webster City.....	33	348,455	34,100	71,023	87,552	155,475	35	24	14,680	205	78,297
32	What Cheer.....	41	132,408	9,250	28,950	30,250	63,958	51	15	7,931	58	25,927

BY SPECIFIED INDUSTRIES: 1900—Continued.

SIOUX CITY—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.										
10	\$4,065					\$8,575	\$130	\$126	\$8,819		\$10,401	\$9,919	\$482	\$32,669	22
80	17,463					3,045	1,519	31	1,495		16,650	16,600	50	52,337	23
28	18,598			1	\$116	2,448	480	250	1,718		21,871	21,871		53,786	24
22	14,421					3,393	300		3,093		23,185	23,038	97	44,323	25
6	4,299	4	\$1,832			4,027	2,426	27	1,574		9,946	9,946		31,045	26
50	26,047					11,902	2,640	202	9,060		64,608	64,608		128,737	27
70	26,371	6	1,408	2	364	15,119	3,759	975	10,385		40,532	38,744	1,788	118,232	28
166	107,114	14	2,411	2	309	33,175	1,862	1,709	27,780	\$1,824	58,447	56,648	1,799	302,197	29
9	5,088					1,168	516	22	630		13,712	13,712		24,565	30
82	16,503			4	208	8,177	3,015	530	4,632		64,464	64,184	280	116,559	31
23	18,618					2,247	1,344	61	842		15,998	15,898	100	88,488	32
85	48,904			8	1,106	26,258	8,827	367	22,064		62,327	62,105	222	170,842	33
21	12,419					3,538	2,695	22	821		15,545	15,509	36	41,168	34
1,405	736,624	211	47,157	32	5,971	416,288	13,680	15,551	386,407	650	8,817,794	8,700,209	117,685	11,935,872	35

monuments and tombstones, 2; musical instruments and materials, not specified, 1; oil, linseed, 1; paper goods, not elsewhere specified, 1; patent medicines and compounds, 1; plastering and stuccowork, 1; rubber and elastic goods, 1; shirts, 1; slaughtering and meat packing, wholesale, 2; slaughtering, wholesale, not including meat packing, 1; soap and candles, 1; starch, 1; trunks and valises, 2; typewriter repairing, 1; vinegar and cider, 2; wirework, including wire rope and cable, 1.

UNDER 20,000 IN POPULATION: 1900.

14,153	\$6,450,378	2,286	\$502,624	559	\$76,830	\$1,642,032	\$277,040	\$132,268	\$1,067,444	\$165,230	\$26,139,019	\$25,640,627	\$498,892	\$42,398,348	1
126	57,132	6	983	2	218	8,819	2,568	755	3,206	2,200	122,413	118,704	3,709	232,581	2
592	300,906	60	12,640	28	2,287	23,725	14,450	3,694	10,346	235	471,794	455,155	16,639	975,645	3
239	108,035	75	14,935	1	120	55,380	5,239	4,335	48,685	70	678,000	671,300	6,700	1,049,567	4
162	75,290	36	7,027	5	850	14,695	3,673	1,936	3,986	5,100	168,272	162,259	6,013	341,169	5
147	60,517	24	3,940	4	330	12,068	6,070	658	6,140	1,200	155,346	152,477	2,869	323,900	6
166	73,604	15	3,819	8	156	15,021	3,944	1,655	8,892	530	231,804	227,352	4,452	438,985	7
74	31,187	10	2,140	1	142	9,434	2,759	1,017	3,613	2,040	97,158	94,681	2,477	179,996	8
88	33,525	5	850	3	535	7,554	3,469	723	2,820	512	168,188	164,618	3,565	294,772	9
370	109,715	48	7,761			29,743	10,015	5,450	12,412	1,860	344,910	336,720	8,190	688,739	10
144	69,350	29	6,199	1	60	23,762	6,236	1,936	14,560	1,030	221,213	215,651	5,562	443,345	11
427	197,021	93	25,183	7	1,020	33,642	10,233	4,681	23,573	150	793,266	762,000	31,266	1,263,385	12
930	403,613	30	5,139	6	594	95,455	6,646	13,109	51,592	24,108	870,482	841,398	29,084	1,737,254	13
270	125,610	64	20,054			37,045	4,259	1,357	18,746	12,683	426,632	421,677	4,955	1,004,642	14
120	52,210	21	3,990	9	1,175	14,766	5,171	1,739	7,556		163,291	159,849	3,442	314,179	15
536	273,222	131	23,914	13	2,178	89,077	17,682	5,055	65,615	825	781,780	768,416	13,364	1,511,065	16
1,145	503,461	440	99,808	80	11,311	196,578	23,155	10,383	127,642	95,893	1,882,227	1,857,284	24,943	3,660,047	17
170	31,513	20	4,291			52,058	6,296	3,337	42,498	527	600,859	676,874	13,985	956,630	18
62	31,464	17	3,602			9,627	4,294	833	4,250	200	117,978	114,998	2,980	244,545	19
1,306	636,427	89	17,105			190,154	22,937	8,663	168,554		3,120,658	3,093,687	116,971	4,587,240	20
322	156,336	52	10,733	2	142	21,013	7,001	2,339	10,623	1,050	330,110	312,045	18,065	705,460	21
2,312	951,694	364	80,157	159	24,053	212,703	18,652	24,320	121,366	48,365	3,773,379	3,743,119	30,260	5,791,110	22
225	108,505	86	12,990	1	43	44,768	7,216	2,216	24,478	10,853	244,402	240,245	4,157	666,727	23
500	277,402	10	2,420	1	100	10,081	4,447	1,188	4,446		337,360	321,958	15,402	674,637	24
53	26,932	15	2,963			6,795	2,372	456	3,967		120,174	117,616	2,558	202,405	25
477	237,090	91	22,909	20	2,229	67,753	18,329	3,485	32,714	13,225	490,982	475,456	15,496	1,063,584	26
1,721	724,382	223	59,395	151	20,423	200,673	26,420	13,330	159,511	1,412	7,093,068	7,036,809	56,259	9,129,862	27
170	80,517	33	5,784	10	777	12,076	3,725	1,518	6,833		200,218	192,803	7,410	332,740	28
165	60,770	69	13,806	7	1,416	31,881	3,460	1,368	25,634	1,422	206,150	200,621	5,529	440,137	29
899	446,425	118	21,337	25	3,846	81,642	22,308	8,201	50,943	100	1,555,578	1,534,642	20,936	2,499,361	30
176	70,951	16	5,186	13	2,160	16,863	2,851	1,535	12,477		188,170	170,973	17,197	415,163	31
60	24,468	6	1,259	2	200	6,578	2,023	940	3,465	150	93,167	89,820	3,347	184,436	32

CENSUS BULLETIN.

No. 115.

WASHINGTON, D. C.

November 27, 1901.

MANUFACTURES.

KANSAS.

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 Kansas 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 36 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 the manufacturing establishments within the corporate limits of such places.

Four cities in Kansas contain a population exceeding 20,000 each: Kansas City, Leavenworth, Topeka, and Wichita. The manufacturing statistics of these 4 cities are presented by specified industries, and the statistics of Kansas City, Topeka, and Wichita are presented in comparison with the returns of the Eleventh Census. The statistics of Leavenworth were not shown separately in 1890, and comparisons with that year are, therefore, not possible in this case.

Mr. W. L. A. Johnson, Commissioner of the Kansas Bureau of Labor and Industrial Statistics, rendered

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

The statistics of Kansas 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 the hand trades and the manufactures proper, and also the statistics of educational, eleemosynary, and penal 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 7 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the cities of Kansas City, Topeka, and Wichita 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 outside 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 Kansas City, Leavenworth, Topeka, and Wichita 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 Kansas 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 Kansas 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. This number may appear excessive as compared with the amount of salaries paid; but allowance should be made for the fact that a considerable 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 \$66,827,362 invested in manufactures and mechanical industries in the 7,830 estab-

lishments reporting for the state of Kansas. 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 of Kansas. The value of the products is returned at \$172,129,398, to produce which involved an outlay of \$3,256,086, for salaries of officials, clerks, etc.; \$16,817,689 for wages, \$5,241,450 for miscellaneous expenses, including rent, taxes, etc., and \$129,485,320 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 Kansas, \$172,129,398, 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 values 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 Kansas, the gross value of products for 1900 was \$172,129,398. The value of materials purchased in a partly manufactured form was \$36,032,460. The difference, \$136,096,929, 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.

KANSAS.

Kansas 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 the state 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 and improvements.

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	7,880	4,471	2,808	1,477	814	75.1	59.5	89.8	329.4
Capital	\$66,827,862	\$48,926,002	\$11,192,815	\$4,319,060	\$1,084,935	52.1	292.5	159.1	298.1
Salaried officials, clerks, etc., number	3,860	14,606	(²)	(²)	(²)	³ 16.2			
Salaries	\$3,256,086	\$3,040,810	(²)	(²)	(²)	7.1			
Wage-earners, average number	35,193	28,237	12,062	6,844	1,735	24.6	134.1	76.2	294.5
Total wages	\$16,817,689	\$13,288,175	\$8,995,010	\$2,377,511	\$380,346	22.8	232.6	68.0	170.1
Men, 16 years and over	31,171	24,846	11,189	6,599	1,700	25.5	128.1	68.8	288.2
Wages	\$15,444,390	\$12,727,955	(²)	(²)	(²)	21.8			
Women, 16 years and over	3,162	2,510	392	118	85	26.0	540.3	232.2	237.1
Wages	\$748,886	\$484,521	(²)	(²)	(²)	51.5			
Children, under 16 years	860	881	581	127		³ 2.4	65.9	818.1	
Wages	\$129,413	\$75,699	(²)	(²)	(²)	71.0			
Miscellaneous expenses	\$5,241,450	\$5,853,466	(⁴)	(⁴)	(⁴)	³ 10.5			
Cost of materials used	\$129,485,320	\$78,845,167	\$21,453,141	\$6,112,163	\$1,444,975	64.2	267.5	251.0	823.0
Value of products, including custom work and repairing	\$172,129,398	\$110,219,805	\$30,843,777	\$11,775,333	\$4,357,408	56.2	257.3	161.9	170.2
Total population	⁵ 1,468,469	1,427,096	996,096	361,399	107,206	2.9	43.3	173.4	239.9
Wage-earners engaged in manufactures	35,193	28,237	12,062	6,844	1,735	24.6	184.1	76.2	294.5
Per cent of total population	2.4	2.0	1.2	1.9	1.6				
Assessed value of real estate	⁶ \$224,905,237	\$241,100,071	\$108,432,049	\$65,499,365	\$16,088,002	⁸ 6.7	122.4	65.5	307.1
Value of land and buildings invested in manufactures	\$21,186,738	\$13,450,853	(²)	(²)	(²)	57.5			
Per cent of assessed value	9.4	5.6							

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 Exclusive of 2,026 Indians and other persons on Indian reservations, which classes were not included at previous censuses.

⁶ As given in letter of the auditor of the state of Kansas.

⁷ Does not include value of rented property.

Although agriculture and stock raising are the leading pursuits of Kansas, manufacturing and mechanical industries have had a considerable growth during the last forty years. The total population of the state in 1860 was 107,206, and in 1900, 1,468,469, an increase in the forty years of 1,361,263, or 1,269.8 per cent. The average number of wage-earners employed in manufacturing establishments has increased from 1,735 in 1860 to 35,193 in 1900, an increase of 1,928.4 per cent in the forty years, and embraced, in the latter year, 2.4 per cent of the entire population, as compared with 1.6 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 48,806, or 3.3 per cent of the total population of the state. The greatest increase in the value of products, 257.3 per cent, was for the decade ending with 1890.

Table 2 divides the industries of the state between the hand trades and the manufactures proper. This table also gives the statistics for educational, eleemosynary, and penal institutions, and establishments with a product of less than \$500; these were not reported at previous censuses, and are, therefore, 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-eters and firm mem-bers.	WAGE-EARNERS.		Miscella-neous expenses.	COST OF MATERIALS USED.				Value of products, including custom work and repairing.
				Average num-ber.	Total wages.		Total.	Purchased in raw state.	Purchased in partially manufac-tured form.	Fuel, freight, etc.	
Total	10,831	\$68,101,312	11,519	35,889	\$16,376,859	\$5,291,863	\$120,830,261	\$90,433,416	\$36,245,429	\$3,151,416	\$173,031,692
Hand trades ¹	3,985	4,095,763	4,598	5,823	2,491,044	615,640	5,456,653	116,937	5,130,762	208,954	12,056,747
Educational, eleemosynary, and penal institutions	13	506,267	1	251	38,003	3,071	139,658	93,165	27,588	18,905	285,881
Establishments with a product of less than \$500	2,488	767,683	2,646	445	20,667	47,342	205,283	19,911	185,372		616,413
All other establishments	3,845	62,731,599	4,274	29,370	13,826,645	4,625,810	124,028,667	90,203,403	30,901,707	2,923,557	160,072,651

¹ Includes bicycle and tricycle repairing, 62; blacksmithing and wheelwrighting, 1,414; boots and shoes, custom work and repairing, 297; carpentering, 475; clothing, men's, custom work and repairing, 250; clothing, women's, dressmaking, 130; dyeing and cleaning, 12; furniture, cabinetmaking, repairing, and upholstering, 63; lock and gun smithing, 39; masonry, brick and stone, 97; millinery, custom work, 461; painting, house, sign, etc., 215; paper hanging, 25; plastering and stuccowork, 60; plumbing, and gas and steam fitting, 88; sewing machine repairing, 4; watch, clock, and jewelry repairing, 293.

Of the 10,831 establishments of all classes shown in this table, 6,473, or 62.7 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 \$12,673,160, or only 7.3 per cent of the total value of the products of the state.

In addition to the 10,831 active establishments in the state during the census year, with a capital of \$68,101,312, shown in Table 2, there were 52 idle establishments, with a capital of \$1,689,755, divided as follows:

INDUSTRIES.	Number of idle estab-lishments.	Capital.	INDUSTRIES.	Number of idle estab-lishments.	Capital.
Brick and tile	2	\$15,685	Salt	3	\$222,000
Flouring and grist mill products	21	186,975	Starch	1	950,000
Ice, artificial	1	3,600	Sugar and molasses, refining	1	85,000
Lumber and timber products	2	6,450	Wire	1	120,000
Lumber, planing mill products, including sash, doors, and blinds	2	9,000	Woolen goods	1	8,000
Oil, linseed	1	30,000	Zinc, smelting and refining	1	42,000
Printing and publishing, newspapers and periodicals	5	8,800	All other industries	10	7,245

TABLE 3.—COMPARATIVE SUMMARY OF SEVEN 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	867	\$37,540,472	13,465	\$9,459,963	\$3,016,892	\$99,486,943	\$119,485,746
	1890	575	24,020,526	11,612	6,344,399	4,110,933	55,066,561	70,653,921
Increase, 1890 to 1900		292	13,519,946	6,853	3,115,564	1,094,041	44,479,782	48,831,825
Per cent of increase		50.8	56.3	59.0	49.1	126.6	80.9	69.1
Per cent of total of all industries in state	1900	11.1	56.2	52.5	58.0	57.6	76.8	69.4
	1890	12.9	54.7	41.1	47.7	70.2	69.8	64.1
Cars and general shop construction and repairs by steam railroad companies	1900	37	2,931,699	5,592	3,476,400	101,457	8,071,173	6,816,816
	1890	26	1,683,210	2,819	1,722,326	(²)	1,874,640	3,644,038
Cheese, butter, and condensed milk, factory product	1900	171	1,139,595	395	167,293	71,883	3,062,335	3,652,630
	1890	101	433,792	271	94,449	22,939	713,677	919,787
Flouring and grist mill products	1900	533	8,366,966	1,451	743,462	447,747	18,595,258	21,926,768
	1890	348	7,844,280	1,623	734,058	599,986	14,285,990	17,420,475
Foundry and machine shop products	1900	94	2,450,324	1,246	716,633	113,929	1,470,774	2,804,268
	1890	69	2,624,807	1,501	915,058	145,683	1,214,567	2,756,825
Slaughtering:								
Total	1900	14	16,436,177	8,117	3,575,049	2,003,771	67,908,960	77,411,883
	1890	18	11,086,058	5,018	2,646,309	3,322,200	36,120,014	44,696,077
Slaughtering and meat packing, wholesale	1900	11	16,410,477	8,068	3,543,777	2,000,935	67,402,245	76,820,139
	1890	15	11,064,683	5,008	2,642,529	3,318,262	36,031,824	44,592,671
Slaughtering, wholesale, not including meat packing	1900	3	75,700	49	31,272	3,736	506,715	582,744
	1890	3	21,375	10	3,780	3,938	88,190	103,406
Soap and candles	1900	7	947,182	177	75,273	197,436	608,897	1,083,337
	1890	9	130,379	39	15,429	15,905	160,667	253,219
Zinc, smelting and refining	1900	11	5,218,529	1,487	705,803	81,169	4,678,946	5,790,141
	1890	4	218,000	341	216,770	4,220	637,000	963,500

¹ Decrease.

² Not reported at the census of 1890.

The 7 leading industries of the state in 1900, as shown in Table 3, embraced 867 establishments, or 11.1 per cent of the total number in the state; used a capital of \$37,540,472, or 56.2 per cent of the total; gave employment to 18,465 wage-earners, or 52.5 per cent of the total number; and paid \$9,459,963, or 58 per cent of the total wages. The value of their products was \$119,485,746, or 69.4 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 slaughtering and meat packing is the most important industry in the state. The 14 establishments reported in 1900 gave employment to 8,117 wage-earners, or 23.1 per cent of the wage-earners employed in the state, and the products were valued at \$77,411,883, or 45 per cent of the total value of the products of the state. In 1890 there were 18 establishments, 5,018 wage-earners, and products valued at \$44,696,077. The increase in value of products, during the decade, was 73.2 per cent. Kansas is one of the leading stock-raising states of the country, having marketed 3,330,944 head of cattle in 1899, valued at \$67,499,112, and slaughtering and meat packing forms a splendid auxiliary to that great industry. Kansas City, Kans., is next to the largest meat-packing city in the world, and has within its limits the largest single packing house in existence, covering 90 acres of floor space. There is scarcely a nation in the world to which these Kansas establishments do not send their products.¹

Allied to slaughtering and meat packing is the manufacture of soap and candles. There were 7 establishments engaged in this industry in 1900, with 177 wage-earners, and products valued at \$1,083,337. In 1890 there were 9 establishments, 39 wage-earners, and products valued at \$253,219. The value of products increased 327.8 per cent during the decade. The establishments engaged in this industry make considerable use of the oils, fatty matter, offal, and other waste products of the slaughtering and meat-packing houses.

Flour and grist milling ranks second in importance, with 533 establishments, 1,451 wage-earners, and products valued at \$21,926,768. In 1890 there were 348 establishments, 1,623 wage-earners, and products valued at \$17,420,475. The increase in the value of products during the decade was 25.9 per cent. The industry began in this state as early as 1861, when a mill was established by S. C. Pomeroy at Atchison, Kans. The inability of the smaller mills to cope with the larger ones in the manufacture of flour products, together with a variation of rates for long hauls, has made it difficult for the milling industry to extend as rapidly as circumstances would seem to warrant, for although Kansas raised 82,486,655 bushels of wheat in 1900, valued at \$46,165,656, or 3.3 per cent of the wheat crop of the world, only 24 per cent of the Kansas crop was ground by the mills of the state.²

Car construction and general shop work by steam railroad companies holds third place among the manufacturing industries of the state. There were 37 establish-

ments reported in 1900, with 5,592 wage-earners, and products valued at \$6,816,816. In 1890 there were 26 establishments, 2,819 wage-earners, and products valued at \$3,644,038. The increase in the value of products during the decade was 87.1 per cent. The importance of this industry in Kansas is indirectly due to its vast agricultural resources, for the 8,980 miles of railroad in the state, equivalent to 22 trunk lines across its entire length, were built primarily to handle its large agricultural and stock-raising products.

There were 11 establishments engaged in the smelting and refining of zinc in 1900, with 1,487 wage-earners and products valued at \$5,790,144. In 1890, 4 establishments were reported, with 341 wage-earners and products valued at \$963,500. The increase in the value of products during the decade was 500.9 per cent. This industry was reported also in 1890 as a branch of mining. A production of 15,200 short tons of spelter was reported for Kansas for that year, as compared with 54,516 short tons produced in 1900. This remarkable increase is due to the fact that in 1890 the industry was almost in its infancy in this state. Since that date the building of smelting and refining works has gone on rapidly, owing to the presence of zinc ores in the same locality with an abundant supply of fuel—both bituminous coal, and gas from the gas and oil fields opened up in southern Kansas. More than a hundred wells, producing either oil or gas, have been opened during the last few years.

There were 171 establishments in 1900 engaged in the factory manufacture of cheese, butter, and condensed milk, with 395 wage-earners, and products valued at \$3,652,530. In 1890 there were 101 establishments, 271 wage-earners, and products valued at \$919,787. The increase in the value of products during the decade was 297.1 per cent. This industry, which has grown to remarkable proportions during the last decade, constitutes a source of profit to the small farmer and stock raiser as well as to those who operate on a larger scale. Good railroad facilities have made it possible to collect cream from numerous and scattered substations, for the supply of the more centrally located butter and cheese factories. Moreover, many cooperative establishments exist in the state and have attained considerable success.

There were 94 establishments in 1900 engaged in the manufacture of foundry and machine shop products, with 1,246 wage-earners, and products valued at \$2,804,268. In 1890 there were 69 establishments, 1,501 wage-earners, and products valued at \$2,756,825. The increase in the value of products during the decade was 1.7 per cent. A number of manufacturers of flour-mill machinery have located in Kansas City and Leavenworth, and have found a productive and responsive field for their energy and capital.

URBAN MANUFACTURES.

Table 4 shows the totals for the manufacturing and mechanical industries of the cities of Kansas City, Topeka, and Wichita, as returned at the censuses of 1890 and 1900, with the percentages of increase.

¹ Report of the Kansas Bureau of Labor, 1899, pages 330-340.

² Report of the Kansas Bureau of Labor, 1900, page 171.

TABLE 4.—COMPARATIVE SUMMARY, KANSAS CITY, TOPEKA, AND WICHITA, 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	7,830	\$66,827,382	35,193	\$16,917,680	\$5,241,450	\$129,485,820	\$172,129,398
Per cent of increase.....	1890	4,471	43,926,002	28,237	13,288,175	5,853,466	78,845,167	110,219,805
		75.1	62.1	24.6	22.8	110.5	64.2	66.2
Kansas City.....	1900	492	18,633,475	10,544	4,885,259	2,643,077	70,886,491	\$2,768,943
Per cent of increase.....	1890	234	11,629,703	6,855	3,067,289	3,243,969	34,236,637	44,079,389
		110.8	60.2	53.8	33.2	118.5	105.6	87.8
Topeka.....	1900	309	8,891,580	3,758	2,110,721	417,231	6,023,934	9,977,605
Per cent of increase.....	1890	371	3,282,899	3,044	1,579,353	276,038	3,670,106	6,752,449
		7.6	18.5	23.5	33.6	51.1	64.1	47.8
Wichita.....	1900	328	2,108,524	1,505	639,271	176,146	3,060,661	4,724,063
Per cent of increase.....	1890	144	3,062,096	1,445	673,994	304,453	3,890,478	5,074,913
		127.8	131.2	4.2	15.2	142.1	19.5	16.9
Total for 3 cities.....	1900	1,219	24,633,529	15,807	7,695,251	3,236,454	79,471,086	97,470,616
Per cent of increase.....	1890	749	17,975,293	11,344	5,920,636	3,324,465	41,287,221	55,906,751
		62.8	87.0	39.3	29.0	115.4	92.5	74.3
Per cent of 3 cities to total for state.....	1900	15.6	36.9	44.9	46.8	61.7	61.4	56.6
	1890	16.8	40.9	40.2	44.6	65.3	52.4	50.7

¹ Decrease.

It appears from Table 4 that there has been a considerable increase during the past decade in the manufactures of the 3 principal cities of the state. The number of establishments increased from 749 to 1,219, or 62.8 per cent; the average number of wage-earners, from 11,344 to 15,807, or 39.3 per cent; and the value of products, from \$55,906,751 to \$97,470,616, or 74.3 per cent. Table 4 indicates, moreover, that the increase, in the last two particulars, was greater in these 3 cities than in the state as a whole. Kansas City, the leading manufacturing city of the state, shows the most rapid growth in value of products, which increased from \$44,079,389 in 1890 to

\$82,768,943 in 1900, or 87.8 per cent. The number of establishments increased during the decade from 234 to 492, or 110.8 per cent, and the number of wage-earners from 6,855 to 10,544, or 53.8 per cent. The number of establishments, number of wage-earners, and value of products for this city in 1900 constituted 6.3, 30, and 48.1 per cent, respectively, of the totals for the entire state.

Table 5 presents the totals for the manufacturing industries of the 36 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	7,830	\$66,827,862	8,872	85,193	\$16,817,689	\$5,241,460	\$129,485,320	\$172,120,398	-----	100.0	11,468,469	-----	100.0
Total for urban manufactures	3,539	50,178,983	4,071	28,050	18,227,812	4,519,179	112,101,357	146,031,011	-----	84.8	312,359	-----	21.3
Ablene	70	232,181	79	192	63,251	26,587	865,596	584,619	22	0.3	8,507	24	0.8
Argentine	45	10,753,128	51	741	436,326	118,218	15,016,721	20,337,170	2	11.8	6,878	17	0.4
Arkansas City	74	677,649	74	819	151,968	68,277	725,361	1,078,555	12	0.6	6,140	15	0.4
Atchison	111	1,139,813	127	881	416,816	97,926	1,699,953	2,600,459	6	1.5	15,722	5	1.1
Chanute	54	98,261	65	154	71,627	9,224	132,216	280,370	30	0.2	4,203	22	0.3
Chetopa	30	57,296	36	27	9,524	3,382	71,704	112,789	36	0.1	2,019	36	0.1
Clay Center	54	179,558	60	71	25,311	11,809	182,221	279,283	31	0.2	8,060	31	0.2
Coffeyville	61	406,444	71	417	148,823	42,900	697,955	1,066,386	13	0.6	4,953	19	0.8
Concordia	48	98,619	56	98	43,570	8,081	153,610	254,570	32	0.1	3,401	27	0.2
Emporia	77	232,606	89	224	101,720	29,861	234,994	474,519	24	0.3	8,223	11	0.6
Fort Scott	97	675,097	104	535	255,803	39,630	475,663	943,018	16	0.6	10,322	7	0.7
Galena	61	174,028	86	132	92,834	12,306	378,520	563,697	20	0.3	10,155	8	0.7
Girard	37	123,340	47	218	87,445	23,133	402,563	511,809	23	0.3	2,473	35	0.2
Hiawatha	45	111,280	55	84	34,256	9,468	85,822	183,816	35	0.1	2,329	34	0.2
Holton	60	163,649	71	104	36,847	11,021	88,039	201,585	34	0.1	3,082	30	0.2
Horton	40	589,952	48	374	196,386	12,721	201,331	555,024	21	0.3	8,393	23	0.2
Hutchinson	140	1,151,138	176	703	279,188	81,740	1,216,951	1,907,370	7	1.1	9,379	10	0.7
Independence	61	210,375	67	133	62,658	14,490	238,555	416,991	25	0.2	4,851	20	0.3
Junction	66	229,677	92	134	38,776	13,252	449,507	652,861	18	0.4	4,695	21	0.3
Kansas City	492	18,633,475	538	10,544	4,886,259	2,643,077	70,386,491	82,768,943	1	48.1	51,418	1	3.5
Lawrence	123	875,638	138	946	335,189	67,859	1,174,357	1,842,199	8	1.1	10,862	6	0.8
Leavenworth	220	3,207,111	252	1,760	838,576	252,029	2,822,127	4,721,373	5	2.7	20,735	4	1.4
McPherson	35	138,602	40	67	26,410	7,279	246,630	330,714	28	0.2	2,996	32	0.2
Manhattan	50	126,820	60	82	31,832	9,468	142,411	253,963	33	0.1	3,438	26	0.2
Newton	76	368,413	91	404	201,415	38,761	652,870	982,475	15	0.6	6,208	14	0.4
Olathe	50	125,780	61	140	60,676	29,456	170,356	330,098	26	0.2	3,451	25	0.2
Osawatomie	29	168,468	34	418	250,746	6,360	356,038	649,050	19	0.4	4,191	23	0.3
Ottawa	67	334,970	72	341	179,651	13,789	406,584	734,965	17	0.4	6,934	13	0.5
Paola	50	134,660	56	110	38,784	16,729	223,237	331,297	27	0.2	3,144	29	0.2
Parsons	33	584,706	90	631	292,237	34,325	531,447	1,025,409	14	0.6	7,632	12	0.5
Pittsburg	82	808,055	87	994	475,772	45,654	986,823	1,616,976	9	0.9	10,112	9	0.7
Salina	119	634,988	134	337	132,761	94,333	885,153	1,329,985	10	0.8	6,074	16	0.4
Topeka	399	3,891,530	472	3,758	2,110,721	417,231	6,023,934	9,977,605	3	5.8	33,608	2	2.3
Weir	22	145,171	23	123	49,686	7,907	240,614	311,634	29	0.2	2,977	33	0.2
Wichita	323	2,108,524	378	1,505	639,271	176,146	3,060,661	4,724,068	4	2.7	24,671	3	1.7
Winfield	75	588,481	91	209	86,852	24,343	893,327	1,136,346	11	0.7	5,554	18	0.4
Total for state exclusive of urban manufactures	4,291	16,648,379	4,801	7,143	3,089,877	722,271	17,382,963	26,098,387	-----	15.2	1,156,110	-----	78.7
Per cent of urban manufactures to total for state	45.2	75.1	45.9	79.7	81.1	86.2	86.6	84.8	-----	-----	21.3	-----	-----

¹ Exclusive of 2,026 Indians and other persons on Indian reservations, which classes were not included at previous censuses.

Of the 7,830 establishments in the state, 3,539, or 45.2 per cent, were located in these 36 cities. They furnished employment to 28,050 wage-earners, or 79.7 per cent of the total number, and the value of their products, \$146,031,011, formed 84.8 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 cities of Kansas City, Leavenworth, Topeka, and Wichita by specified industries.

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

TABLE 6.—MANUFACTURES

[No manufactures reported for

	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.....	7,880	\$66,827,862	\$5,688,686	\$15,503,097	\$17,298,921	\$28,341,708	8,872	3,860	\$1,256,086	35,193	\$16,317,689	
2	Allen.....	82	4,891,863	1,648,061	1,525,938	422,523	795,341	95	39	35,120	1,041	468,506	
3	Anderson.....	55	86,082	4,165	17,200	35,036	20,681	65	2	800	45	15,545	
4	Atchison.....	128	1,215,499	88,000	205,090	344,211	608,198	144	60	46,238	935	435,988	
5	Barber.....	38	105,509	2,685	18,525	52,615	31,684	45	6	2,800	45	17,132	
6	Barton.....	69	273,924	12,080	67,730	79,705	114,409	62	8	5,775	85	43,838	
7	Bourbon.....	139	833,998	188,363	119,110	327,023	249,502	157	36	33,256	581	273,281	
8	Brown.....	129	770,607	36,700	197,692	97,779	438,486	153	25	20,860	476	237,137	
9	Butler.....	96	229,934	9,915	42,705	114,730	62,584	102	6	3,320	71	28,531	
10	Chase.....	31	76,105	2,965	22,150	27,975	23,015	34	7	4,720	65	45,908	
11	Chautauqua.....	35	65,638	5,940	12,590	26,241	20,867	35	1	500	29	12,338	
12	Cherokee.....	170	575,603	41,653	155,228	199,162	179,563	204	18	15,643	479	219,154	
13	Cheyenne.....	4	7,925	1,050	1,050	2,400	3,425	4	—	—	2	575	
14	Clark.....	5	4,924	100	775	1,318	2,731	6	—	—	2	500	
15	Clay.....	93	378,163	122,268	44,400	80,619	130,881	101	19	16,531	117	45,346	
16	Cloud.....	96	166,408	15,730	32,240	55,422	63,016	110	4	2,620	120	50,463	
17	Coffey.....	57	213,617	18,410	60,804	67,278	67,125	67	8	6,296	101	36,662	
18	Comanche.....	8	6,260	460	840	2,180	2,780	8	—	—	4	1,160	
19	Cowley.....	180	1,400,334	71,803	361,998	364,902	601,631	202	71	59,910	611	279,158	
20	Crawford.....	177	1,068,761	112,982	319,730	349,430	256,619	201	42	32,000	1,310	603,188	
21	Decatur.....	25	55,095	4,730	9,030	24,175	16,560	27	2	2,000	22	6,415	
22	Dickinson.....	157	718,041	98,631	170,220	175,835	278,355	161	77	31,301	833	158,305	
23	Doniphan.....	87	171,977	13,145	45,810	62,520	51,002	94	5	2,570	74	27,239	
24	Douglas.....	178	947,788	51,245	196,615	354,967	344,961	192	87	46,909	993	352,374	
25	Edwards.....	22	24,165	1,600	5,635	12,230	12,230	23	—	—	16	5,614	
26	Elk.....	49	61,125	3,775	8,615	17,040	31,695	60	2	1,200	32	9,148	
27	Ellis.....	22	136,440	1,200	27,670	50,825	56,655	22	3	5,640	104	58,267	
28	Ellsworth.....	56	289,092	19,802	71,290	117,345	80,655	65	2	4,200	75	37,037	
29	Finney.....	16	27,995	590	2,760	7,550	17,095	21	—	—	12	2,254	
30	Ford.....	40	68,115	8,885	10,750	20,805	32,725	50	7	3,280	90	43,386	
31	Franklin.....	104	410,408	42,947	108,238	179,245	79,978	109	13	10,941	403	199,126	
32	Geary.....	73	241,657	18,860	69,835	63,830	89,632	101	8	2,400	187	84,751	
33	Gove.....	7	4,820	145	690	2,600	1,385	9	—	—	2	450	
34	Graham.....	4	6,000	200	800	8,650	1,850	7	—	—	3	233	
35	Gray.....	8	13,175	100	2,250	9,950	875	8	—	—	4	1,374	
36	Greenwood.....	37	100,512	11,600	18,790	29,136	40,986	95	1	364	60	19,043	
37	Hamilton.....	7	13,720	700	4,800	5,000	3,220	9	—	—	8	2,290	
38	Harper.....	40	103,916	1,675	19,415	38,308	44,518	45	5	3,310	26	11,678	
39	Harvey.....	119	570,579	31,135	87,820	208,334	243,290	136	34	23,941	450	220,354	
40	Hodgeman.....	3	4,800	150	200	1,150	3,300	3	—	—	1	200	
41	Jackson.....	96	214,329	28,525	40,595	53,590	86,619	111	13	5,280	123	43,282	
42	Jefferson.....	78	193,739	12,770	40,580	57,870	82,519	83	8	2,794	86	33,619	
43	Jewell.....	44	73,441	5,847	14,963	19,485	33,156	47	—	—	46	17,126	
44	Johnson.....	78	243,218	16,880	51,600	96,175	80,063	90	5	2,246	167	71,821	
45	Kearny.....	5	5,250	50	150	2,075	2,075	5	—	—	3	582	
46	Kingman.....	35	59,415	11,050	9,650	17,310	21,405	47	—	—	41	14,614	
47	Kiowa.....	7	9,785	695	1,415	2,325	5,350	7	—	—	2	600	
48	Labette.....	172	827,114	54,060	164,880	333,923	274,251	198	23	25,160	747	334,894	
49	Leavenworth.....	247	3,288,977	224,686	535,413	720,260	1,758,618	278	237	213,961	1,771	843,100	
50	Lincoln.....	40	123,721	10,995	28,915	35,246	49,465	43	1	50	28	11,184	
51	Linn.....	71	136,030	6,905	27,065	46,755	54,305	80	6	4,600	67	17,888	
52	Logan.....	8	15,700	—	2,000	9,800	4,400	3	—	—	3	1,500	
53	Lyon.....	123	358,041	18,750	61,775	178,259	99,257	143	7	3,990	265	113,705	
54	McPherson.....	104	357,384	13,315	30,205	113,057	150,807	123	21	13,176	157	65,702	
55	Marion.....	98	382,129	23,230	72,954	95,897	190,048	103	10	4,720	143	60,923	
56	Marshall.....	163	645,156	81,234	120,220	140,725	299,977	182	20	13,203	235	112,525	
57	Meade.....	4	2,900	—	200	2,475	225	4	1	500	2	200	
58	Miami.....	100	335,414	41,251	44,505	115,993	133,665	112	20	16,376	548	297,145	
59	Mitchell.....	69	313,249	51,175	68,000	113,419	80,055	77	16	3,945	148	48,998	
60	Montgomery.....	193	1,470,958	89,076	614,686	333,997	433,199	217	51	51,002	849	343,282	
61	Morris.....	41	65,001	4,130	16,450	23,800	21,121	44	3	1,920	37	16,837	
62	Nemaha.....	107	144,753	13,160	32,780	45,983	52,830	119	2	940	85	30,463	
63	Neosho.....	112	212,981	32,511	32,720	80,420	67,330	135	6	5,100	194	82,440	
64	Ness.....	14	9,931	337	2,415	3,385	2,894	15	—	—	6	1,735	
65	Norton.....	50	92,984	8,425	19,150	36,687	28,722	58	—	—	34	14,036	
66	Osage.....	116	173,163	9,424	39,175	63,055	61,509	135	9	3,100	135	43,561	
67	Osborne.....	35	96,017	8,330	19,580	40,920	27,187	39	1	75	33	13,315	
68	Ottawa.....	73	175,270	17,280	37,510	66,760	53,720	91	1	750	96	37,238	
69	Pawnee.....	34	109,235	6,075	25,850	41,320	35,390	40	1	1,200	61	25,705	
70	Phillips.....	51	112,814	13,770	20,036	46,008	32,400	63	—	—	31	38,611	
71	Pottawatomie.....	87	173,746	20,110	35,325	63,171	55,139	95	2	600	67	25,345	
72	Pratt.....	17	36,118	2,975	5,980	12,355	14,808	18	2	1,440	13	5,572	
73	Reno.....	200	1,299,247	89,651	356,610	419,658	433,328	243	52	36,166	737	294,681	
74	Republic.....	88	104,713	6,665	23,935	31,865	42,248	104	—	—	72	21,185	
75	Rice.....	77	241,178	13,625	47,900	55,818	33,835	87	9	12,680	147	51,003	
76	Riley.....	91	219,258	24,655	64,705	73,123	66,765	108	8	4,770	124	47,681	

BY COUNTIES: 1900.

Morton and Stanton counties.]

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.										
31,171	\$15,444,390	3,102	\$743,886	860	\$129,413	\$5,241,450	\$578,022	\$400,702	\$3,922,668	\$340,058	\$129,485,320	\$127,675,781	\$1,800,589	\$172,129,398	1
1,013	402,299	21	5,008	10	1,199	42,415	4,480	7,968	29,067	950	2,968,754	2,835,210	133,535	3,897,306	2
38	14,461	2	384	5	700	5,889	2,309	519	3,061		94,981	93,012	1,969	158,829	3
777	401,281	146	30,162	12	1,540	100,003	17,256	8,145	69,602	5,000	2,052,203	2,007,117	45,086	3,083,736	4
40	16,238	5	894			3,838	1,706	374	1,758		56,768	52,954	3,814	112,987	5
78	41,748	6	1,756	1	334	16,088	3,536	1,480	9,882	185	886,540	377,603	8,937	550,450	6
514	257,225	65	15,814	2	245	48,542	10,339	4,568	27,678	5,982	514,373	500,007	14,366	1,039,816	7
438	229,299	32	7,283	6	555	25,024	6,478	8,021	7,486	2,439	440,892	430,170	10,722	839,977	8
56	20,359	13	3,003	2	172	10,703	3,612	1,506	5,655		132,600	128,354	4,266	238,060	9
63	45,487	2	421			3,288	1,936	504	518	800	60,727	58,198	2,529	146,328	10
29	12,383					2,416	824	522	1,070		70,979	68,721	2,258	112,808	11
481	210,267	88	7,631	10	1,256	48,014	9,751	4,872	33,091	800	972,699	941,152	31,547	1,457,142	12
1	500			1	75	238	85	45	108		2,250	2,187	62	5,935	13
2	500					241	144	34	63		1,903	1,785	178	4,946	14
92	40,901	20	3,838	5	607	25,127	5,111	2,241	17,475	300	359,946	342,848	17,103	567,055	15
98	47,058	15	2,601	7	804	11,175	4,223	1,194	5,758		235,394	229,696	5,708	379,858	16
74	81,358	27	5,304			10,807	2,612	1,691	6,104		221,895	217,946	3,949	346,510	17
4	1,160					276	211	26	39		3,477	3,204	273	8,565	18
557	287,615	40	10,121	14	1,422	96,344	13,043	14,585	68,676	40	1,697,304	1,656,938	40,361	2,402,579	19
1,227	586,688	64	14,390	19	2,110	76,717	17,953	10,051	47,388	375	1,629,559	1,587,207	42,352	2,448,488	20
15	5,235	5	1,030	2	150	1,910	279	226	1,305	100	57,872	55,503	2,369	88,569	21
344	151,842	20	5,003	10	1,460	52,232	4,993	5,039	41,050	1,150	1,280,181	1,257,299	22,882	1,677,969	22
66	26,504	3	249	5	483	7,379	2,330	1,102	2,102	1,785	122,807	118,614	3,693	220,915	23
813	315,960	164	34,538	16	1,876	74,873	13,689	7,517	45,882	3,085	1,275,453	1,242,761	32,692	2,003,029	24
14	5,354	1	140	1	120	1,784	1,010	215	659		18,819	18,139	680	86,890	25
25	8,177	1	282	6	689	4,490	2,034	358	1,908	190	80,496	79,516	980	123,608	26
98	57,162	2	434	4	671	3,069	651	1,207	1,231		237,925	232,425	5,500	338,874	27
70	35,288	4	1,674	1	75	14,854	1,837	2,242	6,275	4,000	129,721	123,125	6,696	214,900	28
3	1,160	4	695	5	409	2,403	837	230	1,236		15,305	14,585	720	30,635	29
82	46,076	6	1,950	2	360	3,890	2,404	361	812	283	173,143	171,481	1,712	268,017	30
352	189,721	39	8,380	12	1,025	18,945	7,285	3,490	7,855	315	438,566	478,941	9,025	879,632	31
148	78,436	80	5,888	9	927	13,397	5,165	1,733	6,099	400	465,526	462,032	3,494	676,488	32
1	300			1	150	166	75	36	55		2,034	1,785	249	7,025	33
3	1,218	1	156			186	100	22	64		2,035	1,798	242	7,450	34
46	10,811	10	1,595	5	637	114	62	19	38		5,947	5,717	230	9,720	35
4	1,600					7,805	4,258	733	2,279	536	103,558	99,608	3,860	183,962	36
21	10,926	2	425	4	690	581	128	237	216		26,719	26,189	580	39,250	37
417	213,909	32	6,800	3	327	6,111	1,453	920	3,720	18	163,413	161,171	2,242	223,770	38
96	38,620	24	4,409	1	145	47,177	8,765	5,488	20,073	12,901	1,033,939	1,013,840	20,599	1,453,939	39
68	20,729	13	3,480	5	460	125	58	42	25		4,502	4,267	235	6,570	40
31	13,797	13	3,080	2	249	12,774	4,027	1,481	6,149	1,117	166,121	162,099	4,022	316,771	41
184	63,466	20	6,480	13	1,875	29,180	2,069	1,124	25,937		835,705	832,799	2,906	506,156	42
1	432			2	150	3,431	1,209	484	1,578	150	45,798	44,027	1,771	104,992	43
31	12,800	9	1,664	1	150	33,866	4,413	1,974	10,429	17,050	342,753	334,753	7,919	564,213	44
1	450	1	240			321	73	114	114		1,460	1,285	175	5,175	45
661	321,248	66	11,350	20	2,296	8,076	1,786	877	918		74,107	73,457	650	180,852	46
1,574	805,446	142	30,310	55	7,344	202	25	88	79	10	3,524	3,362	162	9,068	47
18	8,655	7	3,029	3	600	50,134	14,929	6,818	28,810	77	1,091,044	1,069,705	21,339	1,726,107	48
88	13,892	16	2,381	13	1,615	286,632	82,998	36,419	140,218	47,057	2,898,713	2,844,807	53,906	4,584,296	49
3	1,500					7,037	2,314	1,272	3,426	25	81,940	79,745	2,195	130,902	50
227	109,704	31	8,290	7	711	695	194	33	468		232,772	229,006	3,766	323,783	51
135	62,268	16	2,657	6	777	194	102	52	86		23,170	22,420	750	27,610	52
129	58,699	9	1,591	5	638	34,401	10,705	3,114	14,637	6,545	393,085	384,215	8,870	698,350	53
219	97,558	52	13,489	14	1,478	26,532	4,087	2,549	19,694	202	671,007	655,234	15,773	886,817	54
518	292,495	28	4,479	2	200	12,156	3,410	1,781	7,015		980,769	974,359	6,400	674,483	55
132	46,175	9	2,100	7	723	53,237	10,416	2,977	34,669	5,175	413,915	402,869	11,016	771,967	56
73	820,032	94	20,403	29	2,847	190	102	52	86		1,841	1,784	57	4,555	57
33	16,361	2	400	2	76	24,365	6,403	3,817	13,869	276	602,888	594,177	8,711	1,023,871	58
64	25,934	15	3,794	6	735	18,067	4,528	2,298	11,801		492,765	476,952	15,818	667,712	59
153	72,710	35	8,934	6	796	97,603	11,006	8,074	72,083	6,340	1,713,851	1,665,243	48,608	2,546,879	60
4	1,435	1	100	1	200	2,992	1,888	637	837	135	60,886	58,129	2,257	108,458	61
20	13,101	4	818	1	167	8,178	4,623	910	2,420	25	120,455	116,833	3,622	213,875	62
113	38,859	18	4,033	4	669	14,609	5,773	1,412	6,774	650	222,005	218,059	3,946	404,491	63
28	12,315	3	550	2	450	140	131	122	131	30	6,165	5,837	328	11,661	64
74	32,401	20	4,812	2	525	8,114	1,150	682	1,302		86,617	83,846	2,771	143,582	65
54	23,745	7	1,960			10,822	3,526	1,313	5,000	718	202,193	197,282	4,911	351,992	66
76	37,255	3	658	2	698	850	850	1,332	2,247		89,966	88,261	1,705	141,327	67
60	23,705	5	1,488	2	152	11,031	3,403	1,265	3,263	8,100	224,448	220,902	3,546	361,985	68
11	5,272	1	200	1	100	4,917	963	1,131	2,823		165,495	161,482	4,013	241,109	69
648	275,420	38	18,850	3	411	3,553	1,681	678	1,147	97	132,870	128,677	8,693	231,628	70
47	18,189	21	2,396	4	600	9,724	3,716	1,207	4,310	491	157,058	153,873	3,185	261,708	71
132	50,989	15	3,109			1,229	239	357	482	51	33,155	37,790	365	60,193	72
104	43,602	19	3,907	1	72	86,740	16,956	8,592	60,862	330	1,432,519	1,307,009	125,510	2,197,981	73
						7,424	3,046	677	2,951	750	85,963	82,960	3,003	179,816	74
						10,908	1,912	1,496	7,336	104	314,313	296,488	17,828	527,035	75
						12,405	4,320	1,845	6,141	90	199,249	194,194	6,055	356,726	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	Rooks -----	31	\$64,840	\$4,380	\$19,430	\$20,230	\$20,800	35			28	\$9,341
78	Rush -----	20	47,720	2,015	11,950	21,115	12,640	24	2	\$135	12	3,745
79	Russell -----	36	92,512	2,905	20,680	30,674	33,103	39	1	660	19	8,225
80	Saline -----	145	740,543	57,545	219,308	182,789	286,901	164	60	32,814	357	141,310
81	Scott -----	3	2,485	10	50	2,150	225	3			8	770
82	Sedgwick -----	377	2,197,772	208,295	419,583	742,651	827,243	429	152	119,280	1,514	653,175
83	Seward -----	9	3,839	92	301	2,441	1,005	15			4	1,174
84	Shawnee -----	440	4,088,989	226,586	911,353	1,876,495	1,569,505	511	330	212,730	3,936	2,181,463
85	Sheridan -----	9	13,416	280	2,860	7,476	2,800	9			6	2,631
86	Sherman -----	8	55,474	580	40,628	7,025	7,241	6	5	4,416	56	33,391
87	Smith -----	60	126,647	9,133	27,124	55,905	34,485	67	1	900	53	21,146
88	Stafford -----	38	90,340	3,485	19,735	25,250	41,870	45	2	1,450	35	13,023
89	Sumner -----	148	510,142	20,330	126,960	168,411	191,441	163	22	22,142	281	124,843
90	Thomas -----	16	26,278	2,010	9,315	8,300	6,653	16			17	6,137
91	Wabauusee -----	89	115,592	10,059	23,080	35,590	47,163	102	5	2,816	58	19,458
92	Washington -----	104	156,515	12,800	41,662	44,455	57,598	125			75	25,639
93	Wilson -----	55	840,682	13,145	56,395	159,272	111,870	61	6	5,560	112	47,867
94	Woodson -----	40	74,610	2,940	15,630	29,575	26,465	48	2	480	35	12,405
95	Wyandotte -----	568	29,848,694	1,506,809	6,035,233	6,691,874	15,014,778	621	2,144	1,962,954	12,084	5,765,884
96	All other counties ¹ -----	12	35,037	845	5,545	15,825	12,822	15			8	2,325

¹ Includes establishments distributed as follows: Grant, 1; Greeley, 1; Haskell, 2; Lane, 1; Rawlins, 1; Stevens, 1; Trego, 2; Wallace, 1; Wichita, 2.

TABLE 7.—MANUFACTURES BY

	7,830	\$66,827,862	\$5,683,636	\$15,503,097	\$17,298,921	\$28,341,708	8,872	8,860	\$3,256,086	35,193	\$16,817,689
1 All industries	7,830	\$66,827,862	\$5,683,636	\$15,503,097	\$17,298,921	\$28,341,708	8,872	8,860	\$3,256,086	35,193	\$16,817,689
2 Agricultural implements	4	19,760	400	1,500	3,850	14,000	10	6	1,075	11	2,460
3 Awnings, tents, and sails	7	6,045			1,825	4,220	7	8	1,800	14	4,776
4 Baking and yeast powders	5	7,785	10	250	1,200	6,325	7	2	1,200	11	3,580
5 Bicycle and tricycle repairing	62	80,639	1,750	6,025	32,835	39,329	76	1	468	52	20,588
6 Blacksmithing and wheelwrighting	1,414	1,267,679	172,018	823,927	825,733	435,318	1,624	2	750	618	255,082
7 Boots and shoes, custom work and repairing	297	110,225	12,440	21,133	32,237	44,410	304	1	300	76	32,084
8 Bottling	4	18,500	1,600	5,000	4,400	7,500	6	4	2,150	12	5,500
9 Boxes, wooden packing	9	229,655	22,630	48,900	73,875	78,280	8	17	11,810	264	88,850
10 Bread and other bakery products	174	324,999	47,905	113,870	71,757	91,467	187	42	16,180	380	139,014
11 Brick and tile	57	754,710	36,513	220,186	251,944	186,067	67	49	29,184	905	314,830
12 Bridges	3	126,450			25,450	101,000	3	10	16,200	203	124,060
13 Brooms and brushes	62	72,554	6,780	17,942	10,510	37,322	73	11	6,595	115	39,733
14 Carpentering	475	559,785	52,529	76,955	117,658	313,643	509	50	21,715	1,760	844,579
15 Carpets, rag	32	11,520	2,117	4,453	3,059	1,861	32			7	1,428
16 Carriages and wagons	73	271,122	29,785	55,510	44,125	141,702	91	21	12,830	239	102,276
17 Cars and general shop construction and repairs by steam railroad companies	37	2,931,699	858,213	853,770	861,867	857,840		175	167,786	5,592	3,476,400
18 Cheese, butter, and condensed milk, factory product	171	1,139,595	41,280	366,271	492,663	239,381	106	97	40,908	395	167,293
19 Clothing, men's, custom work and repairing	250	304,268	17,710	52,250	35,709	198,599	277	7	6,620	575	252,189
20 Clothing, men's, factory product	3	93,809	1,500	1,500	5,750	85,059	5	10	4,977	101	18,989
21 Clothing, women's, dressmaking	130	47,776	5,650	13,775	10,935	17,716	147	1	275	323	64,936
22 Coke	8	44,267	400	1,057	38,594	4,276	4	4	2,920	28	11,425
23 Confectionery	61	126,621	12,800	25,000	49,033	39,788	70	14	10,700	155	46,194
24 Cooperage	14	186,661	27,950	18,450	23,949	111,312	13	8	5,086	223	95,574
25 Druggists' preparations, not including prescriptions	14	22,220	2,000	4,500	2,770	12,950	16	2	1,000	10	3,580
26 Dyeing and cleaning	12	8,422	2,500	1,800	1,695	2,427	12			11	4,366
27 Electrical construction and repairs	4	129,822			5,698	124,124	3	7	2,895	21	11,169
28 Fertilizers	3	229,738	19,000	66,450	44,448	99,835	1	5	6,300	155	70,832
29 Flouring and grist mill products	533	8,366,966	625,680	1,915,743	2,702,193	3,123,350	639	281	267,737	1,451	743,462
30 Food preparations	5	8,100			3,300	4,800	5	8	3,570	14	4,058
31 Foundry and machine shop products	94	2,450,324	205,885	497,952	554,256	1,192,731	105	117	122,323	1,246	716,683
32 Fruits and vegetables, canning and preserving	5	30,300	4,200	10,702	8,766	6,632	2	11	3,254	116	17,148
33 Furniture, cabinetmaking, repairing, and upholstering	63	197,540	38,790	91,100	29,580	38,070	75	1	180	40	14,321
34 Furniture, factory product	10	212,931	9,526	32,628	51,408	149,369	10	30	21,532	220	72,949
35 Gas, illuminating and heating	17	1,414,636	123,657	137,872	1,012,067	141,240		50	25,695	85	43,562
36 Gas machines and meters	3	6,000		500	950	4,550	4			3	1,560
37 Hand stamps	3	3,250			1,700	1,550	3			5	2,464
38 Ice, artificial	19	425,199	24,870	68,500	295,779	86,050	18	20	13,420	114	55,427
39 Lime and cement	13	617,191	185,532	87,133	159,943	184,583	4	39	36,543	167	69,727
40 Lock and gun smithing	39	35,975	2,050	6,025	11,900	10,000	41			14	6,235
41 Looking-glass and picture frames	13	17,465	800	300	2,120	14,745	12			10	4,280
42 Lumber and timber products	54	85,194	19,841	4,760	47,978	12,615	32			76	22,897
43 Lumber, planing mill products, including sash, doors, and blinds	28	314,265	38,850	55,400	103,350	146,605	32	19	14,340	297	134,371
44 Marble and stone work	40	158,880	27,695	17,920	57,345	55,920	49			264	141,976
45 Masonry, brick and stone	97	150,148	14,090	18,385	19,505	98,078	113	17	11,550	602	315,841
46 Mattresses and spring beds	13	60,254	3,200	4,100	13,363	39,591	14	10	6,245	82	29,433

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 num- ber.	Wages.	Average num- ber.	Wages.	Average num- ber.	Wages.										
28	\$8,737	4	\$508	1	\$86	\$2,158	\$908	\$500	\$750		\$110,005	\$107,023	\$2,977	\$172,225	77
9	3,120	1	455	2	170	1,389	275	210	372	\$532	31,949	80,567	1,832	54,105	78
17	7,704	2	521			3,443	563	670	1,910	300	60,529	53,191	2,338	109,588	79
287	127,414	57	12,160	13	1,786	90,668	10,280	3,690	65,316	17,382	995,790	977,186	18,604	1,476,081	80
2	520	1	250			158	71	12	75		626	544	82	3,200	81
1,318	605,762	202	43,380	24	4,033	184,310	50,159	11,256	85,220	37,675	3,098,757	3,045,070	53,687	4,841,815	82
8	984			1	190	578	320	73	180		12,015	12,138	417	22,200	83
3,548	2,091,174	356	86,128	32	4,161	424,311	68,766	34,301	247,256	78,988	6,198,363	6,060,563	137,800	10,318,566	84
6	2,631					667	142	113	412		18,439	17,819	820	80,620	85
56	33,391					1,136	120	785	231		67,574	63,637	3,937	112,691	86
33	18,422	11	2,232	4	492	4,225	1,805	997	1,905	18	191,298	183,121	3,177	296,765	87
30	11,755	5	1,273			2,472	722	589	898	265	202,727	197,908	4,819	252,694	88
236	115,891	38	7,599	7	853	40,456	8,060	3,976	26,733	1,687	872,831	849,101	23,730	1,257,042	89
17	6,187					1,234	517	201	538		35,565	33,654	1,911	58,968	90
50	18,378	6	830	2	250	5,597	1,854	760	2,823	160	126,704	123,912	2,792	222,562	91
65	22,898	9	2,401	1	340	7,991	2,697	1,037	4,106	151	143,239	145,573	2,666	278,985	92
101	45,970	7	1,363	4	534	27,426	1,281	2,303	23,821	21	235,651	218,732	16,919	380,029	93
30	11,609	4	571	1	225	4,142	1,301	740	2,077	24	84,661	83,207	1,454	134,863	94
10,908	5,466,828	823	233,045	353	66,011	2,785,044	90,948	139,554	2,479,425	75,117	85,836,500	85,246,813	589,687	104,063,058	95
2	1,300	2	440	4	585	1,045	236	243	566		61,235	59,508	1,727	76,862	96

SPECIFIED INDUSTRIES: 1900.

31,171	\$15,444,390	3,102	\$743,886	860	\$129,413	\$3,241,450	\$578,022	\$400,702	\$3,922,668	\$340,058	\$129,485,320	\$127,675,781	\$1,809,539	\$172,129,398	1
11	2,460					856	138		358	360	10,819	10,590	229	18,275	2
10	3,150	4	1,626			1,058	757	31	270		14,175	14,057	118	27,750	3
5	2,530	3	800	8	200	1,075	615	39	221	200	12,143	11,944	199	29,909	4
50	20,293	1	100	1	195	10,574	6,563	889	3,532	90	46,131	43,987	2,144	130,353	5
611	254,108			7	974	57,030	28,194	9,773	17,411	1,661	545,581	488,756	56,825	1,795,685	6
75	32,559	1	125			19,552	13,931	744	4,672	205	109,385	106,525	2,860	307,383	7
12	5,500					1,652	380	110	1,162		32,936	32,500	430	49,841	8
205	75,240	12	3,744	47	9,866	12,315	1,295	1,453	9,567		338,938	337,444	1,494	435,322	9
282	121,221	80	16,163	12	1,630	39,135	21,975	3,848	13,312		518,064	493,324	22,740	979,315	10
898	312,594			13	1,780	57,709	1,284	5,343	43,982	7,100	156,294	155,226	121,068	724,351	11
208	124,060					18,619	230	18,389			467,398	466,393	1,000	677,000	12
100	36,610	3	1,050	12	2,073	3,326	1,100	416	1,770	40	111,728	111,020	1,708	209,004	13
1,751	841,696	4	1,720	5	1,163	235,604	14,985	3,371	11,328	206,920	2,076,152	2,071,593	4,559	3,867,761	14
2	788	5	640			669	410	83	176		11,802	11,191	201	26,216	15
233	100,930	1	300	5	1,046	20,418	6,861	2,388	9,512	2,157	150,698	145,175	5,518	377,134	16
5,590	3,476,251			2	149	101,457		37,799	63,658		3,071,173	2,993,803	77,365	6,816,816	17
886	164,908	7	2,035	2	350	71,388	5,569	7,456	57,946	412	3,062,335	3,003,797	58,538	3,652,530	18
422	214,016	148	37,701	5	472	49,793	35,949	1,904	11,290	650	367,140	360,114	7,026	931,736	19
11	4,602	90	14,387			2,262	850	330	1,082		63,027	62,305	722	98,710	20
		323	54,936			9,448	7,389	290	1,421	148	50,446	49,090	1,350	195,091	21
28	11,425					12,069	260	639	11,170		28,136	26,514	1,622	32,270	22
92	84,749	57	10,814	6	631	21,205	11,289	1,466	8,350	100	211,070	203,533	7,537	333,310	23
218	94,944			5	630	9,164	2,157	1,350	5,657		199,705	189,408	1,297	402,805	24
10	3,580					3,088	1,498	234	1,856		10,870	10,125	745	28,236	25
10	4,020	1	346			1,524	1,050	87	387		1,655	1,281	374	15,317	26
21	11,169					1,898	564	30	1,304		27,344	26,951	393	52,523	27
155	70,882					52,380	40	2,000	50,340		411,139	381,989	29,200	549,948	28
1,441	741,891	8	1,221	2	350	447,747	26,264	69,634	347,799	4,650	18,595,258	18,338,263	256,995	21,920,768	29
6	2,513	7	1,390	1	150	4,139	532	51	3,006		20,117	20,117	1,355	41,355	30
1,234	714,144	2	700	10	1,839	113,929	6,324	12,887	87,787	6,931	1,470,774	1,398,278	72,496	2,804,268	31
51	10,124	51	5,564	14	1,460	11,722	596	363	10,763		68,465	66,866	1,599	113,675	32
35	18,839	3	380	2	102	5,732	3,350	574	1,808		38,192	37,495	697	99,453	33
176	66,403	13	3,164	31	3,382	18,800	1,963	1,287	3,507	12,063	141,615	137,990	3,625	302,339	34
85	48,562					40,651	100	10,395	30,156		106,597	96,436	10,161	325,465	35
3	1,500					821	121		200		2,165	2,085	80	5,030	36
4	2,154	1	300			402	276	15	111		1,455	1,415	40	6,440	37
113	55,217	1	210			15,715	601	2,849	12,265		55,784	53,343	38,441	196,310	38
169	60,367	1	860			40,164	4,475	1,404	25,169	9,116	88,086	86,344	29,712	314,451	39
14	5,235					3,676	2,704	277	645		15,971	15,452	519	49,820	40
7	3,630	3	650			3,009	2,109	128	472		14,168	13,893	272	31,930	41
75	22,747			1	150	3,827	1,635	678	1,514		43,251	43,176	75	104,182	42
294	133,921	1	150	2	300	14,301	1,024	2,067	11,010	200	311,907	305,946	5,961	559,203	43
262	141,776			2	200	10,344	4,575	1,022	3,147	1,600	66,343	63,608	2,735	314,681	44
602	315,841					49,743	3,293	667	7,953		601,877	601,277	1,600	1,137,337	45
63	24,854	18	4,299	1	280	4,827	2,192	442	2,193		93,001	92,251	1,350	156,736	46

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.
47	Millinery, custom work.....	461	\$531,130	\$24,455	\$64,865	\$27,524	\$414,286	561	41	\$14,198	650	\$143,787
48	Mineral and soda waters.....	50	177,389	19,675	32,530	81,930	43,334	66	4	1,745	83	30,277
49	Monuments and tombstones.....	73	164,185	10,820	12,416	12,000	128,949	93	32	18,676	144	64,271
50	Painting, house, sign, etc.....	215	168,140	10,934	16,589	29,122	111,495	266	14	6,931	469	226,270
51	Paper hanging.....	25	26,298	2,500	3,650	2,565	17,583	35	8	486	54	30,045
52	Patent medicines and compounds.....	22	51,865	2,850	5,175	10,010	33,880	34	45	11,880	66	16,820
53	Paving and paving materials.....	44	184,779	47,531	28,750	41,813	66,385	63	6	3,614	564	239,947
54	Photography.....	221	220,444	19,280	49,743	104,950	46,471	286	4	1,012	99	35,404
55	Plastering and stuccowork.....	60	20,596	3,170	5,050	4,391	7,385	74	4	1,012	116	66,506
56	Plumbing, and gas and steam fitting.....	88	302,607	18,225	33,475	39,300	211,607	111	18	12,040	323	163,701
57	Pottery, terra cotta, and fire-clay products.....	3	19,700	1,800	4,200	9,400	4,800	3	1	1,200	22	11,520
58	Printing and publishing, book and job.....	66	698,851	12,500	10,900	348,323	227,128	77	43	88,695	884	188,675
59	Printing and publishing, newspapers and periodicals.....	595	1,920,636	63,700	222,375	1,181,989	502,572	701	169	107,369	1,766	623,783
60	Roofing and roofing materials.....	12	19,685	1,500	1,800	3,950	12,435	16	32	21,495	25	10,388
61	Saddlery and harness.....	477	1,297,366	99,665	236,031	106,228	865,442	543	32	21,495	516	229,211
62	Salt.....	8	960,733	68,732	363,454	266,869	261,678	2	32	36,010	450	168,034
63	Sewing machine repairing.....	4	4,230	200	200	1,225	2,865	4	3	2,435	6	1,800
64	Shirts.....	4	41,100	1,300	15,800	5,800	13,700	6	8	2,435	88	13,914
65	Slaughtering and meat packing, wholesale.....	11	16,410,477	771,728	2,639,200	1,658,062	11,341,487	8	1,830	1,620,010	8,068	8,543,777
66	Slaughtering, wholesale, not including meat packing.....	3	75,700	21,500	19,000	20,700	14,500	1	11	11,856	49	81,272
67	Soap and candles.....	7	947,182	74,100	154,000	186,076	533,006	10	58	63,551	177	75,273
68	Sugar and molasses, refining.....	14	9,275	1,075	1,840	4,655	1,705	14	26	14,319	12	2,563
69	Surgical appliances.....	3	105,483	5,500	13,000	17,135	60,848	2	8	3,470	47	11,826
70	Thsmithing, coppersmithing, and sheet-iron working.....	337	649,654	95,475	177,392	125,173	251,614	405	8	3,470	451	224,975
71	Tobacco, cigars and cigarettes.....	169	408,086	21,750	60,045	26,373	299,918	191	14	9,504	495	190,699
72	Trunks and valises.....	3	27,589	1,500	5,000	2,950	13,139	3	4	3,686	39	11,951
73	Vinegar and cider.....	16	49,166	3,625	9,630	23,850	12,061	18	2	1,800	23	6,794
74	Washing machines and clothes wringers.....	4	3,885	600	600	2,325	360	4	1	600	11	5,994
75	Watch, clock, and jewelry repairing.....	293	290,948	23,155	43,415	95,601	123,777	309	6	3,336	134	59,134
76	Windmills.....	6	23,495	560	4,400	6,500	12,085	10	1	600	11	5,994
77	Wirework, including wire rope and cable.....	8	22,433	1,290	2,400	3,700	15,043	12	2	1,800	12	3,075
78	Zinc, smelting and refining.....	11	5,218,529	1,684,026	2,206,702	405,464	922,337	2	40	60,800	1,487	705,803
79	All other industries.....	80	12,151,440	310,269	3,805,451	4,839,116	3,196,604	90	261	231,275	1,296	596,921

1 Embraces bags, other than paper, 1; baskets, and rattan and willow ware, 1; bookbinding and blank book making, 2; boots and shoes, factory product, 1; boxes, cigar, 2; boxes, fancy and paper, 2; butter, reworking, 1; carriage and wagon materials, 1; cars and general shop construction and repairs by street railroad companies, 1; coffee and spice, roasting and grinding, 1; coffins, burial cases, and undertakers' goods, 1; cordage and twine, 1; cordials and syrups, 1; cutlery and edge tools, 1; dentists' materials, 1; electroplating, 1; engraving, steel, including plate printing, 1; explosives, 1; fancy articles, not elsewhere specified, 2; flavoring extracts, 1; fur goods, 1; furnishing goods, men's, 2; gas and lamp fixtures, 1; gloves and mittens, 1; grease and tallow, 1; hardware, 1; hosiery and knit goods, 1; house furnishing goods, not elsewhere specified, 2; iron and steel, 1; ironwork, architectural and ornamental, 2; jewelry, 2; labels and tags, 1; lamps and

TABLE 8.—MANUFACTURES IN CITIES

KANSAS CITY.

		492	\$18,633,475	\$1,063,395	\$3,062,529	\$2,092,747	\$12,414,804	538	2,075	\$1,918,251	10,544	\$4,880,259
1	All industries.....											
2	Blacksmithing and wheelwrighting.....	33	24,340	5,700	5,750	4,915	7,975	40			29	15,059
3	Boots and shoes, custom work and repairing.....	29	11,351	1,300	878	1,855	7,318	20	1	800	8	4,139
4	Boxes, wooden packing.....	4	215,385	22,000	48,000	70,785	74,650	3	17	11,840	252	85,420
5	Bread and other bakery products.....	19	20,345	1,800	4,600	6,170	7,775	19	6	1,420	33	16,463
6	Brooms and brushes.....	3	8,925	150	150	2,175	6,600	4			22	9,100
7	Carpentering.....	72	72,836	13,525	16,615	12,141	30,555	81			221	152,544
8	Carriages and wagons.....	5	16,950	1,750	4,600	3,550	7,050	7			17	9,000
9	Clothing, men's, custom work and repairing.....	17	23,610	500	500	2,495	20,615	17	4	3,600	34	18,740
10	Clothing, women's, dressmaking.....	27	9,881	1,250	3,200	1,910	3,521	30			29	6,338
11	Confectionery.....	3	3,605	350	350	2,033	822	6			8	3,600
12	Coopeage.....	4	146,836	22,500	9,000	25,389	89,947	3	8	5,086	198	86,858
13	Flouring and grist mill products.....	7	55,570	3,000	5,400	9,620	37,550	13	7	3,500	22	13,251
14	Foundry and machine shop products.....	6	687,523	108,255	156,890	142,912	279,466	4	21	19,522	290	223,155
15	Furniture, cabinetmaking, repairing, and upholstering.....	6	1,675			590	1,085	5			4	1,792
16	Masonry, brick and stone.....	38	46,855	8,550	13,435	4,565	20,305	42			216	144,507
17	Millinery, custom work.....	9	10,261	1,400	1,750	190	6,921	10			10	1,886
18	Painting, house, sign, etc.....	35	26,420	4,000	6,550	3,850	12,020	41	1	800	71	49,090
19	Paper hanging.....	7	8,375	50	25	600	2,700	9	1	156	11	6,483
20	Patent medicines and compounds.....	3	1,165			40	1,125	6			2	572
21	Paving and paving materials.....	13	71,900	3,925	11,950	13,775	42,250	15			258	118,060
22	Photography.....	7	4,065	305	1,400	1,515	845	7			4	1,819
23	Plastering and stuccowork.....	17	6,700	1,075	1,975	850	2,800	19			44	29,606
24	Plumbing, and gas and steam fitting.....	11	12,845			4,700	8,145	13	1	450	38	25,565
25	Printing and publishing, book and job.....	5	12,400			10,300	2,100	7			12	5,443
26	Printing and publishing, newspapers and periodicals.....	11	33,165	300	1,700	24,400	6,765	11	6	4,260	31	13,905

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	\$520	645	\$142,867	4	\$380	\$80,719	\$56,128	\$4,562	\$19,711	\$318	\$680,669	\$375,068	\$5,601	\$1,296,103	47
73	28,710	3	602	7	965	8,385	2,107	1,407	4,388	483	56,111	54,734	1,377	176,437	48
141	63,846	1	250	2	175	9,684	4,495	923	4,238	28	226,098	224,828	1,270	412,732	49
464	225,453	3	500	2	317	24,369	15,617	1,053	6,814	885	267,653	266,670	983	746,977	50
54	80,045					2,963	1,508	178	1,282		20,040	28,960	80	94,129	51
47	13,016	18	3,700	1	104	18,993	1,702	453	16,838		36,760	36,331	429	123,335	52
563	239,647			1	800	30,538	2,085	2,615	10,700	16,133	588,965	546,496	42,409	969,621	53
53	24,149	44	11,137	2	118	32,951	20,391	1,581	10,535	444	117,850	114,060	8,700	335,090	54
116	66,194			1	312	2,868	1,320	166	6,582	800	91,028	90,908	120	221,167	55
316	162,411	3	904	4	386	24,954	12,019	2,087	8,998	1,850	453,342	450,383	2,959	810,010	56
22	11,520					564		145	419		5,824	3,166	2,658	29,060	57
317	173,072	64	15,275	3	328	52,039	13,715	2,777	35,047	500	258,242	250,041	8,201	662,869	58
1,144	502,408	364	89,439	258	31,986	195,520	50,562	12,711	113,509	18,745	533,452	503,019	30,438	2,348,453	59
25	10,386					1,641	730	180	631		13,223	13,013	210	32,261	60
508	227,641	2	1,000	6	570	65,991	32,269	10,842	23,233	147	880,039	821,671	8,359	1,580,553	61
429	163,724	21	4,310			52,798	500	5,798	46,505		327,890	208,854	119,036	717,449	62
2	1,120	4	680			458	276	10	172		1,030	990	90	5,740	63
14	3,924	74	10,020			1,677	246	465	866		14,984	14,175	803	41,100	64
7,121	3,299,359	661	190,802	286	53,616	2,000,035	44,460	108,644	1,846,931		67,402,245	67,066,013	336,227	76,829,189	65
49	31,272					3,736	720	226	2,790		506,715	504,175	2,540	582,744	66
131	65,207	38	8,781	8	1,285	197,436	2,200	3,936	191,301		698,897	683,327	15,570	1,083,337	67
11	2,445	1	118			141		46	95		6,294	6,685	609	10,720	68
23	7,034	24	4,792			51,474	1,000	700	49,774		35,942	35,339	603	151,278	69
445	224,182			6	793	39,417	21,337	5,478	11,602	1,000	494,346	485,959	8,387	1,045,660	70
339	151,759	117	34,312	39	4,628	128,569	17,332	2,992	108,195		283,808	281,218	2,590	789,780	71
29	10,033	9	1,768	1	150	8,047	1,516	501	1,030		21,326	20,712	614	47,148	72
22	6,614	1	150			1,807	781	316	710		24,869	23,129	1,740	57,023	73
						125	110		15		1,355	1,296	69	4,050	74
118	55,726	8	2,181	8	1,227	35,824	24,596	2,452	8,536	240	78,311	75,218	3,093	352,705	75
11	5,994					1,422	464	138	820		12,017	11,422	595	27,725	76
12	8,075					1,184	246	88	800		27,361	26,949	412	41,144	77
1,485	704,903	2	900			81,169	7,800	11,023	62,346		4,678,946	4,474,773	204,173	5,790,144	78
1,060	539,903	206	54,523	30	2,495	484,036	12,788	12,630	451,911	6,707	16,843,532	16,673,994	169,538	23,310,081	79

reflectors, 2; lard, refined, 1; lead, smelting and refining, 2; leather, tanned, curried, and finished, 1; liquors, malt, 2; liquors, vinous, 2; lithographing and engraving, 1; mirrors, 1; models and patterns, 2; oil, cottonseed and cake, 1; oil, linseed, 1; oil, not elsewhere specified, 1; oleomargarine, 2; optical goods, 1; paints, 1; paper and wood pulp, 2; perfumery and cosmetics, 2; petroleum, refining, 1; pickles, preserves, and sauces, 1; plumbers' supplies, 1; pumps, not including steam pumps, 2; scales and balances, 2; sewing machines and attachments, 1; steam packing, 1; tools, not elsewhere specified, 1; upholstering materials, 2; wood, turned and carved, 2; woolen goods, 1.

BY SPECIFIED INDUSTRIES: 1900.

KANSAS CITY.

9,384	\$4,589,835	812	\$230,933	348	\$65,441	\$2,643,077	\$88,336	\$122,694	\$2,356,976	\$75,071	\$70,386,491	\$69,914,739	\$471,752	\$82,768,913	1
28	14,851			1	208	3,287	2,103	346	778		18,696	17,253	1,443	63,900	2
8	4,139					2,168	1,797	64	297		10,188	9,972	216	34,623	3
196	71,940	12	3,744	44	9,786	11,923	1,100	1,386	9,437		327,423	326,014	1,409	464,050	4
29	15,352	4	1,111			3,621	2,397	84	1,140		54,524	51,828	2,696	105,214	5
22	9,100					1,049	192	62	795		13,365	13,185	180	26,800	6
220	152,336			1	208	40,277	2,960	760	4,047	32,510	405,506	404,773	733	709,490	7
16	9,300	1	300			937	60	125	752		17,196	16,559	637	35,620	8
31	17,550	3	1,190			3,104	1,928	121	1,055		34,998	34,756	237	85,769	9
		29	6,338			1,527	984	89	454		10,732	10,487	245	33,807	10
6	3,100	2	500			641	456	20	165		7,190	6,840	350	17,800	11
193	86,228			5	630	6,948	2,120	970	3,858		154,956	153,926	1,030	249,270	12
22	13,251					10,041	3,461	724	5,856		479,459	474,601	4,855	525,496	13
288	222,972			2	183	23,038	240	2,898	19,839	91	415,097	384,422	30,675	776,308	14
4	1,792					575	464		111		1,690	1,650	40	6,895	15
216	144,507					32,936	1,850	397	4,989	25,700	323,479	322,237	1,242	570,586	16
		10	1,836			1,767	818	84	870		9,802	9,777	25	18,111	17
71	49,090					4,695	2,566	204	1,895		56,361	56,148	213	147,150	18
11	6,483					596	420	26	150		5,635	5,625	10	20,172	19
1	312	1	260			541	211	330	830		725	700	25	4,150	20
252	117,760			1	300	25,991	534	1,892	8,665	14,900	435,651	396,672	38,979	632,908	21
8	1,585	1	234			1,009	692	47	254	16	8,698	8,688	10	13,401	22
44	29,506					1,366	700	54	332	300	30,566	30,496	70	75,397	23
38	25,565					2,224	1,309	40	875		59,771	59,486	285	105,886	24
10	4,935	2	508			1,171	544	99	528		6,170	5,725	445	18,300	25
27	12,769	3	1,040	1	96	4,920	2,573	278	2,015	54	16,704	16,087	617	59,068	26

TABLE 8.—MANUFACTURES IN CITIES

KANSAS CITY—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
27 Roofing and roofing materials -----	8	\$4,830			\$850	\$3,980	6			5	\$3,020
28 Saddlery and harness -----	6	12,000		\$100	1,270	11,290	7			5	4,600
29 Slaughtering and meat packing, whole- sale.	5	15,038,901	\$384,128	2,800,000	1,298,776	10,746,997	2	1,760	\$1,567,580	7,664	3,350,238
30 Slaughtering, wholesale, not including meat packing.	3	75,700	21,500	19,000	20,700	14,500	1	11	11,856	49	31,272
31 Soap and candles -----	3	904,957	71,500	141,500	179,057	512,900	5	57	62,651	164	69,003
32 Tinsmithing, coppersmithing, and sheet-iron working.	23	31,103	2,400	6,340	6,370	15,993	27	3	1,780	50	86,789
33 Tobacco, cigars and cigarettes -----	10	10,370	770	1,800	625	7,175	10			8	4,586
34 Watch, clock, and jewelry repairing.---	14	12,950	150	250	3,650	8,900	11	1	900	7	2,842
35 All other industries ! -----	34	1,014,021	81,912	289,821	280,124	412,164	29	170	223,050	724	340,964

¹ Embraces awnings, tents, and sails, 1; bicycle and tricycle repairing, 1; brick and tile, 1; cars and general shop construction and repairs by steam railroad companies, 1; clothing, men's, factory product, 1; collars, burial cases, and undertakers' goods, 1; fancy articles, not elsewhere specified, 1; fertilizers, 2; furnishing goods, men's, 1; furniture, factory product, 2; gas, illuminating and heating, 1; gas machines and meters, 1; grease and tallow, 1; house furnishing goods, not else-

LEAVENWORTH.

1 All industries	220	\$3,207,111	\$220,436	\$559,313	\$608,285	\$1,734,077	252	232	\$211,761	1,750	\$333,576
2 Blacksmithing and wheelwrighting	16	16,949	6,050	3,900	2,455	4,544	18			9	4,134
3 Boots and shoes, custom work and repairing	9	1,261			810	451	10				
4 Bread and other bakery products	11	54,530	7,500	23,400	6,400	17,230	12	5	2,276	36	11,674
5 Carpentering	17	111,305	3,750	7,550	4,945	95,120	19	3	2,620	106	56,093
6 Carriages and wagons	6	89,051	9,000	18,300	8,350	53,401	7	18	9,980	53	23,140
7 Clothing, men's, custom work and repairing	10	25,223			1,175	24,048	11			29	16,770
8 Clothing, women's, dressmaking	9	4,985	700	1,550	880	1,855	9			45	8,484
9 Confectionery	3	1,350			450	900	3			5	1,422
10 Flouring and grist mill products	5	408,033	40,540	62,095	88,563	216,835	6	15	15,890	53	25,640
11 Foundry and machine shop products	6	824,216	30,670	178,972	106,238	508,336	7	58	70,711	320	197,331
12 Furniture, factory product	4	201,831	7,226	28,628	40,428	125,549	2	25	17,882	159	50,216
13 Marble and stone work	3	18,470	4,000	3,000	1,095	10,375	4	3	1,200	6	3,050
14 Masonry, brick and stone	4	24,705	1,800	1,500	805	21,100	4			30	16,850
15 Millinery, custom work	8	26,275			485	25,790	13	6	3,162	23	10,017
16 Mineral and soda waters	3	12,125	1,300	2,300	5,800	2,725	6			8	3,322
17 Painting, house, sign, etc.	6	21,944			1,380	20,614	7	4	1,956	41	22,016
18 Paying and paying materials	11	11,610	6,500	1,500	1,010	2,500	8	3	2,040	35	14,372
19 Photography	6	8,330		200	5,050	3,130	6	2	562	5	2,100
20 Plumbing, and gas and steam fitting	3	23,500	1,000	5,000	800	16,700	4	1	600	18	8,274
21 Printing and publishing, book and job	4	62,675			29,694	32,981	5	5	4,800	38	19,250
22 Printing and publishing, newspapers and periodicals	8	110,300	11,000	68,000	25,000	6,300	8	13	7,630	44	23,295
23 Saddlery and harness	5	45,490	1,000	3,000	2,050	39,440	7	3	2,456	14	6,354
24 Tinsmithing, coppersmithing, and sheet-iron working	9	40,764	2,700	3,525	8,035	26,504	14			20	10,111
25 Tobacco, cigars and cigarettes	17	84,325	2,750	9,225	3,115	19,235	18			20	6,581
26 Watch, clock, and jewelry repairing	8	11,142			6,337	4,805	10	4	2,136	12	4,133
27 All other industries	33	1,016,012	82,250	137,668	842,435	453,609	41	64	60,360	614	286,796

¹ Embraces bags, other than paper, 1; baskets, and rattan and willow ware, 1; bookbinding and blank book making, 1; boots and shoes, factory product, 1; bottling, 1; boxes, cigar, 1; brick and tile, 1; bridges, 1; brooms and brushes, 1; carpets, rag, 1; cars and general shop construction and repairs by steam railroad companies, 2; cheese, butter, and condensed milk, factory product, 1; cooperage, 1; dyeing and cleaning, 2; fruits and vegetables, canning and preserving, 1; furniture, cabinetmaking, repairing, and upholstering, 2; gas, illuminating and heating, 1; hand stamps, 1; ice, artificial, 1; liquors, malt, 1; lock and gun

TOPEKA.

1 All industries	399	\$3,891,530	\$214,291	\$367,930	\$1,329,600	\$1,479,709	472	319	\$232,602	3,758	\$2,110,721
2 Bicycle and tricycle repairing	6	11,799			6,500	5,299	8			7	3,550
3 Blacksmithing and wheelwrighting	26	16,615	4,500	8,550	3,875	4,600	30			31	14,579
4 Boots and shoes, custom work and repairing	22	6,290	540	680	2,330	1,740	23			8	2,518
5 Bread and other bakery products	14	15,430	1,200	3,180	8,350	2,700	14	9	1,904	35	15,399
6 Brooms and brushes	4	2,250		100	650	1,500	5			5	2,150
7 Carpentering	23	49,075	2,200	2,750	8,625	35,500	26	4	2,175	183	107,632
8 Carriages and wagons	8	26,725	2,500	8,500	3,475	12,250	9			23	10,920
9 Clothing, men's, custom work and repairing	25	26,862		750	3,399	22,713	27	1	1,820	67	26,891
10 Clothing, women's, dressmaking	8	1,730			980	750	10	1		36	7,224
11 Confectionery	9	30,874	5,100	10,300	9,620	5,854	13	6	3,600	25	9,130
12 Druggists' preparations, not including prescriptions	3	1,350			50	1,300	4			1	200
13 Flouring and grist mill products	10	725,872	19,700	136,700	221,342	347,630	11	45	51,974	135	70,942
14 Foundry and machine shop products	7	123,025	19,400	24,800	47,000	31,825	7	5	2,432	91	40,816
15 Furniture, cabinetmaking, repairing, and upholstering	5	1,330			650		6			4	1,380
16 Ice, artificial	3	75,400	8,800	13,500	62,000	1,100	3	6	3,000	16	8,420

BY SPECIFIED INDUSTRIES: 1900—Continued.

KANSAS CITY—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	\$3,020					\$332	\$230	\$25	\$77		\$3,805	\$3,685	\$120	\$9,950	27
5	4,600					1,409	923	94	392		10,430	10,325	105	22,414	28
6,725	3,107,475	653	\$190,198	281	\$52,665	1,915,675	42,360	103,325	1,769,990		64,575,866	64,265,037	310,829	73,205,027	29
49	31,272					3,786	720	226	2,790		506,715	504,175	2,540	582,744	30
119	58,937	37	3,781	8	1,285	106,249	1,800	3,428	191,021		652,150	637,415	14,735	1,020,337	31
59	36,789					3,789	2,424	414	901		64,977	64,168	809	186,621	32
8	4,586					4,619	861	84	3,704		9,440	9,414	26	27,470	33
6	2,567	1	275			2,054	1,357	70	627		8,819	8,751	68	17,465	34
672	326,116	48	14,618	4	230	328,842	5,097	4,268	317,987	\$1,500	1,659,712	1,603,859	55,853	2,843,743	35

where specified, 1; iron and steel, 1; lamps and reflectors, 2; lard, refined, 1; looking-glass and picture frames, 2; marble and stone work, 2; mineral and soda waters, 1; models and patterns, 1; monuments and tombstones, 1; oil, cottonseed and cake, 1; oleomargarine, 2; scales and balances, 1; sewing machine repairing, 1; steam packing, 1; tools, not elsewhere specified, 1.

LEAVENWORTH.

1,556	\$796,777	140	\$20,580	54	\$7,219	\$252,029	\$32,228	\$35,926	\$137,543	\$16,332	\$2,822,127	\$2,770,419	\$51,703	\$4,721,373	1
9	4,134					1,241	914	223	74	30	5,075	4,417	658	22,936	2
						826	766	20	40		1,550	1,550		6,374	3
24	10,476	10	990	2	208	2,551	1,320	783	448		42,884	40,423	2,461	80,121	4
106	56,693					21,306	472	152	132	20,550	155,928	155,920	8	279,545	5
58	23,146					7,326	960	885	5,481		39,589	38,547	1,042	91,534	6
24	15,178	5	1,692			3,314	2,321	122	371		17,044	16,953	91	48,210	7
		45	8,484			722	668	43	11					15,095	8
2	810	3	612			756	720	21	15		8,436	3,277	159	8,440	9
55	26,610					16,097	280	1,322	14,495		502,446	555,263	7,183	661,277	10
320	197,381					52,553	951	3,956	42,186	5,460	308,630	386,512	7,118	810,715	11
132	47,176			27	8,040	16,404	1,333	1,185	1,823	12,063	118,212	110,636	2,576	235,843	12
6	3,050					570	120	200	250		9,337	9,337		18,440	13
30	16,850					51		32	19		32,969	32,969		57,980	14
		23	10,017			5,934	3,560	271	2,103		33,888	33,888		77,578	15
7	3,140			1	182	558	240	127	191		3,590	3,485	105	17,580	16
40	21,860			1	156	2,653	1,824	75	754		23,105	23,105		58,151	17
85	14,872					185		170	15		14,627	14,127	500	34,727	18
8	1,950	2	150			1,303	804	22	477		3,287	3,287		14,850	19
17	8,144			1	130	1,262	480	308	474		44,230	44,150	80	63,170	20
32	18,026	6	1,224			7,314	1,920	216	5,178		23,776	22,935	841	70,500	21
41	22,355	2	760	1	180	9,075	780	1,154	5,707	1,434	21,538	19,979	1,559	69,166	22
14	6,354					1,795	1,322	175	298		29,889	29,889		48,528	23
19	9,961			1	150	2,070	828	263	979		23,432	23,126	306	40,729	24
16	5,925			4	656	7,378	1,932	191	5,255		18,411	13,411		35,694	25
11	4,063			1	65	1,495	899	71	525		2,524	2,402	122	16,937	26
555	278,593	44	5,751	15	2,452	87,290	6,314	23,939	50,242	6,795	1,207,730	1,180,831	26,899	1,837,203	27

smithing, 2; lumber, planing mill products, including sash, doors, and blinds, 1; mattresses and spring beds, 2; monuments and tombstones, 2; patent medicines and compounds, 1; plastering and stuccowork, 2; roofing and roofing materials, 1; slaughtering and meat packing, wholesale, 2; soap and candles, 1; vinegar and cider, 1.

TOPEKA.

3,443	\$2,040,237	291	\$66,628	24	\$3,856	\$417,231	\$67,882	\$33,250	\$242,111	\$73,988	\$9,023,934	\$5,911,064	\$112,870	\$9,977,605	1
7	3,550					1,846	1,242	33	481	40	4,683	4,101	582	17,520	2
31	14,579					2,792	2,792	254	371		11,769	10,673	1,096	51,264	3
8	2,518					1,993	1,886	43	109		6,650	6,401	249	19,720	4
32	14,849			3	550	4,385	2,994	201	1,190		47,480	45,343	2,037	96,275	5
5	2,150					206	156	11	39		6,985	6,916	69	13,040	6
188	107,632					60,203	1,422	276	955	57,550	228,839	223,365	474	440,785	7
26	10,330			2	570	2,624	1,231	354	514	525	16,649	16,132	517	43,524	8
46	21,853	21	5,038			7,552	6,137	184	1,231		32,918	31,987	931	92,198	9
1	540	35	6,684			942	832		110		3,962	3,920	42	18,150	10
23	8,880	2	250			3,916	1,926	445	1,545		31,512	30,535	977	69,280	11
1	200					730	200	10	520		2,025	2,000	25	3,900	12
128	70,223	7	719			59,590	6,500	7,773	45,317		1,920,467	1,896,895	23,562	2,188,031	13
90	40,536			1	280	5,523	1,130	1,398	3,000		55,266	51,400	3,866	127,875	14
4	1,380					913	790	18	110		3,760	3,700	60	9,370	15
16	8,420					3,320	240	580	2,500		11,000	1,600	9,400	38,800	16

TABLE 8.—MANUFACTURES IN CITIES

TOPEKA—Continued.

	MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and imple-ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
17	Lumber, planing mill products, including sash, doors, and blinds.	3	\$75,500	\$10,500	\$9,500	\$17,500	\$38,000	3	1	\$1,500	73	\$32,075
18	Masonry, brick and stone	4	44,350			4,250	40,100	7			168	61,221
19	Mattresses and spring beds	3	36,561	2,500	1,000	2,298	80,766	4	6	3,600	30	10,540
20	Millinery, custom work	14	24,495			1,895	22,600	15	10	3,150	66	17,064
21	Painting, house, sign, etc	22	18,010	100	100	8,785	14,025	26	4	1,575	57	31,212
22	Paper hanging	3	6,250			400	5,850	5	2	330	14	9,000
23	Photography	12	10,725		865	5,910	4,450	13			10	3,564
24	Plastering and stucco work	7	755	100	50	405	200	9			14	7,340
25	Plumbing, and gas and steam fitting	9	45,252	2,350	4,100	2,950	95,852	16	2	1,160	57	82,840
26	Printing and publishing, book and job	13	372,694	12,400	10,000	194,717	155,477	17	24	23,140	204	109,550
27	Printing and publishing, newspapers and periodicals	27	150,780	1,000	13,500	95,675	40,605	33	70	40,049	112	71,087
28	Saddlery and harness	5	33,500	3,000	4,000	1,550	24,950	7	1	600	13	7,362
29	Tinsmithing, coppersmithing, and sheet-iron working	16	47,782	9,300	14,500	7,100	16,882	22	2	390	45	25,059
30	Tobacco, cigars and cigarettes	16	28,460	725	650	2,302	24,783	17	4	2,664	68	28,544
31	Watch, clock, and jewelry repairing	17	9,277			5,400	3,877	18			5	3,095
32	All other industries ¹	55	1,874,109	108,376	605,355	614,617	545,761	64	116	87,204	2,150	1,339,417

¹ Embraces agricultural implements, 1; awnings, tents, and sails, 1; baking and yeast powders, 1; bookbinding and blank book making, 1; boxes, cigar, 1; boxes, fancy and paper, 1; brick and tile, 1; carpets, rag, 1; cars and general shop construction and repairs by steam railroad companies, 1; cars and general shop construction and repairs by street railroad companies, 1; cheese, butter, and condensed milk, factory product, 1; clothing, men's, factory product, 1; dyeing and cleaning, 2; electrical construction and repairs, 2; flavoring extracts, 1; food preparations, 2; fruits and vegetables, canning and preserving, 1; fur goods, 1; gas, illuminating and heating, 1; hand stamps, 1; ironwork, architectural and ornamental, 1; lime and cement, 1; lock and gun smithing, 2; looking-glass and picture

WICHITA.

		828	\$2,108,524	\$202,513	\$395,760	\$715,963	\$794,283	378	144	\$110,935	1,505	\$639,271
1	All industries.											
2	Awnings, tents, and sails.	3	1,470			450	1,020	3			4	1,050
3	Baking and yeast powders.	3	5,950			650	5,300	4			4	1,830
4	Bicycle and tricycle repairing.	6	6,090		200	2,105	3,785	10	1	468	16	6,515
5	Blacksmithing and wheelwrighting.	27	17,918	6,800	4,250	4,195	2,673	33			24	12,595
6	Boots and shoes, custom work and repairing.	20	5,935	2,100	750	1,600	1,395	22			8	1,250
7	Bread and other bakery products.	10	17,175	2,900	4,800	6,200	3,275	11	4	1,370	32	8,489
8	Carpentering.	17	12,368	1,118	1,000	4,250	6,000	21			146	55,823
9	Carriages and wagons.	3	11,159	3,000	1,500	770	5,889	4			19	8,420
10	Clothing, men's, custom work and repairing.	18	32,450			3,330	29,120	20			67	27,547
11	Clothing, women's, dressmaking.	6	2,410			585	1,825	6			46	8,360
12	Confectionery.	7	52,930	2,500	2,500	26,880	21,050	9	7	12,500	70	19,992
13	Druggists' preparations, not including prescriptions.	6	13,575	2,000	4,500	1,725	5,350	6	2	1,000	7	2,650
14	Flouring and grist mill products.	10	145,746	4,700	14,550	64,200	62,296	14	10	7,480	35	17,902
15	Foundry and machine shop products.	8	64,634	3,150	7,450	21,856	32,173	10	6	2,526	41	18,739
16	Furniture, cabinetmaking, repairing, and upholstering.	7	126,350	30,000	65,000	20,760	10,600	13			9	3,320
17	Lock and gun smithing.	4	7,050			1,625	5,525	4			5	2,500
18	Lumber, planing mill products, including sash, doors, and blinds.	3	44,600	3,500	7,100	14,500	19,500	3	1	1,500	39	18,200
19	Masonry, brick and stone.	6	8,050			3,050	5,000	6			54	23,600
20	Millinery, custom work.	10	37,725			8,725	34,000	11	2	800	40	10,593
21	Mineral and soda waters.	3	5,725	100	25	4,100	1,500	4			6	1,700
22	Painting, house, sign, etc.	17	32,475	1,000	700	3,475	27,300	22	5	3,100	61	26,421
23	Patent medicines and compounds.	3	6,999	1,150	575	650	4,624	2	6	3,520	7	1,800
24	Paving and paving materials.	6	2,475			1,675	800	7			37	20,980
25	Photography.	8	6,980		430	4,400	2,150	8			8	3,316
26	Plastering and stucco work.	3	350			350		3			7	3,220
27	Plumbing, and gas and steam fitting.	6	21,650	4,500	5,000	2,450	9,700	10	1	100	20	10,000
28	Printing and publishing, book and job.	10	68,817	100	900	47,822	19,995	9	7	5,915	54	25,537
29	Printing and publishing, newspapers and periodicals.	9	100,800	8,000	17,000	49,100	26,700	14	9	7,900	146	69,110
30	Saddlery and harness.	11	112,885	5,000	11,550	4,935	91,400	10	13	11,130	51	29,300
31	Tinsmithing, coppersmithing, and sheet-iron working.	12	35,935	10,500	7,500	6,160	9,775	13			23	11,469
32	Tobacco, cigars and cigarettes.	11	15,560	800	1,200	960	12,600	14	1	200	18	7,695
33	Vinegar and cider.	3	12,338	500	4,100	5,050	2,688	4			5	1,380
34	Watch, clock, and jewelry repairing.	14	8,931		75	5,406	3,450	12			12	6,232
35	All other industries ¹ .	38	1,055,019	109,095	233,105	396,994	325,825	36	69	51,426	389	171,742

¹ Embraces bottling, 2; boxes, fancy and paper, 1; boxes, wooden packing, 2; brick and tile, 1; bridges, 1; brooms and brushes, 2; cars and general shop construction and repairs by steam railroad companies, 2; cheese, butter, and condensed milk, factory product, 1; dyeing and cleaning, 2; electrical construction and repairs, 1; electroplating, 1; engraving, steel, including plate printing, 1; furniture, factory product, 1; gas, illuminating and heating, 1; hardware, 1; ice,

BY SPECIFIED INDUSTRIES: 1900—Continued.

TOPEKA—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.										
71	\$31,775			2	\$300	\$3,399		\$438	\$2,961		\$95,365	\$93,926	\$1,439	\$156,400	17
168	61,221					4,070	\$135	35	1,400	\$2,500	99,625	99,575	50	186,100	18
24	9,375	6	\$1,165			1,967	900	260	807		56,000	55,255	705	77,920	19
		66	17,064			8,748	7,164	301	1,283		64,200	63,830	370	124,913	20
57	31,212					3,095	2,118	164	813		22,892	22,720	172	83,850	21
14	9,000					1,262	675	25	562		7,688	7,650	33	27,000	22
4	1,610	6	1,951			2,771	1,920	113	738		8,210	7,619	591	27,286	23
14	7,340					155	24	16	15	100	11,383	11,383		24,900	24
57	82,840					8,894	1,960	894	1,040	500	81,616	81,276	240	143,900	25
167	100,455	37	9,095			30,578	3,507	1,462	25,609		152,178	148,296	3,882	369,181	26
90	66,569	18	3,295	9	1,223	44,189	5,295	1,405	25,416	12,073	79,656	75,708	3,948	360,003	27
13	7,362					1,469	576	237	606		12,898	12,726	172	28,513	28
44	24,984			1	75	3,491	2,404	323	764		48,321	47,659	662	104,520	29
49	24,510	12	3,784	2	250	14,802	2,424	283	12,095		32,283	31,873	410	97,001	30
5	3,085					2,255	1,984	63	208		8,824	8,640	184	20,260	31
2,060	1,321,229	86	17,580	4	608	133,921	7,368	16,051	109,802	700	2,868,995	2,812,920	56,075	4,913,584	32

frames, 2; marble and stone work, 2; mineral and soda waters, 2; mirrors, 1; models and patterns, 1; monuments and tombstones, 2; oil, not elsewhere specified, 1; optical goods, 1; patent medicines and compounds, 1; paying and paying materials, 2; perfume and cosmetics, 2; pickles, preserves, and sauces, 1; pumps, not including steam pumps, 2; roofing and roofing materials, 1; shirts, 1; slaughtering and meat packing, wholesale, 1; surgical appliances, 1; trunks and valises, 1, upholstering materials, 1; vinegar and cider, 1; windmills, 1.

WICHITA.

1,284	\$592,693	200	\$42,810	21	\$3,768	\$176,146	\$46,511	\$10,833	\$81,171	\$37,631	\$3,060,661	\$3,014,051	\$46,610	\$4,724,068	1
2	550	2	500			331	300	6	75		2,534	2,534		5,800	2
3	1,630	1	200			559	375	15	169		8,376	8,376	49	21,184	3
16	6,515					2,156	1,110	12	1,034		5,677	5,358	319	28,000	4
24	12,565					2,213	1,589	854	270		19,787	18,722	1,065	64,810	5
3	1,250					1,146	987	29	130		8,087	7,925	162	21,949	6
21	6,640	11	1,849			3,968	2,354	234	1,380		64,711	62,830	1,881	101,102	7
144	55,293			2	530	27,473	993	95	845	25,540	186,000	185,060	40	331,698	8
10	8,420					1,130	444	114	190	382	6,607	6,392	215	18,555	9
51	23,677	14	3,600	2	270	6,665	5,012	138	1,515		42,057	41,018	1,039	102,452	10
		46	3,360			1,316	901		415		16,565	16,460	105	39,500	11
32	13,400	37	6,460	1	132	7,188	3,110	403	3,575	100	116,532	112,601	3,931	171,613	12
7	2,650					1,605	920	165	520		7,023	6,370	658	17,918	13
35	17,902					8,234	310	1,564	6,360		395,702	389,108	6,594	457,275	14
40	18,550			1	150	4,897	1,464	523	2,865	45	41,194	39,032	2,142	95,915	15
9	3,320					941	306	10	625		2,925	2,850	75	14,372	16
5	2,500					899	746	13	80		6,116	5,980	136	14,800	17
89	18,200					1,903	149	239	1,515		42,111	41,441	670	79,000	18
54	28,600					9,345	485	20	240	8,600	54,160	53,960	200	99,840	19
6	1,700	40	10,593			5,243	3,660	818	1,205		60,114	59,904	210	98,490	20
						560	240	58	262		2,288	2,188	100	10,740	21
59	26,068	1	200	1	156	4,432	2,881	129	1,347	75	42,821	42,726	95	99,616	22
3	1,000	4	800			1,608	60	58	1,490		8,770	8,750	40	23,710	23
37	20,980					485	335		150		68,380	68,380		95,056	24
6	3,010	2	306			1,823	1,180	11	537	100	9,160	8,995	165	21,925	25
7	3,220					153	148		10		4,305	4,305		10,820	26
20	10,000					2,548	1,284	259	1,005		39,175	38,860	315	65,832	27
50	24,619	3	768	1	150	4,953	2,951	576	931	500	89,846	88,105	1,741	96,237	28
134	65,680	9	3,076	3	354	12,314	490	770	9,577	1,977	34,946	33,306	1,640	168,301	29
51	29,300					4,210	2,173	667	1,370		100,634	100,484	150	168,565	30
28	11,469					1,800	1,011	179	610		20,906	20,408	498	51,572	31
17	7,570			1	125	6,544	1,270	330	4,944		11,516	11,450	66	39,153	32
4	1,230	1	150			371	56	110	205		13,235	12,615	620	24,856	33
9	5,309	1	520	2	412	3,017	1,935	237	815		7,655	7,655	175	26,887	34
354	164,825	28	5,428	7	1,489	43,611	5,282	3,167	34,850	312	1,570,546	1,549,027	21,519	2,031,866	35

artificial, 2; ironwork, architectural and ornamental, 1; jewelry, 2; labels and tags, 1; lithographing and engraving, 1; looking-glass and picture frames, 1; mattresses and spring beds, 1; monuments and tombstones, 2; sewing machines and attachments, 1; shirts, 1; slaughtering and meat packing, wholesale, 1; soap and candles, 2; trunks and valises, 1; wirework, including wire rope and cable, 1.

TABLE 9.—MANUFACTURES IN CITIES

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 imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
1 Total for cities	2,100	\$23,393,343	\$1,154,485	\$6,141,177	\$8,122,139	\$6,920,542	2,431	666	\$446,460	10,493	\$4,757,985
2 Abilene	70	232,181	10,271	35,125	55,595	131,190	79	59	20,320	192	63,251
3 Argentine	45	10,753,128	270,744	3,530,085	4,459,926	2,492,373	51	42	20,739	741	436,226
4 Arkansas City	74	677,649	17,835	237,269	147,143	275,402	74	39	30,474	319	151,968
5 Atchison	111	1,139,313	76,800	172,950	318,386	572,177	127	53	39,738	881	416,516
6 Chanute	54	98,261	13,500	14,405	35,750	34,606	65	5	4,600	154	71,627
7 Chetopa	30	57,296	4,920	12,555	24,010	15,811	36	1	300	27	9,524
8 Clay Center	54	179,558	39,150	20,900	39,945	79,563	60	9	3,751	71	25,311
9 Coffeyville	64	406,444	28,280	77,290	170,012	130,862	71	25	19,294	417	148,523
10 Concordia	48	98,619	10,400	15,575	30,150	42,194	56	3	1,820	98	43,570
11 Emporia	77	232,606	13,350	39,750	131,489	48,017	89	5	3,300	224	101,720
12 Fort Scott	97	675,097	71,798	93,770	235,161	224,368	104	32	29,496	535	255,503
13 Galena	61	174,023	16,975	29,125	48,955	79,573	86	6	4,963	132	92,534
14 Girard	37	123,310	8,140	26,160	42,334	46,716	47	6	2,572	218	87,445
15 Hiawatha	45	111,280	21,830	23,290	25,635	40,525	55	1	500	84	34,256
16 Holton	60	163,649	25,850	30,650	40,960	66,189	71	13	5,280	104	36,347
17 Horton	40	589,952	10,985	150,832	44,029	378,106	48	22	19,800	374	196,386
18 Hutchinson	140	1,151,138	78,125	318,149	364,226	390,638	176	47	35,476	703	270,138
19 Independence	61	210,375	8,175	35,430	82,720	81,050	67	12	6,910	133	62,558
20 Junction	66	229,677	18,450	66,300	58,780	86,147	92	3	2,400	134	33,776
21 Lawrence	123	875,638	45,800	177,400	326,382	326,056	133	36	46,109	946	335,189
22 McPherson	35	133,602	6,950	39,800	35,932	55,920	40	7	3,200	67	26,410
23 Manhattan	50	126,820	17,105	32,455	37,103	40,157	60	8	4,770	82	31,332
24 Newton	76	368,413	20,600	65,635	157,758	124,420	91	23	18,441	404	201,415
25 Olathe	50	125,780	11,050	23,300	46,350	45,080	61	2	1,004	140	60,676
26 Osawatimie	29	168,468	21,930	15,450	50,938	80,150	34	16	15,276	418	250,746
27 Ottawa	67	334,970	39,900	85,925	148,345	57,800	72	9	9,041	341	179,551
28 Paola	50	134,660	14,825	24,725	45,555	49,555	56	3	1,509	110	38,784
29 Parsons	83	584,706	39,850	114,900	241,238	188,713	90	17	11,629	631	292,237
30 Pittsburg	82	808,055	90,665	283,435	262,854	171,101	87	28	27,037	994	475,772
31 Salina	119	634,938	55,350	153,103	161,724	264,811	134	53	31,734	337	132,761
32 Weir	22	145,171	4,425	88,080	39,855	12,811	23	2	1,004	123	40,686
33 Winfield	75	588,481	42,057	93,069	162,899	235,456	91	26	25,026	209	86,852

UNDER 20,000 IN POPULATION: 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 number.	Wages.	Average number.	Wages.	Average number.	Wages.										
9,223	\$4,505,631	1,111	\$231,202	159	\$18,149	\$1,030,696	\$197,748	\$104,587	\$653,852	\$74,500	\$29,808,144	\$29,238,848	\$574,296	\$43,839,022	1
161	58,499	24	3,687	7	1,065	26,587	3,672	1,804	20,011	1,100	865,596	857,597	7,999	534,619	2
734	434,752	5	1,312	2	162	118,218	1,611	8,056	108,551		15,016,721	14,918,029	103,092	20,337,170	3
289	146,039	20	4,892	10	1,032	68,277	6,963	10,619	60,095		725,861	706,537	18,824	1,078,565	4
724	384,214	146	30,162	11	1,440	97,926	17,019	7,719	68,188	5,000	1,699,953	1,667,587	32,866	2,600,469	5
122	63,490	81	8,009	1	128	9,224	4,832	701	3,491	200	182,216	129,998	2,218	280,370	6
19	8,300	8	1,224			8,332	1,729	631	920	52	71,704	70,170	1,584	112,789	7
49	21,696	18	3,208	4	407	11,809	4,453	1,228	5,928	200	182,221	179,180	3,011	279,283	8
377	140,772	38	7,835	2	216	42,900	5,292	4,378	26,930	6,300	697,956	671,974	25,981	1,066,386	9
85	41,228	12	2,246	1	96	8,081	3,079	853	4,149		153,610	149,420	4,190	254,570	10
137	92,969	31	8,290	6	461	29,361	9,608	2,048	11,205	6,500	234,994	230,726	4,269	474,519	11
470	239,994	64	15,664	1	145	39,630	10,086	4,135	24,313	1,096	475,668	462,310	13,352	943,018	12
161	88,220	13	4,318	3	206	12,806	5,480	832	6,294	200	373,520	366,211	7,309	563,697	13
191	82,845	22	4,397	5	703	23,133	7,746	1,480	13,532	375	402,568	380,420	22,148	511,809	14
68	29,511	16	4,745			9,576	3,429	912	3,994	1,540	85,822	83,374	1,948	133,316	15
79	32,060	23	4,184	2	153	11,021	5,673	1,172	5,059	1,117	88,039	85,897	2,142	201,585	16
355	193,505	14	2,352	5	529	12,721	2,309	7,325	2,188	899	291,331	284,686	6,645	555,024	17
614	259,927	86	18,850	3	411	81,740	16,326	7,621	57,463	330	1,216,951	1,096,833	120,118	1,907,370	18
118	52,319	45	8,365	20	1,974	14,490	3,292	1,303	9,875	20	253,555	253,849	4,706	416,991	19
145	77,461	30	5,388	9	927	13,252	5,105	1,683	6,064	400	449,507	446,398	3,109	652,861	20
776	301,601	157	32,038	13	1,550	67,859	17,854	6,909	41,921	1,175	1,174,357	1,148,821	30,536	1,842,199	21
55	24,441	12	1,969			7,270	1,985	953	4,321	20	246,030	239,895	6,735	380,714	22
64	27,725	18	3,657			9,468	3,791	1,176	4,411	90	142,411	138,614	3,797	253,963	23
373	195,674	30	5,596	1	145	33,751	8,026	4,133	13,717	12,875	652,870	639,209	13,661	982,475	24
111	52,866	19	6,210	10	1,600	29,456	3,982	1,187	7,237	17,050	170,356	166,614	3,742	339,098	25
412	249,936	4	639	2	171	6,360	1,885	2,023	2,252	250	356,038	352,518	3,520	649,050	26
314	173,691	24	5,610	3	250	13,789	5,525	2,905	5,059	300	406,584	399,107	7,477	734,965	27
86	34,944	24	3,840			16,729	4,391	1,539	10,749		223,237	219,839	3,398	331,297	28
570	232,145	52	9,116	9	976	34,325	10,907	3,343	20,076		531,447	519,247	12,200	1,025,409	29
946	466,147	36	8,443	12	1,182	45,654	6,833	7,673	31,143		986,828	929,581	57,247	1,616,976	30
268	119,465	56	11,560	13	1,736	94,333	10,030	3,334	63,539	17,380	885,153	869,246	15,907	1,329,985	31
110	47,661	10	1,721	8	304	7,967	1,010	1,648	5,309		240,614	228,990	11,624	311,654	32
190	82,037	18	4,725	1	90	24,343	5,820	3,264	15,219	40	869,327	849,866	19,461	1,136,346	33

CENSUS BULLETIN.

No. 116.

WASHINGTON, D. C.

November 29, 1901.

MANUFACTURES.

SALT.

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

SIR: I transmit herewith a report on the manufacture of salt during the calendar year 1899, prepared under my direction by Mr. Edward W. Parker, of the United States Geological Survey, acting in the capacity of an expert special agent of the division of manufactures of the Census Office.

Salt production has always been regarded for census purposes as a manufacturing industry, although in some of its features it is more closely allied to mining. The total cost of materials, for example, appears small, since the most important material is extracted chiefly from the earth, purchased materials being confined to mill supplies, and cases, bags, barrels, etc., used for packing.

Salt manufacture is, in fact, one of the large group of industries which lie on the border line, either between manufacturing and mining, as in this case, or between manufacturing and agriculture, as in the case of slaughtering and meat packing, or of canning fruits and vegetables. The products of these crude manufacturing industries greatly swell the value of the manufactured product as reported by the census, and it will be the endeavor of the division of manufactures of the Twelfth Census, in presenting the complete statistics, so to separate and classify them that all of these border-line industries can be grouped and eliminated by those who desire to do so.

The statistics are presented in 6 tables: Table 1 showing comparative figures for the industry at the several censuses; Table 2 showing the quantities of each kind of salt manufactured in the census years 1880, 1890, and 1900, and the total quantities shown by the censuses from 1850 to 1900; Table 3 showing, by states and territories, the number and size of covers or ponds and the number of grainers, open pans, kettles, and vacuum pans in use; Table 4 showing the quantity of salt manufactured, by states and territo-

ries, in 1890 and 1899; Table 5 showing the salt production of the Onondaga district, New York, for one hundred years; and Table 6 showing the detailed statistics for the industry in 1899, by states and territories.

Table 1 shows the growth of the industry 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 the manufacture of salt 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.

The reports show a capital of \$27,123,864 invested in the manufacture of salt in the 159 establishments reporting for the country. 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 engaged in this industry. The value of the products is returned at \$7,966,897, to produce which involved an outlay of \$499,748 for salaries of officials, clerks, etc.; \$1,911,140 for wages; \$760,589 for miscellaneous expenses, including rent, taxes, etc.; and \$3,335,922 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 salt 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 works. This statement is necessary in order to avoid erroneous conclusions from the figures presented.

Very respectfully,



Chief Statistician for Manufactures.

SALT.

By EDWARD W. PARKER, *Expert Special Agent.*

It has been the custom in United States census inquiry to include salt production among manufacturing industries. Salt itself is a mineral, but it is not clear whether the process by which it is obtained should be regarded as manufacturing or as a method of mining. Rock salt is undoubtedly a mining product, but as it is considered in connection with salt manufacture by artificial heat or by solar evaporation, it is included in the present report. Salt is the only mineral product which enters directly into consumption as food, and while a considerable quantity is used for other purposes, by far the larger portion is consumed as food either directly or indirectly.

The history of the manufacture in this country covers the entire period subsequent to the early settlement by the English. The first salt was produced in Virginia prior to 1620, and in the various reports of the Federal Census mention is made of not less than 32 states in which salt has at some period been produced in considerable quantities. The early process consisted in the production from sea water, either by exposure to evaporation under the sun's rays, or sometimes by boiling in pans or kettles until the dissolved salt was deposited. About the close of the Eighteenth century the manufacture was begun from brine obtained from natural salt springs, following the same crude processes used in the manufacture of salt from sea water.

At the present time, however, comparatively little salt is made from sea water, or brine from natural springs, and some of that so obtained is evaporated by artificial heat. Nearly all the evaporated salt is now obtained by sinking wells to the salt body, pumping fresh water into the wells, and withdrawing the brine after it has become well saturated. Practically all the product from natural salt water, by solar evaporation is made along the shores of San Francisco Bay in California, and Great Salt Lake, Utah. With these two exceptions the evaporated product is almost entirely obtained from deep wells.

Salt manufactured by artificial heat is made in kettles, open pans, vacuum pans, and grainers, the heat being applied either directly or by steam. In blocks where kettles or open pans are used, the heat is usually applied directly

and the brine is boiled. In grainers and vacuum pans steam heat is used. The grainer process is essentially American; the brine in this process is evaporated from rectangular vats about 12 inches deep, in which are suspended coils of pipe carrying either live or exhaust steam, according to local conditions. The brine is usually kept agitated mechanically, so that the salt which is formed on top will be broken up and precipitated. In some instances the salt is removed from the bottom of the pan by mechanical scrapers; in others, hand labor is employed. The grainer process seems to be the most popular method in the United States and most of the finer grades of table and dairy salts are produced either by this or by the vacuum-pan process.

Solar salt is made in vats or ponds, covered and uncovered. At Syracuse, N. Y., the ponds are supplied with movable covers. No covers are used in Utah or California, as the operations in those states continue only during the dry season.

Rock salt is mined and prepared for use in the states of New York, Kansas, Louisiana, and California. It is now produced in greater quantities than solar salt. A more extended presentation of the method of mining rock salt follows in the description of salt manufacture in Kansas.

Four different units of measure are employed in the industry. At the solar salt works, Syracuse, N. Y., and at some of the salt blocks along the Ohio River in Ohio and West Virginia, the bushel of 56 pounds is used as the unit. At the rock salt mines in New York state, and at Avery Island rock salt mines in Louisiana, the long ton of 2,240 pounds is used as the unit, while the short ton of 2,000 pounds is the usual unit at the rock salt mines in Kansas and at the solar works along the shores of San Francisco Bay and Great Salt Lake. In nearly every other instance the barrel of 280 pounds is adopted. In the compilation of this report the barrel of 280 pounds net is used as the unit, and when the quantities have been reported in other units of measurement they have been reduced accordingly.

Table 1 shows the totals for the industry as returned at the censuses of 1850 to 1900, inclusive, with the percentages of increase for each decade.

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

	DATE OF CENSUS.						PER CENT OF INCREASE.				
	1900	1890	1880	1870	1860	1850	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860
Number of establishments	159	200	268	282	399	340	20.5	25.4	5.0	29.8	17.4
Capital	\$27,123,364	\$13,437,749	\$8,225,740	\$6,561,615	\$3,692,215	\$2,640,885	101.8	63.4	25.4	77.7	39.8
Land	\$3,494,587	\$4,287,784	(3)	(3)	(3)	(3)	98.1				
Buildings	\$3,853,013	\$4,255,866	(3)	(3)	(3)	(3)	96.4				
Machinery, tools, and implements	\$4,523,284	\$2,703,863	(3)	(3)	(3)	(3)	67.3				
Cash and sundries	\$5,747,465	\$2,190,201	(3)	(3)	(3)	(3)	162.4				
Salaries of officials, clerks, etc., number	406	200	(3)	(3)	(3)	(3)	103.0				
Salaries	\$499,748	\$189,049	(3)	(3)	(3)	(3)	164.3				
Wage-earners, average number	4,774	4,255	4,289	2,053	2,213	2,786	12.2	20.8	45.2	33.4	20.6
Total wages	\$1,911,140	\$1,593,442	\$1,260,023	\$1,146,910	\$371,954	\$751,224	19.9	26.5	9.9	208.8	50.7
Miscellaneous expenses	\$760,589	\$674,183	(4)	(4)	(4)	(4)	12.8				
Cost of materials used	\$3,335,922	\$1,826,770	\$2,074,019	\$1,760,670	\$1,054,780	\$1,051,425	82.6	11.9	17.8	66.9	0.3
Value of products	\$7,966,897	\$5,484,618	\$4,829,566	\$1,818,229	\$2,289,504	\$2,222,745	45.3	13.6	0.2	110.4	3.0

¹ The report for the Twelfth Census is for the calendar year 1899.

² Decrease.

³ Not separately reported.

⁴ Not reported.

⁵ Exclusive of 4,520,796 barrels of salt valued at \$1,171,948, an intermediate product in the manufacture of chemicals, and included in the report of that industry.

Includes products other than salt to the value of \$65,061.

⁶ Includes products other than salt to the value of \$43,315.

Table 1 shows that the production of salt in the United States has increased continuously since 1850. In the half century from 1850 to 1900 the capital increased from \$2,640,885 to \$27,123,364, while the value of products increased from \$2,222,745 to \$7,966,897. In contrast with the increase in capital and products, the number of establishments shows a marked decrease since 1860. At the census of 1860 there were 399 establishments, while only 159 are shown at the census of 1900, a decrease of 60.2 per cent. During the last twenty years the development of the industry has been most rapid, the capital having increased from \$8,225,740 to \$27,123,364, a gain of 229.7 per cent. The products in the same period increased from \$4,829,566 to \$7,966,897, or 65 per cent, while the number of establishments decreased from 268 to 159, a loss of 40.7 per cent. The decrease in the number of establishments is due to the abandonment of many small plants along the Atlantic coast and in some of the interior districts where salt was manufactured from brine springs; also to the consolidation of a number of large establishments, particularly in New York, Ohio, Michigan, Kansas, Utah, and California.

From 1890 to 1899 the number of establishments decreased from 200 to 159, or 20.5 per cent. The capital increased from \$13,437,749 to \$27,123,364, or 101.8 per cent, and of this increase the greatest gain was shown in the item of live capital which increased from \$2,190,201 to \$5,747,465, or 162.4 per cent.

The cost of materials increased from \$1,826,770 in 1890 to \$3,335,922 in 1899, or 82.6 per cent. The cost of the barrels, boxes, cartons, bags, cooperage stock, and cloth for sacks purchased, amounting in 1899 to \$1,837,122, formed the most important factor in the cost of materials.

The next most important item of expense was that for fuel, which, in 1899, amounted to \$991,248. The expense for fuel in 1890 was \$745,917. No separation was made of any of the other items included in the cost of materials in 1890. For 1899, besides the cost of packages and fuel, the following items were separately reported: mill sup-

plies, \$192,777; rent of power and heat, \$2,111; all other materials, \$189,747; and freight, \$122,917; a total of \$507,552. While the cost of fuel, \$991,248, represents the amount actually reported for this item of expense in 1899, there are also large quantities of fuel consumed, particularly in Michigan, where salt blocks are operated in connection with the manufacture of lumber, the salt operations being carried on largely to utilize sawdust and other waste. In such cases nothing is reported for the cost of fuel. The detailed statistics as to materials used and miscellaneous expenses are presented in Table 6.

In 1890 the value of products was \$5,484,618, and in 1899, \$7,966,897, an increase of 45.3 per cent. In general, however, owing to a decline in the price of salt, the increase in the value of the product does not adequately represent the growth of the industry. A better index of growth is afforded by the quantity produced, which, as presented in Table 2, shows an increase of 30.2 per cent from 1850 to 1860, 38.4 per cent from 1860 to 1870, 69.3 per cent from 1870 to 1880, 74.6 per cent from 1880 to 1890, and 45.9 per cent from 1890 to 1899. Comparison with the corresponding figures for the value of salt (see Table 1) shows that the price declined continuously until 1890, except during the decade from 1860 to 1870, when the quantity increased 38.4 per cent, while the value rose 110.4 per cent. It should be remembered, however, that values in 1870 were expressed in a currency which was at a discount in gold, and should, therefore, be reduced about one-fifth for purposes of comparison with other census years.

In 1890, in addition to the 159 active establishments, 10 idle establishments were reported, with a capital of \$1,737,150.

Table 2 presents a comparative statement of the quantity of salt manufactured by the various processes, as reported at the censuses of 1880, 1890, and 1900, with the percentage that each constitutes of the total; and also a statement of the total quantity reported at each census from 1850 to 1900, inclusive.

TABLE 2.—QUANTITY OF EACH KIND OF SALT MANUFACTURED, AND PER CENT OF TOTAL.

KINDS OF SALT.	1900		1890		1880		1870		1860		1850	
	Quantity, barrels.	Per cent of total.	Quantity, barrels.	Per cent of total.	Quantity, barrels.	Per cent of total.	Quantity, barrels.	Per cent of total.	Quantity, barrels.	Per cent of total.	Quantity, barrels.	Per cent of total.
Total	15,187,819	100.0	10,406,860	100.0	5,961,060	100.0	3,521,221	100.0	2,513,440	100.0	1,952,768	100.0
Rock salt	2,543,679	16.7	1,413,281	13.6	62,400	1.0	(2)		(2)		(2)	
Solar salt	910,974	6.0	1,443,262	13.9	903,555	15.2	(2)		(2)		(2)	
Salt made by the boiling process	11,733,166	77.3	7,550,317	72.5	4,995,105	83.8	(2)		(2)		(2)	

¹ The report for the Twelfth Census is for the calendar year 1899.

² Not separately reported.

³ Includes table salt, 1,866,058 barrels; common fine, 6,866,126 barrels; common coarse, 2,635,282 barrels; packers', 182,930 barrels; milling, 96,178 barrels; other grades, 80,592 barrels.

The varieties of salt were not reported until 1880. In that year the product of the United States amounted to 29,805,298 bushels of 56 pounds, or 5,961,060 barrels of 280 pounds net. At the census of 1890 it was 52,034,360 bushels, or 10,406,860 barrels, an increase of 74.6 per cent. At the Twelfth Census, which covered the calendar year 1899, it reached 75,989,095 bushels, or 15,187,819 barrels, an increase over 1890 of 45.9 per cent, and over 1880 of 154.8 per cent. The production in 1899 does not include 4,520,796 barrels of salt valued at \$1,171,948, which formed an intermediate product in the manufacture of chemicals in Michigan, New York, and Pennsylvania, and were included in the report for the chemical industry. Including this intermediate product the total output in 1899 amounted to 19,708,615 barrels, valued at \$9,073,784. In addition to the salt product there were obtained, as by-products, 279,437 pounds of bromine, valued at \$64,921, and other products not classified, to the value of \$140.

This table emphasizes the decrease in the manufacture of solar salt as compared with the growth of the salt industry. In 1880 the output was 903,555 barrels, forming 15.2 per cent of all salt produced; while in 1899 the product was 910,974 barrels, forming but 6 per cent of the total production. The production of rock salt, on the other hand, increased from 62,400 barrels in 1880, when it formed but 1 per cent of the total salt production, to 2,543,679 barrels in 1899, forming 16.7 per cent. More than 90 per cent of this rock salt is mined in New York and Kansas. (See Table 6.) Salt made by the boiling process shows a steady increase for each decade. The increase from 1880 to 1899 was 6,738,061 barrels, or 134.9 per cent.

Table 3 presents the statistics of the number of establishments in each state in which salt was made in 1899, together with a statement as to the number and square feet of the covers or ponds in use, and the number of grainers, kettles, open pans, or vacuum pans used in the manufacture by evaporation.

TABLE 3.—COVERS OR PONDS, AND EVAPORATING APPARATUS, BY STATES: 1900.

STATES AND TERRITORIES	Number of establishments.	COVERS OR PONDS.		Grain-ers.	Open pans.	Ket-tles.	Vacuum pans.
		Num-ber.	Square feet.				
The United States	159	35,222	109,921,360	522	264	411	40
California	24	474	62,062,800		2		1
Kansas	8	30	144,656	13	36		
Michigan	53	2,009	545,300	273	17	5	19
Nevada	3	2	30,000				
New York	38	32,295	8,176,948	92	43	338	9
Ohio	10	4	12,320	33	38	81	5
Oklahoma	4	13	62,120	2	21		
Texas	3	14	135,680	24	2		
Utah	6	39	38,610,728			1	
West Virginia	4			23		36	
All other states ¹	7	342	110,808	12	105		6

¹ Includes establishments distributed as follows: Illinois, 1; Louisiana, 2; Massachusetts, 2; Pennsylvania, 1; and Virginia, 1.

It appears from Table 3 that the 24 establishments in California used the solar process almost entirely, there being but 2 open pans and 1 vacuum pan in the state, while there were 474 covers or ponds, having an area of 62,062,800 square feet, or 56.5 per cent of the total area in the United States. Utah shows for the solar process 5 establishments, with an area of 38,610,728 square feet for 39 covers or ponds, and for the evaporating process but 1 kettle. The relation of climate to the manufacture of solar salt is clearly seen from the statistics of California and Utah. Because of the dryness of their climate, these states offer exceptional advantages for the development of the solar process, and of the 109,921,360 square feet of covers or ponds in the United States, these 2 states contain 100,673,528 square feet, or 91.6 per cent of the total. Nevada, with 3 establishments, uses the solar process entirely. In New York the ponds for evaporation by solar heat are provided with movable covers; by this means the rains are kept from the brine and the process is considerably accelerated. This state had 38 establishments, and while the solar process still showed an area of 8,176,948 square feet for the 32,295 covers or ponds, the evaporating apparatus consisted of 92 grainers,

43 open pans, 338 kettles, and 9 vacuum pans. The remaining states represent less than 1 per cent of the square feet area in covers or ponds, and practically use the boiling process entirely.

In the last decade manufacturers have made great progress in the production of the finer grades of salt, particularly those for table and dairy use, and for the preservation of fish and meats. Much of the increase shown in production was due to the development of the large meat-packing establishments and, in a lesser degree, to the development of the dairy industry. The extensive use of the chlorination process of extracting gold and silver from ores has required large amounts of the lower grades of salt.

It is interesting to note the extent to which salt of domestic production has supplanted that of foreign manufacture, as seen by the following statement:

	1880	1890	1899
	Barrels.	Barrels.	Barrels.
In warehouses at the beginning of the year.....	204,814	196,854	34,940
Domestic production.....	5,961,060	10,406,860	15,187,819
Imports.....	3,442,753	1,807,285	1,879,925
Quantity available.....	9,608,627	12,410,999	16,602,684
Exports (domestic).....	4,436	15,292	90,001
Exports (foreign).....	23,630	12,588	16,629
In warehouses at the end of year.....	197,359	209,673	62,689
Net consumption.....	9,388,152	12,173,446	16,431,365
Net imports.....	3,419,073	1,794,697	1,361,296
Per cent of net imports to consumption.....	36.4	14.7	8.3

¹ Calendar year ending December 31.

This statement shows that in 1880 imported salt formed 36.4 per cent of the domestic consumption; in 1890 it had fallen to 14.7 per cent; while in 1899 it was only 8.3 per cent. Reducing to pounds the figures presented above, it is found that the total domestic consumption in 1880 was 2,627,282,560 pounds; in 1890 it was 3,408,564,880 pounds; and 4,600,782,200 pounds in 1899. The population of the United States was 150,189,209 in 1880; 262,979,706 in 1890; and 276,149,386 in 1900. From these figures it is seen that the per capita consumption in these three years was, respectively, 52.3, 54.1, and 60.4 pounds.³

Table 4 shows the total quantity of salt produced in each state during the census years of 1890 and 1900, the rank of each state according to the quantity of product, and the percentage that the product of each state is of the total for the United States.

¹ Includes population of Alaska, but exclusive of population of Indian Territory (Oklahoma and Indian Territory in 1890 and 1900) for which there are no figures for 1880.

² Exclusive of population of Hawaii.

³ The figures for the production of salt are for the calendar year 1899, while those for the population are for 1900—no others being available.

TABLE 4.—QUANTITY OF SALT MANUFACTURED IN EACH STATE, AND PER CENT OF TOTAL, 1890 AND 1900.

STATES AND TERRITORIES.	RANK.		1900		1890	
	1900	1890	Number of barrels of salt manufactured.	Per cent of total output.	Number of barrels of salt manufactured.	Per cent of total output.
The United States.....			15,187,819	100.0	10,406,860	100.0
Michigan.....	1	1	5,206,510	34.3	3,729,110	35.8
New York.....	2	2	4,894,852	32.2	3,225,250	31.0
Kansas.....	3	3	1,645,350	10.8	1,140,799	11.0
Ohio.....	4	5	1,460,516	9.6	409,514	3.9
California.....	5	7	640,420	4.2	255,828	2.5
Texas.....	6		312,486	2.1	(²)	
Utah.....	7	4	235,671	1.5	626,429	6.0
West Virginia.....	8	6	221,534	1.5	235,461	2.7
Louisiana.....	9		208,850	1.4	(²)	
Virginia.....	10		151,391	1.0	(²)	
Pennsylvania.....	11	8	140,000	0.9	172,400	1.7
Illinois.....	12		56,782	0.4	(²)	
Nevada.....	13	9	7,671	0.1	25,250	0.2
Oklahoma.....	14		4,856	(²)	(²)	
Massachusetts.....	15		980	(²)	(²)	
All other states.....					536,319	5.2

¹ The report of the Twelfth Census is for the calendar year 1899.

² Included with all other states in 1890.

³ Less than one-tenth of 1 per cent.

⁴ Includes Illinois, Kentucky, Louisiana, Massachusetts, Texas, and Virginia, not separately shown in 1890.

SALT PRODUCTION BY STATES.

The first attempt at salt making is recorded in Beverly's History of Virginia, in which it is stated that as early as 1620, "a salt work was set up at Cape Charles on the Eastern Shore." What success attended this effort is not stated.⁴

Prince's Chronological History of New England states that an attempt to manufacture salt was made at Plymouth, Mass., in 1624, but was not successful. Prior to the Revolutionary war, salt was not manufactured in the colonies in large quantities, and it is probable that the supply was procured from England or from other foreign sources. The commencement of hostilities cut off importations, and a system (extensive for that period) of making salt by boiling sea water was developed around New Bedford and on Cape Cod. This industry continued until after the War of 1812, when importation was resumed and the works were allowed to fall into decay. Foreign salt was sold in the American markets at that time for 50 cents per bushel, which was considered a very low figure. It is now sold for from 25 to 30 cents a barrel of 5 bushels, or about one-tenth of the early price.

Salt making from brine other than sea water began in the later years of the Eighteenth century. In the report on manufactures for the Eighth Census, it is stated that salt works were said to have been erected on Big Beaver Creek, in western Pennsylvania, in 1784, but no reference

⁴ United States Agricultural Report, 1858. Historical sketch of salt manufacture, by Wm. C. Dennis.

was made to the success of the enterprise. In New York the first salt made by white men was produced in 1788. At Avery Island, La., in 1791, an unsuccessful attempt was made to make salt from brine. The first salt furnace in what is now West Virginia was built in 1797 on the Kanawha River near the present city of Charleston, and in the following year the first salt was produced in Ohio at what is now known as the Old Scioto Works.

CALIFORNIA.—The first salt made or "harvested" in California appears to have been a purely natural product. Along the shores of Alameda Bay are what were formerly known as "tide lands," covered by the high tides of June and July. Here were a number of natural sinks or ponds where the water was retained and, not being reached by the tides of the late season, was evaporated by solar heat, leaving small quantities of salt. The Spaniards, Mexicans, and Indians gathered this salt annually until about 1852, although the harvest amounted to only a few bushels. In that year the discovery was made that the land was public domain (school lands), and it was purchased from the state at a price said to have been \$1.25 per acre. During the following year levees were built for the more complete retention of the salt water. The harvest for that year, it is said, amounted to 40 or 45 tons, and was sold for \$50 per ton. In the following year other levees were built, and the harvest amounted to about 150 tons which sold for about \$40 per ton. From this time the number of people engaged in the industry increased, but no attempts were made for a number of years to improve the quality of the product, and as the supply increased the prices fell until they reached as low a figure as \$2 per ton.

The first attempt to improve the quality appears to have been made in 1864, when the Crystal Salt Works were built. These works consisted of ponds for receiving and settling the sea water so as to precipitate the gypsum and other impurities which were less soluble than the salt. The mother liquor, or bittern, which remained in the brine after the salt itself was precipitated, was drained off, and a salt of high quality obtained.

The manner of making the settling and evaporating ponds and of preparation for market is thus described by Mr. A. A. Oliver of Mount Eden, Cal.:¹ "The land having been cleared of grass and weeds is first diked with a good levee 3 or 4 feet high. It is then partitioned off into reservoirs of different sizes for receiving and evaporating the water. Crystallizing ponds are excavated and platforms for stacking the salt are built. The ground is principally peat overlaying blue clay; the crystallizing ponds are dug in the peat, of which enough is left to form a bottom or carpet in the pond, the salt crystals being readily removed from the peat floor. There are usually 7 evaporating reservoirs to a plant, the brine being drawn from one to another as it strengthens and decreases in volume by evaporation. The last 3 are called lime ponds, because large quantities of gypsum and other matter, precipitated before the salt, settles in them. The brine is retained

in the seventh reservoir until it reaches a density of 25° Baumé. When this strength of brine is attained, the crystallizing ponds are filled to a depth of 10 or 12 inches and the brine evaporated until 29° by the hydrometer is reached. The mother liquor is then drawn off and the salt gathered up and conveyed into warehouses to drain. This completes the solar process.

"Much of the salt is sold after drying in the warehouses, but many thousands of tons are taken to refining works in San Francisco, where it is more thoroughly dried by artificial heat and ground into various grades for chlorination works, packing houses, and silver mills, and for dairy and table uses. The regular trade winds which blow in the summer months are quite strong in this locality, and greatly aid evaporation."

Owing to overproduction, the industry for a number of years has not been in a prosperous condition. During 1899 the management of all the large works along San Francisco Bay passed into the hands of the Federal Salt Company, and it is believed that with a restricted production and conservative management, the industry may be made a profitable one.

While the principal salt works in California are located on San Francisco Bay, small quantities of salt are produced in other places in the state. There are salt works at Salton, in Riverside county. In a portion of the Colorado Desert which is below the level of the sea, salt water is pumped from wells and evaporated. At National City, in San Diego county, salt is made by the evaporation of water from San Diego Bay. A small amount of rock salt, which is said to be very pure and transparent, has been mined in San Bernardino county 80 miles south of Danby; as many as 5,000 tons have been mined there during one year, but only 250 tons were mined in 1899. The distance from railroads prevents a larger production. A small amount is made from saline springs near Sites, in Colusa county, and at Black Lake, in San Luis Obispo county.

The report on manufactures for the Eighth Census contains the first official record of the salt production of California, which was then reported as 44,000 bushels, or 8,000 barrels. The production reported at each subsequent census has been: in 1870, 84,971 barrels; in 1880, 176,949 barrels; in 1890, 255,328 barrels; and in 1899, 640,420 barrels.

ILLINOIS.—There was 1 establishment producing salt in Illinois in 1899, as in 1890. The works are located at St. John, Perry county, and as this establishment is the only one in the state, the statistics are combined with those for other states having less than 3 establishments.

KANSAS.—The first salt made in Kansas was obtained from marshes which are scattered over the central part of the state. The pioneer travelers, hunters, and traders were led by buffalo paths to these marshes, which are the salty remains of decomposed saline strata; they are large, shallow lakes which dry up almost entirely in the summer, leaving a thin white scale of salt deposited over a large area of grassless territory. Along the banks of these

¹ Eighteenth Annual Report of the United States Geological Survey, 1896-97, Part 5, page 1310.

marshes salt works were constructed, similar to those described as used by the ancients. Stone arches were erected about the kettles in which the brine was evaporated, and chimneys were built in order to economize fuel and heat as much as possible. Until 1868 these crude factories were the only ones in Kansas. As late as 1870, salt obtained in this way was worth as much as 10 cents a pound,¹ equivalent to \$28 per barrel.

In 1867 a company erected a plant and began drying brine at Solomon City, where wells were sunk and good brine struck at about 75 feet. A second solar plant was erected by William Dewar at Solomon City in 1874. No record of any salt manufactured in Kansas was obtained until the Tenth Census, in 1880, in which year a total production of 2,000 barrels was reported. The development of the industry between 1880 and 1890 was marked by one of the most remarkable changes which took place in that region during the decade. The product of Kansas in 1890, as reported by the Eleventh Census, was 1,140,799 barrels, while in 1899 it reached a total of 1,645,350 barrels. It was not until the latter part of the decade from 1880 to 1890, however, that salt manufacture in Kansas assumed importance as an industry. In 1887 the state experienced a period of great activity in the development of coal mining and other industries. In the search for petroleum or gas a large body of rock salt was struck near Hutchinson. The people who owned the wells in which the salt was found were much disappointed at finding neither coal oil nor gas in large quantities, and did not at once appreciate the real value of the discovery, but an important industry was soon built up, as is shown by the statistics above presented, and some of this salt, particularly the dairy and table brands, now finds its way into the markets of the Eastern states.

A small amount of salt was made by solar evaporation in Kansas in 1899, but the greater portion of the product was evaporated in the 13 grainers and 36 open pans shown in Table 3. The use of kettles has been abandoned, and no vacuum pans have been introduced into the state. The amount of rock salt produced in Kansas was not reported separately at the Eleventh Census. The quantity produced in 1899 amounted to 468,029 barrels.

A body of rock salt was discovered at Lyons, in Rice county, in 1887, by prospectors in search of oil or natural gas.² The drill penetrated the body of salt at a depth of 880 feet, and passed through it only on reaching a depth of 1,100 feet. In 1890 a company was organized by business men at Lyons, Kans., and St. Louis, Mo., and a shaft was sunk at a point about three-fourths of a mile from the city of Lyons. The shaft penetrated the bed of salt to a depth of 265 feet, making the total depth of the shaft from the surface, 1,065 feet, there being some 30 or 40 feet of salt below the bottom of the shaft.

On sinking the shaft through this 265 feet of salt strata, 15 workable veins of rock salt, ranging from 4 to 18 feet in thickness, and separated by veins or layers of shale, from one-fourth of an inch to 5 feet in thickness were penetrated. A vein of salt 18 feet in thickness and of exceptional purity was selected for mining purposes, the lower 10 or 12 feet of this vein being mined. From the bottom of the shaft the mine is laid off somewhat similarly to the streets of a city, the main streets, 25 feet in width, running east and west, and the cross streets, of the same width, running north and south. From these cross streets rooms or chambers are driven, having a width of 50 feet, there being pillars 50 feet in thickness left standing between the chambers. It is in these chambers that the principal mining operations are carried on.

The rock salt is at first undercut with mining or channeling machines operated by compressed air; holes are made in the salt with air drills; and dynamite, exploded by electricity, brings the salt down to the floor of the mine. The loose salt is loaded on cars, each holding about 2 tons, conveyed to the shaft by underground railroads, and hoisted to the top of a five-story mill building directly over the mouth of the shaft. It is dumped automatically from the mine cars into crushers over dumps and passes by gravity down through different sized crushers to the screen room below, where, by screens of various sizes, it is separated into 9 different grades. Thence it is conveyed to large bins, from which it is loaded into railway cars.

LOUISIANA.—The southern coast of Louisiana is marked by a striking topographical and geographical feature, consisting of 5 islands or mounds which rise from the otherwise marshy land. These islands range in height from a few feet to about 250 feet. They are arranged in a practically straight line running northwest and southeast. They are known as Jefferson or Orange Island, Weeks Island, Avery Island, Cote Blanche, and Belle Isle. All of these, except Cote Blanche, have been prospected for salt, which has been struck at a comparatively shallow depth in each case. No knowledge of the depth of the beds, however, has yet been obtained. On Jefferson Island a drill penetrated to a depth of 2,100 feet without passing through the salt bed.

So far as known the first attempt to manufacture salt in Louisiana was made in 1791,³ on Avery Island, the discovery being made by a man named John Hays, who came across a brine spring while hunting. The attempt to manufacture salt from this spring was, however, not a success, as the supply of brine was not sufficient to pay the expenses of operation. During the War of 1812 the price of salt was so advanced that operations were resumed, and continued there until 1815, when the work was stopped. It was not again resumed until 1861, when, on account of the blockade of the southern seaports, salt became expensive. As the supply of brine was not sufficient to meet the

¹ Eleventh Annual Report of the Kansas Bureau of Labor, 1895, quoted in the Eighteenth Annual Report of the United States Geological Survey, 1896-97, Part 5, page 1306 et seq.

² Report of the Kansas Bureau of Labor, 1893.

³ Eighteenth Annual Report of the United States Geological Survey, 1896-97, Part 5, page 1296 et seq.

requirements, an attempt was made to deepen the wells, and in May, 1862, a body of rock salt was encountered at a depth of about 16 feet. The mining of rock salt in pits was then introduced, and about ten pits were dug, the salt being found at from 14 to 20 feet below the surface. No official record of the salt taken from these works was kept, although it is said that there were from 400 to 600 men employed, and that 22,000,000 pounds were mined during the 11 months they were in operation.

The Report of the American Bureau of Mines, published in 1867, stated that this method of pit mining would possibly endanger subsequent successful shaft mining. This prediction was borne out, as the shaft afterwards sunk to the salt body had to be abandoned because of surface waters penetrating to the works. The first shaft sunk on Avery Island was a small one, 8 by 8 feet and 83 feet deep. This shaft was leased afterwards to the American Salt Company, which continued it to a depth of 190 feet and extended galleries east and west to distances of 270 and 370 feet respectively, crosscuts being made from these galleries.

The problem of marketing the product of the mines proved to be so serious that the mining company cut a channel through two miles of marsh to deep water, and considerable trade was thus developed with Galveston, New Orleans, and Mobile. Transportation was further improved in 1886 by the construction of a branch railroad from New Iberia. The later owners of the mines experienced much difficulty in keeping back surface water from the mine works, and were finally compelled to abandon the shaft. In 1897 a shaft was sunk some distance from the old one, and the new works were equipped with all modern appliances. The new shaft was sunk 500 feet before any attempt at working the property was begun. It was evidently believed that by sinking the shaft to this distance, all danger from surface waters would be obviated.

Until 1898 all the production of Louisiana had been from mines at Avery Island. In 1898 the Gulf Company of Morgan City sunk a shaft on Belle Isle, but, through a misapprehension as to the conditions, the galleries were driven out from the shaft at too shallow a depth, and the surface waters percolating through the thin stratum of soil and the roof of salt, forced an abandonment of the work. A new shaft was then sunk at a distance of about a quarter of a mile from the first. An evaporating plant was erected beside the original works and a considerable quantity of brine salt was made there in 1899, the grainer process being used.

The entire production of Louisiana in 1899 was 208,850 barrels. In 1890 Louisiana was included with "all other states." In 1880 the production was reported as 62,400 barrels, and in 1870 as 25,600 barrels. No production was reported at the census of 1860.

MASSACHUSETTS.—Many years ago a considerable amount of salt was made in Massachusetts from sea water, but this industry has almost entirely disappeared. The total amount made in Massachusetts in 1899 was 980 barrels. There was only 1 establishment engaged in the manufac-

ture at the Eleventh Census, and the state was not reported separately. In 1880 the production amounted to 1,915 barrels, not quite double the production in 1899. In 1870 it amounted to 4,569 barrels, and in 1860 to 6,305 barrels.

MICHIGAN.—Michigan was for a number of years the leading state of the Union in the manufacture of salt. Its salt springs were used by the Indians, but salt manufacture is of comparatively recent date. On March 4, 1838, the governor of the state approved an act directing the state geologist to bore for salt at one or more of the salt springs. An appropriation of \$3,000 was made for the purpose, and the state geologist was directed to report the result of his investigation to the next session of the legislature. The report was made January 1, 1839, and states: "The brine springs of our state, like those of Ohio, Pennsylvania; and Virginia [now West Virginia], emanate from a rock which lies deep, being covered with a mass of rock and earthy matter which it is necessary to penetrate. In this respect they differ most essentially from those of New York." Other work was done by the state in 1840, 1841, and 1842, but no satisfactory results were obtained.

It remained for private enterprise to establish the industry in the Saginaw Valley. The first well was bored in 1859, at what is now East Saginaw.

The census report covering the fiscal year ending May 31, 1860, gives the production for the state as 472 barrels. This was the beginning of an important industry, but irregularities in manufacture soon developed the necessity of a state salt inspection and a law was enacted in 1869, establishing the office of State Salt Inspector. By this time the industry had developed so that the production amounted to over 550,000 barrels.

The census report for 1870 shows that the production in Michigan amounted to 796,263 barrels; in 1880 it was 2,485,177 barrels; in 1890 it was 3,729,111 barrels; and in 1899 it was 5,206,510 barrels.

NEVADA.—There were 3 establishments in the state of Nevada engaged in this industry in 1899. No production was reported for this state at any previous census. The salt is made from brine springs, a portion of it being used locally for domestic purposes, or for the reduction of silver in works using the chlorination process. The entire production was obtained by solar evaporation.

NEW YORK.—Lemoyne, a French Jesuit explorer, in his journal, published in 1653, mentioned the salt springs of western New York, which were at that time well known to the Indians. In 1770¹ salt from the Onondaga region was in use among the Delaware Indians, and was sold by them in Albany and as far north as Quebec to the pioneer whites. The first salt made by white men in this district was in 1788.

New York was the first state to pass any law regulating the manufacture of salt. This was done as early as 1797, and

¹ Eighteenth Annual Report of the United States Geological Survey, Part 5, 1896-97, page 1200 et seq.

for over one hundred years the state maintained control of the Onondaga salt reservation, furnishing the brine to those who paid for it. The state built and repaired the settling tanks from which the brine was delivered to the lessees. The law regulating the manufacture of brine on the Onondaga reservation was amended a number of times after enactment. At first, 4 cents per bushel was charged on all salt made, and each lessee was required to manufacture not less than 10 bushels a year and prohibited from charging more than 60 cents per bushel. In 1805 the rate was reduced to 3 cents per bushel; in 1812 it was advanced to 12½ cents, in order to raise revenue for the construction

of the canals of the state. The duty was reduced to 6 cents in 1834 and to 1 cent in 1846, which rate was continued until the state sold its title to the lands, in 1898, a little over one hundred years after assuming control.

The sale of the state's interest in the Onondaga reservation was due to the fact that the revenue obtained from the sale of the brine was less than the expense of keeping up the works.

Table 5 presents a statement of the amount of salt produced during the one hundred years from 1797, when the works were first put in operation.

TABLE 5.—SALT PRODUCTION OF THE ONONDAGA DISTRICT, NEW YORK, FOR 100 YEARS.

YEARS.	Total.	Solar.	Fine.	YEARS.	Total.	Solar.	Fine.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>		<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1797	25,474		25,474	1847	3,951,355	262,879	3,688,476
1798	59,928		59,928	1848	4,737,126	342,497	4,394,629
1799	42,704		42,704	1849	5,083,569	377,785	4,705,884
1800	50,000		50,000	1850	4,268,919	374,732	3,894,187
1801	62,000		62,000	1851	4,614,117	378,967	4,235,150
1802	75,000		75,000	1852	4,922,533	638,595	4,283,938
1803	90,000		90,000	1853	5,404,524	577,947	4,826,577
1804	100,000		100,000	1854	5,803,347	734,474	5,068,873
1805	154,071		154,071	1855	6,082,885	498,124	5,584,761
1806	122,577		122,577	1856	5,966,810	709,391	5,257,419
1807	175,448		175,448	1857	4,312,126	481,280	3,830,846
1808	319,618		319,618	1858	7,033,219	1,514,554	5,518,665
1809	128,282		128,282	1859	6,894,272	1,345,022	5,549,250
1810	450,000		450,000	1860	5,593,247	1,462,565	4,130,682
1811	200,000		200,000	1861	7,200,391	1,884,697	5,315,694
1812	221,011		221,011	1862	9,053,874	1,983,022	7,070,852
1813	226,000		226,000	1863	7,942,383	1,437,656	6,504,727
1814	295,000		295,000	1864	7,378,834	1,971,122	5,407,712
1815	322,058		322,058	1865	6,385,930	1,886,760	4,499,170
1816	348,665		348,665	1866	7,158,503	1,978,183	5,180,320
1817	408,665		408,665	1867	7,595,565	2,271,892	5,323,673
1818	406,540		406,540	1868	8,666,616	2,027,490	6,639,126
1819	548,374		548,374	1869	8,662,237	1,857,942	6,804,295
1820	458,329		458,329	1870	8,748,113	2,487,691	6,260,422
1821	526,049		526,049	1871	8,874,956	2,464,464	5,910,492
1822	481,562		481,562	1872	7,930,925	1,882,604	6,048,321
1823	726,988		726,988	1873	7,460,357	1,691,369	5,768,988
1824	816,634		816,634	1874	6,029,300	1,667,368	4,361,932
1825	767,203		767,203	1875	7,179,446	2,655,955	4,522,491
1826	811,023		811,023	1876	5,892,677	2,308,679	3,083,998
1827	983,410		983,410	1877	6,427,983	2,525,335	3,902,648
1828	1,160,888		1,160,888	1878	7,176,197	2,788,754	4,387,443
1829	1,129,280		1,129,280	1879	8,322,162	2,957,744	5,364,418
1830	1,435,446		1,435,446	1880	7,998,750	2,516,485	5,482,265
1831	1,514,037		1,514,037	1881	7,917,236	3,011,461	4,905,775
1832	1,652,985		1,652,985	1882	8,340,180	3,032,447	5,307,733
1833	1,835,646		1,835,646	1883	7,497,431	2,444,374	5,053,057
1834	1,948,252		1,948,252	1884	6,942,270	2,363,860	4,578,410
1835	1,209,807		1,209,807	1885	6,934,299	2,439,332	4,494,967
1836	1,912,858		1,912,858	1886	6,101,757	2,772,348	3,329,409
1837	2,167,287		2,167,287	1887	5,695,797	3,118,974	2,576,823
1838	2,575,033		2,575,033	1888	5,057,367	3,115,314	2,542,053
1839	2,864,718		2,864,718	1889	5,365,030	2,916,922	2,448,117
1840	2,622,305		2,622,305	1890	4,928,122	2,726,471	2,201,651
1841	3,340,767	220,247	3,120,520	1891	3,948,913	2,113,727	1,735,186
1842	2,291,903	163,021	3,128,882	1892	4,405,674	3,122,789	1,282,885
1843	3,127,500	318,105	2,809,395	1893	3,065,906	2,332,052	733,854
1844	4,063,552	332,418	3,071,134	1894	3,227,253	2,355,394	871,859
1845	3,762,338	353,455	3,408,903	1895	3,214,124	2,608,289	605,835
1846	3,885,851	381,705	3,507,146	1896	2,806,600	2,464,422	342,178

During the first forty-four years only boiled salt was manufactured on the Onondaga reservation, and in this period the production increased from 25,474 bushels in 1797 to 2,622,305 bushels in 1840. The manufacture by the solar process began with the production of 220,247 bushels in 1841. In the same year the amount of fine salt

made was 3,120,520 bushels, making a total product of 3,340,767 bushels. The salt-making industry on the Onondaga reservation continued to increase gradually until 1862, in which year 1,983,022 bushels of solar salt and 7,070,852 bushels of fine or boiled salt were produced, making a total product of 9,053,874 bushels. This was

the largest product ever obtained. Since that time the production has shown a declining tendency, which from 1885 to 1896 was quite pronounced, the total output in the latter year amounting to only 2,806,600 bushels. Practically all this decrease has been in the manufacture of fine salt, which in 1896 had declined to 342,178 bushels, or only 4.8 per cent of what it was in 1862. This rapid decline, which is particularly noticeable from 1882 to 1896, was due in a large degree to the development of the Warsaw district, which began producing in 1883. The manufacturers in the Warsaw district were independent of state control, and their product was not subjected to the tax of 1 cent per bushel which was imposed upon the production of the reservation. The average price ranged between 25 and 30 cents per barrel containing 5 bushels. The tax, therefore, amounted to practically 20 per cent of the selling price.

The discovery of salt in the Warsaw district, which is in the county of Wyoming, was made near the town of Wyoming in 1880 by parties drilling for oil. The oil was not found, and very little salt was made from this well. In the fall of 1882 a well was sunk to the salt bed and the manufacture began the following year. Sixteen other companies were afterwards formed. The initial production, in 1883, amounted to 600,000 bushels, or 120,000 barrels. In 1890 the production had increased to 7,732,060 bushels, or 1,546,412 barrels. The production in this district in 1899 is not separately published.

The opening of the Genesee district was nearly contemporaneously with that of the Warsaw district, the first well being put down in the spring of 1883, and the manufacture beginning the same year. The initial output was 80,000 barrels of common fine salt. Of the 3 companies which began operations in 1884 and the 3 which began in 1885 only 1 survives.

The Ithaca or southern New York district was developed in 1895. The production from this region has not been particularly important.

The mining of rock salt in New York began in December, 1885. The first shaft of the Retsof Mining Company was located near York, Livingston county. In 1892 shafts were sunk near Leroy, Genesee county, and at Livonia and Greigsville, Livingston county, and shipments of salt were made from these mines that same year. The shaft of the Retsof mine is 1,100 feet in depth; the Lehigh shaft, near Leroy, 804 feet; the Livonia shaft, 1,432 feet; and the Greigsville shaft, 1,150 feet. Three of these companies have since passed out of existence, and all the rock-salt mining in the state of New York is now carried on by one company.

The production of rock salt in New York state varies from 150,000 long tons to 250,000 long tons annually, according to the market requirements.

OHIO.—The first attempt at salt making in Ohio was made in 1798 at what is now called the Old Scioto Salt Works, located on Salt Creek, a branch of the Scioto River in Jackson county. At this time the wells were dug only

to the rocks below the surface soil, the brine flowing through the rock crevices into the wells. The brine was weak, full of bittern, and no attempt was made to purify the product even by draining. The brine was evaporated in kettles, from which it was transferred directly to pack horses and transported to other settlements, where it was sold for \$3 and \$4 per bushel. This continued as late as 1808. The brine springs were thought to be so important to the country, that when the territory of Ohio was admitted as a state, in 1802, a tract 6 miles square, embracing the wells, was set apart for the use of the state. Two other reservations were made, each of 640 acres or 1 square mile, 1 being in Muskingum county and the other in Delaware county.

The state legislature in 1804 enacted a law regulating the management of the salt reservations, and an agent or superintendent was appointed to lease lots to manufacturers, to inspect the salt made, and to carry out the other provisions of the law. A tax of 16 cents per year was imposed on each gallon of kettle capacity of the plant, no one being allowed to have less than 600 nor more than 4,000 gallons to a furnace. The revenue to the state, however, did not exceed \$500 in any one year, and as better discoveries were made on navigable streams, the old works became unprofitable, were abandoned and the reservations sold. The exact date of the development of the other salt-producing properties in Ohio is not known, but it was probably about 1825.

There is no record as to the quantity made in Ohio prior to 1860, in which year, according to the census, the product amounted to 348,640 barrels. In 1870 the product of Ohio amounted to 579,730 barrels. In 1880 it had decreased to 530,060 barrels. Between 1890 and 1899 the production increased rapidly, and amounted in the latter year to 1,460,516 barrels. From Table 8 it appears that there were in operation during 1899, 83 grainers, 38 open pans, 31 kettles, and 5 vacuum pans. There were also 4 covers or ponds, having an area of 12,320 square feet, in which solar salt was made. The principal grades produced in the state are table, dairy, and common fine.

OKLAHOMA.—Salt making began in Oklahoma as late as 1896. The works were established near the town of Okeene, on the banks of a branch of the Cimarron River, a creek whose waters are highly impregnated with salt. One of the first attempts at salt making was made by Mr. J. M. White, who began evaporating the brine in an old stove kettle, afterwards using a galvanized wash tub. These were soon destroyed by the action of the salt, and he then experimented with an ordinary sorghum pan, meeting with more success. Others adopted the same method, and there are now 4 establishments engaged in the manufacture, although the original primitive plants are still used. There is comparatively little market for the salt, the demand being limited to a local consumption. The amount made in the territory in 1899 was 4,856 barrels, valued at \$4,329.

PENNSYLVANIA.—The manufacture of salt in the state

of Pennsylvania has ceased to be an industry of any moment, although at one time it was of comparative importance in the western part of the state. The industry has been mainly confined to the valley of the Conemaugh River, where it was quite firmly established early in the present century.

In the census report for 1860 it is stated that a company of Philadelphia and Pittsburg merchants erected salt works on Big Beaver Creek in 1784. In 1810 one establishment in Indiana county was reported as having made 600 bushels of salt, worth \$1,000. About that time William Johnson commenced boring on the Conemaugh River, near the mouth of the Loyalhanna, struck an abundant fountain of salt water at the depth of 450 feet, and erected furnaces, pans, etc., by which he made about 30 bushels a day, and sold at a high price. Other wells were soon sunk to a depth of 300 to 600 feet in the coal measures of that region, and the price of salt was reduced as low as \$1 per barrel, but afterwards fixed at \$2, which afforded a profit. The pumps were first worked by horse power and afterwards by small engines. In 1820 the business employed a capital of \$38,000 in western Pennsylvania, and in 1826 there were 35 salt works on the Conemaugh and Kiskiminitas rivers, 3 on the Allegheny, and others were being constructed elsewhere, one of which was expected to yield 1,500 bushels daily. Salt was supplied at the works for from 20 to 25 cents per bushel, while it brought 50 cents in Kentucky, Ohio, and Illinois.

In Egle's History of Pennsylvania it is stated that about 1812 or 1813 the discovery of a salt spring was made by an old lady named Deemer at low-water mark of the Conemaugh River, about 2 miles above the present site of Saltsburg. This discovery shortly led to the development of an important industry in Indiana county. A well was sunk to the depth of 270 feet and an abundance of salt water found. The salt was manufactured by boiling the water in large kettles, using wood for fuel, and was sold at \$5 per bushel. Afterwards, as the number of wells and plants increased, the price was reduced to \$4 per bushel. Improvements were made in the methods of pumping the brine and manufacturing the salt; coal was used instead of wood for fuel, and steam engines instead of horse power for boring and pumping. The place was known as the Great Conemaugh Salt Works. The same authority states that between 1820 and 1830, 21 salt works, with a total of 24 wells, were in operation on the Conemaugh River, in Westmoreland county. Mr. James M. Swank, in his report to the Centennial Commission, states that all but 3 of these works had been abandoned in 1876. Mr. Swank states that as early as 1811 salt works, which are reported to have produced considerable salt, were erected on the Sinnemahoning Creek, probably in what is now the county of Cameron.

The census report of 1820 makes a brief reference to salt manufacture in Pennsylvania in that year, but in most instances shows values only, without quantities. Armstrong county had 38 pans in operation, and the value of

the product amounted to \$18,000. Erie county had 18 kettles of 32 gallons each in operation. Indiana county had 32 pans and 190 kettles, the price being given as \$1 per bushel. Westmoreland county had 6 establishments, and produced 70,000 bushels worth \$1 per bushel.

The manufacture of salt was the only industry reported in Indiana county in 1820. The Gazetteer of Pennsylvania, published in 1832, shows that the total product of Pennsylvania in 1830 was 100,000 barrels of 5 bushels each, valued at \$200,000. In 1840 it is reported to have been 549,478 bushels, an increase of about 10 per cent in the ten years. In 1850 there were 47 establishments, and the production amounted to 919,100 bushels, valued at \$206,796.¹ In 1860 the number of establishments had decreased to 34, but the product had increased to 1,011,800 bushels, with a decrease in value to \$196,916. A considerable decrease in the industry was shown in 1870, when there were 27 establishments, producing 579,970 bushels, valued at \$187,312. In 1880 the number of establishments had been reduced to 16, but the product had increased to 851,450 bushels, with a decrease in value to \$177,415. In 1890 there were only 3 of these establishments in Pennsylvania, but the product was a little more than that of ten years before, amounting to 862,000 bushels valued at \$156,398. In 1899, there was only 1 establishment in Pennsylvania, and the statistics were included under "all other states."

TEXAS.—The first salt well sunk in the state was begun at the town of Colorado in 1884. Salt was struck at a depth of 7 feet and the work of making from brine was begun in 1885. A second well was drilled in 1889 and completed before the close of the year. The manufacture of salt was begun at once and since that time the industry has assumed considerable importance. As there were only 2 establishments, the production of the state was not reported separately at the census of 1890.

In 1899 the product amounted to 312,436 barrels, valued at \$256,900, a third establishment having been added during the decade. Of this product 10,000 barrels were made by solar evaporation and the rest by boiling, either in grainers or open pans. The greater part was made in grainers, of which there were 24 in use in the state. There were only 2 open pans operated.

UTAH.—The manufacture of salt in the territory of Utah began almost immediately after the advent of the Mormons in 1847. The first salt was harvested from the shores of Great Salt Lake in the following year. The water from the lake being thrown back upon the shore by westerly winds prevailing in the spring, formed small pools of brine which evaporated during the warm, dry weather of July and August, leaving deposits of salt. This was scraped up and used for domestic purposes and for the curing of meats. The early settlers were supplied in this way until about 1860, when the idea was con-

¹ So given in Vol. III, Report of Ninth Census, page 622. In the Digest of the Census of 1850, page 100, the value is given as \$161,796, without the quantity of salt.

ceived of making dams in low places which would hold large quantities of water. Salt was made in this way in 1860, but no product is reported by the census of that year. The dams were flooded in the spring, and the salt deposited during the summer by solar evaporation. As the summer is generally dry it is not necessary to cover the ponds, and the process of evaporation is practically a continuous one. At about this time the chlorination process for the reduction of silver from its ores was discovered, and the first use of salt from Great Salt Lake for this purpose is reported to have been made at the Alice mine in Butte, Mont. This was before the days of railroads, and the product was carried on the backs of mules from the lake to the mine at a cost of about \$200 per ton.

It does not appear from the census records that this very largely increased the production from the lake, as the amount reported in 1870 was only 1,950 bushels. By 1880, however, the output had increased to 483,800 bushels, and a number of large companies had in the meanwhile been formed. By 1890 this output was still further augmented to a production of 3,132,143 bushels, valued at \$144,300.

In 1899 Utah produced 235,671 barrels, equivalent to 1,178,355 bushels, nearly all of which was made by solar evaporation. In the making of salt by solar evaporation the pumps are started each year about the month of March, the brine being pumped into large reservoirs, each covering from 10 to 20 acres. As the brine becomes stronger it is drawn off into other reservoirs or sloughs covering from 3 to 15 acres. Sloughs are made with a hard clay bottom and with a levee thrown up 3 or 4 feet high around the sides to retain the brine and at the same time furnish a ditch on the outside to carry off fresh water. The sloughs are replenished from time to time during the summer, the reservoirs being kept stocked until September or October, by which time salt is deposited to the depth of from 3 to 6 inches. Harvesting then begins with wheelbarrows and tramway, the salt being stacked on the banks in large piles shaped something like a haystack, but not so high. A crust which answers every purpose of a shingle roof forms on each pile. This is the crude salt ready for market; it is hauled to the mills for refining purposes or is shipped in this crude state to the silver mills working under the chlorination process.

The latest improved machinery in the mills consists of revolving cylinders, roller burrs, and a series of sieves. The salt is hauled to a crusher, whence it is carried by hoppers to the heated cylinders, which deliver it perfectly dried to the roller burrs; thence it goes to the sieves. It is purified by means of a suction blower as it passes over the sieves. The impurities are lighter than the salt, and as it passes over the sieves the suction is set with just enough strength to take off the impurities and allow the salt to pass on to the bins, the different grades being conveyed to the proper bins by a series of hoppers.

VIRGINIA.—Since West Virginia was separated from Virginia, there has been only 1 establishment making salt

in the latter state. This is located at Saltville, in the valley of the Shenandoah River. The production is combined with that of other states having less than 3 establishments engaged in the business.

Most of the Virginia product is used in the production of soda ash, bicarbonate of soda, etc., by an electrolytic process.

WEST VIRGINIA.—The early attempts at making salt in West Virginia were attended with many interesting incidents. They have been historically recorded in a contribution to a report on the resources of West Virginia by Dr. J. P. Hale, of Charleston, which was published in 1876 by the state board of centennial managers. According to this the principal points at which salt has been manufactured in the state are: Charleston, on the Kanawha River; Hartford, Mason City, Clifton, and other places in Mason county, along the Ohio River; near Birch on Elk River; and at a few other places on a small scale for local use. The seat of the industry at present is along the Ohio River in Mason county, there being but one establishment of any importance in the state outside of that county.

The earliest attempts were on the Kanawha River. The Kanawha "licks" were known to have been used by the Indians, and were the gathering places for buffalo, elk, deer, and other wild animals before the advent of the white man. The earliest settlement in this region was made in 1774 by Walter Kelly and family at the mouth of the creek bearing his name. They were all killed by Indians. Later, in 1785, when life in that section had become a little more secure, Joseph Ruffner, an enterprising farmer from the Shenandoah Valley of Virginia, purchased about 500 acres of land at the mouth of Campbell's Creek from one John Dickinson, on Dickinson's representations as to the valuable salt springs on the property. Ruffner also purchased 900 acres, extending from a point on the Elk River to the Kanawha, and embracing the present site of Charleston. Joseph Ruffner did not live to see his design for making salt effected, but in transmitting the property to his sons David and Joseph, he enjoined them to carry out his plans for building extensive salt works. All that the elder Ruffner had accomplished was the leasing of the "licks" to one Elisha Brooks, with the right to manufacture salt. Brooks, in 1797, erected the first salt furnace in Kanawha county, which was also the first one west of the Allegheny Mountains. It consisted of two dozen small kettles set in a double row, with a flue beneath, a chimney at one end and a fire bed at the other.

In order to obtain a supply of brine, Brooks sank two or three "gums" into the mire and quicksand of the lick and dipped up the brine with a bucket and sweep. In this crude way he manufactured about 150 pounds of salt a day, which he sold at from 8 to 10 cents a pound. No attempt was made to purify the salt from the bitter and other impurities, either organic or inorganic. This salt soon acquired a reputation for its strong, pungent taste and superior qualities for curing meat, etc. The presence

of iron gave the salt a reddish tinge, and it became widely and favorably known as "that strong red salt from the Kanawha 'licks'."

In 1806 the two brothers Ruffner, inspired by the growing needs of an increasing population, began to look for the source of the brine springs in the hope of finding a larger and better supply. The history of their struggle, as recorded by Dr. Hale, is very interesting. They began by sinking a "gum," consisting of a hollow sycamore tree, which reached what they supposed was bed rock at 13 feet. With the primitive means at their command, even this little was accomplished only after much work and many and trying delays. Upon cutting at the bottom with crowbars, this bed was found to be shale only about 6 inches thick, which, when penetrated, furnished a larger stream of brine but much weaker than the "lick" at the surface. The brothers, disappointed at this result, decided to sink a well in the bottom land about 100 yards from the river, but after penetrating 45 feet of alluvial deposit they struck the same shale as at the "gum" with only a slightly brackish water.

They then decided to return to the "gum" and continue work until they struck bed rock, which they finally did at about 17 feet. The quantity of brine was small but of a strong quality. Encouraged by this, they decided to drill the rock. This was done by means of a long drill with a 2½-inch chisel bit attached at the upper end to a spring pole, and the pole to a rope. Boring by this means was slow, difficult, and tedious, but on November 1, 1807, at 17 feet in the rock, they struck a larger flow of strong brine. Continuing the work, at 28 feet a still larger and stronger flow was obtained. On January 15, 1808, at 40 feet in the rock, they found a stream large and strong enough for all their purposes and ceased boring.

But they had no pipes in which to bring the strong brine to the top of the ground undiluted by the surface seepage. These were finally provided by whittling out two half-tubes from long strips of wood, fitting the edges carefully together, and wrapping the whole from end to end with small twine. The brine came up free and strong from below, the "gum" floor was made water-tight, and from the "gum" the brine was raised to the surface by bucket and sweep. This is said to be the first rock-bored salt well west of the Allegheny Mountains, if not in the United States; it required a year and a half to complete it. The success is the surprising feature. As Dr. Hale says: "Without preliminary study, previous experience, or training; without precedents in what they undertook; in a newly settled country, without steam power, machine shops, skilled mechanics, suitable tools or materials, failure rather than success might reasonably have been predicted."

Meanwhile their furnace, a reproduction of Brooks' on a larger plan, was under construction and was completed in time for the brine. On February 8, 1808, the Ruffner brothers secured their first output, and immediately cut the former price of salt one-half, selling it at the unprecedentedly low figure of 4 cents per pound. The neigh-

bors, who had watched the progress and result of the Ruffner struggle, began boring on their own lands with more or less success, and in 1817 there were about 30 furnaces and 15 or 20 wells in operation. Improvements in mechanical methods of raising the brine were adopted, the bucket and sweep giving way to the winch, and the winch in 1828 to steam. Coal, too, began to be used for fuel, David Ruffner being the enterprising pioneer in this as in the boring. In 1831 William Morris invented an ingenious but simple tool for boring salt wells, which is to-day used in boring oil and gas wells. It was the tool known as "slip" or "jar." Morris's invention was never patented, and, like the hydraulic ram, has not been improved upon.

In 1835 there were about 40 furnaces along the Kanawha River, producing annually about 2,000,000 bushels of salt. But the activity in the industry in West Virginia has since that time been transferred to the region along the Ohio River in Mason county. The change began in 1849. In this year Messrs. Williams & Stevens bored for salt water at West Columbia, and, striking a good flow of strong brine at 700 feet, erected the first salt furnace on the Ohio River. This was soon after sold to New York parties, and enlarged and improved by them to a capacity of 1,200 bushels per day. The second furnace on the Ohio was built in 1854 by a company formed by Hartford, Conn., parties. The first one was located at the southern limit of the coal exposures and the other at the northern limit. The third furnace was erected and wells were sunk at Mason City, about halfway between the others. Within the next few years 10 more furnaces were erected, making a total of 13, with an annual capacity of 3,700,000 bushels. At the time of the writing of Dr. Hale's report (1875), 4 of these furnaces were idle, and the actual output from the 9 other furnaces was reported by him at 2,500,000 bushels, or 500,000 barrels.

The census report for 1860 shows that the production of salt in those counties of Virginia which were set off from that state and, in 1863, admitted as the state of West Virginia, amounted to 2,076,513 bushels, or 415,303 barrels. By 1870 the production had increased to 4,633,750 bushels, or 926,750 barrels, an increase of 123.2 per cent. During the next decade the industry in West Virginia suffered from the competition brought about by developments in other states, and in 1880 the production had declined to 2,679,438 bushels, or 535,888 barrels. In 1890 it had dropped to 285,461 barrels, and had further decreased in 1899 to 221,534 barrels.

As shown in Table 3, all the salt made in West Virginia is made by the boiling process. There were 4 establishments in 1899, one less than at the preceding census. The salt is made entirely in grainers and kettles, there being 23 grainers and 36 kettles in operation in the state during 1899.

Table 6 presents the detailed statistics for the industry, by states, as reported at the Twelfth Census for the calendar year 1899.

TABLE 6.—SALT MANUFACTURE, BY STATES AND TERRITORIES: 1900.¹

	The United States.	California.	Kansas.	Michigan.	New York.	Ohio.	Oklahoma.	Texas.	Utah.	West Virginia.	Nevada.	All other states. ²
Number of establishments.....	159	24	8	58	38	10	4	8	5	4	8	7
Character of organization:												
Individual.....	56	15	2	15	10	1	4		4	1	1	8
Firm and limited partnership.....	23	6		11	3	2					1	
Incorporated company.....	80	3	6	27	25	7		3	1	3	1	4
Established during the decade.....	43	6	6	16	6	3	3	1	3			1
Established during the census year.....	4	1			1		1					1
Capital:												
Total.....	\$27,123,364	\$757,895	\$960,733	\$4,759,805	\$17,231,864	\$796,841	\$2,555	\$327,036	\$646,850	\$381,200	\$9,320	\$1,299,205
Land.....	\$3,494,587	\$468,601	\$68,732	\$280,432	\$6,387,587	\$78,047	\$275	\$54,493	\$540,010	\$160,500	\$3,350	\$162,500
Buildings.....	\$3,958,018	\$36,000	\$363,454	\$884,128	\$6,148,385	\$263,400	\$335	\$115,876	\$23,740	\$69,500	\$2,400	\$450,800
Machinery, tools, and implements.....	\$4,523,294	\$102,511	\$266,869	\$1,037,072	\$2,338,407	\$303,000	\$204	\$80,000	\$25,011	\$32,500	\$1,520	\$281,200
Cash and sundries.....	\$5,747,465	\$150,723	\$261,678	\$2,528,283	\$2,862,485	\$142,394	\$1,741	\$76,667	\$58,089	\$48,700	\$2,050	\$114,705
Proprietors and firm members.....	81	28	2	29	5	3	4		4		3	3
Salaried officials, clerks, etc.:												
Total number.....	406	87	32	91	157	48		11	8	13		9
Total salaries.....	\$499,748	\$37,128	\$36,010	\$87,249	\$247,373	\$42,218		\$17,070	\$10,580	\$13,540		\$3,580
Officers of corporations—												
Number.....	87	5	9	24	24	13		4	1	7		
Salaries.....	\$185,524	\$9,600	\$15,000	\$31,879	\$94,365	\$12,630		\$8,600	\$2,100	\$10,700		
General superintendents, managers, clerks, and salesmen—												
Total number.....	319	32	23	67	133	35		7	7	6		9
Total salaries.....	\$314,224	\$27,528	\$20,410	\$55,370	\$153,008	\$29,538		\$3,470	\$8,480	\$2,840		\$3,580
Men:												
Number.....	291	31	21	61	121	29		7	6	6		9
Salaries.....	\$299,382	\$27,288	\$19,210	\$52,055	\$144,624	\$27,705		\$3,470	\$8,000	\$2,840		\$3,580
Women:												
Number.....	28	1	2	6	12	6			1			
Salaries.....	\$14,842	\$240	\$1,200	\$2,705	\$8,384	\$1,833			\$480			
Wage-earners, including pieceworkers, and total wages:												
Greatest number employed at any one time during the year.....	6,612	468	496	2,133	1,799	848	11	213	120	220	13	291
Least number employed at any one time during the year.....	4,179	178	420	1,342	1,116	636	4	135	38	128	5	177
Average number.....	4,774	267	450	1,449	1,279	678	7	191	59	190	7	197
Wages.....	\$1,911,140	\$109,774	\$168,034	\$619,383	\$542,909	\$243,397	\$1,100	\$66,079	\$23,702	\$54,805	\$3,670	\$78,287
Men, 16 years and over—												
Average number.....	4,337	260	429	1,840	1,137	543	7	179	53	186	6	192
Wages.....	\$1,813,638	\$107,604	\$163,724	\$595,041	\$509,436	\$215,975	\$1,100	\$61,929	\$23,537	\$54,305	\$3,450	\$77,637
Women, 16 years and over—												
Average number.....	378	6	21	71	133	133		12	1		1	
Wages.....	\$36,007	\$1,027	\$4,310	\$16,027	\$32,106	\$27,102		\$4,150	\$165		\$220	
Children, under 16 years—												
Average number.....	59	1		38	9	2				4		5
Wages.....	\$11,495	\$243		\$8,315	\$1,367	\$320				\$500		\$750
Average number of wage-earners, including pieceworkers, employed during each month:												
Men, 16 years and over:												
January.....	3,402	153	430	760	943	484	9	186	42	209	3	183
February.....	3,375	162	408	778	941	587	9	186	40	197	3	164
March.....	3,657	190	412	946	985	654	9	154	36	195	4	173
April.....	4,472	224	406	1,356	1,330	563	7	167	38	203	5	173
May.....	4,877	250	435	1,649	1,328	604	6	176	63	197	5	164
June.....	4,834	230	418	1,666	1,219	641	5	189	88	194	6	178
July.....	4,975	360	429	1,721	1,220	567	4	191	85	194	9	195
August.....	5,046	413	437	1,752	1,249	510	4	192	80	201	5	203
September.....	4,880	423	438	1,569	1,233	566	5	195	62	177	5	207
October.....	4,488	355	449	1,506	1,100	491	7	189	50	139	12	190
November.....	4,301	291	450	1,409	1,102	491	10	188	64	150	10	226
December.....	3,784	154	432	965	993	513	10	186	53	175	7	246
Women, 16 years and over:												
January.....	336	10	22	36	135	118		13	1		1	
February.....	325	10	23	46	118	118		8	1		1	
March.....	356	10	23	64	119	129		9	1		1	
April.....	403	6	21	80	149	132		13	1		1	
May.....	443	13	22	99	156	138		13	1		1	
June.....	384	2	17	98	125	127		13	1		1	
July.....	371	3	16	87	117	133		13	1		1	
August.....	372	3	19	82	123	130		13	1		1	
September.....	397	3	19	87	126	147		13	1		1	
October.....	385	3	23	67	143	134		13	1		1	
November.....	395	7	23	60	147	143		13	1		1	
December.....	370	6	22	50	132	146		13	1		1	
Children, under 16 years:												
January.....	17	1		1	4	1				5		5
February.....	17	1		1	4	1				5		5
March.....	27	1		5	10	1				5		5
April.....	66	1		44	10	1				5		5
May.....	69	1		45	11	2				5		5
June.....	75	1		51	11	2				5		5
July.....	82	1		58	11	2				5		5
August.....	87	1		64	10	2				5		5
September.....	67	1		46	10	3				2		5
October.....	74	1		53	10	3				2		5
November.....	68	1		46	10	3				3		5
December.....	59	1		36	9	3				5		5
Miscellaneous expenses:												
Total.....	\$760,539	\$30,990	\$52,798	\$193,915	\$329,701	\$93,342	\$350	\$6,255	\$24,065	\$9,838	\$1,110	\$13,175
Rent of works.....	\$42,340	\$9,458	\$500	\$650	\$21,671	\$21,671	\$246		\$4,275			\$5,540
Taxes, not including internal revenue.....	\$71,067	\$2,504	\$5,793	\$29,217	\$19,069	\$6,656	\$69	\$2,235	\$402	\$2,404	\$110	\$2,608
Rent of offices, insurance, interest and all sundry expenses not hitherto included.....	\$621,855	\$19,028	\$46,505	\$140,548	\$288,161	\$55,709	\$35	\$4,020	\$19,388	\$7,434	\$1,000	\$10,027
Contract work.....	\$25,277			\$23,500	\$800	\$977						

¹ The report for the Twelfth Census is for the calendar year 1899.² Distributed as follows: Illinois, 1; Louisiana, 2; Massachusetts, 2; Pennsylvania, 1; Virginia, 1.

TABLE 6.—SALT MANUFACTURE, BY STATES AND TERRITORIES: 1900¹—Continued.

	The United States.	California.	Kansas.	Michigan.	New York.	Ohio.	Oklahoma.	Texas.	Utah.	West Virginia.	Nevada.	All other states. ²
Materials used:												
Total cost.....	\$3,335,922	\$116,712	\$327,890	\$1,095,780	\$958,802	\$423,875	\$1,235	\$141,342	\$31,759	\$57,398	\$2,876	\$178,753
Barrels, bags, sacks, cartons, etc., purchased.....	\$997,503	\$89,662	\$49,072	\$355,451	\$335,495	\$52,888	—	\$44,793	\$25,283	\$4,700	\$2,612	\$38,042
Cooperage stock purchased.....	\$775,411	—	\$124,001	\$352,014	\$157,611	\$50,268	—	\$13,000	—	\$15,648	—	\$23,909
Cloth purchased for sacks.....	\$64,208	\$1,300	—	\$3,708	—	\$58,470	—	—	—	—	—	—
Fuel.....	\$991,248	\$10,404	\$119,036	\$274,055	\$305,864	\$140,289	\$230	\$10,399	\$3,874	\$25,500	\$157	\$51,740
Rent of power and heat.....	\$2,111	\$1,721	—	—	\$140	—	—	—	\$250	—	—	—
Mill supplies.....	\$192,777	\$2,632	\$6,305	\$50,312	\$63,767	\$24,163	—	\$4,150	\$931	\$1,600	\$17	\$38,839
All other materials.....	\$189,747	\$3,442	\$3,980	\$24,855	\$83,581	\$32,222	\$25	\$5,000	\$366	\$10,050	—	\$16,223
Freight.....	\$122,917	\$2,551	\$25,375	\$35,885	\$6,841	\$18,125	—	\$34,000	\$50	—	\$90	—
Products:												
Total value.....	\$7,966,897	\$380,193	\$717,449	\$2,460,538	\$2,698,691	\$818,200	\$4,320	\$256,900	\$139,488	\$150,202	\$12,696	\$328,121
Salt, including value of packages:												
Number of barrels.....	15,187,819	640,420	1,645,850	5,206,510	4,894,952	1,460,516	4,856	312,436	235,671	221,534	7,671	558,003
Value.....	\$7,901,836	\$380,193	\$717,449	\$2,451,904	\$2,698,571	\$801,872	\$4,329	\$256,900	\$139,488	\$130,492	\$12,696	\$301,882
Table and dairy salt: number of barrels.....	1,866,058	128,779	56,624	233,713	1,028,808	875,739	1,720	31,286	1,485	5,000	3,000	828,173
Common fine.....	6,866,125	83,671	47,157	4,076,497	1,051,619	887,445	1,773	220,000	—	216,584	857	20,980
Common coarse.....	2,635,282	128,852	1,072,676	820,259	897,664	84,882	576	44,721	62,115	—	2,457	—
Packers'.....	182,930	47,143	—	19,119	4,313	112,850	—	—	—	—	—	—
Coarse solar.....	910,974	282,122	714	17,748	523,724	—	—	—	—	—	—	—
Rock salt, mined.....	2,543,679	250	468,029	—	1,866,550	—	—	10,000	75,893	—	—	208,850
Milling.....	96,178	7,200	—	—	—	—	—	—	88,907	—	—	—
Other grades.....	86,592	12,503	250	39,179	19,174	—	—	6,429	7,271	—	1,786	—
Bromine:												
Pounds.....	279,437	—	—	27,584	—	62,041	—	—	—	98,000	—	96,812
Value.....	\$64,921	—	—	\$8,554	—	\$13,328	—	—	—	\$19,800	—	\$23,239
Value of all other products.....	\$140	—	—	\$20	\$120	—	—	—	—	—	—	—
Value of packages included in foregoing.....	\$2,032,474	\$93,992	\$174,158	\$320,058	\$515,311	\$231,808	\$100	\$59,793	\$25,788	\$26,705	\$2,612	\$67,189
Comparison of products:												
Number of establishments reporting for both years.....	114	17	5	39	25	8	4	2	8	3	8	5
Value for census year.....	\$5,000,310	\$270,143	\$310,899	\$1,027,181	\$1,058,958	\$341,200	\$4,329	\$241,300	\$135,738	\$110,692	\$12,696	\$287,174
Value for preceding business year.....	\$4,405,762	\$214,610	\$211,911	\$1,392,100	\$1,421,035	\$474,089	\$3,455	\$197,000	\$89,001	\$105,900	\$0,500	\$289,501
Processes employed:												
Covers or ponds:												
Number.....	85,222	474	90	2,000	32,295	4	13	14	39	—	2	342
Square feet.....	109,921,360	62,062,800	144,656	545,300	8,176,948	12,320	92,120	135,680	33,610,728	—	30,000	110,808
Grainers.....	522	—	18	273	92	83	2	24	—	23	—	12
Open pans.....	264	2	36	17	43	38	21	2	—	—	—	105
Kettles.....	411	—	5	338	31	—	—	—	—	—	—	—
Vacuum pans.....	40	1	—	19	9	5	—	—	1	36	—	6
Power:												
Number of establishments reporting.....	117	11	7	48	28	10	—	2	4	4	1	2
Total horsepower.....	24,000	876	2,130	10,625	7,781	1,812	—	56	108	320	42	1,410
Owned:												
Engines:												
Steam:												
Number.....	880	9	18	183	150	37	—	8	2	16	3	9
Horsepower.....	23,104	288	2,052	10,149	7,770	1,052	—	37	90	318	42	1,360
Gas or gasoline:												
Number.....	13	7	1	—	—	—	—	—	—	—	—	—
Horsepower.....	182	93	8	—	—	—	—	2	—	1	—	2
Water wheels:												
Number.....	1	—	—	—	—	—	—	—	1	—	—	—
Horsepower.....	8	—	—	—	—	—	—	—	8	—	—	—
Electric motors:												
Number.....	8	—	—	6	—	2	—	—	—	—	—	—
Horsepower.....	195	—	—	160	—	35	—	—	—	—	—	—
Other power:												
Number.....	9	—	1	4	—	3	—	—	1	—	—	—
Horsepower.....	521	—	70	216	—	225	—	—	10	—	—	—
Furnished to other establishments:												
Number.....	200	—	—	200	—	—	—	—	—	—	—	—
Rented horsepower:												
Number.....	50	45	—	—	5	—	—	—	—	—	—	—
Establishments classified by number of persons employed, not including proprietors and firm members:												
Total number of establishments.....	159	24	8	53	98	10	4	3	5	4	3	7
No employees.....	2	—	—	—	—	—	—	—	—	—	—	—
Under 5.....	22	6	1	7	2	—	3	—	1	—	1	1
5 to 20.....	53	9	3	19	15	1	—	1	2	—	—	2
21 to 50.....	33	5	2	8	8	4	—	—	1	—	—	1
51 to 100.....	83	4	1	16	8	3	—	—	1	—	—	3
101 to 250.....	6	—	—	—	4	1	—	—	—	—	—	—
251 to 500.....	6	—	1	2	1	—	—	—	—	—	—	—

¹ The report for the Twelfth Census is for the calendar year 1899.² Distributed as follows: Illinois, 1; Louisiana, 2; Massachusetts, 2; Pennsylvania, 1; Virginia, 1.

CENSUS BULLETIN.

No. 117.

WASHINGTON, D. C.

December 3, 1901.

MANUFACTURES.

ALABAMA.

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 Alabama 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 or towns 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 Alabama contain a population exceeding 20,000 each: Birmingham, Mobile, and Montgomery. The manufacturing statistics of these 3 cities are presented by specified industries and in comparison with the returns of the Eleventh Census.

Mr. James Bawron, of Birmingham, rendered valuable assistance in the preparation of the text for the accompanying report.

The statistics of Alabama 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 the hand trades and the manufactures proper, and also the statistics of educational, eleemosynary, and penal 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 11 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the cities of Birmingham, Mobile, and Montgomery 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 of the cities of Birmingham, Mobile, and Montgomery 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 Alabama 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 Alabama 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 considerable 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 \$70,370,081 invested in manufactures and mechanical industries in the 5,602 establishments reporting for the state of Alabama. 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 of Alabama. The value of the products is returned at \$82,793,804, to produce which involved an outlay of \$2,168,671 for salaries of officials, clerks, etc.; \$15,130,419 for wages; \$3,828,402 for miscellaneous expenses, including rent, taxes, etc.; and \$46,151,026 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 Alabama, \$82,793,804, 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 values 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 Alabama, the gross value of products for 1900 was \$82,793,804. The value of materials purchased in a partly manufactured form was \$21,844,174. The difference, \$60,949,630, 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.

ALABAMA.

Table 1 shows the manufacturing and mechanical industries of the state of Alabama 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	5,602	2,977	2,070	2,189	1,459	1,026	88.2	43.8	15.4	50.0	42.2
Capital	\$70,870,081	\$46,122,571	\$9,668,008	\$5,714,032	\$9,093,181	\$3,450,606	52.6	377.1	69.2	137.2	163.7
Salaried officials, clerks, etc., number	2,580	2,684	(³)	(³)	(³)	(³)	15.7				
Salaries	\$2,168,671	\$1,876,282	(³)	(³)	(³)	(³)	15.6				
Wage-earners, average number	52,902	31,137	10,019	8,248	7,889	4,936	69.9	210.8	21.5	4.6	59.8
Total wages	\$15,130,419	\$10,799,747	\$2,500,504	\$2,227,968	\$2,182,940	\$1,105,821	40.1	331.9	12.2	4.5	92.9
Men, 16 years and over	45,580	27,848	8,368	7,196	6,792	4,397	63.5	232.8	16.3	5.9	54.5
Wages	\$14,073,456	\$10,231,041	(³)	(³)	(³)	(³)	37.6				
Women, 16 years and over	8,898	1,864	842	664	1,097	539	109.1	121.4	26.8	139.5	103.5
Wages	\$704,099	\$116,610	(³)	(³)	(³)	(³)	69.0				
Children, under 16 years	8,474	1,425	809	388	(³)	(³)	143.8	76.1	108.5		
Wages	\$352,864	\$152,096	(³)	(³)	(³)	(³)	182.0				
Miscellaneous expenses	\$8,828,402	\$2,797,896	(³)	(³)	(³)	(³)	36.8				
Cost of materials used	\$46,151,026	\$28,432,281	\$8,545,520	\$7,592,837	\$5,489,968	\$2,224,960	62.3	232.7	12.5	38.3	146.7
Value of products, including custom work and repairing	\$82,793,804	\$51,226,605	\$13,565,504	\$13,040,644	\$10,588,590	\$4,528,876	61.6	277.6	4.0	23.2	133.8
Total population	1,828,697	1,513,017	1,262,505	996,992	964,201	771,623	20.9	19.8	26.6	3.4	25.0
Wage-earners engaged in manufactures	52,902	31,137	10,019	8,248	7,889	4,936	69.9	210.8	21.5	4.6	59.8
Per cent of total population	2.9	2.1	0.8	0.8	0.8	0.6					
Assessed value of real estate	\$158,390,273	\$154,706,494	\$77,374,008	\$117,223,043	\$155,034,089	\$78,870,718	2.4	99.9	134.0	124.4	96.6
Value of land and buildings invested in manufactures ⁶	\$24,978,478	\$12,709,521	(³)	(³)	(³)	(³)	96.5				
Per cent of assessed value	15.8	8.2									

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 for the year 1900 in the annual report of the auditor of the state of Alabama.

⁶ Does not include the value of rented property.

Although Alabama is an agricultural state, Table 1 shows that there has been a remarkable growth in the manufacturing and mechanical industries during the half century. The population increased during these years from 771,623 to 1,828,697, or 137 per cent, while the average number of wage-earners employed in manufacturing establishments increased from 4,936 to 52,902, or 971.8 per cent. This growth of the wage-earning class has been very marked in the last two decades and particularly in the decade 1880 to 1890, when the increase was 210.8 per cent as compared with an increase of 19.8 per cent in total population. In 1900 the average number of wage-earners in manufactures constituted 2.9 per cent of the total population as compared with eight-tenths of 1 per cent in 1880. But 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 76,931, or 4.2 per cent of the total population of the state.

The rapid growth of the manufacturing industries of Alabama during the last twenty-five years is due to the utilization of the state's rich mineral resources which were neglected in the earlier years of the century. The develop-

ment of the iron industry and of coal mining has stimulated a variety of manufactures which are centered in the Birmingham district, in the northern part of the state where the mineral deposits exist. The abundance of coal has made unnecessary any extensive use of the waterpower of the state on the Coosa, Tennessee, and Tallapoosa rivers, although on the Tallapoosa near Montgomery one of the largest waterpower plants in the South has recently been constructed.¹ It is noteworthy that the great development of manufactures in the northern part of the state has taken place largely without the advantage of navigable water for the cheap shipment of products. For years efforts have been made to connect the Birmingham district with tidewater at Mobile Bay by means of a canal and the construction of locks on the Warrior River. Of the 5 locks projected 3 were completed in 1895, and a route for the canal has been surveyed by engineers of the United States. It is estimated that water communication with Mobile would reduce freight charges on iron 80 per cent.

¹ The Manufacturers' Record, December 14, 1899, page 12; The Tradesman Annual, January 1, 1900, page 109; Handbook of Alabama, 1892, by Saffold Berney, page 494.

Table 2 divides the industries of the state between the hand trades and the manufactures proper. This table also gives the statistics for educational, eleemosynary, and penal institutions, and establishments with a product of

less than \$500; these were not reported at previous censuses, and are, therefore, omitted from the other tables and their use confined to Table 2.

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	13,563	\$72,486,449	15,410	60,703	\$15,381,499	\$3,878,113	\$46,556,501	\$17,906,094	\$22,111,037	\$6,539,370	\$84,015,117
Hand trades ¹	1,091	1,498,856	1,288	2,809	988,951	182,430	1,907,871	6,114	1,846,856	55,401	4,263,862
Educational, eleemosynary, and penal institutions	10	135,456	1	83	8,522	352	59,567	26,193	27,920	5,454	92,588
Establishments with a product of less than \$500	7,951	1,980,912	8,665	7,718	242,558	49,359	345,908	106,965	238,943	-----	1,128,725
All other establishments	4,511	68,871,225	5,456	50,038	14,141,468	3,645,972	44,243,155	17,766,822	19,997,818	6,478,515	78,529,942

¹ Includes bicycle and tricycle repairing, 85; blacksmithing and wheelwrighting, 452; boots and shoes, custom work and repairing, 118; carpentering, 73; clothing, men's, custom work and repairing, 54; clothing, women's, dressmaking, 19; dyeing and cleaning, 16; furniture, cabinetmaking, repairing, and upholstering, 19; lock and gun smithing, 14; masonry, brick and stone, 14; millinery, custom work, 110; painting, house, sign, etc., 16; paper hanging, 2; plastering and stuccowork, 1; plumbing, and gas and steam fitting, 47; sewing machine repairing, 6; typewriter repairing, 3; watch, clock, and jewelry repairing, 92.

Of the 13,563 establishments of all classes shown in this table, 9,042, or 66.7 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 \$5,392,587, or only 6.4 per cent of the total products of the state.

In addition to the 13,563 active establishments in the state during the census year, with a capital of \$72,486,449, shown in Table 2, there were 121 idle establishments, with a capital of \$3,388,916, divided as follows:

INDUSTRIES.	Number of idle establishments.	Capital.	INDUSTRIES.	Number of idle establishments.	Capital.
Brick and tile	7	\$10,285	Leather, tanned, curried, and finished	5	\$3,700
Coke	1	20,000	Lumber and timber products	31	120,305
Flouring and grist mill products	8	11,207	Lumber, planing mill products, including sash, doors, and blinds	3	37,160
Foundry and machine shop products	1	84,499	Pottery, terra cotta, and fire-clay products	3	65,700
Hardware	1	37,700	All other industries	49	81,471
Iron and steel	12	2,966,889			

The 11 leading industries of the state in 1900, as shown in Table 3, embraced 3,335 establishments, or 59.5 per cent of the total number in the state; used a capital of \$57,809,426, or 82.2 per cent of the total; gave employment to 37,347 wage-earners, or 70.6 per cent of the total

number; and paid in wages \$10,657,960, or 70.4 per cent of the total. The value of their products was \$62,382,686, or 75.3 per cent of the total value of the products in the state.

TABLE 3.—COMPARATIVE SUMMARY OF ELEVEN 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	3,335	\$57,809,426	37,347	\$10,657,960	\$2,658,306	\$36,238,387	\$62,382,686
	1890	1,544	35,865,769	20,657	6,598,977	1,904,398	20,862,385	84,814,502
Increase, 1890 to 1900		1,791	21,943,657	16,690	4,058,983	753,908	15,376,002	27,568,184
Per cent of increase		116.0	61.2	80.8	61.5	39.6	73.7	79.2
Per cent of total of all industries in state	1900	59.5	82.2	70.6	70.4	69.4	78.5	75.3
	1890	51.9	77.8	66.3	61.1	68.1	73.4	68.0
Cars and general shop construction and repairs by steam railroad companies	1900	19	2,019,434	4,030	1,941,031	86,045	2,032,166	4,172,192
	1890	12	909,911	1,373	761,134	-----	784,304	1,581,207
Coke	1900	15	3,855,379	1,592	535,622	180,290	2,673,568	3,726,483
	1890	19	1,368,238	1,120	432,143	7,994	1,810,274	2,474,377
Cotton, ginning ¹	1900	1,216	2,006,406	1,518	194,133	42,560	291,729	1,218,283
	1890	212	289,228	792	57,161	14,263	85,982	213,529
Cotton goods	1900	31	11,638,757	8,332	1,482,226	511,296	4,825,981	8,153,136
	1890	18	2,853,015	2,088	402,908	154,893	1,469,048	2,190,771
Fertilizers	1900	17	1,407,323	439	94,965	92,704	1,387,385	2,063,162
	1890	8	709,250	230	42,835	48,715	519,713	765,000

¹ Does not include many ginneries 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 ginneries in operation, reference should be made to the special report on cotton ginning.

TABLE 3.—COMPARATIVE SUMMARY OF ELEVEN LEADING INDUSTRIES—Continued.

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.			
Flouring and grist mill products.....	1900	781	\$1,047,961	540	\$92,858	\$34,654	\$2,787,634	\$3,310,757
	1890	702	1,410,730	1,043	157,134	56,535	2,471,828	3,060,452
Foundry and machine shop products.....	1900	74	4,826,825	3,461	1,329,566	298,558	2,755,921	5,482,441
	1890	41	2,355,253	1,460	736,002	113,262	817,023	2,195,913
Iron and steel.....	1900	25	15,918,479	7,238	2,454,401	896,126	10,062,094	17,392,483
	1890	35	17,879,583	5,685	2,202,904	1,089,690	7,423,344	12,544,227
Leather, tanned, curried, and finished.....	1900	18	464,005	165	71,440	44,107	672,017	1,005,358
	1890	21	33,045	41	7,997	1,546	42,539	77,066
Lumber and timber products.....	1900	1,111	13,020,183	9,273	2,265,018	277,521	6,646,124	12,867,551
	1890	472	7,460,103	6,335	1,712,336	330,497	4,551,261	8,607,971
Oil, cottonseed and cake.....	1900	28	1,609,674	759	196,700	194,450	2,103,768	2,985,890
	1890	9	592,408	490	86,363	87,003	945,069	1,203,869

Table 3 shows that the manufacture of iron and steel is the most important industry in the state. The 25 establishments reported for this industry in 1900 gave employment to 7,238 wage-earners, or 13.7 per cent of the wage-earners in the state, and the products were valued at \$17,392,483, or 21 per cent of the total value of the products of the state. In 1890 there were 35 establishments reported, with 5,685 wage-earners, and products valued at \$12,544,227. The increase in the value of products during the decade was \$4,848,256, or 38.6 per cent.

The importance of the iron and steel industry in Alabama is directly due to the development of extensive deposits of iron ore, coal, limestone, and dolomite, which are found in most unusual proximity in the Birmingham district. This combination of natural advantages makes it possible to produce pig iron at very low cost. A charcoal furnace was built as early as 1818,¹ but it was not until 1874 that the manufacture began to assume importance. Birmingham, named after England's iron center, was founded in 1871, Anniston in 1872, Sheffield in 1883, and Bessemer in 1887. An important epoch in the history of the industry began in 1895, when it was demonstrated that Alabama pig iron could be laid down in Liverpool, grade for grade, at less than the price of Middlesboro iron shipped across England to that point.² Exports to England, continental Europe, and Japan in 1896 amounted to 65,000 tons,³ and in 1900 to 113,185 tons, a quantity greatly in excess of that reported for any other state. The total production of pig iron in the state in 1860 was valued at \$64,590, in 1870 at \$210,258, in 1880 at \$1,405,356, in 1890 at \$10,315,691, and in 1900 at \$13,465,616. The most important grade manufactured in the state in 1900 was foundry iron, no other state producing so large a quantity.

Although the manufacture of steel in Alabama is in its infancy, every indication points to a development as rapid as that shown in pig iron. It seems to be established that

the iron ores of Alabama are not suited to the manufacture of steel by the acid or basic Bessemer processes, because of their large percentage of phosphorus and silica, and therefore manufacturers using these ores are practically restricted to the basic open-hearth process. The first attempt to manufacture steel in the state was made in 1888, but until 1897 only indifferent success was attained.⁴ In 1900 there were 12 basic open-hearth furnaces in the state with a daily capacity of 1,210 tons of steel ingots. The manufacture was greatly stimulated by the fact that many engineers and architects, in 1896, began to show a preference for open-hearth steel, stipulating in their specifications that this variety should be used.⁵

Related to the iron and steel industry is the manufacture of foundry and machine shop products. There were 74 establishments engaged in this industry in 1900, with 3,461 wage-earners, and products valued at \$5,482,441. In 1890 there were 41 establishments reported, with 1,460 wage-earners, and products valued at \$2,195,913. The value of products increased \$3,286,528, or 149.7 per cent during the decade. This industry has been stimulated by the large production of pig iron, and has in turn reacted to increase that production. One of the most important of Alabama's foundry products is cast-iron pipe. There were 11 establishments, most of them at Bessemer, Anniston, and Birmingham, engaged in this manufacture during the census year. Some of these export products to foreign countries. Other important iron products of the state are stoves, car wheels, boilers, and engines.

The various iron industries have continued to advance since the close of the census year. One of the largest plants in the United States for the manufacture of wire and wire nails has been put into operation at Ensley, a large establishment for the manufacture of steel cars is now being built at the same place, and a tube works and cotton tie plant has been started at Helena.

The manufacture of coke is also closely connected with the iron manufacture. There were 15 coke establishments in Alabama in 1900, with 1,592 wage-earners, and products

¹ Iron Making in Alabama, page 8.

² The Tradesman Annual, January 1, 1896, page 103.

³ Iron Making in Alabama, Second edition, 1898, by W. B. Phillips, consulting chemist of the Alabama Geological Survey, page 15.

⁴ Ibid., pages 290, 296, and 312.

⁵ The Tradesman Annual, January 1, 1898, page 84.

valued at \$3,726,488, the state ranking third in the United States in this industry. In 1890 there were 19 establishments, 1,120 wage-earners, and products valued at \$2,474,877. The value of products increased \$1,252,056, or 50.6 per cent during the decade.

The manufacture of lumber and timber products ranks second. There were 1,111 establishments reported for 1900, with 9,273 wage-earners, and products valued at \$12,867,551. In 1890 there were 472 establishments engaged in this industry, with 6,335 wage-earners, and products valued at \$8,507,971. The increase in the value of products during the decade was \$4,359,580, or 51.2 per cent, and a considerable portion of Alabama's forests is yet untouched by the axe.¹ The lower part of the maritime pine belt is considered equal in extent and quality to the timber lands in the adjoining parts of Florida and Mississippi, and is said to be unsurpassed by the most favored sections of the Atlantic pine forest.² A large quantity of timber is floated down streams and sawed in the mills of Florida.³

Dependent also upon the forests of the state is the manufacture of turpentine and rosin. There were 152 establishments engaged in this industry in 1900, with 3,716 wage-earners, and products valued at \$2,033,705. The statistics of the 7 establishments reported in 1890 were not shown separately, and comparisons with that year are not possible.

There were 31 establishments engaged in the manufacture of cotton goods in 1900, the industry third in rank, with 8,332 wage-earners, and products valued at \$8,153,136. In 1890, 13 establishments were reported, with 2,088 wage-earners, and products valued at \$2,190,771. The increase in value of products during the decade was \$5,962,365, or 272.2 per cent, a greater absolute increase than is shown in any other industry in the state.

There were 19 establishments engaged in the construction and repair shop work of steam railroad companies in 1900, with 4,030 wage-earners, and products valued at \$4,172,192. In 1890 there were 12 establishments, 1,373 wage-earners, and products valued at \$1,581,207. The increase in the value of products was \$2,590,985, or 163.9 per cent. The development of this industry is due to the railroads connecting the Birmingham district with other parts of the country. Six roads center at the city of Birmingham, and several have shops there. Two large establishments, 1 at Anniston, and 1 at Gadsden, manufacture cars for steam railroads, but the statistics for these can not be shown separately without disclosing the operations of individual establishments.

¹ Handbook of Alabama, page 449.

² The Timber Pines of the Southern United States, page 38. (Bulletin No. 13, 1897, United States Department of Agriculture, Division of Forestry.)

³ Ibid., pages 40 and 42.

There were 781 establishments engaged in flour and grist milling in 1900, with 540 wage-earners, and products valued at \$3,310,757. In 1890 there were 702 establishments, 1,043 wage-earners, and products valued at \$3,060,452. The increase in the value of products during the decade was \$250,305, or 8.2 per cent.

There were 28 establishments engaged in the manufacture of cottonseed oil and cake in 1900, with 759 wage-earners, and products valued at \$2,985,890. In 1890 there were 9 establishments, 490 wage-earners, and products valued at \$1,203,989. The increase in the value of products during the decade was \$1,781,901, or 148 per cent. Allied to this industry is cotton ginning, with 1,216 establishments in 1900, and 1,518 wage-earners. The receipts for ginning and other work done amounted to \$1,218,283. In 1890 there were 212 establishments reported, with 792 wage-earners, and the receipts for ginning and other work done amounted to \$213,529. The increase in these receipts during the decade was \$1,004,754, or 470.5 per cent. These figures do not include the operations of many private plantation ginneries, or ginneries connected with saw, grist, or cottonseed oil mills. For the full number of ginneries in operation reference should be made to the special report on cotton ginning. These two industries are directly dependent on the large cotton crop of the state, which in 1899 amounted to 1,108,690 commercial bales, or 11.4 per cent of the production of the United States.⁴

In 1900, 17 establishments were reported as engaged in the manufacture of fertilizers, with 439 wage-earners, and products valued at \$2,068,162. In 1890 there were 8 establishments, 230 wage-earners, and products valued at \$765,000. The value of products increased \$1,303,162, or 170.3 per cent, during the decade. This growth is due, on the one hand, to the extensive market for fertilizers in the cotton section of the state, and, on the other, to the large production of cottonseed meal. The principal fertilizer manufactured is a combination of this meal with phosphates from the adjacent fields of Florida.

In 1900, 18 establishments were reported as engaged in the tanning, currying, and finishing of leather, with 165 wage-earners, and products valued at \$1,005,358. In 1890 there were 21 establishments, 41 wage-earners, and products valued at \$77,066. The value of products increased \$928,292, or 1,204.5 per cent, during the decade.

URBAN MANUFACTURES.

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

⁴ Census Bulletin, No. 58, Cotton Ginning, page 5.

TABLE 4.—COMPARATIVE SUMMARY, BIRMINGHAM, MOBILE, AND MONTGOMERY, 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	5,602	\$70,370,081	52,902	\$15,130,419	\$3,828,402	\$46,151,026	\$82,793,804
Per cent of increase.....	1890	2,977	46,122,571	81,137	10,799,747	2,797,896	28,432,281	51,226,605
		88.2	62.6	69.9	40.1	36.8	62.8	61.6
Birmingham.....	1900	283	7,434,654	6,675	2,587,221	533,368	6,045,552	12,581,066
Per cent of increase.....	1890	283	4,558,478	3,247	1,668,812	545,290	3,508,588	7,031,248
			63.8	105.6	2.2	72.3		78.9
Mobile.....	1900	222	3,294,238	2,827	1,139,605	272,087	2,016,400	4,451,062
Per cent of increase.....	1890	261	2,236,818	2,719	950,270	226,987	1,814,468	3,826,399
		114.9	47.3	4.0	19.9	20.3	12.8	16.3
Montgomery.....	1900	163	2,980,782	2,359	802,188	342,390	2,902,054	5,035,190
Per cent of increase.....	1890	138	1,684,271	1,680	634,423	140,829	1,753,166	3,234,962
		18.1	74.0	39.7	26.4	143.5	65.5	55.6
Total for 3 cities.....	1900	668	13,659,674	11,861	4,529,014	1,149,245	10,994,006	22,067,318
Per cent of increase.....	1890	682	8,474,007	7,655	3,248,005	913,106	7,070,217	14,095,609
		12.1	54.9	39.4	25.9	25.9	51.7	56.6
Per cent of 3 cities to total for state.....	1900	11.9	19.4	22.4	29.9	30.0	23.8	26.7
	1890	22.9	18.4	24.6	30.1	32.6	24.9	27.5

¹ Decrease.

It appears from Table 4 that there has been a considerable increase during the past decade in the manufactures of these cities. The average number of wage-earners increased from 7,655 to 11,861, or 54.9 per cent, and the value of products from \$14,095,609 to \$22,067,318, or 56.6 per cent. The number of establishments decreased, however, from 682 to 668, or 2.1 per cent. The increase in the average number of wage-earners and value of products has been smaller in these 3 cities than in the state as a whole. Birmingham, the leading manufacturing city, shows the greatest growth, the value of products having increased from \$7,034,248 in 1890 to \$12,581,066 in 1900, or 78.9 per cent. The number of establishments

remained the same as in 1890, that is 283, but the number of wage-earners increased from 3,247 to 6,675, or 105.6 per cent. The number of establishments, number of wage-earners, and value of products, in this city, in 1900, constituted 5.1, 12.6, and 15.2 per cent, respectively, of the totals for the entire state.

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.

	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.....	5,602	\$70,370,081	6,744	52,902	\$15,130,419	\$3,828,402	\$46,151,026	\$82,793,804	-----	100.0	1,828,697	-----	100.0
Total for urban manufactures.....	1,223	23,227,196	1,277	22,681	8,084,517	2,209,028	23,764,981	42,272,001	-----	51.1	183,651	-----	10.0
Anniston.....	59	2,396,278	52	1,997	649,993	134,580	1,414,873	2,594,758	6	3.1	9,695	4	0.5
Bessemer.....	42	3,020,082	33	1,669	605,741	317,590	2,206,654	3,561,549	5	4.3	8,358	3	0.3
Birmingham.....	283	7,434,654	284	6,675	2,587,221	533,368	6,045,552	12,581,066	1	15.2	35,415	2	2.1
Decatur.....	24	229,807	25	198	54,660	7,574	108,799	237,265	15	0.3	8,114	16	0.2
Florence.....	33	871,373	30	595	177,813	50,870	603,432	1,037,471	10	1.3	6,478	7	0.4
Fort Payne.....	17	85,405	21	88	37,992	4,206	71,652	155,016	16	0.2	1,037	18	0.1
Gadsden.....	35	1,184,805	47	520	165,475	24,180	463,733	848,751	11	1.0	4,282	12	0.2
Huntsville.....	79	1,877,781	85	1,203	283,575	152,637	1,011,888	1,890,461	8	2.3	8,068	6	0.4
Mobile.....	222	3,294,238	238	2,827	1,139,605	272,987	2,046,400	4,451,062	4	5.4	38,469	1	2.1
Montgomery.....	163	2,980,782	193	2,359	802,188	342,390	2,902,054	5,035,190	2	6.1	30,346	8	1.7
New Decatur.....	30	1,348,871	25	1,521	700,196	81,286	3,733,519	4,876,919	3	5.9	4,437	11	0.2
Opelika.....	30	148,275	34	214	48,023	10,943	206,885	335,670	14	0.4	4,245	13	0.2
Phoenix.....	6	33,595	5	16	4,548	5,361	7,644	22,850	18	(¹)	4,163	14	0.2
Selma.....	98	1,226,308	98	1,943	392,016	93,084	1,163,936	2,015,777	7	2.4	8,713	5	0.5
Sheffield.....	21	1,226,258	25	878	246,009	123,390	874,502	1,461,418	9	1.8	3,833	15	0.2
Talladega.....	22	848,414	13	343	77,311	25,979	427,544	583,902	12	0.7	5,056	10	0.3
Tuscaloosa.....	43	353,925	44	407	104,141	26,918	304,629	511,683	13	0.6	5,094	9	0.3
Tusculum.....	16	46,350	22	28	8,040	1,753	51,280	80,787	17	0.1	2,848	17	0.1
Total for state exclusive of urban manufactures.....	4,379	41,142,885	5,467	30,221	7,045,902	1,619,374	22,386,045	40,521,803	-----	48.9	1,645,046	-----	90.0
Per cent of urban manufactures to total for state.....	21.8	41.5	18.9	42.9	53.4	57.7	51.5	51.1	-----	-----	10.0	-----	-----

¹ Less than one-tenth of 1 per cent.

Of the 5,602 establishments in the state, 1,223, or 21.8 per cent, are located in these 18 cities and towns. They furnished employment to 22,681 wage-earners, or 42.9 per cent of the total number, and the value of their products, \$42,272,001, formed 51.1 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 Birmingham, Mobile, and Montgomery by specified industries.

Table 9 shows the totals for 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 implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
1	The State.....	5,602	\$70,370,081	\$10,021,049	\$14,957,424	\$24,159,595	\$21,232,013	6,744	2,530	\$2,168,671	52,902	\$15,180,419
2	Autauga.....	53	1,420,973	245,779	230,351	396,884	541,959	66	69	66,428	887	238,088
3	Baldwin.....	41	1,377,882	865,184	44,000	245,552	222,516	45	40	30,710	666	156,711
4	Barbour.....	74	615,859	55,023	95,093	330,312	125,981	76	23	15,315	600	97,048
5	Bibb.....	53	746,569	399,941	25,040	223,387	92,201	61	12	6,749	398	90,379
6	Blount.....	71	100,819	18,156	11,505	63,657	12,001	105	1	300	189	48,578
7	Bullock.....	64	264,068	20,905	62,237	145,728	85,198	67	15	6,894	217	36,505
8	Butler.....	51	789,931	191,941	57,315	390,998	149,677	57	20	19,660	638	178,225
9	Calhoun.....	171	3,266,363	229,310	554,597	1,326,511	1,155,945	198	93	83,576	2,711	769,374
10	Chambers.....	96	2,146,349	84,654	386,663	905,063	709,964	116	28	33,811	1,453	274,919
11	Cherokee.....	73	806,881	27,056	114,145	98,161	67,519	92	10	9,659	201	42,402
12	Chilton.....	49	548,458	169,085	55,745	243,866	79,762	64	12	11,050	418	88,030
13	Choctaw.....	43	67,076	7,071	11,625	35,705	12,675	55	6	1,325	143	23,883
14	Clarke.....	63	687,808	218,420	57,936	282,804	128,648	82	32	23,500	389	108,011
15	Clay.....	62	237,886	48,574	11,238	107,860	70,714	92	5	4,475	263	48,778
16	Cleburne.....	62	125,232	20,492	15,790	60,400	28,550	83	2	744	147	35,808
17	Coffee.....	72	279,449	33,606	38,059	33,839	73,945	95	26	11,600	624	129,094
18	Colbert.....	76	1,399,243	119,790	501,423	294,708	403,318	92	31	33,446	881	281,798
19	Conecuh.....	55	226,326	107,882	18,006	57,056	43,382	82	10	5,000	344	78,357
20	Coosa.....	47	87,428	16,841	12,890	46,735	10,972	61	3	792	119	26,503
21	Covington.....	72	522,113	184,236	42,526	133,644	161,707	96	25	15,800	631	146,172
22	Crenshaw.....	59	221,153	38,907	19,895	30,223	82,128	93	25	8,390	314	58,844
23	Cullman.....	54	107,433	10,299	21,385	58,692	22,057	67	8	1,004	103	23,813
24	Dale.....	56	145,193	15,018	26,002	57,846	46,237	63	9	3,786	189	35,376
25	Dallas.....	170	1,448,852	86,463	252,198	642,968	466,723	179	140	106,828	1,489	416,561
26	Dekalb.....	109	240,116	60,168	28,418	92,664	68,876	136	10	7,900	206	50,878
27	Elmore.....	56	1,607,156	58,785	511,965	348,368	688,038	63	13	20,605	990	190,097
28	Escambia.....	25	1,151,692	682,153	43,457	238,304	187,778	36	20	15,573	421	113,299
29	Etowah.....	96	1,925,207	226,732	478,595	618,926	600,934	133	50	49,388	1,418	343,954
30	Fayette.....	23	39,052	2,785	5,008	25,882	5,877	37	11	15,350	33	4,331
31	Franklin.....	47	810,447	65,738	28,890	96,925	118,859	62	11	15,350	222	56,627
32	Geneva.....	67	320,676	111,211	30,179	69,467	109,819	99	21	9,050	778	157,588
33	Greene.....	33	46,177	1,182	8,530	34,975	1,490	37	4	515	46	6,249
34	Hale.....	51	131,053	14,870	24,855	71,535	19,793	71	7	1,016	110	21,028
35	Henry.....	136	883,380	66,204	41,786	139,568	136,822	169	42	14,540	694	139,017
36	Jackson.....	108	295,629	41,915	44,311	126,953	82,450	137	20	13,883	384	87,135
37	Jefferson.....	470	22,308,336	2,027,878	6,227,501	7,233,887	6,819,070	496	625	699,560	14,076	4,960,842
38	Lamar.....	60	110,115	27,321	13,065	46,394	23,335	72	3	800	128	20,192
39	Lauderdale.....	94	1,303,733	39,890	233,726	369,548	566,629	108	64	48,567	1,030	238,266
40	Lawrence.....	55	94,061	23,495	12,815	43,930	14,421	68	2	600	79	12,331
41	Lee.....	87	285,673	44,580	41,197	112,160	87,736	92	28	14,270	323	69,081
42	Limestone.....	92	128,801	17,636	20,975	63,880	26,810	119	2	1,050	135	26,673
43	Lowndes.....	56	92,695	4,550	22,795	61,775	3,575	62	6	937	90	13,117
44	Macon.....	50	100,735	15,860	16,585	51,375	16,915	61	6	1,340	87	16,544
45	Madison.....	168	2,093,841	110,687	321,805	919,547	741,302	197	66	60,018	1,490	344,204
46	Marengo.....	80	440,619	54,167	91,589	220,692	74,171	84	33	19,639	422	77,110
47	Marion.....	35	60,267	16,732	10,735	28,700	4,100	51	2	184	36	5,615
48	Marshall.....	79	111,529	13,966	15,302	58,680	23,581	100	4	4,080	185	30,648
49	Mobile.....	278	5,681,918	1,230,206	764,794	1,802,177	1,884,741	303	294	251,248	4,762	1,744,115
50	Monroe.....	57	417,908	130,487	26,630	138,370	71,921	64	20	12,130	476	99,048
51	Montgomery.....	212	3,116,417	251,550	541,968	1,108,350	1,219,554	253	218	167,308	2,518	832,031
52	Morgan.....	115	1,722,329	106,076	355,375	646,299	614,579	132	71	59,364	1,798	773,839
53	Perry.....	74	184,446	14,148	38,595	102,069	29,634	90	16	4,969	115	22,622
54	Pickens.....	58	94,249	17,553	15,390	48,260	13,046	74	1	100	89	13,204
55	Pike.....	99	478,282	44,434	77,738	145,889	210,221	125	20	12,688	372	79,866
56	Randolph.....	104	239,463	33,833	41,070	91,603	73,047	132	7	2,275	179	30,613
57	Russell.....	38	122,449	22,380	18,870	60,055	21,144	53	8	2,702	147	24,118
58	St. Clair.....	74	288,876	33,442	24,035	116,299	50,100	105	10	7,310	230	52,083
59	Shelby.....	91	1,247,692	286,388	246,080	273,599	441,675	99	40	30,095	820	208,211
60	Sumter.....	62	225,348	50,007	26,395	96,097	52,249	72	10	2,915	160	30,874
61	Talladega.....	148	2,636,398	229,276	1,101,390	736,142	569,180	158	50	44,461	1,320	239,675
62	Tallapoosa.....	133	300,775	45,901	38,298	134,568	82,013	161	13	7,477	275	71,862
63	Tuscaloosa.....	105	871,794	67,273	165,141	510,610	128,740	105	28	29,187	1,037	198,096
64	Walker.....	58	1,298,054	60,492	296,277	509,652	431,633	78	10	10,326	638	144,545
65	Washington.....	34	582,315	189,338	68,125	176,614	148,193	46	27	17,940	505	118,616
66	Wilcox.....	66	112,239	13,177	20,429	64,550	14,083	86	1	219	91	13,758
67	Winston.....	24	34,605	12,310	4,045	16,630	1,620	33	2	1,230	23	6,010

TABLE 7.—MANUFACTURES BY

1	All industries -----	5,602	\$70,370,081	\$10,021,049	\$14,957,424	\$24,159,505	\$21,232,013	6,744	2,530	\$2,168,671	52,902	\$15,180,419
2	Awnings, tents, and sails -----	4	5,150			1,850	3,800	4			9	6,625
3	Bicycle and tricycle repairing -----	35	46,700	465	2,075	12,440	31,720	41	3	1,190	50	15,177
4	Blacksmithing and wheelwrighting -----	452	259,062	39,023	46,649	60,117	113,373	543	8	615	409	101,641
5	Boots and shoes, custom work and repairing -----	118	29,952	4,620	3,715	11,813	9,904	125	1	156	60	19,423
6	Bread and other bakery products -----	51	280,755	49,530	71,000	73,493	66,732	54	55	29,188	282	87,392

BY COUNTIES: 1900.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not including internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
45,530	\$14,073,456	3,898	\$704,099	3,474	\$352,864	\$3,828,402	\$291,181	\$388,511	\$2,907,994	\$185,766	\$46,151,026	\$40,620,881	\$5,530,195	\$82,793,804	1
648	200,627	100	20,672	144	11,789	86,082	1,060	7,413	33,146	39,463	642,737	632,335	10,402	1,209,700	2
620	152,831	9	875	28	3,005	23,462	135	3,581	19,746	—	438,504	437,596	908	821,566	3
370	70,551	99	15,201	131	11,296	28,547	232	7,049	20,766	500	294,821	274,923	19,898	558,975	4
976	86,379	3	700	19	8,300	23,189	1,718	1,336	20,051	84	262,551	250,112	3,439	456,305	5
136	43,137	—	—	4	441	2,314	604	764	921	125	90,027	87,858	2,169	234,179	6
187	33,448	9	1,728	21	1,329	8,988	90	1,571	7,277	—	208,628	198,418	10,210	326,011	7
523	153,030	51	10,050	61	10,145	16,692	1,084	4,117	11,396	95	355,472	353,186	2,286	680,909	8
2,030	683,096	345	52,220	327	34,058	187,041	8,639	17,023	154,694	6,685	1,792,675	1,705,210	87,465	3,283,335	9
750	181,399	309	57,741	323	35,776	30,218	1,151	7,910	21,157	—	1,081,431	1,043,926	37,505	1,853,016	10
192	41,287	4	610	5	505	13,405	915	2,685	9,805	—	232,765	150,651	82,114	395,246	11
402	86,848	—	—	11	1,182	18,463	160	1,942	16,861	—	177,933	176,933	1,000	340,948	12
133	23,518	2	186	3	179	2,588	1,025	472	971	120	42,101	40,823	1,278	95,097	13
373	106,721	—	—	16	1,890	14,673	424	2,739	11,370	140	344,735	341,257	3,538	606,223	14
261	48,034	—	—	2	144	5,412	401	1,455	3,566	—	154,001	151,092	509	262,889	15
143	34,953	8	700	1	150	2,972	255	909	1,787	20	106,611	105,302	1,309	208,350	16
618	128,669	2	200	4	225	12,431	4,673	2,930	4,300	528	92,447	89,965	2,482	349,810	17
857	277,353	10	1,469	14	2,976	126,333	1,594	6,678	118,901	—	976,229	595,591	380,638	1,663,848	18
341	78,107	1	100	2	150	4,841	247	1,829	2,565	200	139,978	138,494	1,484	363,743	19
109	24,899	2	600	8	1,004	2,145	100	681	1,164	200	72,038	69,950	2,088	140,593	20
631	146,172	—	—	—	—	7,912	295	4,252	2,365	1,000	226,214	221,337	1,877	498,363	21
309	57,800	—	—	5	544	4,896	163	1,777	2,826	130	113,713	112,008	1,705	244,666	22
101	23,553	1	150	1	115	3,442	196	829	2,417	—	63,457	61,009	2,448	129,840	23
172	33,071	12	1,130	5	575	4,987	835	2,645	1,823	184	129,491	125,590	3,901	222,276	24
1,127	360,707	248	43,983	114	11,811	96,692	18,274	12,961	63,489	6,908	1,215,221	1,163,586	51,635	2,136,474	25
200	58,805	5	880	1	128	7,902	660	1,393	4,094	1,755	168,488	161,593	6,890	341,076	26
492	127,097	220	36,000	278	26,400	38,279	1,585	7,101	29,543	50	408,636	406,828	1,808	772,124	27
416	112,594	2	320	3	425	10,891	865	9,821	6,105	—	635,315	634,733	582	1,129,560	28
994	268,239	355	74,718	69	7,027	121,128	2,965	8,482	114,410	265	1,182,570	1,023,629	159,041	1,956,139	29
32	4,741	1	90	—	—	700	130	822	208	40	15,066	15,816	851	32,707	30
221	50,514	—	—	1	113	6,812	865	1,825	4,822	300	61,182	54,561	6,661	194,603	31
707	156,288	4	850	7	450	30,337	1,314	2,394	15,150	11,479	158,588	156,109	2,479	499,596	32
45	6,190	—	—	1	90	1,201	405	442	294	—	22,158	19,857	2,301	49,855	33
105	20,233	2	395	3	400	2,509	728	916	867	—	49,619	40,427	3,192	104,169	34
643	131,939	17	3,677	34	3,501	18,121	2,655	5,288	10,061	120	484,806	474,594	10,212	871,674	35
313	79,011	7	808	64	7,316	9,012	1,010	1,117	6,885	—	205,091	203,210	1,881	443,119	36
13,232	4,788,841	500	124,943	344	46,558	1,442,233	98,081	110,272	1,163,163	70,767	15,469,793	11,730,561	3,733,232	27,629,366	37
125	28,936	—	—	3	286	1,581	112	663	551	5	66,813	65,507	1,306	144,713	38
742	204,850	119	15,799	169	17,617	60,796	1,904	8,252	50,640	—	970,112	854,312	115,800	1,465,568	39
78	12,271	—	—	1	60	1,562	435	595	532	—	37,977	36,157	1,820	79,198	40
312	68,256	8	565	8	260	18,147	3,246	3,968	10,808	80	269,839	260,799	9,040	472,709	41
128	24,997	5	1,510	2	166	4,080	1,860	907	1,313	—	126,052	124,191	1,861	237,957	42
88	12,939	1	90	1	88	2,136	908	755	425	50	17,273	13,130	4,148	67,597	43
82	16,359	4	1,095	1	90	4,652	1,431	791	2,430	—	57,696	54,224	3,472	109,450	44
960	272,651	282	53,073	248	18,474	160,669	7,730	12,536	137,431	2,972	1,272,835	1,240,814	32,521	2,274,262	45
384	71,657	8	1,775	30	3,678	25,289	1,994	2,941	18,354	2,000	192,998	182,577	10,421	416,703	46
34	5,428	—	—	2	217	916	86	466	414	—	30,545	30,285	260	56,306	47
152	28,303	7	568	26	1,777	4,719	563	780	2,096	380	65,871	64,002	1,869	163,215	48
4,556	1,709,628	104	22,454	102	12,033	337,119	62,257	31,466	262,006	31,390	3,201,302	3,131,102	70,200	7,019,974	49
464	97,593	3	510	9	915	5,603	1,055	2,098	2,275	175	179,792	178,778	1,464	422,670	50
2,007	740,645	364	75,222	147	16,164	346,793	36,611	29,268	279,351	1,563	2,939,599	2,864,982	74,617	5,155,596	51
1,774	769,922	9	2,707	15	1,260	91,285	3,031	8,053	79,294	907	3,897,931	3,856,476	41,455	5,236,921	52
110	21,947	1	300	4	375	4,002	951	1,530	1,491	30	124,855	119,226	5,629	223,478	53
87	12,994	1	150	1	60	1,961	394	747	820	—	41,484	39,859	1,595	87,402	54
348	75,689	20	3,895	4	282	24,488	1,311	4,053	18,924	200	285,642	276,048	9,594	531,106	55
123	28,897	27	4,000	29	3,216	7,799	1,522	1,685	4,407	175	246,416	240,936	5,480	357,987	56
138	23,138	—	—	9	975	11,305	1,407	1,045	8,853	—	121,268	115,157	6,111	231,865	57
218	50,843	—	—	12	1,240	4,589	482	845	3,142	120	190,423	188,507	1,916	348,824	58
795	205,094	9	1,155	16	1,962	88,019	2,621	8,470	26,797	231	613,736	599,452	154,284	1,122,239	59
155	30,234	—	—	6	640	5,746	1,262	508	792	3,004	78,614	74,709	3,905	174,726	60
885	199,889	180	21,752	255	18,034	54,420	2,839	9,291	42,105	135	1,185,639	839,627	206,012	1,968,041	61
263	69,894	3	617	9	1,351	14,783	1,278	2,043	11,377	90	310,662	303,438	7,224	459,455	62
686	165,234	233	24,836	118	3,026	40,222	3,176	4,944	31,602	500	777,787	759,994	17,793	1,210,172	63
363	108,133	115	20,091	160	16,271	68,318	805	1,060	66,453	—	473,849	468,813	5,036	876,180	64
465	115,436	12	1,000	28	2,180	11,348	95	2,514	8,298	441	310,611	309,627	1,084	614,365	65
88	13,518	—	—	3	240	2,739	229	769	1,591	150	34,591	31,538	3,063	87,077	66
28	6,010	—	—	—	—	463	5	343	105	—	24,487	24,140	347	51,888	67

SPECIFIED INDUSTRIES: 1900.

45,530	\$14,073,456	3,898	\$704,099	3,474	\$352,864	\$3,828,402	\$291,181	\$388,511	\$2,907,994	\$185,766	\$46,151,026	\$40,620,881	\$5,530,195	\$82,793,804	1
9	6,625	—	—	—	—	607	380	15	212	—	21,785	21,785	—	38,700	2
44	14,571	—	—	6	606	7,966	5,411	450	2,055	50	32,643	32,071	572	85,857	3
403	101,179	—	—	6	462	18,367	11,730	2,315	4,205	617	136,356	123,437	12,919	504,144	4
59	19,223	1	200	—	—	9,044	8,147	320	577	—	45,760	45,203	557	133,617	5
239	79,785	33	6,311	10	1,206	30,114	13,063	6,046	5,469	5,586	386,909	375,062	11,847	681,736	6

TABLE 7.—MANUFACTURES BY

7	MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
7	Brick and tile	72	\$431,749	\$37,165	\$123,025	\$107,601	\$163,958	93	44	\$24,719	1,122	\$256,708
8	Brooms and brushes	10	15,480	2,600	1,850	2,175	9,355	10	4	1,850	44	10,791
9	Carpentering	73	163,625	12,585	17,885	87,250	96,455	82	17	12,895	742	250,675
10	Carriage and wagon materials	6	54,974	2,975	4,375	20,837	27,287	8	5	3,400	60	18,180
11	Carrriages and wagons	49	386,061	15,540	39,670	32,297	298,567	58	24	15,985	408	128,647
12	Cars and general shop construction and repairs by steam railroad companies.	19	2,019,434	169,200	559,810	660,570	629,854	-----	118	112,795	4,030	1,941,031
13	Charcoal	51	77,426	18,375	1,824	6,880	55,847	56	3	2,320	467	88,042
14	Cheese, butter, and condensed milk, factory product.	4	13,670	700	3,600	7,370	2,000	4	-----	-----	4	1,277
15	Clothing, men's, custom work and repairing.	54	156,565	1,100	3,200	11,140	141,125	65	9	7,430	234	99,204
16	Clothing, men's, factory product.	7	96,004	-----	-----	16,189	79,815	9	13	11,060	191	46,546
17	Clothing, women's, dressmaking	19	7,305	500	500	3,055	3,250	20	1	1,200	106	22,223
18	Coke	15	3,855,379	1,808,111	78,751	2,217,140	256,877	2	43	40,003	1,592	585,622
19	Confectionery	19	124,537	2,500	1,075	27,835	98,127	23	36	14,485	145	22,292
20	Cooperage	9	34,470	805	1,050	20,515	12,100	8	3	1,760	89	26,380
21	Cordage and twine.	4	298,448	27,025	45,951	169,976	55,495	-----	10	10,980	282	47,648
22	Cotton, compressing	11	472,671	60,400	103,000	194,000	115,271	1	41	31,136	257	51,040
23	Cotton, ginning ¹	1,216	2,006,406	77,887	396,298	1,444,813	87,428	1,581	102	11,249	1,518	194,133
24	Cotton goods	31	11,638,757	827,152	2,364,901	5,198,990	3,747,624	-----	159	197,700	8,332	1,482,226
25	Druggists' preparations, not including prescriptions.	7	13,650	100	500	4,175	8,875	6	20	9,386	7	1,174
26	Dyeing and cleaning	16	15,305	2,540	2,500	4,895	5,460	17	5	2,856	41	12,454
27	Electrical construction and repairs	6	26,700	-----	-----	5,850	20,850	5	7	4,150	44	19,485
28	Fertilizers	17	1,407,323	18,118	225,500	175,518	988,187	32	60	61,975	439	94,965
29	Flouring and grist mill products	781	1,047,961	118,425	240,400	494,533	194,603	934	39	22,691	540	92,858
30	Foundry and machine shop products	74	4,826,825	844,520	673,592	1,590,744	2,217,969	60	231	251,363	3,461	1,329,566
31	Fruits and vegetables, canning and preserving.	3	7,585	4,110	1,125	850	1,500	3	1	800	16	2,880
32	Furniture, cabinetmaking, repairing, and upholstering.	19	14,565	1,320	1,075	4,200	7,970	24	-----	-----	18	8,670
33	Furniture, factory product.	5	75,519	3,025	9,625	16,400	45,569	7	3	2,760	123	35,925
34	Gas, illuminating and heating	11	1,120,539	47,800	145,520	830,996	96,723	-----	40	80,674	75	31,611
35	Ice, artificial	21	611,367	61,700	77,700	422,600	49,867	11	41	33,280	160	59,106
36	Iron and steel	25	16,913,479	902,188	7,161,378	2,724,947	5,124,966	-----	182	232,561	7,238	2,454,401
37	Leather, tanned, curried, and finished	18	464,005	7,955	38,935	149,575	267,540	19	8	7,200	165	71,440
38	Lime and cement	17	366,647	91,078	86,545	157,270	80,754	17	20	10,645	396	89,957
39	Liquors, distilled	15	33,650	3,970	6,425	20,475	2,780	16	1	1,200	15	5,080
40	Liquors, malt	5	829,446	52,000	284,000	335,000	153,446	-----	94	40,142	239	75,157
41	Lock and gun smithing	14	22,665	1,850	3,650	5,500	11,665	13	1	1,800	17	9,230
42	Looking-glass and picture frames	12	11,470	400	700	1,845	8,525	15	3	540	8	8,775
43	Lumber and timber products	1,111	13,020,183	5,156,012	874,989	4,388,919	2,650,263	1,616	399	310,572	9,273	2,265,018
44	Lumber, planing mill products, including sash, doors, and blinds.	50	345,872	25,900	36,700	138,009	145,263	58	33	25,390	432	140,659
45	Marble and stone work	8	343,122	59,933	24,540	92,065	170,634	4	27	30,230	305	96,381
46	Masonry, brick and stone.	14	295,894	-----	50	32,445	263,399	23	24	11,800	481	198,187
47	Mattresses and spring beds	6	50,089	-----	40	8,672	41,377	5	12	5,840	36	14,040
48	Millinery, custom work	110	233,112	11,100	20,080	5,614	196,318	143	41	22,366	246	73,174
49	Mineral and soda waters	20	75,975	2,350	3,050	38,650	31,425	23	9	6,940	79	28,490
50	Monuments and tombstones	21	43,892	3,332	5,480	2,805	32,235	20	2	1,260	54	20,153
51	Oil, cottonseed and cake	28	1,609,674	106,489	333,822	782,762	856,601	21	106	99,020	759	196,700
52	Painting, house, sign, etc.	16	22,055	2,410	2,875	2,135	14,635	18	3	1,400	57	19,874
53	Patent medicines and compounds	6	16,145	-----	-----	2,195	12,950	7	13	6,815	19	6,663
54	Photography	46	62,329	2,805	8,125	32,905	18,394	47	2	792	46	18,306
55	Plumbing, and gas and steam fitting	47	137,820	3,000	2,800	10,725	121,295	53	21	13,820	270	111,274
56	Pottery, terra cotta, and fire-clay products.	21	199,585	30,710	63,748	41,350	63,777	28	15	8,450	227	66,667
57	Printing and publishing, book and job.	40	224,974	1,350	1,550	151,371	70,703	54	16	16,944	256	100,774
58	Printing and publishing, newspapers and periodicals.	156	621,852	13,945	37,580	362,741	207,586	178	80	79,809	543	241,525
59	Rice, cleaning and polishing	4	2,995	95	400	2,100	400	5	-----	-----	3	860
60	Roofing and roofing materials	8	43,704	4,200	6,500	15,498	17,506	-----	3	1,180	85	35,300
61	Saddlery and harness	37	67,505	850	3,450	10,151	53,114	42	7	4,084	35	13,103
62	Sewing machine repairing	6	4,170	500	1,000	970	1,700	6	1	125	2	1,000
63	Ship and boat building, wooden	6	146,946	24,750	2,600	31,820	87,776	4	3	4,300	293	101,526
64	Sugar and molasses, refining	59	4,402	202	294	3,833	73	66	-----	-----	24	3,655
65	Thosmithing, coppersmithing, and sheet-iron working.	37	185,781	18,800	21,779	24,630	118,572	41	12	14,710	150	59,795
66	Tobacco, cigars and cigarettes	26	116,145	4,005	6,775	3,424	101,941	29	18	13,530	186	88,395
67	Trunks and valises	3	2,850	-----	-----	700	2,150	4	-----	-----	14	4,500
68	Turpentine and rosin	152	1,176,391	525,973	111,920	161,773	376,718	236	162	67,062	3,716	780,578
69	Typewriter repairing	3	385	-----	-----	100	285	3	-----	-----	3	950
70	Vinegar and cider	3	4,951	-----	-----	1,075	3,876	4	2	1,500	5	1,860
71	Watch, clock, and jewelry repairing	92	76,026	4,250	6,560	28,126	37,090	103	1	300	57	37,357
72	Wood, turned and carved	8	78,570	9,000	15,150	23,050	31,370	7	17	12,145	234	60,570
73	Woolen goods	11	97,759	2,175	14,795	31,723	49,066	13	2	1,820	75	10,458
74	All other industries ²	52	1,793,594	195,775	472,449	493,550	631,820	40	109	101,578	1,502	504,039

¹ Does not include many ginneries 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 ginneries in operation, reference should be made to the special report on cotton ginning.

² Embodies agricultural implements, 1; baking and yeast powders, 2; baskets, and rattan and willow ware, 1; bookbinding and blank book making, 1; boot and shoe uppers, 1; boots and shoes, factory product, 1; bottling, 1; boxes, cigar, 1; boxes, wooden packing, 1; brass castings and brass finishing, 2; bridges, 1; bronze castings, 1; carpets and rugs, other than rag, 1; cars and general shop construction and repairs by street railroad companies, 1; cars, steam railroad, not including operations of railroad companies, 2; coffins, burial cases, and undertakers' goods, 1; dyeing and finishing textiles, 1; explosives, 2; foundry supplies, 2; furnishing

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.										
992	\$239,852			130	\$16,851	\$38,046	\$6,464	\$2,718	\$10,844	\$18,025	\$142,982	\$32,483	\$110,449	\$657,794	7
36	10,076	1	\$150	7	565	1,404	1,000	165	229	10	26,406	26,399		67,270	8
741	250,615			1	60	28,246	2,778	1,412	4,781	19,325	455,078	453,934	1,094	939,142	9
60	13,180					1,866		85	1,581	200	25,188	24,035	1,148	55,326	10
394	126,609			14	2,038	40,928	6,500	2,876	31,177	375	230,397	226,186	4,211	556,327	11
4,019	1,939,170	11	1,861			86,045		12,276	78,769		2,032,166	1,996,738	35,428	4,172,192	12
467	83,042					3,294	1,030	108	1,271	885	27,838	27,838		132,376	13
8	1,217	1	60			175		108	67		8,084	7,418	616	12,960	14
168	80,232	68	18,780	8	192	22,450	15,327	1,968	4,865	290	171,131	169,448	1,683	404,213	15
16	6,265	105	39,281	10	1,000	5,593	3,332	589	1,672		162,424	151,371	1,053	262,454	16
		106	22,223			2,891	2,127	85	679		14,918	14,691	227	66,485	17
1,558	527,737			34	7,865	180,290		16,764	180,854	32,672	2,673,568	2,667,328	6,240	3,726,438	18
82	16,864	33	8,676	30	1,752	17,311	8,278	1,182	7,851		137,264	133,988	3,276	255,486	19
89	26,330					6,981	1,155	376	5,400	50	16,155	15,916	240	69,000	20
89	25,771	105	13,525	88	8,347	14,654	775	1,749	12,130		166,146	160,688	5,557	253,560	21
252	60,640			5	400	27,526	1,026	6,586	19,914		2,123,094	2,115,340	7,724	2,316,248	22
1,509	193,658			9	475	42,560	5,231	17,430	19,829	70	291,729	220,094	71,635	1,218,283	23
3,152	789,225	2,743	468,244	2,437	229,757	511,296		42,809	468,487		4,825,981	4,683,984	141,987	8,163,136	24
7	1,174					3,635	2,900	457	278		3,780	3,687	93	31,605	25
31	11,032	8	1,292	2	130	5,080	3,242	271	1,667		8,234	7,472	812	46,875	26
41	19,220			8	265	7,900	3,695	275	2,930	1,000	71,695	70,740	955	113,692	27
489	94,905					92,704	900	22,924	68,880		1,387,345	1,366,831	20,554	2,068,162	28
539	92,708			1	150	84,654	9,783	9,162	14,765	944	2,787,634	2,759,436	28,198	3,810,757	29
3,427	1,323,471			84	6,095	298,553	13,356	22,178	218,160	44,859	2,765,921	2,614,886	141,555	5,482,441	30
9	1,760	4	400	3	220	135		45	60	30	3,418	3,295	123	7,947	31
18	8,670					2,246	1,670	184	292	100	9,551	9,069	482	32,264	32
114	34,825			9	1,100	3,790	25	431	3,334		46,142	45,182	960	107,185	33
75	31,611					54,396		11,939	42,457		51,010	49,233	1,777	232,802	34
160	53,106					81,352	3,799	4,239	23,314		50,554	23,669	26,885	242,111	35
7,201	2,449,705			37	4,696	896,126	1,075	68,344	826,707		10,062,094	5,421,083	4,641,011	17,392,483	36
165	71,440					44,107		1,865	42,107	75	672,017	658,959	13,058	1,005,358	37
345	88,641	6	685	5	631	9,214	2,315	788	5,535	581	58,217	58,736	19,431	230,684	38
15	5,080					116,090	40	107	115,783	160	25,262	22,862	2,400	152,753	39
214	73,657	5	1,500			150,039		6,342	143,697		134,653	110,927	23,726	431,640	40
17	9,230					2,533	1,727	82	724		3,973	3,782	191	24,450	41
8	3,775					2,527	2,155	98	274		12,151	12,122	29	23,128	42
8,831	2,206,997	67	11,757	355	46,264	277,621	21,921	59,093	196,607		6,646,124	6,644,907	1,217	12,867,551	43
423	139,341	3	700	6	618	15,080	3,960	2,402	8,673	645	452,649	446,643	6,006	763,125	44
304	96,218			1	113	10,164	1,625	1,155	7,384		69,792	63,225	6,567	257,022	45
474	192,082			7	505	18,134	505	874	3,105	13,650	447,979	447,929	50	771,489	46
25	10,500	11	3,540			4,674	2,644	306	1,724		72,897	72,332	565	109,440	47
10	4,864	234	68,005	2	205	31,333	18,688	1,744	10,826	75	290,962	290,091	871	539,878	48
76	28,240			8	250	12,516	3,583	2,809	6,034	75	42,440	41,291	1,149	144,069	49
54	20,153					1,970	1,946	296	658	70	47,907	47,822	85	98,295	50
757	196,261	2	489			194,450	1,250	15,477	171,705	6,018	2,103,768	2,038,122	70,646	2,985,390	51
57	19,874					1,228	978	115	135		21,856	21,813	43	59,890	52
11	5,840	6	798	2	125	8,614	1,187	117	7,810		26,651	26,599	52	58,400	53
32	14,386	13	3,779	1	144	12,950	7,503	757	4,285	400	37,619	37,333	286	124,492	54
268	111,027			2	217	15,803	9,014	2,220	4,569		230,410	229,125	1,285	480,917	55
209	61,166			18	2,501	4,812	770	887	3,105	50	69,523	31,035	28,488	225,335	56
215	90,949	32	9,100	9	725	17,298	9,473	1,743	6,039	43	114,576	110,446	4,180	318,767	57
459	229,549	21	5,368	63	6,603	84,881	16,498	4,313	51,237	12,833	168,077	149,042	9,635	841,036	58
3	360					29		6	23		3,615	3,515	100	4,816	59
85	35,390					2,663	1,315	765	583		177,740	177,321	416	255,240	60
32	12,821			3	285	6,856	4,097	602	2,157		63,102	62,746	356	101,000	61
2	1,000					859	688	92	79		2,745	2,720	25	6,678	62
293	101,526					6,022	2,350	1,538	2,134		76,767	76,482	285	240,242	63
22	3,530			2	125	91	3	38	50		32,801	30,141	2,600	44,745	64
142	58,872	2	400	6	523	13,602	3,622	1,448	6,532	2,000	230,843	228,888	1,955	421,419	65
171	86,669	5	1,030	10	696	36,049	7,130	1,087	27,882		94,227	94,132	95	278,014	66
14	4,500					1,561	1,358	41	165		6,925	6,855	70	22,950	67
3,643	773,717	29	2,877	44	3,979	59,214	8,015	8,157	24,616	18,426	650,681	639,169	11,512	2,033,705	68
2	900			1	50	520	240	30	250		570	570	10	2,550	69
5	1,860					2,297	700	72	1,525		11,670	11,570		26,175	70
56	37,257			1	100	14,755	11,344	1,162	2,249		25,927	25,435	492	135,513	71
228	59,809	1	133	5	628	2,176	323	1,718	1,718		64,719	64,119	600	173,484	72
21	3,863	51	6,395	8	200	8,091	113	231	7,647	100	43,078	42,138	940	67,293	73
1,325	484,399	131	16,590	46	3,050	108,351	9,020	5,458	88,346	5,527	1,564,269	1,525,405	38,864	2,580,413	74

goods, men's, 1; glass, cutting, staining, and ornamenting, 1; hairwork, 1; hand stamps, 1; hosiery and knit goods, 1; house furnishing goods, not elsewhere specified, 1; ironwork, architectural and ornamental, 1; knollin and other earth grinding, 1; liquors, vinous, 2; optical goods, 2; oysters, canning and preserving, 1; paper hanging, 2; paving and paving materials, 2; plastering and stuccowork, 1; pumps, not including steam pumps, 1; shirts, 1; slaughtering and meat packing, wholesale, 1; slaughtering, wholesale, not including meat packing, 1; soda water apparatus, 1; tobacco, chewing, smoking, and snuff, 1; upholstering materials, 1; washing machines and clothes wringers, 1; woodenware, not elsewhere specified, 2.

TABLE 8.—MANUFACTURES IN CITIES.

BIRMINGHAM.

	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	283	\$7,434,054	\$579,430	\$1,627,434	\$2,406,453	\$2,861,337	284	359	\$405,424	6,075	\$2,537,221
2	Bicycle and tricycle repairing	6	19,650			4,000	15,650	7			16	6,590
3	Blacksmithing and wheelwrighting	18	6,320			2,310	4,010	23			35	14,599
4	Boots and shoes, custom work and repairing	31	6,175			2,475	3,700	34			29	10,490
5	Bread and other bakery products	8	67,155	8,000	9,000	25,700	24,455	7	27	16,760	87	26,552
6	Brick and tile	3	16,650		3,000	2,150	11,500	4			76	20,791
7	Carpentering	13	13,500			2,050	11,450	15	1	3,600	115	59,550
8	Carriages and wagons	6	22,900		400	9,400	13,100	7			54	22,700
9	Cars and general shop construction and repairs by steam railroad companies	3	403,653	70,000	90,300	85,700	157,653		22	18,862	1,195	609,411
10	Clothing, men's, custom work and repairing	12	64,750			3,100	61,650	18	1	1,000	80	42,432
11	Clothing, women's, dressmaking	7	2,925			1,825	1,100	7	1	1,200	64	15,828
12	Confectionery	4	5,700			2,000	3,700	4	2	1,020	10	3,440
13	Dyeing and cleaning	7	2,865			1,600	1,265	7	1	720	18	4,735
14	Electrical construction and repairs	3	21,450			4,050	17,400	2	6	3,970	36	16,655
15	Flouring and grist mill products	3	46,250	1,000	2,000	16,500	26,750	1	7	7,420	14	4,530
16	Foundry and machine shop products	16	1,314,620	79,000	110,228	310,191	815,201	11	65	82,449	873	339,366
17	Furniture, cabinetmaking, repairing, and upholstering	4	1,550			625	925	3			5	2,050
18	Iron and steel	4	2,602,291	160,000	886,000	552,658	1,003,633		37	77,691	2,040	750,805
19	Looking-glass and picture frames	3	3,250			350	2,900	5			4	2,200
20	Lumber, planing mill products, including sash, doors, and blinds	4	48,710		3,150	24,500	21,060	4	6	5,130	90	35,396
21	Mattresses and spring beds	4	39,974			7,622	32,352	4	8	4,060	25	7,340
22	Millinery, custom work	7	35,025	2,000	3,000	1,225	28,800	11	3	4,600	68	24,600
23	Mineral and soda waters	3	13,500			8,000	5,500	3	3	2,320	23	8,400
24	Patent medicines and compounds	4	12,110			1,585	10,525	6	9	3,335	11	4,800
25	Photography	8	10,225		400	6,300	3,525	8			13	5,950
26	Plumbing, and gas and steam fitting	9	28,800			2,750	26,050	10	8	7,100	77	33,700
27	Printing and publishing, book and job	5	87,643			57,416	30,227	3	14	14,544	99	52,685
28	Printing and publishing, newspapers and periodicals	13	145,050	100		102,100	42,850	8	50	51,730	104	62,000
29	Saddlery and harness	6	9,523			1,816	7,707	6	1	864	6	2,547
30	Tinsmithing, coppersmithing, and sheet-iron working	4	20,224	4,200	1,462	2,646	20,916	3	4	5,500	35	14,949
31	Tobacco, cigars and cigarettes	5	2,542	500	150	182	1,710	6			11	4,992
32	Watch, clock, and jewelry repairing	13	11,725			8,350	3,375	20			13	9,490
33	All other industries ¹	42	2,338,949	254,630	418,344	1,215,277	460,698	37	83	91,399	1,350	307,058

¹ Embraces baking and yeast powders, 1; brass castings and brass finishing, 2; bronze castings, 1; brooms and brushes, 1; clothing, men's, factory product, 2; coke, 2; cotton, compressing, 2; cotton goods, 2; fertilizers, 1; fruits and vegetables, canning and preserving, 1; furniture, factory product, 1; gas, illuminating and heating, 1; glass, cutting, staining, and ornamenting, 1; ice, artificial, 2; ironwork, architectural and ornamental, 1; liquors, malt, 2; lumber and timber

MOBILE.

1	All industries	222	\$3,294,238	\$318,100	\$539,886	\$1,144,478	\$1,291,774	238	203	\$173,810	2,827	\$1,189,605
2	Awnings, tents, and sails	3	4,450			1,250	3,200	3			9	6,625
3	Bicycle and tricycle repairing	4	4,985			285	4,700	5			4	719
4	Blacksmithing and wheelwrighting	10	18,375	3,550	6,350	3,875	4,600	12	1	75	23	10,404
5	Boots and shoes, custom work and repairing	13	6,635	2,500	1,500	1,955	680	13			3	1,140
6	Bread and other bakery products	17	61,810	18,900	20,800	9,895	12,215	18	8	3,050	75	29,253
7	Carpentering	3	18,100			2,800	15,300	4	1	900	80	33,230
8	Carriages and wagons	5	5,550	500	200	1,600	3,250	4	1	500	21	8,906
9	Clothing, men's, custom work and repairing	10	17,760			1,410	16,350	11	1	250	24	11,150
10	Clothing, men's, factory product	3	24,600			6,100	18,500	5	7	4,400	24	6,750
11	Confectionery	5	10,250	2,500	1,075	1,175	5,500	6	5	1,930	9	2,750
12	Cooperage	3	31,900		400	20,000	11,500	2	1	900	31	14,200
13	Flouring and grist mill products	3	62,000	2,000	6,000	12,000	42,000	3	7	6,140	23	8,500
14	Foundry and machine shop products	7	185,300	6,600	33,000	70,900	74,800	10	11	10,580	252	120,830
15	Furniture, cabinetmaking, repairing, and upholstering	3	2,900			200	2,700	3			3	600
16	Lock and gun smithing	5	7,075	150	350	725	5,850	4			8	1,230
17	Looking-glass and picture frames	3	2,250			650	1,600	3	1	240		
18	Lumber and timber products	4	342,650	141,550	15,500	91,100	94,500	3	16	21,560	321	113,400
19	Masonry, brick and stone	5	228,800		50	22,450	206,300	9	9	5,100	86	39,850
20	Millinery, custom work	5	28,475	3,000	3,000	800	22,175	5	7	2,000	17	4,600
21	Mineral and soda waters	3	18,900			5,100	8,800	3	2	2,220	14	9,232
22	Photography	4	14,200		150	9,000	5,050	4	1	312	10	5,054
23	Plumbing, and gas and steam fitting	16	55,435	2,000	1,000	2,135	50,250	20	9	4,060	86	42,135
24	Printing and publishing, book and job	9	54,205			38,855	20,350	15			66	24,943
25	Printing and publishing, newspapers and periodicals	6	122,150	5,000	20,000	47,000	50,150	10	15	17,044	74	43,532
26	Ship and boat building, wooden	4	146,026	24,000	2,500	31,750	87,776	2	3	4,300	291	100,816

BY SPECIFIED INDUSTRIES: 1900.

BIRMINGHAM.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average num- ber.	Wages.	Average num- ber.	Wages.	Average num- ber.	Wages.										
5,980	\$2,440,998	484	\$122,075	211	\$23,248	\$538,368	\$82,801	\$40,630	\$380,920	\$29,017	\$6,045,552	\$1,838,413	\$1,152,139	\$12,581,066	1
16	6,590					2,320	1,630	80	610		8,834	8,685	199	26,375	2
34	14,510			1	89	3,297	2,266	189	842		11,919	11,051	868	52,852	3
28	10,290	1	200			3,422	3,292	62	65		18,830	18,760	70	52,170	4
70	23,352	17	3,200			13,142	4,540	1,058	2,008	5,586	144,614	140,418	4,196	252,658	5
61	18,816			14	1,975	665	595	40	30		6,973	2,278	4,635	41,200	6
115	59,550					11,512	1,510	217	785	9,000	72,763	72,767	6	165,775	7
54	22,700					8,825	2,440	275	1,110		27,850	27,200	650	69,750	8
1,187	608,051	8	1,800			5,952		3,028	2,921		488,481	477,080	6,401	1,117,706	9
60	85,702	19	6,650	1	80	9,500	7,448	640	1,412		77,890	77,220	170	184,100	10
		64	15,828			2,802	1,604	73	625		10,175	10,075	100	47,470	11
5	2,240	5	1,200			2,747	642	65	2,040		13,489	13,323	166	37,050	12
14	4,150	4	585			2,369	1,822	102	445		2,527	2,149	378	17,448	13
34	16,480			2	175	6,950	2,980	270	2,700	1,000	60,115	59,225	890	92,900	14
14	4,530					5,318	3,271	216	1,831		256,763	253,967	2,796	287,342	15
873	339,806					76,093	8,700	4,429	62,964		701,043	676,862	24,181	1,418,236	16
5	2,050					361	260	66	35		1,040	1,040		5,800	17
2,032	750,570			8	825	182,718	1,075	18,860	117,783		2,568,172	1,500,368	1,067,804	5,461,358	18
4	2,200					705	660	20	25		5,315	5,300	15	12,600	19
90	35,306					2,806	1,855	535	916		76,568	75,590	978	140,230	20
17	5,300	8	2,040			3,834	2,094	206	1,534		53,842	53,427	415	78,120	21
5	3,000	63	21,600			4,171	3,780	286	155		60,675	60,350	325	123,600	22
23	8,400	2				1,342	480	325	537		16,836	16,251	585	56,159	23
9	4,500		300			3,939	522	117	3,800		11,586	11,534	52	32,500	24
12	5,550	1	400			3,019	2,598	156	65	200	7,055	6,950	105	23,237	25
77	33,700					4,416	2,895	681	840		61,523	61,025	498	144,700	26
83	48,257	16	4,428			6,094	2,740	525	2,829		63,410	61,605	1,805	148,699	27
97	59,740	4	1,910	8	350	48,837	5,421	876	31,259	11,281	61,425	58,953	2,407	286,420	28
5	2,434			1	113	2,027	987	25	1,015		6,581	6,551	30	14,670	29
34	14,907			1	42	4,797	755	272	1,770	2,000	54,337	53,827	1,010	103,100	30
9	4,800			2	192	5,287	1,982	87	3,218		10,290	10,280	10	33,530	31
12	9,300			1	100	3,251	2,649	195	407		8,196	8,087	109	34,245	32
901	283,977	272	63,274	177	19,807	156,350	9,858	11,654	134,838		1,081,935	1,051,770	30,165	2,019,566	33

products, 1; marble and stone work, 1; masonry, brick and stone, 1; monuments and tombstones, 2; oil, cottonseed and cake, 2; painting, house, sign, etc., 2; paper hanging, 1; roofing and roofing materials, 2; tobacco, chewing, smoking, and snuff, 1; trunks and valises, 2; typewriter repairing, 2; vinegar and cider, 2.

MOBILE.

2,086	\$1,114,037	83	\$20,030	58	\$5,538	\$272,987	\$56,866	\$22,336	\$180,395	\$13,890	\$2,046,400	\$1,986,002	\$60,398	\$1,451,062	1
9	6,625					547	320	15	212		21,110	21,110		87,500	2
2	500			2	219	943	876	47	20		1,675	1,675		5,800	3
23	10,404					1,584	1,164	210	210		13,603	13,177	426	33,240	4
3	1,140					1,080	920	96	64		4,195	4,195		12,307	5
75	29,253					3,956	3,021	538	397		93,261	90,139	3,122	162,400	6
80	33,280					1,030	480	100	450		39,800	39,050	250	103,000	7
21	8,906					1,466	1,220	53	193		12,236	12,043	193	35,270	8
21	10,150	3	1,000			4,645	3,276	253	1,016		17,360	17,360		42,150	9
9	2,750	24	6,750			2,428	2,132	146	150		33,600	33,400	200	62,800	10
						2,455	1,810	140	605		11,935	11,651	284	22,140	11
81	14,200					3,848	1,130	343	2,375		13,040	12,940	100	46,000	12
23	8,500					4,505	8,000	455	1,050		403,996	399,696	4,300	454,144	13
249	120,570			3	260	8,127	2,838	1,155	4,134		103,100	98,650	9,450	304,487	14
3	600					698	640	88	20		1,775	1,775		5,850	15
3	1,230					879	684	37	158		2,070	2,070		6,100	16
321	113,400					870	785	25	50		3,140	3,140		7,450	17
86	39,850					13,087	4,620	2,610	5,857		299,672	299,672		566,800	18
		17	4,660			15,737	405	107	1,575	13,850	104,339	104,339		187,461	19
14	9,282					2,375	1,540	165	670		13,750	13,750		33,200	20
						1,975	965	196	814		7,734	7,566	168	29,000	21
7	4,182	2	728	1	144	3,252	2,050	145	1,057		6,815	6,315		17,750	22
84	41,968			2	217	4,932	2,905	755	1,272		95,581	95,132	449	173,174	23
59	22,698	4	1,960	3	290	4,941	3,215	492	1,294		20,949	19,725	1,224	71,730	24
70	43,046	1	240	8	276	9,766	1,240	537	7,749	240	17,341	14,634	2,707	127,930	25
291	100,816					6,013	2,350	1,529	2,134		75,218	74,943	275	236,142	26

TABLE 8.—MANUFACTURES IN CITIES

MOBILE—Continued.

	MANUFACTURING AND MECHANICAL INDUSTRIES, AND CITIES AND TOWNS.	Num-ber of estab-lish-ments.	CAPITAL.					Propri-itors 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.		Num-ber.	Salaries.	Total.	
											Aver-age num-ber.	Wages.
27	Tinsmithing, coppersmithing, and sheet-iron working.	8	\$61,960	\$4,100	\$8,117	\$8,160	\$46,583	8	8	\$2,910	44	\$16,856
28	Tobacco, cigars and cigarettes.	11	92,050	8,500	6,600	2,050	79,900	11	16	12,330	145	70,640
29	Watch, clock, and jewelry repairing.	12	7,980	500	1,000	8,325	3,155	12			14	10,580
30	All other industries ¹	88	1,662,467	97,750	417,294	753,383	894,040	30	78	72,940	1,075	401,435

¹ Embraces baking and yeast powders, 1; bookbinding and blank book making, 1; boot and shoe uppers, 1; boxes, cigar, 1; brick and tile, 1; brooms and brushes, 2; cars and general shop construction and repairs by steam railroad companies, 1; cotton goods, 1; dyeing and cleaning, 2; electrical construction and repairs, 1; fertilizers, 1; gas, illuminating and heating, 2; hairwork, 1; hand stamps, 1; ice, artificial, 2; liquors, malt, 1; lumber, planing mill products, including

MONTGOMERY.

1	All industries	163	\$2,930,782	\$243,950	\$179,578	\$1,006,895	\$1,200,359	196	204	\$163,537	2,359	\$802,188
2	Blacksmithing and wheelwrighting	9	3,487	50	50	1,220	2,167	13	1	240	23	7,787
3	Boots and shoes, custom work and repairing.	12	1,901			1,806	595	13			10	2,572
4	Bread and other bakery products	5	92,807	16,000	20,000	29,694	21,113	5	14	7,628	72	20,556
5	Carpentering	6	36,060	4,350	8,700	1,810	26,200	9	2	990	108	38,760
6	Carriages and wagons	3	36,456	5,000	2,500	2,529	26,427	3	7	5,480	47	15,400
7	Cars and general shop construction and repairs by steam railroad companies.	8	196,989	31,250	57,110	33,190	75,439		9	8,229	327	146,783
8	Clothing, men's, custom work and repairing.	9	27,150			2,200	24,950	12	2	2,120	48	21,000
9	Clothing, women's, dressmaking	4	2,410			760	1,650	4			30	4,070
10	Confectionery	6	98,050			19,350	78,700	11	27	10,515	81	12,721
11	Dyeing and cleaning	8	3,125			1,030	2,015	4	3	1,536	9	2,682
12	Foundry and machine shop products.	5	188,878	53,000	25,500	56,300	54,078	7	8	7,360	87	34,500
13	Furniture, cabinetmaking, repairing, and upholstering.	3	925			275	650	3			3	1,240
14	Ice, artificial	3	40,700	800	6,200	28,000	5,700	4	2	1,200	8	3,945
15	Lumber, planing mill products, including sash, doors, and blinds.	3	21,000	8,000	1,500	11,500	5,000	4	2	1,750	31	12,220
16	Masonry, brick and stone	3	45,157			6,500	38,657	6	3	2,700	247	118,440
17	Millinery, custom work	9	48,765			465	48,300	13	23	13,940	53	19,080
18	Painting, house, sign, etc.	3	1,350			450	900	3			5	3,025
19	Photography	4	7,190		40	4,600	2,550	4			3	1,065
20	Plumbing, and gas and steam fitting	7	11,750			1,250	10,500	10	1	900	43	13,876
21	Printing and publishing, book and job.	6	39,401			29,900	9,501	9	2	2,400	56	14,287
22	Printing and publishing, newspapers and periodicals.	3	56,700	2,500	2,000	37,700	14,500	1	5	5,820	57	33,292
23	Saddlery and harness	4	2,632			1,115	1,517	5	1	120	2	357
24	Tinsmithing, coppersmithing, and sheet-iron working.	4	5,595	1,000	1,500	1,375	1,720	6			8	3,233
25	Watch, clock, and jewelry repairing	10	5,650			2,540	3,110	11			8	9,100
26	All other industries ¹	36	1,956,654	127,000	353,478	731,786	744,390	36	92	90,609	993	257,147

¹ Embraces awnings, tents, and sails, 1; bicycle and tricycle repairing, 2; bottling, 1; brick and tile, 1; brooms and brushes, 1; cars and general shop construction and repairs by street railroad companies, 1; clothing, men's, factory product, 2; cordage and twine, 1; cotton, compressing, 1; cotton, ginning, 1; cotton goods, 2; electrical construction and repairs, 2; fertilizers, 2; gas, illuminating and heating, 1; liquors, distilled, 1; liquors, malt, 1; lock and gun smithing, 1; looking-glass

TABLE 9.—MANUFACTURES IN CITIES AND

1	Total for cities and towns	555	\$15,567,522	\$1,263,201	\$4,138,548	\$4,898,106	\$5,267,667	559	532	\$488,013	10,820	\$3,555,503
2	Anniston	59	2,396,273	146,540	451,830	929,320	868,583	52	64	64,566	1,997	649,983
3	Bessemer	42	8,620,082	519,287	1,166,584	833,260	1,101,001	33	49	57,639	1,669	605,741
4	Decatur	24	229,807	83,500	23,875	82,645	89,787	25	10	7,052	198	54,650
5	Florence	33	871,373	60,200	219,326	178,309	413,538	30	52	39,937	595	177,813
6	Port Payne	17	85,405	1,195	11,010	19,190	54,010	21	6	4,600	88	87,982
7	Gadsden	35	1,184,895	155,575	395,260	222,586	411,384	47	25	25,078	520	165,475
8	Huntsville	79	1,877,781	96,237	283,180	835,050	668,314	85	53	51,308	1,203	283,575
9	New Decatur	30	1,348,871	45,250	316,725	499,810	487,086	25	56	51,784	1,521	700,196
10	Opelika	30	143,275	8,550	16,800	52,955	69,870	34	22	12,490	214	48,023
11	Phoenix	6	33,595	3,300	8,675	13,910	7,710	5	2	800	16	4,543
12	Selma	98	1,296,308	49,605	229,748	568,638	448,317	98	133	106,400	1,343	392,016
13	Sheffield	21	1,220,258	89,600	569,749	210,746	356,163	25	25	34,300	678	246,009
14	Talladega	22	848,414	24,487	333,761	233,463	206,708	13	20	14,981	348	77,311
15	Tuscaloosa	43	353,925	15,450	52,560	207,569	78,346	44	13	16,682	407	101,141
16	Tuscumbia	16	46,350	14,325	9,525	10,650	11,850	22	2	396	28	8,040

BY SPECIFIED INDUSTRIES: 1900—Continued.

MOBILE—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.										
43	\$16,786	-----	-----	1	\$120	\$2,707	\$984	\$479	\$1,244	-----	\$43,995	\$43,392	\$603	\$99,010	27
144	70,490	-----	-----	1	150	24,108	3,760	726	19,622	-----	66,475	66,475	-----	200,000	28
14	10,580	-----	-----			1,877	1,645	187	45	-----	2,680	2,680	-----	25,100	29
1,001	892,881	32	\$4,692	42	3,862	143,256	6,381	10,757	126,118	-----	511,955	475,808	36,647	1,848,115	30

sash, doors, and blinds, 2; marble and stone work, 2; mattresses and spring beds, 1; oil, cottonseed and cake, 1; painting, house, sign, etc., 2; roofing and roofing materials, 1; saddlery and harness, 2; sewing machine repairing, 2; shirts, 1; trunks and valises, 1; upholstering materials, 1; vinegar and cider, 1; woodenware, not elsewhere specified, 1.

MONTGOMERY.

1,856	\$711,533	360	\$74,887	143	\$15,768	\$342,890	\$36,577	\$28,038	\$276,712	\$1,563	\$2,902,054	\$2,840,853	\$61,701	\$5,085,190	1
23	7,787					1,702	1,616	2	84		6,703	6,443	260	27,585	2
10	2,572					1,547	1,419	17	111		4,045	3,932	113	14,287	3
52	16,922	12	2,554	8	1,080	5,493	2,640	990	1,863		89,897	87,291	2,606	165,820	4
108	88,760					2,099		179	920	1,000	61,470	61,817	153	183,550	5
47	15,400					3,388	1,500	688	1,250		23,551	22,921	630	59,810	6
325	146,433	2	850			5,879		2,065	2,914		189,241	187,479	1,762	850,132	7
43	19,490	5	1,510			3,665	1,710	545	1,410		23,226	22,599	627	67,877	8
		30	4,070			438	406		32		4,103	4,056	47	18,165	9
50	9,927	13	1,750	18	1,014	10,843	5,286	747	4,810		65,543	63,880	1,663	137,311	10
7	2,344	1	260	1	78	1,346	550		786		3,850	3,735	85	13,059	11
87	34,500					6,554	780	1,664	4,110		76,837	71,847	4,990	167,340	12
8	1,240					453	410		43		1,400	1,400		3,925	13
8	3,945					1,190	180	165	845		2,020	1,100	920	20,325	14
31	12,220					1,205	276	150	734	45	10,204	9,670	525	86,500	15
247	118,440					1,582		602	980		291,050	291,000	50	454,500	16
2	700	51	13,380			12,836	5,196	482	7,158		83,587	83,500	87	153,825	17
5	3,025					425	390		35		758	740	18	5,750	18
3	1,065					1,675	924	46	705		4,348	4,301	47	16,800	19
43	13,876					3,202	1,830	292	1,080		25,009	24,813	196	61,650	20
39	11,336	12	2,612	5	399	3,258	1,720	324	1,171	43	16,066	15,399	667	48,920	21
56	38,032	1	260			4,230	1,475	435	2,320		15,624	13,952	1,632	83,060	22
1	285			1	72	635	560		75		2,829	2,797	32	8,049	23
5	2,958			3	825	590	450	80	50		3,716	3,665	51	12,473	24
8	9,100					2,688	2,034	156	498		3,087	2,990	97	20,400	25
653	201,176	233	43,141	107	12,880	266,027	5,225	17,609	242,718	475	1,893,890	1,849,447	44,443	2,959,039	26

and picture frames, 2; marble and stone work, 2; mineral and soda waters, 2; oil, cottonseed and cake, 2; optical goods, 1; paving and paving materials, 1; sewing machine repairing, 1; slaughtering, wholesale, not including meat packing, 1; tobacco, cigars and cigarettes, 1; typewriter repairing, 1.

TOWNS UNDER 20,000 IN POPULATION: 1900.

9,179	\$3,325,915	933	\$159,934	708	\$69,654	\$1,059,783	\$50,079	\$33,599	\$908,975	\$17,130	\$12,770,975	\$11,181,402	\$1,589,573	\$20,204,633	1
1,593	591,531	242	86,803	162	21,599	134,530	6,168	13,093	109,779	5,490	1,414,873	1,342,384	72,489	2,594,758	2
1,652	602,488	4	960	13	2,203	317,590	9,343	19,431	288,816		2,206,651	1,491,059	715,595	3,561,549	3
189	52,792	4	1,530	5	323	7,574	952	1,452	5,070	100	108,799	106,049	2,750	237,265	4
557	173,177	1	306	37	4,336	50,370	1,212	4,241	44,917		693,432	588,344	105,088	1,037,471	5
84	87,402	4	580			4,206	374	413	3,819	100	71,652	66,796	4,856	155,916	6
503	162,008	9	2,685	8	782	24,180	2,257	2,617	19,108	200	463,738	387,721	76,017	848,751	7
684	218,233	232	53,079	237	17,213	152,637	7,015	11,092	131,558	2,972	1,041,863	1,014,028	27,840	1,880,461	8
1,510	698,796	4	844	7	556	81,286	1,649	5,891	72,946	800	3,733,549	3,697,355	36,194	4,876,919	9
206	47,388	6	435	2	200	10,943	2,642	3,269	5,032		206,885	202,564	4,321	335,676	10
16	4,548					5,361	93	225	5,043		7,644	4,789	2,855	22,350	11
981	336,222	248	43,983	114	11,811	93,034	13,079	11,955	61,032	6,968	1,163,936	1,116,144	47,792	2,015,777	12
663	242,628	3	551	12	2,330	123,390	777	5,634	116,979		874,592	498,366	376,226	1,461,418	13
229	65,207	54	7,050	60	5,054	25,979	1,197	1,951	22,831		427,544	320,995	106,549	583,902	14
286	90,619	71	10,966	50	2,556	26,918	2,627	1,854	21,937	500	304,529	294,546	9,984	511,683	15
26	7,776	1	168	1	96	1,785	694	481	610		51,280	50,263	1,017	80,787	16

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 118.

WASHINGTON, D. C.

December 10, 1901.

MANUFACTURES.

GEORGIA.

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 Georgia for the census year 1900, taken in accordance with the provisions of section 7 of the act of March 8, 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 17 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 the manufacturing establishments within the corporate limits of such places.

Four cities in Georgia contain a population exceeding 20,000 each: Atlanta, Augusta, Macon, and Savannah. The manufacturing statistics of these 4 cities are presented by specified industries and in comparison with the returns of the Eleventh Census.

Mr. T. H. Martin, secretary of the Chamber of Com-

merce of Atlanta, rendered valuable assistance in the preparation of the text for the accompanying report.

The statistics of Georgia are presented in 9 tables: Table 1 showing comparative figures at the several censuses; Table 2 showing all the industries divided between the hand trades and the manufactures proper, and also the statistics of 1 governmental establishment, 1 eleemosynary institution, 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 9 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the cities of Atlanta, Augusta, Macon, and Savannah 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 Atlanta, Augusta, Macon, and Savannah 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 Georgia 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 Georgia 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 considerable 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 \$89,789,656 invested in manufactures and mechanical industries in the 7,504 establishments reporting for the state of Georgia. 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 of Georgia. The value of the products is returned at \$106,654,527, to produce which involved an outlay of \$3,354,946 for salaries of officials, clerks, etc., \$20,290,071 for wages, \$5,321,380 for miscellaneous expenses, including rent, taxes, etc., and \$58,232,202 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 Georgia, \$106,654,527, 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 values 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 Georgia, the gross value of products for 1900 was \$106,654,527. The value of materials purchased in a partly manufactured form was \$28,499,916. The difference, \$78,154,611, 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.

GEORGIA.

Table 1 shows the manufacturing and mechanical industries of the state of Georgia 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 manufac-

turing 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	7,504	4,285	3,503	3,836	1,890	1,522	75.1	19.3	16.8	103.0	24.2
Capital	\$89,789,666	\$56,921,580	\$20,672,410	\$13,930,125	\$10,890,875	\$5,456,488	57.7	175.4	48.4	27.9	99.6
Salaries of officials, clerks, etc., number	4,203	24,085	(3)	(3)	(3)	(3)	2.9				
Salaries	\$1,851,946	\$2,688,200	(3)	(3)	(3)	(3)	24.8				
Wage-earners, average number	83,842	52,298	24,875	17,871	11,575	8,368	60.3	110.2	39.2	54.4	38.3
Total wages	\$20,290,071	\$14,623,096	\$5,266,152	\$4,844,508	\$2,925,148	\$1,709,664	38.7	177.7	8.7	65.6	71.1
Men, 16 years and over	66,540	42,779	18,937	16,078	9,492	6,650	55.5	125.9	25.6	58.8	42.7
Wages	\$17,582,519	\$12,976,291	(3)	(3)	(3)	(3)	35.5				
Women, 16 years and over	10,929	5,998	3,610	1,498	2,083	1,718	82.2	65.7	141.6	128.1	21.2
Wages	\$2,015,852	\$1,285,806	(3)	(3)	(3)	(3)	55.2				
Children, under 16 years	6,378	3,521	2,310	1,295	(3)	(3)	81.0	51.8	79.1		
Wages	\$691,700	\$348,890	(3)	(3)	(3)	(3)	98.3				
Miscellaneous expenses	\$5,321,330	\$1,019,539	(3)	(3)	(3)	(3)	32.4				
Cost of materials used	\$58,232,202	\$35,774,480	\$24,143,930	\$18,553,781	\$9,886,532	\$3,401,917	62.8	48.2	29.9	86.1	193.8
Value of products, including custom work and repairing	\$106,654,527	\$68,917,020	\$36,440,948	\$31,196,115	\$16,925,564	\$7,082,075	54.8	89.1	16.8	84.3	139.0
Total population	2,216,331	1,837,353	1,542,180	1,184,109	1,057,236	906,185	20.6	19.1	30.2	12.0	16.7
Wage-earners engaged in manufactures	83,842	52,298	24,875	17,871	11,575	8,368	60.3	110.2	39.2	54.4	38.3
Per cent of total population	3.8	2.8	1.6	1.5	1.1	0.9					
Assessed value of real estate	\$134,336,134	\$225,054,915	\$139,988,941	\$143,948,216	\$179,801,441	\$121,619,739	93.0	60.8	12.8	139.9	47.8
Value of land and buildings invested in manufactures	\$24,283,038	\$17,106,773	(3)	(3)	(3)	(3)	41.9				
Per cent of assessed value	5.6	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 Report of the Comptroller-General of the State of Georgia for 1900, page 4.

⁶ Does not include value of rented property.

Although Georgia is an agricultural 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 906,185 to 2,216,331, or 144.6 per cent, but the average number of wage-earners employed in manufacturing establishments increased from 8,368 to 83,842, or 901.9 per cent, embracing, in 1900, 3.8 per cent of the entire population, compared with nine-tenths of 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 111,239, or 5 per cent of the total population of the state.

A distinct advance in manufactures has marked each decennial period—even that between the years 1860 and 1870—of the state's history. A great impetus was given to manufacturing by the cotton exposition held at Atlanta in 1881. It was the first exhibition of the kind in the Southern states, and the first in the country after the Centennial Exposition at Philadelphia, by which it seems to have been suggested. The increasing interest in manual training and technical education since 1887 has also con-

tributed to the growth of Georgia's manufactures. The Georgia Institute of Technology was opened to students in 1887. Its graduates are actively engaged in manufacturing of various kinds with marked success. It is noteworthy that the increase in value of products was greatest—\$37,737,507—during the decade ending with the census year 1900.

Table 1 shows that during the last decade the increase in percentage of women, and of children under 16 years of age, among wage-earners, was larger than that of men. In the absence of legislation regulating child labor, all the cotton manufacturers in the state have signed an agreement to exclude from the mills children under 10 years of age, and those under 12 who can not show a certificate of 4 months' attendance at school.

Table 2 divides the industries of the state between the hand trades and the manufactures proper. This table also gives the statistics for 1 governmental establishment, 1 eleemosynary institution, 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.	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	13,176	\$92,315,737	15,147	91,547	\$20,464,456	\$5,382,817	\$58,539,684	\$26,702,668	\$28,741,907	\$3,095,109	\$107,867,052
Hand trades ¹	1,681	1,713,164	1,888	8,822	1,817,016	243,539	2,778,299	2,950	2,703,392	71,957	5,822,990
Governmental establishment	1	125		1	510		29		24	6	569
Eleemosynary institution	1	1,200		1	150		2,415	2,400	15		2,800
Establishments with a product of less than \$500	5,670	2,524,756	6,319	7,703	173,695	61,487	305,038	63,086	241,952		1,209,156
All other establishments	5,873	88,076,492	6,990	80,020	18,973,955	5,077,791	55,453,903	26,634,232	25,796,524	3,023,147	100,881,537

¹ Includes bicycle and tricycle repairing, 58; blacksmithing and wheelwrighting, 621; boots and shoes, custom work and repairing, 169; carpentering, 87; clothing, men's, custom work and repairing, 73; clothing, women's, dressmaking, 89; dyeing and cleaning, 24; furniture, cabinetmaking, repairing, and upholstering, 42; lock and gun smithing, 19; masonry, brick and stone, 30; millinery, custom work, 131; painting, house, sign, etc., 47; paper hanging, 6; plumbing, and gas and steam fitting, 56; sewing machine repairing, 4; typewriter repairing, 3; watch, clock, and jewelry repairing, 123.

Of the 13,176 establishments of all classes, shown in this table, 7,801, or 55.4 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 \$7,032,146, or only 6.5 per cent of the total products of the state.

In addition to the 13,176 active establishments in the state during the census year, with a capital of \$92,315,737, shown in Table 2, there were 103 idle establishments, with a capital of \$1,117,076, divided as follows:

INDUSTRIES.	Number of idle establishments.	Capital.	INDUSTRIES.	Number of idle establishments.	Capital.
Brick and tile	7	\$5,907	Iron and steel	8	\$599,300
Chemicals	1	150,000	Kaolin and other earth grinding	1	29,000
Cotton ginning	40	26,782	Lumber and timber products	28	81,539
Fertilizers	1	82,500	Lumber, planing mill products, including sash, doors, and blinds	1	25,000
Flouring and grist mill products	7	7,965	Paving and paving materials	2	10,176
Foundry and machine shop products	1	44,000	Roofing and roofing materials	1	54,500
Fruits and vegetables, canning and preserving	1	9,100	All other industries	7	12,337
Hosiery and knit goods	1	25,000			
Ice, artificial	1	4,000			

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	3,801	\$61,841,596	61,170	\$14,059,303	\$2,731,378	\$41,893,194	\$72,715,698
	1890	1,673	38,425,143	31,494	8,561,345	1,992,578	24,060,378	41,768,950
Increase, 1890 to 1900		1,628	22,916,453	26,676	5,497,958	738,800	17,832,816	30,951,743
Per cent of increase		97.3	59.6	77.3	64.2	37.1	74.1	74.1
Per cent of total of all industries in state	1900	44.0	68.3	73.0	69.3	51.3	71.9	68.2
	1890	39.0	67.5	66.0	58.5	49.6	67.3	60.6
Cars and general shop construction and repairs by steam railroad companies.	1900	32	1,408,592	3,175	1,002,208	89,380	1,272,692	3,092,283
	1890	11	450,512	906	522,657		349,844	892,010
Fertilizers	1900	41	6,663,618	1,126	294,887	405,936	2,349,635	3,367,858
	1890	44	5,501,881	1,204	326,011	468,599	3,098,883	5,026,034
Flouring and grist mill products	1900	1,123	2,504,093	1,167	225,933	73,455	7,004,095	8,330,489
	1890	719	2,347,895	1,078	197,964	108,985	4,856,700	5,180,311
Foundry and machine shop products	1900	87	3,398,141	2,384	920,331	173,903	1,590,894	3,506,427
	1890	52	2,107,969	1,682	732,301	124,862	753,299	2,272,658
Lumber and timber products	1900	1,254	11,802,716	10,240	2,844,523	249,636	6,665,897	13,704,923
	1890	449	5,019,635	5,943	1,533,217	228,279	3,304,249	6,545,195
Lumber, planing mill products, including sash, doors, and blinds	1900	99	2,074,226	2,171	672,243	102,159	2,280,495	4,302,976
	1890	82	1,677,880	2,167	851,290	126,193	1,907,370	3,548,972
Oil, cottonseed and cake	1900	48	4,098,668	1,691	354,017	312,986	6,229,426	8,064,112
	1890	17	992,131	761	145,557	86,843	1,289,421	1,670,196
Turpentine and rosin	1900	524	3,785,432	19,199	3,772,848	178,774	2,292,665	8,110,468
	1890	228	2,242,592	9,889	1,998,186	108,003	1,001,686	4,242,255

TABLE 3.—COMPARATIVE SUMMARY OF NINE 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.			
Textiles:								
Total	1900	98	\$25,606,170	20,117	\$3,872,313	\$1,145,149	\$12,207,425	\$20,266,712
	1890	71	18,084,708	10,814	2,264,162	746,814	7,998,926	12,376,724
Cotton goods (including cotton small wares)	1900	68	24,222,169	18,348	3,574,492	1,050,088	11,169,700	18,544,910
	1890	53	17,664,675	10,814	2,167,036	724,822	7,832,230	12,085,629
Hosiery and knit goods	1900	16	928,887	1,208	200,662	72,631	757,430	1,230,801
	1890	4	121,494	338	64,092	10,605	70,697	166,850
Woolen goods	1900	14	455,114	561	97,159	22,430	280,295	491,001
	1890	14	298,539	162	28,034	10,887	95,999	173,245

The 9 leading industries of the state in 1900, as shown in Table 3, embraced 3,301 establishments, or 44 per cent of the total number in the state; used a capital of \$61,341,596, or 68.3 per cent of the total; gave employment to 61,170 wage-earners, or 73 per cent of the total number; and paid \$14,059,303, or 69.3 per cent of the total wages. The value of their products was \$72,715,693, or 68.2 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.

Table 3 shows that the manufacture of cotton goods is the most important industry in the state. The 68 establishments reported in 1900 gave employment to 18,348 wage-earners, or 21.9 per cent of the wage-earners employed in the state, and their products were valued at \$18,544,910, or 17.4 per cent of the total value of the products of the state. In 1890 there were 53 establishments reported, with 10,814 wage-earners, and products valued at \$12,085,629. The increase in the value of products during the decade was \$6,509,281, or 54.1 per cent.

The growth of the cotton manufactures in Georgia has attracted the attention of the whole country. Stimulated in the first instance by abundant raw material, it has also in some instances been encouraged by municipal exemption from taxation, while railroad companies, chambers of commerce, and other agencies have done much to attract capital to the industry from a distance. Cotton manufacturers of Massachusetts, New York, and Pennsylvania are now represented in the state by large mills recently constructed in Floyd and Polk counties, within a radius of 10 miles. Home capital also has been attracted by the profits of the industry, and by the salutary effect of the distribution of wages through the channels of trade. Cotton factories have benefited the farmers by providing a strong local market for cotton and a better demand for farm products, and, therefore, farmers are joining the business men as subscribers for the capital stock of the new corporations.

Another industry dependent upon the large cotton crop of the region is the manufacture of cottonseed oil and cake. There were 43 establishments engaged in this industry in 1900, with 1,591 wage-earners, and products valued at \$8,064,112. In 1890 there were 17 establishments reported, with 751 wage-earners, and products valued at \$1,670,196.

The increase in the value of products during the decade was \$6,393,916, or 382.8 per cent. The products of these mills include cottonseed meal, as well as oil and cake. Much of this meal is sold for the manufacture of fertilizers and used for this purpose by the mills themselves. A comparison of the products of these mills with the products of the cotton factories of the state indicates that the seed of the cotton plant contributes to the total value of products nearly one-half as much as the fiber.

Next in importance to cotton manufacturing is the manufacture of lumber and timber products. There were 1,254 establishments engaged in this industry in 1900, with 10,240 wage-earners, and products valued at \$13,704,923. In 1890 there were 449 establishments reported, with 5,943 wage-earners, and products valued at \$6,545,195. The increase in the value of products during the decade was \$7,159,728, or 109.4 per cent. Long-leaf pine forests cover a considerable portion of the land surface in 80 counties, and lumber made from these trees finds a market in most of the states east of the Mississippi River, as well as in South America, the West Indies, and various parts of Europe.

Dependent also upon the forests of the state is the manufacture of turpentine and rosin. There were 524 establishments engaged in this industry in 1900, with 19,199 wage-earners, and products valued at \$8,110,468. In 1890 there were 228 establishments reported, with 9,889 wage-earners, and products valued at \$4,242,255. The increase in the value of products during the decade was \$3,868,213, or 91.2 per cent. The value of the manufactured products of the forests of Georgia in 1900, including lumber and timber products and turpentine and rosin, was \$21,815,391. This exceeds the value of cotton goods, but is less than the value of all the manufactured products of the cotton plant, including cottonseed oil and cake, which was \$26,609,022. Thus the forests rank next to the cotton plant in their supply of raw material for the manufacturing industries of the state. By a system of forestry it is believed that the pine regions might be made to yield indefinitely. Whenever the sawmill has been in operation a few years the land is practically denuded of timber. The destruction is made more complete by the operations of turpentine farmers, who box and drain the sap of young trees which

would not be worth hauling to a sawmill, and by disastrous forest fires. Under these conditions, industries dependent upon the forests seem doomed to early extinction.

There were 1,123 establishments engaged in flour and grist milling in 1900, with 1,167 wage-earners, and products valued at \$8,330,439. In 1890 there were 719 establishments reported, with 1,078 wage-earners, and products valued at \$5,190,311. The increase in the value of products during the decade was \$3,140,128, or 60.5 per cent. For some years the flouring and grist mills in Georgia felt very strongly the competition of large western establishments, but the wheat crop of the state is increasing, and within the past decade several costly plants have been erected.

There were 99 establishments engaged in the planing-mill industry in 1900, with 2,171 wage-earners, and products valued at \$4,302,976. In 1890 there were 82 establishments reported, with 2,157 wage-earners, and products valued at \$3,548,972. The increase in the value of products during the decade was \$754,004, or 21.2 per cent.

There were 87 establishments engaged in the foundry and machine shop industry in 1900, with 2,384 wage-earners, and products valued at \$3,506,427. In 1890 there were 52 establishments reported, with 1,632 wage-earners, and products valued at \$2,272,653. The increase in the value of products during the decade was \$1,233,774, or 54.3 per cent.

There were 41 establishments engaged in the manufacture of fertilizers in 1900, with 1,126 wage-earners, and products valued at \$3,367,353. In 1890 there were 44 establishments reported, with 1,264 wage-earners, and products valued at \$5,026,034. The decrease in the value

of products during the decade, \$1,658,681, or 33 per cent, is due to the lower price of commercial fertilizers in 1900, and to the fact that farmers bought fertilizing materials and mixed them at home.

There were 32 establishments engaged in the construction and repair shop work of steam railroads in 1900, with 3,175 wage-earners, and products valued at \$3,062,283. In 1890 there were 11 establishments reported, with 966 wage-earners, and products valued at \$892,610. The increase in the value of products during the decade was \$2,169,673, or 243.1 per cent. This increase reflects the improvement of the railroads, for in 1894 three-fourths of the mileage of the state was in the hands of receivers.

There were 16 establishments engaged in the manufacture of hosiery and knit goods in 1900, with 1,208 wage-earners, and products valued at \$1,230,801. In 1890 there were 4 establishments reported, with 338 wage-earners, and products valued at \$166,850. The increase in the value of products during the decade was \$1,063,951, or 637.7 per cent.

There were 14 establishments engaged in the manufacture of woolen goods in 1900, with 561 wage-earners, and products valued at \$491,001. In 1890 there were 14 establishments reported, with 162 wage-earners, and products valued at \$173,245. The increase in value of products during the decade was \$317,756, or 183.4 per cent.

URBAN MANUFACTURES.

Table 4 shows the totals for the manufacturing and mechanical industries of the cities of Atlanta, Augusta, Macon, and Savannah as returned at the censuses of 1890 and 1900, with the percentages of increase.

TABLE 4.—COMPARATIVE SUMMARY, ATLANTA, AUGUSTA, MACON, AND SAVANNAH, 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	7,504	\$39,789,656	83,842	\$20,230,071	\$5,321,339	\$58,232,202	\$106,654,527
	1890	4,285	56,921,530	52,298	14,623,906	4,019,539	35,774,480	68,917,020
Per cent of increase.....		75.1	57.7	60.3	38.7	32.4	62.8	54.3
Atlanta.....	1900	395	16,085,114	9,368	3,106,039	1,352,721	8,571,194	16,721,899
	1890	410	9,508,962	7,957	3,206,285	987,623	5,914,571	13,074,037
Per cent of increase.....		13.7	69.2	17.7	13.1	37.0	44.9	27.9
Augusta.....	1900	388	9,016,619	7,138	1,815,879	618,938	6,244,286	10,069,750
	1890	440	7,770,688	5,714	1,689,941	526,539	5,430,871	9,244,850
Per cent of increase.....		11.8	16.0	24.9	7.5	17.5	15.0	8.9
Macon.....	1900	182	5,076,005	3,700	1,047,437	445,078	3,741,167	6,495,767
	1890	203	3,988,900	3,157	1,057,041	219,988	2,661,498	5,171,530
Per cent of increase.....		10.3	27.3	17.2	10.9	102.3	40.4	25.6
Savannah.....	1900	155	5,716,491	2,870	1,176,150	469,918	3,915,884	6,461,816
	1890	241	5,379,774	2,419	1,059,348	484,497	3,297,804	6,319,066
Per cent of increase.....		36.5	6.3	18.6	11.0	13.0	18.7	2.3
Total for 4 cities.....	1900	1,120	35,894,229	23,076	7,145,505	2,886,655	22,472,531	39,749,232
	1890	1,297	26,648,324	19,247	7,012,615	2,218,647	17,307,744	33,800,483
Per cent of increase.....		13.6	34.7	19.9	1.9	30.1	29.8	17.6
Per cent of 4 cities to total for state.....	1900	14.9	40.0	27.5	35.2	54.2	38.6	37.3
	1890	30.3	46.3	36.8	48.0	55.2	48.4	49.1

¹ Decrease.

It appears from Table 4 that there has been a considerable increase during the past decade in the manufactures of these cities. The average number of wage-earners increased from 19,247 to 23,076, or 19.9 per cent, and the value of products from \$33,809,483 to \$39,749,232, or 17.6 per cent, while the number of establishments decreased from 1,297 to 1,120, or 13.6 per cent. The increase in the number of wage-earners and in the value of products has been much smaller in these 4 cities than in the state as a whole. Atlanta, the leading manufacturing city of the state, shows the most rapid growth, the value of products having increased from \$13,074,037 in 1890 to \$16,721,899 in 1900, or 27.9 per cent. The average num-

ber of wage-earners increased from 7,957 to 9,368, or 17.7 per cent, but the number of establishments decreased from 410 to 395, or 3.7 per cent. The number of establishments, number of wage-earners, and value of products for this city constituted 5.3, 11.2, and 15.7 per cent, respectively, of the totals for the entire state.

Table 5 presents the totals for the manufacturing industries of the 17 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.

	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.....	7,504	\$89,789,656	8,828	83,842	\$20,290,071	\$5,321,330	\$58,232,202	\$106,651,527	-----	100.0	2,216,331	-----	100.0
Total for urban manufactures.....	1,788	50,263,578	1,832	35,780	10,295,982	3,723,930	32,300,640	56,921,346	-----	53.4	292,333	-----	13.2
Americus.....	57	455,056	61	585	210,047	27,701	327,672	694,511	15	0.7	7,674	8	0.3
Athens.....	71	804,190	73	851	176,758	42,289	557,261	958,722	11	0.9	10,245	6	0.5
Atlanta.....	395	16,085,114	391	9,368	3,106,039	1,352,721	8,671,194	16,721,899	1	15.7	89,872	1	4.1
Augusta.....	393	9,016,619	390	7,138	1,815,879	614,983	6,244,286	10,069,750	2	9.4	39,441	3	1.8
Barnesville.....	18	631,683	17	678	119,623	23,177	600,524	1,033,749	10	1.0	3,036	17	0.1
Brunswick.....	73	423,826	76	550	247,516	39,144	551,817	1,171,378	8	1.1	9,081	7	0.4
Cartersville.....	40	132,523	49	124	23,890	5,684	73,083	160,715	17	0.1	3,135	16	0.1
Columbus.....	135	5,690,882	152	4,814	1,201,320	409,320	3,634,213	6,039,799	5	5.7	17,614	5	0.8
Dalton.....	40	776,504	62	838	144,745	30,916	1,043,269	1,489,412	7	1.4	4,315	14	0.2
Gainesville.....	50	317,775	65	544	182,657	18,325	466,952	788,221	14	0.7	4,382	13	0.2
Griffin.....	29	1,407,562	28	1,021	229,790	44,981	561,874	1,079,133	9	1.0	6,857	10	0.3
La Grange.....	30	978,366	28	716	133,158	38,493	468,372	792,038	12	0.7	4,274	12	0.2
Macon.....	182	5,076,005	173	3,700	1,047,437	445,078	3,741,167	6,495,767	3	6.1	23,272	4	1.1
Marietta.....	34	698,134	35	683	180,157	37,996	386,114	704,959	13	0.7	4,416	11	0.2
Newnan.....	27	824,721	27	456	102,567	43,451	403,963	679,133	16	0.6	3,654	15	0.2
Rome.....	64	1,328,118	58	944	248,249	75,793	857,990	1,570,273	6	1.5	7,291	9	0.3
Savannah.....	155	5,716,491	157	2,870	1,176,150	469,918	3,915,884	6,461,816	4	6.1	54,244	2	2.4
Total for state exclusive of urban manufactures.....	5,716	39,526,078	6,996	48,062	9,994,019	1,597,400	25,931,562	49,733,181	-----	46.6	1,923,498	-----	86.8
Per cent of urban manufactures to total for state.....	23.8	56.0	20.8	42.7	50.7	70.0	55.5	53.4	-----	-----	13.2	-----	-----

Of the 7,504 establishments in the state, 1,788, or 23.8 per cent, were located in these 17 cities and towns. They furnished employment to 35,780 wage-earners, or 42.7 per cent of the total number, and the value of their products, \$56,921,346, formed 53.4 per cent of the total for the state.

Table 6 shows the totals for the state by counties.

Table 7 shows the totals for the state by specified industries.

Table 8 shows the totals for the cities of Atlanta, Augusta, Macon, and Savannah by specified industries.

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

TABLE 6.—MANUFACTURES

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.
The State	7,504	\$89,789,656	\$10,992,824	\$13,290,214	\$32,830,482	\$32,676,186	8,828	4,203	\$3,354,946	83,842	\$20,290,071
Appling	76	481,718	227,495	39,238	157,580	57,405	94	35	14,800	829	170,593
Baker	20	69,380	24,240	7,775	18,875	18,490	24	18	8,375	304	67,911
Baldwin	39	229,480	31,000	45,855	74,710	77,915	42	22	13,667	200	36,086
Banks	45	54,025	16,905	7,747	24,275	5,098	54	21	12,799	71	11,535
Bartow	76	414,517	108,497	44,540	137,061	123,819	100	21	12,799	270	61,271
Berrien	91	780,026	235,748	62,519	201,988	169,771	120	61	25,964	1,302	291,928
Bibb	200	5,605,919	346,871	949,012	1,810,211	2,499,825	192	278	289,330	4,122	1,143,615
Brooks	45	390,015	187,038	26,740	159,216	67,021	53	22	15,892	685	131,079
Bryan	25	81,415	27,187	4,864	29,691	19,673	37	18	5,970	894	67,741
Bulloch	99	346,943	81,166	34,188	148,528	88,061	128	55	24,105	1,476	262,839
Burke	55	162,794	10,204	34,815	89,475	28,210	62	7	3,293	154	31,438
Butts	44	305,655	30,745	71,037	134,696	69,177	45	10	5,960	341	62,080
Calhoun	35	113,805	23,007	12,065	60,752	17,981	42	12	6,290	206	87,917
Camden	13	160,929	66,757	18,282	22,356	58,534	16	31	17,385	551	93,696
Campbell	31	241,472	13,895	42,675	87,855	97,047	41	14	3,350	211	41,482
Carroll	116	401,398	63,155	68,060	201,726	68,457	150	16	5,658	248	48,869
Catoosa	24	25,778	3,360	6,040	13,540	2,838	28	10	3,580	83	6,950
Charlton	10	95,687	34,162	3,025	33,600	24,900	12	10	3,580	220	43,670
Chatham	170	6,415,480	706,200	1,042,803	1,588,946	3,082,481	174	239	247,415	8,527	1,312,872
Chattahoochee	14	24,432	4,282	1,800	16,800	1,550	18	1	240	66	9,841
Chattooga	48	1,178,715	60,782	195,955	672,386	249,642	52	41	28,211	859	141,353
Cherokee	49	177,546	61,240	14,180	54,438	47,688	60	4	3,212	118	27,115
Clarke	83	1,088,649	48,110	111,288	431,606	497,687	85	47	31,231	1,166	225,370
Clay	26	114,465	8,915	13,950	44,605	46,985	27	5	1,510	75	13,329
Clayton	34	49,800	3,015	9,737	29,630	6,918	39	5	1,510	60	11,421
Clinch	50	297,685	93,251	26,427	108,647	69,360	82	55	23,360	1,548	287,481
Cobb	109	1,197,706	88,171	205,417	387,509	521,609	125	59	48,679	1,195	267,027
Coffee	63	1,231,048	600,786	77,694	877,856	174,712	92	55	29,090	1,678	392,210
Colquitt	62	1,056,114	344,720	81,186	378,070	267,138	102	82	43,614	1,425	300,087
Columbia	17	31,629	10,591	2,140	14,870	4,028	17	1	260	33	6,337
Coweta	86	1,011,076	54,502	142,010	285,644	528,920	97	41	29,015	649	131,224
Crawford	33	56,365	11,410	10,620	26,070	8,265	43	6	4,560	99	17,908
Dade	23	115,396	5,660	11,715	86,255	11,766	22	6	4,560	71	18,188
Dawson	31	35,865	7,970	7,215	17,895	3,285	37	76	42,710	17	2,383
Decatur	80	1,080,867	460,517	97,780	281,826	240,744	106	76	42,710	2,056	407,176
Dekalb	50	775,234	59,905	168,239	122,910	424,180	58	24	84,145	423	151,187
Dodge	43	247,418	25,325	18,740	115,373	92,980	54	19	14,335	447	112,700
Dooly	59	650,910	111,090	42,540	269,618	227,632	82	19	8,284	830	186,422
Dougherty	43	400,136	67,987	68,132	178,660	90,357	48	85	28,894	409	88,444
Douglas	41	44,128	4,566	6,665	23,815	9,637	49	6	768	48	8,801
Early	53	428,480	141,515	37,605	162,545	86,815	78	27	18,280	785	174,304
Echols	11	77,960	42,525	6,325	14,120	14,990	16	14	3,542	236	51,910
Effingham	29	208,727	57,905	14,098	101,254	35,470	37	17	9,836	471	95,729
Elbert	51	460,347	47,793	63,947	218,221	136,384	61	14	9,965	449	75,793
Emanuel	58	416,662	88,043	51,123	181,369	146,127	69	41	20,352	1,020	198,617
Fannin	39	90,463	9,123	17,255	29,141	84,944	42	5	4,020	140	52,866
Fayette	24	57,907	26,403	7,090	23,110	1,804	35	94	96,425	81	5,125
Floyd	137	3,198,628	241,041	771,674	980,507	1,252,406	143	94	96,425	2,229	566,952
Forsyth	19	16,455	2,015	3,120	9,945	1,375	24	11	2,765	16	2,472
Franklin	64	111,812	11,023	26,113	65,480	9,196	81	11	2,765	109	19,841
Fulton	441	19,138,286	1,439,348	2,221,946	7,527,496	7,999,496	433	909	969,826	10,803	3,494,947
Gilmer	46	167,568	73,279	16,595	43,305	84,384	62	4	1,700	68	11,317
Glascock	4	7,250	750	900	5,600	6,000	6	1	275	10	1,969
Glynn	84	677,559	137,337	102,758	206,922	230,542	89	33	24,514	894	343,361
Gordon	44	89,143	9,135	18,725	47,025	14,258	57	1	100	62	11,020
Greene	46	120,088	7,650	17,902	79,816	15,220	62	9	1,764	140	20,847
Gwinnett	92	437,076	15,221	45,820	137,715	238,320	113	33	22,760	665	108,905
Habersham	64	497,750	87,055	92,476	218,292	149,928	64	17	14,105	490	80,222
Hall	85	305,460	52,288	50,220	136,445	126,507	104	23	14,986	597	143,644
Hancock	36	70,532	5,135	13,300	36,822	15,275	41	2	370	81	11,610
Haralson	61	180,503	17,470	20,765	67,475	74,793	82	10	5,750	216	65,709
Harris	42	308,756	26,412	74,595	160,750	46,999	50	12	2,832	203	35,689
Hart	36	240,690	26,555	58,850	114,475	40,710	47	13	6,421	232	88,022
Heard	43	69,091	18,321	9,465	36,470	4,885	48	3	165	47	9,688
Henry	49	116,566	11,456	20,285	48,365	27,510	72	5	577	86	16,558
Houston	37	208,774	12,925	28,500	75,162	92,187	44	11	5,930	217	40,324
Irwin	79	743,944	318,435	42,819	290,259	92,431	102	34	21,380	948	216,055
Jackson	79	308,548	11,155	57,380	131,368	108,695	98	13	4,968	312	52,498
Jasper	38	53,684	2,331	6,305	31,468	13,590	45	1	600	65	14,158
Jefferson	37	69,768	7,830	13,043	32,928	5,967	44	8	2,620	107	21,877
Johnson	32	77,646	19,663	5,680	36,243	16,060	46	18	3,769	245	40,752
Jones	19	89,140	21,585	22,880	38,135	6,540	23	2	310	28	4,949
Laurens	83	437,185	63,449	40,501	160,635	172,000	95	20	11,790	603	132,974
Lee	33	109,880	42,220	11,200	38,430	17,530	35	18	5,620	127	25,503
Liberty	42	144,287	41,277	15,885	56,643	30,532	55	34	13,374	790	163,925

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 number.	Wages.	Average number.	Wages.	Average number.	Wages.											
66,540	\$17,582,519	10,929	\$2,015,852	6,878	\$391,700	\$5,821,330	\$473,942	\$640,949	\$8,998,762	\$212,677	\$58,232,202	\$56,793,964	\$1,438,288	\$106,654,527	1	
794	167,838	1	50	34	3,205	8,806	112	2,207	6,487		327,302	326,252	1,650	693,706	2	
302	87,411	2	500			1,730	185	458	1,107		62,221	61,501	720	171,314	3	
193	84,963	3	831	4	292	12,856	1,832	2,379	8,645		200,773	189,953	10,820	324,234	4	
69	11,335			2	220	1,123	809	458	831		58,895	57,925	470	101,162	5	
253	59,409	8	975	9	887	12,693	1,716	2,820	7,742	416	580,912	519,626	11,286	764,691	6	
1,271	288,128	4	820	27	2,980	15,417	1,704	5,074	8,699		450,128	448,686	1,242	1,003,225	7	
3,051	968,770	745	129,849	826	44,996	464,916	37,433	41,829	358,859	26,815	3,949,059	3,824,447	124,612	6,901,219	8	
572	130,036			13	1,043	7,823	425	1,171	6,732		236,527	234,817	1,710	462,572	9	
889	67,428	1	68	4	250	7,398	435	851	2,037	4,075	104,806	104,284	622	246,408	10	
1,466	261,433	2	350	7	556	12,263	1,037	2,002	9,000	224	271,377	268,319	8,058	767,917	11	
153	30,988	1	450			10,626	681	992	8,958		145,259	136,651	8,608	277,661	12	
159	41,656	75	9,165	107	11,259	10,493	445	1,934	8,114		253,699	246,046	7,653	471,976	13	
204	37,812			2	105	6,050	143	923	3,740	1,230	114,161	112,122	2,029	224,434	14	
551	93,696					8,540	400	847	6,493	800	100,808	100,263	545	263,687	15	
119	28,481	47	7,915	45	5,086	13,593	210	802	12,581		285,828	280,493	5,335	338,336	16	
166	87,941	43	8,068	39	2,860	12,266	1,480	2,978	7,804	4	299,304	293,168	6,136	458,138	17	
81	5,779			2	171	397	160	151	86		46,943	45,517	501	74,874	18	
214	42,990			6	680	1,272	67	074	498	100	59,556	59,355	201	146,792	19	
8,334	1,288,039	149	22,007	44	2,226	495,437	66,792	62,061	374,884	2,200	4,205,324	4,102,989	102,325	6,967,783	20	
56	9,541			252	24,808	252	94	133	25		30,012	85,908	104	63,237	21	
326	69,637	281	47,008	252	24,808	24,040	423	5,765	17,652	200	527,047	515,764	11,283	868,820	22	
111	25,949	3	805	4	361	13,865	944	628	12,393		93,208	88,402	4,896	165,888	23	
578	149,925	312	50,552	281	24,893	72,959	6,033	8,511	57,080	180	511,088	790,679	20,464	1,348,746	24	
72	13,107			8	222	2,870	403	737	1,725		121,377	117,357	4,020	193,070	25	
54	10,971			6	450	1,895	154	424	807		52,623	51,713	910	87,109	26	
1,586	286,245			12	1,236	10,656		1,494	9,162		162,762	159,593	3,169	627,728	27	
801	216,235	184	28,882	210	21,850	91,258	4,237	8,726	75,140	3,116	769,732	750,219	19,513	1,372,750	28	
1,672	391,235	2	144	4	840	29,330	955	8,102	20,203		384,315	333,185	1,430	1,147,209	29	
1,418	807,977	4	500	3	560	26,801	450	5,141	20,885	825	416,803	414,460	1,843	1,044,450	30	
38	6,937			5	650	414	138	244	32		14,661	14,426	235	30,632	31	
445	105,114	104	16,660	100	9,450	48,513	1,887	7,677	38,789	190	580,567	517,629	12,938	893,274	32	
99	17,908					870	12	389	469		49,126	48,164	972	104,455	33	
73	18,133			1	55	16,688	20	467	11,168	5,043	86,150	84,864	1,295	131,878	34	
17	2,883					658	42	311	280	25	46,220	46,024	206	60,193	35	
1,020	370,170	357	31,030	79	5,976	59,448	700	5,278	30,670	22,800	733,676	734,144	4,431	1,718,734	36	
405	148,562	6	1,125	12	1,500	53,588	3,428	4,288	35,322	10,500	362,437	347,626	14,511	697,702	37	
435	110,972			12	1,728	11,081	415	1,763	5,403	3,500	200,169	198,967	1,212	503,008	38	
821	185,672			9	750	15,256	1,098	8,590	10,475	93	458,008	452,320	5,683	890,696	39	
389	85,934	6	1,304	14	1,206	29,767	4,148	8,747	21,422	450	226,467	203,678	21,739	480,545	40	
46	8,701			2	100	1,347	728	350	274		47,733	46,932	801	51,616	41	
780	173,524	1	300	4	480	6,648	428	2,941	3,279		371,081	369,940	1,141	1,286,468	42	
236	51,910					4,530		470	4,000		30,195	29,405	700	107,563	43	
460	94,757	3	834	8	688	10,723	480	1,250	3,998		165,116	164,888	228	348,641	44	
253	53,214	92	12,675	104	9,904	14,480	1,064	3,028	10,288	50	291,190	278,842	12,357	482,670	45	
1,008	197,294	6	912	6	411	12,094	916	2,206	8,487	485	269,052	267,628	1,624	624,234	46	
140	52,356					1,645	123	1,048	469		62,602	61,870	732	141,654	47	
28	4,878			3	247	539	95	241	203		31,946	30,814	1,132	47,993	48	
1,606	466,750	314	68,024	309	31,173	141,175	9,220	21,181	110,771		1,622,111	1,482,764	139,517	2,982,674	49	
16	2,472					413	90	117	206		21,727	21,461	266	33,785	50	
104	19,330			5	511	2,907	493	881	1,653		119,148	115,497	3,451	189,027	51	
7,756	2,945,527	2,195	484,553	852	114,862	1,571,669	150,690	108,806	1,256,127	56,046	10,748,684	10,495,421	253,263	20,049,206	52	
66	11,092			2	225	3,455	168	603	2,679		88,103	87,983	120	167,275	53	
10	1,969					215		65	150		4,893	4,183	205	13,901	54	
875	339,777	6	1,970	13	1,614	48,085	12,095	8,348	20,272	7,370	820,312	809,756	10,566	1,678,025	55	
62	11,020					2,149	771	654	720	4	170,423	168,097	2,326	230,167	56	
73	12,958	41	6,021	26	1,865	5,403	509	728	2,991	1,175	92,447	87,718	4,729	163,626	57	
550	98,959	29	3,798	36	11,208	13,486	467	2,013	11,016		859,503	854,083	5,420	1,190,643	58	
286	57,277	104	13,832	100	9,113	22,743	462	2,245	18,916	1,120	224,461	219,065	5,306	462,429	59	
487	129,504	45	7,525	65	6,015	20,171	4,373	3,539	12,194	65	553,985	540,090	13,895	855,685	60	
70	10,885	4	250	7	475	1,938	631	525	682	100	51,266	49,620	1,646	86,085	61	
199	60,959	1	360	16	4,390	8,997	777	1,287	6,033	950	131,766	114,298	17,468	277,391	62	
110	23,592	40	7,774	53	4,323	8,409	136	1,172	2,101		123,199	123,766	2,433	235,234	63	
88	17,885	43	8,459	106	12,144	5,927	212	906	4,809		129,195	125,163	4,032	233,479	64	
47	9,688					859		627	84		97,013	96,059	954	102,250	65	
58	10,658	23	5,500	5	400	4,493	590	793	3,105		79,327	78,007	3,320	147,118	66	
214	39,849			3	475	6,037	494									

TABLE 6.—MANUFACTURES

	COUNTIES AND MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
77	Lincoln	13	\$25,570	\$1,705	\$6,785	\$14,830	\$2,800	18	1	\$30	15	\$2,368
78	Lowndes	97	650,512	90,751	54,332	238,689	266,740	117	51	29,810	906	191,111
79	Lumpkin	36	41,310	18,321	5,981	19,015	2,993	45	1	240	34	5,560
80	McDuffie	27	36,253	3,188	6,785	18,755	7,525	31	5	508	42	7,355
81	McIntosh	11	179,291	27,637	15,745	30,379	105,580	7	19	13,300	289	69,128
82	Macon	35	62,191	21,650	4,955	28,940	6,646	40	4	1,910	75	14,189
83	Madison	38	66,698	8,053	10,255	30,910	17,480	56	4	820	41	6,858
84	Marion	23	30,995	2,370	7,675	15,650	5,300	26	4	1,235	46	9,062
85	Meriwether	61	259,056	27,931	42,860	146,990	41,275	89	11	6,990	145	33,237
86	Miller	15	126,463	57,721	6,906	23,048	38,778	20	10	4,560	340	71,559
87	Milton	22	19,815	745	3,730	14,075	1,265	36	1	100	18	2,381
88	Mitchell	25	235,610	121,365	19,595	69,940	24,710	33	16	7,480	197	43,455
89	Monroe	49	324,093	13,310	66,520	177,702	67,161	58	7	4,611	195	41,548
90	Montgomery	62	621,588	172,193	55,173	271,903	122,319	85	41	19,067	1,021	207,900
91	Morgan	42	163,706	6,576	27,966	82,948	46,216	48	14	4,893	97	25,454
92	Murray	27	39,632	13,340	6,490	15,785	4,017	32	1	400	41	5,694
93	Muscogee	151	5,729,012	339,233	841,143	1,775,417	2,773,219	171	197	193,015	4,883	1,221,157
94	Newton	71	799,620	64,735	108,789	372,927	263,169	83	13	8,254	477	76,636
95	Oconee	27	120,090	5,085	20,675	81,505	12,825	33	7	3,130	97	19,854
96	Oglethorpe	56	114,434	5,352	18,845	72,180	18,057	56	12	1,958	75	14,061
97	Paulding	50	63,823	8,340	7,155	35,523	12,805	63	3	720	168	24,165
98	Pickens	39	276,911	26,686	37,420	101,263	111,542	46	15	12,360	189	46,851
99	Pierce	22	432,314	194,075	35,089	118,767	89,883	24	15	9,005	408	87,773
100	Pike	54	686,563	24,105	78,220	206,570	277,668	51	29	22,220	610	125,695
101	Polk	65	1,417,455	141,441	481,750	562,085	232,179	66	37	31,245	1,054	188,830
102	Pulaski	44	186,584	25,915	12,765	57,725	90,179	54	11	5,030	278	60,351
103	Putnam	28	42,460	3,535	13,675	19,540	5,710	29	1	150	42	7,389
104	Quitman	6	4,935	1,345	780	2,350	460	7			6	1,290
105	Rabun	23	8,620	1,370	2,095	4,145	1,010	25			14	1,693
106	Randolph	35	61,960	10,210	8,965	34,835	7,950	40	4	710	54	10,556
107	Richmond	403	9,030,679	912,689	1,008,626	3,810,969	2,898,395	894	265	278,936	7,206	1,827,795
108	Rockdale	28	41,945	4,580	9,350	24,430	3,535	35	1	900	46	10,662
109	Schley	11	14,185	855	3,235	9,665	930	12	1	120	9	1,279
110	Screven	59	259,643	116,708	24,648	56,017	62,270	71	16	7,296	640	116,747
111	Spalding	49	1,438,257	21,665	248,150	654,708	513,734	52	29	28,089	1,039	234,082
112	Stewart	36	117,049	18,108	28,166	47,485	23,290	42	8	1,980	76	14,513
113	Sumter	98	502,194	60,403	63,980	248,393	129,418	98	34	25,518	624	215,580
114	Talbot	24	108,163	43,228	13,880	31,885	19,175	33	4	1,850	74	13,581
115	Taliaferro	22	30,055	4,620	7,655	16,555	1,225	24	2	187	17	2,660
116	Tattall	102	430,810	152,097	49,449	135,299	93,965	127	48	28,123	1,259	253,431
117	Taylor	29	130,424	9,255	16,843	69,994	34,332	34	5	2,175	145	25,686
118	Telfair	49	208,827	78,764	15,875	69,743	49,445	79	24	8,116	635	137,043
119	Terrell	61	168,977	14,110	32,362	95,115	27,390	77	19	9,124	263	61,968
120	Thomas	117	389,950	54,247	33,661	181,470	120,572	154	26	10,630	1,049	213,505
121	Towns	17	12,485	2,950	2,130	8,370	3,585	24	1	225	15	3,088
122	Troup	69	1,223,711	60,965	182,039	605,827	374,880	65	25	19,106	934	190,345
123	Twiggs	15	17,745	1,020	4,810	11,515	400	16			23	4,118
124	Union	20	18,415	1,915	4,250	9,000	3,250	21	1	500	17	3,063
125	Upson	32	201,366	28,982	27,330	77,025	68,029	28	11	5,360	113	28,407
126	Walker	44	1,823,005	78,307	283,459	491,978	909,261	39	37	39,959	780	147,250
127	Walton	71	910,150	14,951	175,779	339,000	330,420	70	27	25,113	745	126,099
128	Ware	78	327,369	55,941	34,600	153,076	78,752	89	50	26,790	800	214,041
129	Warren	35	87,301	3,325	19,710	48,858	15,408	42	4	1,700	137	27,452
130	Washington	69	171,926	24,435	22,395	72,620	52,476	82	15	4,580	259	51,490
131	Wayne	38	137,273	51,406	12,037	46,218	27,612	57	15	7,750	446	100,997
132	Webster	12	11,405	695	3,000	7,250	460	13			10	1,407
133	White	22	18,195	1,495	3,505	12,185	1,010	25			18	2,773
134	Whitfield	61	811,960	27,285	120,795	366,917	296,963	88	31	19,985	859	148,815
135	Wilcox	41	470,294	80,199	16,225	213,687	160,138	63	30	18,665	803	157,742
136	Wilkes	48	161,620	13,013	26,805	77,110	44,692	57	13	5,422	113	27,042
137	Wilkinson	28	76,369	10,495	8,190	47,842	3,842	35	3	800	83	14,411
138	Worth	72	676,592	216,158	42,509	237,655	180,270	92	37	20,184	910	190,784

TABLE 7.—MANUFACTURES BY

		7,504	\$89,789,656	\$10,992,824	\$13,290,214	\$32,830,482	\$32,676,136	8,828	4,203	\$3,354,946	83,842	\$20,290,071
1	All industries											
2	Agricultural implements	10	454,988	101,980	38,750	70,552	243,706	10	23	30,884	360	99,951
3	Awnings, tents, and sails	8	12,825	500	1,500	475	10,350	6	2	2,000	11	4,645
4	Baking and yeast powders	3	40,100	500	1,500	2,400	35,500	2	9	9,520	27	4,486
5	Baskets, and rattan and willow ware	4	62,850	8,150	6,000	22,000	16,700	5	2	880	44	11,170
6	Bicycle and tricycle repairing	58	50,507	2,160	1,915	20,512	26,010	63	9	4,886	84	24,987
7	Blacksmithing and wheelwrighting	621	336,482	70,059	62,534	97,919	155,970	719	4	1,556	572	160,928
8	Boots and shoes, custom work and repairing	169	33,682	1,555	3,835	12,406	15,886	178	1	600	131	40,595
9	Boots and shoes, factory product	5	90,700	1,500	6,500	23,400	59,300	10	9	8,200	250	66,000
10	Boxes, fancy and paper	3	72,017	6,000		22,964	44,053	4	12	13,576	123	29,125
11	Boxes, wooden packing	7	187,170	13,650	23,204	45,955	104,361	3	19	9,430	274	56,164

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.										
12	\$2,168			3	\$200	\$448		\$142	\$270		\$22,748	\$22,586	\$162	\$32,418	77
891	188,226	9	\$2,250	6	635	31,648	4,495	4,803	11,320	\$11,530	506,340	502,146	4,194	1,006,569	78
31	5,205	1	75	2	280	1,551		274	330		35,456	35,251	205	60,687	79
37	6,700			4	380	1,422		352	580	6	29,104	28,121	983	62,423	80
286	68,828	1	275	3	800	2,413	278	655	1,405	75	80,649	79,729	920	221,230	81
75	14,189					1,878	1,108	364	406		38,529	32,568	961	76,951	82
40	6,803			1	50	1,147	207	535	355		72,355	71,505	850	105,543	83
43	8,860			3	202	1,170		191	313		17,397	16,864	533	68,165	84
141	32,392	2	505	2	340	39,114		1,736	37,069	55	308,342	303,739	4,003	471,029	85
339	71,493			1	96	1,372	60	716	596		57,877	57,424	453	175,200	86
16	2,216			2	165	416	59	157	200		20,143	19,526	617	33,204	87
197	43,455					4,874	48	878	3,948		118,917	115,044	3,873	204,726	88
121	31,988	28	3,914	46	5,646	8,841	490	2,260	6,091		294,575	286,066	8,509	423,308	89
1,008	206,542			16	1,358	17,701	2,311	3,088	12,012	290	352,757	349,101	3,656	854,108	90
94	25,154	1	200	2	100	15,287	1,250	1,243	12,794		35,146	31,605	3,541	155,288	91
41	5,694					1,140		356	670		29,392	29,085	307	44,589	92
2,850	807,017	1,591	365,921	412	48,219	413,054	19,411	42,940	350,248	460	3,683,560	3,601,287	87,273	6,267,037	93
289	43,275	126	19,391	62	12,970	23,666	1,042	7,578	14,996	50	337,162	335,213	1,949	526,464	94
66	13,242	15	8,500	16	3,112	1,574		482	470		116,561	115,066	1,495	164,910	95
73	13,861			2	200	3,816	765	1,436	1,615		116,837	112,937	3,900	164,951	96
162	23,000			6	565	3,430	570	724	336	1,800	72,452	71,197	1,255	149,227	97
171	45,421	14	1,280	4	150	25,804	182	570	25,082		110,701	106,146	4,555	240,468	98
402	86,737			6	1,036	8,788	2,691	1,515	4,582		244,465	242,447	2,018	418,779	99
299	89,760	195	26,519	116	9,316	28,204	899	5,001	22,054	250	639,945	629,403	10,542	1,105,657	100
600	135,840	249	39,386	205	23,604	59,691	3,481	6,863	49,247		823,342	775,185	48,157	1,219,628	101
271	58,576	5	1,700	2	75	9,926	979	1,099	7,723	125	154,191	152,142	2,049	345,797	102
31	6,109	6	780	5	500	1,847	739	919	189		118,167	117,471	696	154,623	103
6	1,200					51		51			13,324	13,274	50	16,736	104
12	1,213	2	480			208	61	84	61	2	18,007	17,957	50	24,898	105
49	9,501	2	680	3	375	1,957	630	660	767		31,129	29,661	1,468	68,103	106
4,455	1,375,126	2,081	352,634	670	70,035	638,889	64,649	117,881	461,259	5,100	6,261,901	6,119,250	142,651	10,129,332	107
37	8,772	3	555	6	735	3,774	665	947	2,729	83	41,894	40,281	1,613	73,573	108
8	1,179			1	100	198	24	142	32		3,152	2,802	350	10,701	109
637	116,323			3	424	10,269	431	1,511	3,327	5,000	93,775	96,475	2,300	318,866	110
540	151,068	263	55,858	236	27,056	45,768	1,032	9,181	35,495	50	584,341	562,016	22,325	1,122,832	111
72	13,901			4	617	3,352	519	933	1,795	105	78,809	71,484	2,375	121,020	112
604	212,482	14	2,470	6	628	23,215	4,651	5,607	17,957		396,188	381,281	14,907	785,771	113
73	13,408					2,451	325	641	1,485		44,216	42,322	1,894	73,028	114
15	2,320	1	173			320	81	170	78		29,328	28,719	609	44,795	115
1,254	257,951			5	480	22,687	460	2,993	9,214	10,020	388,768	387,344	1,424	957,683	116
95	19,763	25	3,742	25	2,181	4,455	75	1,387	2,993		131,028	129,837	1,191	195,529	117
619	135,043			16	2,000	8,346	345	1,009	1,692	300	135,048	131,844	3,204	369,465	118
245	58,918	10	2,000	8	1,050	7,435	1,785	1,625	4,025		224,387	218,151	6,236	382,099	119
1,088	212,508	5	704	6	298	17,146	3,917	1,951	7,198	4,080	256,062	246,570	9,492	708,388	120
15	3,088					298	90	91	117		17,814	17,647	167	28,122	121
509	130,392	201	35,545	224	24,408	48,949	3,772	7,166	37,781	230	691,050	667,165	23,885	1,148,168	122
23	4,118					408	100	173	135		13,889	13,464	425	23,538	123
17	3,093					254	25	126	103		26,013	26,013	30	36,463	124
88	22,148	14	4,510	11	1,749	7,746	350	1,309	6,087		105,090	102,582	2,558	162,126	125
389	89,022	246	42,753	145	15,484	49,706	298	5,801	43,357	250	841,135	831,178	10,017	1,249,261	126
378	85,081	175	26,188	192	14,830	42,557	743	5,972	29,706	6,136	498,396	482,314	16,082	812,729	127
761	207,737	18	4,515	21	1,789	27,942	2,078	2,750	11,314	11,800	229,766	222,440	7,326	649,972	128
88	19,257	29	6,296	20	1,899	3,951	398	451	3,102		124,852	121,123	3,724	202,447	129
244	49,100	6	1,740	9	650	5,915	932	1,555	3,423		135,507	130,395	5,112	261,681	130
441	100,229			5	768	3,055	828	685	1,956	86	93,059	91,693	1,366	268,914	131
10	1,407					127		105	22		11,472	11,327	145	16,561	132
18	2,773					293	15	135	93		37,716	37,607	109	50,762	133
406	93,689	224	35,828	229	19,298	32,475	3,460	7,351	19,964	1,700	1,143,425	1,130,013	13,412	1,612,388	134
796	156,778			7	964	9,941	1,209	1,269	7,458	5	309,253	307,923	1,330	654,179	135
109	26,117	4	925			4,901	1,881	1,330	1,665	25	114,997	106,263	8,734	197,924	136
83	14,411					694	435	76	183		58,002	57,693	309	107,036	137
889	188,567	4	150	17	2,067	6,026	322	2,714	2,990		342,780	341,275	1,455	769,358	138

SPECIFIED INDUSTRIES: 1900.

66,540	\$17,582,519	10,929	\$2,015,852	6,373	\$691,700	\$5,321,330	\$473,942	\$640,949	\$3,993,762	\$212,077	\$58,232,202	\$56,798,964	\$1,438,238	\$106,054,527	1
354	99,423			6	528	33,864	730	3,309	29,775		437,799	429,826	8,178	737,652	2
8	3,510	3	1,035			897	115	320	320		14,025	14,025	5	32,540	3
12	2,344	15	2,142			4,433	840	573	3,220		32,355	31,785	560	115,000	4
26	8,220	6	400	13	2,550	735	100	170	465		4,181	3,705	485	34,095	5
79	24,507			5	480	12,095	8,487	1,037	2,447	124	39,130	37,515	1,615	115,345	6
563	160,228			9	705	33,494	23,047	4,062	6,936	449	225,675	208,277	17,398	777,521	7
125	40,032	2	354	4	209	16,341	13,416	571	1,354		64,886	63,975	911	197,912	8
190	55,000	40	7,400	20	3,000	7,859	1,810	1,024	5,025		255,695	254,445	1,250	346,256	9
30	13,145	83	14,980	10	1,000	5,654	2,320	400	2,334		26,310	25,630	680	122,125	10
216	50,691	1	195	57	5,278	9,643		630	3,933		76,249	76,080	169	194,381	11

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.
12	Bread and other bakery products	62	\$233,200	\$45,850	\$75,400	\$41,805	\$70,145	64	21	\$18,734	241	\$82,248
13	Brick and tile	70	1,045,179	257,732	213,320	239,455	334,672	77	59	45,745	1,701	347,297
14	Brooms and brushes	14	37,825	8,920	6,925	5,015	21,965	12	2	1,380	81	17,980
15	Carpentering	87	177,833	14,625	22,690	26,945	113,073	100	4	8,900	848	301,426
16	Carriages and wagons	132	847,426	84,698	121,334	107,339	584,055	166	39	31,024	830	261,856
17	Cars and general shop construction and repairs by steam railroad companies.	32	1,408,592	190,110	412,414	408,005	398,063		97	98,003	3,175	1,602,208
18	Charcoal	15	10,827	2,890	185	1,230	6,022	20	1	360	87	7,470
19	Cheese, butter, and condensed milk, factory product.	4	13,497	450	3,100	8,910	1,037	3	1	400	4	1,860
20	Clothing, men's, custom work and repairing.	73	168,656	14,950	25,550	10,961	117,195	87	21	20,350	284	129,843
21	Clothing, men's, factory product	18	514,060	11,840	27,700	71,251	403,269	31	43	37,340	1,276	230,947
22	Clothing, women's, dressmaking	89	43,055	10,275	20,725	6,895	5,160	90	4	1,765	189	33,723
23	Coffins, burial cases, and undertakers' goods.	4	227,635	25,525	44,760	14,450	142,900	4	19	20,900	109	42,300
24	Confectionery	27	471,680	15,900	23,500	54,982	377,298	28	72	61,663	419	109,561
25	Cooperage	23	270,353	21,095	59,675	83,180	106,403	21	22	22,322	408	98,607
26	Cotton, compressing	10	895,468	213,094	277,952	260,284	144,138	4	45	41,712	505	84,307
27	Cotton, ginning ¹	1,178	1,312,038	57,602	329,125	1,360,649	64,572	1,449	161	15,219	1,401	207,757
28	Cotton goods	67	24,158,159	1,166,237	4,701,906	10,828,803	7,461,213	10	332	430,501	18,233	3,566,951
29	Druggists' preparations, not including prescriptions.	6	57,600			1,100	56,500	6	6	2,100	14	4,239
30	Dyeing and cleaning	24	28,334	3,550	7,400	4,520	12,861	30	2	800	78	15,923
31	Electrical construction and repairs	6	56,850	3,000		16,650	37,200	5	9	7,660	60	29,228
32	Fertilizers	41	6,663,618	137,762	1,044,804	661,134	4,819,918	39	114	147,018	1,126	291,887
33	Flouring and grist mill products	1,123	2,504,033	289,073	577,812	1,025,920	611,223	1,315	88	58,908	1,167	225,133
34	Foundry and machine shop products	87	8,393,141	327,452	465,971	691,539	1,913,179	88	177	198,734	2,381	920,331
35	Fruits and vegetables, canning and preserving.	8	24,801	1,851	5,700	5,500	11,750	5	4	3,650	81	10,545
36	Furniture, cabinetmaking, repairing, and upholstering.	42	25,262	3,100	5,275	5,925	10,962	45			41	15,666
37	Furniture, factory product	21	1,195,948	165,400	127,667	183,794	719,087	17	85	90,534	1,354	358,512
38	Gas, illuminating and heating	12	4,269,319	313,250	260,806	3,413,216	282,047		75	56,311	271	92,265
39	Hosiery and knit goods	16	928,887	21,836	85,012	416,329	405,710		46	39,467	1,203	200,062
40	Ice, artificial	32	975,100	63,950	128,988	721,050	58,112	14	48	42,535	251	86,210
41	Iron and steel	3	655,916	175,000	295,000	113,880	72,036		18	13,295	194	48,391
42	Leather, tanned, curried, and finished	36	1,434,390	56,270	210,520	265,820	901,780	38	26	20,413	410	92,030
43	Lime and cement	5	130,949	89,000	9,210	24,760	7,979	4	4	4,215	103	25,320
44	Liquors, distilled	28	54,808	3,485	10,350	17,000	23,973	29	4	1,320	42	8,557
45	Liquors, malt	5	1,827,830	200,500	323,852	323,380	480,098		37	64,300	300	123,288
46	Liquors, vinous	6	38,360	240	5,900	6,320	25,900	4	3	1,350	6	1,225
47	Lock and gun smithing	19	15,765	3,500	1,150	7,905	3,210	22			12	2,452
48	Looking-glass and picture frames	14	16,835			1,735	15,100	17	4	2,010	26	9,582
49	Lumber and timber products	1,254	11,802,716	4,044,247	751,547	4,773,750	2,233,172	1,697	414	268,646	10,240	2,314,523
50	Lumber, planing mill products, including sash, doors, and blinds.	99	2,074,226	244,830	254,925	640,108	934,363	120	150	146,020	2,171	672,243
51	Marble and stone work	23	590,542	142,140	54,885	187,040	255,877	23	25	27,275	574	233,026
52	Masonry, brick and stone	30	89,011	7,500	13,200	16,206	52,105	32	9	5,770	594	227,836
53	Mattresses and spring beds.	10	114,170	3,600	1,800	22,940	85,830	10	21	22,313	74	30,188
54	Millinery and lace goods	3	18,200			3,500	14,700	4	16	8,090	62	20,388
55	Millinery, custom work	181	261,232	13,260	36,450	8,851	202,071	213	42	16,000	279	82,059
56	Mineral and soda waters	38	130,961	5,700	4,775	66,335	54,151	41	29	17,590	91	22,045
57	Monuments and tombstones	41	168,198	9,432	7,185	17,115	134,466	51	26	16,480	303	124,536
58	Oil, cottonseed and cake	43	4,098,668	235,853	683,532	1,428,334	1,750,949	7	195	187,164	1,591	354,017
59	Optical goods	3	37,050			2,750	34,300	4			12	8,800
60	Painting, house, sign, etc	47	32,645	2,750	4,575	7,075	18,245	52	2	1,380	132	66,386
61	Paints	5	101,300	4,000	4,500	11,500	81,300	3	12	9,170	23	9,844
62	Paper hanging	5	23,240			890	22,350	6	7	4,784	23	8,540
63	Patent medicines and compounds	22	498,560	29,756	77,268	28,725	862,811	13	38	31,958	178	44,340
64	Paving and paving materials	3	35,189	7,100	5,200	12,229	10,660		11	5,175	40	16,535
65	Photography	64	59,798	2,805	6,762	31,105	19,121	74	3	800	49	14,752
66	Plumbing, and gas and steam fitting	56	247,002	13,100	19,550	22,205	192,147	63	26	17,543	423	161,350
67	Pottery, terra cotta, and fire-clay products.	21	266,710	38,125	80,415	53,110	95,060	23	21	17,800	285	66,795
68	Printing and publishing, book and job.	51	635,150	32,700	18,300	417,293	166,857	66	49	41,916	811	241,745
69	Printing and publishing, newspapers and periodicals.	233	1,352,313	113,635	165,112	1,249,133	324,933	234	196	177,325	1,050	450,878
70	Rice, cleaning and polishing	4	113,155	30,085	40,075	20,775	22,220	4	5	4,800	14	8,250
71	Roofing and roofing materials	11	90,235	10,500	21,500	22,700	35,535	12	9	5,950	87	33,507
72	Saddlery and harness	78	493,454	20,726	51,315	63,849	357,564	93	41	21,535	651	141,900
73	Sewing machine repairing	4	1,040			555	485	3			2	400
74	Ship and boat building, wooden	4	15,170			770	14,400	2	2	1,400	19	5,156
75	Slaughtering and meat packing, wholesale.	4	109,400	13,500	27,700	24,700	43,500	4	32	19,625	98	31,050
76	Slaughtering, wholesale, not including meat packing.	3	6,427	3,200	1,325	102	1,800	4	2	610	6	1,390

¹ Does not include many ginneries 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 ginneries in operation, reference should be made to the special report on cotton ginning.

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.										
201	\$76,616	20	\$3,736	20	\$1,896	\$26,504	\$12,411	\$3,043	\$11,050		\$290,557	\$288,244	\$7,813	\$597,549	12
1,633	841,099	2	500	66	5,698	44,687	9,505	6,678	23,104	\$100	264,016	65,205	198,811	1,053,255	13
79	17,860			2	120	1,833	892	435	506		60,382	69,132	250	117,260	14
848	301,426					21,960	5,577	1,676	8,714	5,993	604,900	603,957	943	1,112,725	15
822	261,056			8	800	45,092	10,420	8,339	26,163	120	545,587	533,707	11,830	1,350,644	16
3,169	1,601,128	6	1,080			89,380	1,800	16,472	69,931	1,174	1,272,692	1,257,533	15,159	3,002,283	17
85	7,370			2	100	2,277	90	61	326	1,800	10,120	10,120		41,832	18
4	1,860					360		72	288		10,515	9,964	551	14,166	19
211	112,435	65	16,789	8	622	27,293	15,167	1,980	9,871	275	171,542	169,611	1,931	437,113	20
119	44,408	1,088	178,070	74	8,469	25,200	9,962	2,915	12,273	50	657,352	640,882	7,470	1,120,607	21
		185	33,438	4	285	6,344	5,314	547	483		96,637	96,432	205	183,582	22
94	89,300			15	3,000	5,546	480	1,516	3,550		76,505	74,650	1,855	203,760	23
238	80,994	165	26,555	16	2,012	60,550	14,718	4,453	41,379		534,244	524,405	9,839	864,500	24
394	97,735			14	872	24,042	2,166	1,495	13,581	6,800	392,244	381,227	1,017	678,092	25
505	84,307					63,453	15,000	13,123	35,330		43,921	25,480	18,441	845,017	26
1,398	207,460	6,495	1,270,434	3	297	34,615	2,877	15,436	10,302		281,562	161,500	70,053	1,120,264	27
7,309	1,815,126	6	1,208	4,479	481,391	1,041,863	178,561	178,561	831,902	31,379	11,113,356	10,794,699	318,657	18,457,615	28
6	2,856			2	175	4,996	1,736	1,885	1,375		70,930	68,385	2,545	96,626	29
52	18,012	6	1,315	20	1,596	5,845	4,220	323	1,202	100	80,777	29,778	999	67,791	30
59	29,078			1	150	6,292	3,820	315	1,607	550	64,289	63,740	540	130,910	31
1,121	293,887			5	1,000	405,936	4,261	36,174	365,376	125	2,349,635	2,296,942	52,693	3,867,353	32
1,164	225,223			13	710	78,455	8,050	23,120	42,113	172	7,004,065	6,955,025	49,040	8,330,439	33
2,390	916,468	1	800	23	3,568	178,903	8,165	30,085	130,123	5,580	1,590,884	1,539,742	51,142	3,506,427	34
26	6,260	38	4,410	17	875	4,262	600	221	3,441		67,192	60,099	493	120,022	35
33	15,266			3	400	3,621	2,639	384	543	50	16,380	16,235	145	62,194	36
1,154	334,943	48	7,230	152	16,839	93,702	8,106	4,580	80,766	250	517,466	512,927	4,539	1,273,462	37
271	92,265					185,602	24,000	24,140	137,462		141,507	135,109	6,398	660,812	38
217	64,148	682	104,754	309	31,760	72,631	910	5,353	55,496	10,872	757,430	746,536	10,894	1,230,801	39
250	86,030			1	180	49,654	2,005	8,826	38,373	450	126,512	45,981	80,531	456,004	40
188	47,959			6	432	8,800		1,766	6,884	150	237,421	111,483	125,938	391,599	41
408	91,980			2	50	24,724	1,620	3,989	19,115		928,129	924,868	3,261	1,187,697	42
108	25,320					1,135		416	719		19,893	12,214	7,679	62,519	43
42	3,557					135,152	296	1,158	133,698		39,695	35,242	4,453	198,891	44
300	128,288					410,745		9,903	400,842		275,747	234,807	40,940	973,212	45
6	1,225					3,482	120	160	3,262		7,815	7,765	50	15,875	46
7	1,780	1	240	4	432	4,567	2,637	737	1,193		7,421	6,887	584	25,653	47
26	9,582					4,897	3,454	241	1,137	85	25,238	25,268	30	57,935	48
10,108	2,330,622	11	1,800	121	12,101	249,636	15,476	53,942	170,598	9,690	6,665,897	6,665,437	460	18,704,923	49
2,139	667,145	1	500	31	4,698	102,159	13,144	19,040	64,975	5,000	2,230,495	2,268,654	11,841	4,302,976	50
562	281,326			12	1,700	41,528	2,873	1,614	27,041	10,600	162,759	161,891	10,868	551,983	51
594	227,836					6,240	1,693	1,021	3,526		581,744	534,592	152	865,017	52
61	27,150	12	2,918	1	120	7,821	3,732	1,168	2,921		150,325	148,910	1,415	238,028	53
6	1,260	47	18,428	9	700	4,210	2,775	550	885		58,965	58,710	255	113,500	54
3	625	267	80,123	9	1,311	40,501	28,010	8,149	9,336	6	380,731	380,235	496	685,733	55
82	21,116			9	929	14,973	4,881	1,167	8,975		65,608	64,985	613	196,599	56
303	124,536					11,312	5,281	2,078	8,753	200	203,907	202,245	1,662	487,722	57
1,681	352,875	1	115	9	1,027	312,936	100	28,727	282,959	1,200	6,229,436	6,105,840	122,596	8,004,112	58
11	8,200		600			4,425	2,100	185	2,140		22,205	22,090	115	58,500	59
177	66,011			5	375	6,266	3,922	655	1,639		72,456	72,373	83	195,920	60
19	8,704	1	600	3	540	10,905	2,720	1,360	6,825		112,474	111,522	952	182,279	61
23	8,540					4,398	2,610	468	510	800	80,392	39,880	12	71,475	62
87	27,156	87	16,054	4	530	281,676	5,366	13,604	262,706		487,037	484,998	2,039	1,160,802	63
40	16,535					715	450	90	175		16,539	16,185	354	63,607	64
27	10,684	16	3,479	6	589	13,625	10,060	1,435	2,000	130	33,595	33,374	221	120,974	65
420	101,038			3	312	20,713	12,611	3,164	4,938		417,125	414,943	2,182	774,326	66
279	66,156	1	75	5	564	15,587	861	2,051	13,150	25	42,273	17,275	24,998	203,322	67
583	207,693	198	30,594	30	3,458	46,243	19,230	5,408	18,421	3,139	242,609	234,074	8,595	693,726	68
774	406,365	110	27,190	166	17,323	243,417	23,438	13,364	167,669	33,901	370,920	349,288	21,632	1,637,019	69
14	8,250					2,690	100	1,306	1,284		161,070	159,535	1,535	184,804	70
87	33,607					10,015	2,504	599	4,912	2,000	123,362	122,600	762	213,623	71
540	126,187	16	2,490	95	13,223	35,501	12,882	3,476	18,667	506	820,062	815,745	4,317	1,249,885	72
2	400					366	336	30			805	805		3,000	73
19	5,156					10	10	25	800	345	12,050	12,050		23,500	74
97	30,800			1	250	10,745	860	1,360	8,525		456,355	458,955	2,400	567,381	75
5	1,315	1	75			489	60	29	400		27,340	27,340		33,396	76

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 imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
77	Sugar and molasses, refining-----	9	\$32,895	\$20	\$40	\$11,330	\$21,605	12	4	\$3,014	20	\$1,502
78	Tinsmithing, coppersmithing, and sheet-iron working.	52	458,039	50,950	38,930	50,545	317,614	56	30	23,500	303	103,114
79	Tobacco, cigars, and cigarettes-----	34	55,673	6,170	3,110	2,915	43,478	36	7	2,795	106	35,438
80	Trunks and valises-----	7	45,879			2,859	43,020	7	14	12,930	92	32,580
81	Turpentine and rosin-----	524	3,785,432	1,496,829	355,120	559,992	1,373,491	815	768	320,265	19,199	3,772,818
82	Typewriter repairing-----	8	31,163			2,000	29,163	1	3	2,300	14	9,930
83	Vinegar and cider-----	3	17,335		200	1,935	15,200	4	4	5,200	12	3,100
84	Watch, clock, and jewelry repairing --	123	98,665	7,200	16,175	35,640	39,650	131	4	836	66	31,972
85	Wood, turned and carved-----	6	17,030	2,090	2,625	10,375	1,940	8			43	7,425
86	Woolen goods-----	14	455,114	32,065	61,895	198,135	162,969	1	13	16,936	561	97,159
87	All other industries ¹ -----	65	3,307,564	168,830	402,807	1,111,042	1,624,885	52	195	205,548	2,619	671,086

¹ Embraces bags, paper, 2; belting and hose, leather, 1; bottling, 1; brass castings and brass finishing, 1; carriage and wagon materials, 1; cars and general shop construction and repairs by street railroad companies, 2; cars, steam railroad, not including operations of railroad companies, 2; coke, 2; cordage and twine, 1; cotton small wares, 1; cotton waste, 1; cutlery and edge tools, 1; electrical apparatus and supplies, 1; electroplating, 1; engraving, steel, including plate printing, 2; fancy articles, not elsewhere specified, 1; food preparations, 1; furnishing goods, men's, 2; gas machines and meters, 1; glass, 1; glass, cutting, staining, and ornamenting, 1; grease and tallow, 1; hand stamps, 2; hats and caps, not including fur hats, and wool hats, 2; house furnishing goods, not elsewhere specified, 1;

TABLE 8.—MANUFACTURES IN CITIES

ATLANTA.

1 All industries.....	395	\$16,085,114	\$1,219,144	\$1,694,606	\$6,745,921	\$6,895,443	391	780	\$851,801	9,368	\$3,106,039
2 Bicycle and tricycle repairing.....	8	6,020			3,520	2,500	8	6	3,886	18	5,192
3 Blacksmithing and wheelwrighting.....	25	20,855	10,500	1,100	4,788	4,467	31			57	21,936
4 Boots and shoes, custom work and repairing.....	48	5,893		50	1,704	4,139	49			38	12,591
5 Boxes, fancy and paper.....	3	72,017	5,000		22,964	44,053	4	12	13,576	123	29,125
6 Bread and other bakery products.....	13	79,900	9,100	16,600	20,650	33,550	13	9	9,554	90	28,711
7 Carpentering.....	10	71,843			9,825	62,018	16			317	121,604
8 Carriages and wagons.....	6	52,525	6,000	7,000	4,025	35,500	7	7	4,900	82	31,300
9 Clothing, men's, custom work and repairing.....	11	17,410			1,310	16,100	18	3	4,200	51	30,416
10 Clothing, men's, factory product.....	7	226,105			37,500	188,605	16	11	12,790	801	156,388
11 Confectionery.....	6	384,250			39,250	295,000	9	38	34,123	259	63,602
12 Cotton goods.....	3	3,461,373	161,655	641,152	1,601,984	1,056,582		33	61,105	1,776	417,246
13 Dyeing and cleaning.....	6	7,720	1,000	4,000	1,480	1,240	7			22	6,420
14 Electrical construction and repairs.....	4	42,000	3,000		14,500	24,500	2	7	7,300	49	21,100
15 Fertilizers.....	3	672,482	21,000	116,000	60,000	476,482		14	30,402	145	38,721
16 Foundry and machine shop products.....	17	1,193,756	125,000	100,800	195,178	772,778	10	59	73,450	602	285,832
17 Furniture, cabinetmaking, repairing, and upholstering.....	3	5,075			1,200	3,875	4			5	3,216
18 Furniture, factory product.....	5	781,685	145,000	70,000	88,900	477,785	1	81	45,460	533	173,550
19 Ice, artificial.....	4	227,238	10,500	17,138	186,600	13,000		8	10,100	32	14,946
20 Lock and gun smithing.....	7	7,165	2,500	1,000	3,505	160	8			4	1,070
21 Lumber and timber products.....	5	39,958	32,333	1,775	5,150	700	5			12	2,050
22 Lumber, planing mill products, including sash, doors, and blinds.....	6	337,700	108,000	58,000	80,700	156,000	3	44	56,140	521	186,400
23 Millinery and lace goods.....	3	18,200			3,500	14,700	4	16	8,690	62	20,388
24 Millinery, custom work.....	6	22,281	500	2,000	630	19,151	4	14	4,500	45	18,171
25 Mineral and soda waters.....	4	52,175			16,700	35,475	1	18	10,090	13	3,470
26 Monuments and tombstones.....	7	24,760			4,325	20,425	6	1	1,200	73	31,728
27 Painting, house, sign, etc.....	6	9,265			1,280	7,985	7			9	12,510
28 Paints.....	5	101,300	4,000	4,500	11,500	81,800	3	12	9,170	23	9,814
29 Paper hanging.....	4	21,575			875	20,700	5	6	4,610	17	6,200
30 Patent medicines and compounds.....	10	429,935	27,756	78,268	23,400	305,511	8	27	25,813	128	32,376
31 Photography.....	3	5,075			3,800	1,275	3			9	2,172
32 Plumbing, and gas and steam fitting.....	14	53,180			5,880	47,300	15	8	6,200	135	49,320
33 Printing and publishing, book and job.....	17	365,085	25,000	10,000	248,050	82,035	19	81	28,160	409	150,562
34 Printing and publishing, newspapers and periodicals.....	16	984,845	60,000	66,000	702,257	96,588	11	68	87,165	160	121,986
35 Saddlery and harness.....	9	31,670			3,800	27,870	10			23	10,778
36 Tinsmithing, coppersmithing, and sheet-iron working.....	8	311,289	20,000	30,000	39,685	227,604	8	27	21,900	170	41,540
37 Tobacco, cigars and cigarettes.....	10	17,753			1,060	16,693	12	4	1,415	38	13,946
38 Typewriter repairing.....	3	31,163			2,000	29,163	1	3	2,300	14	9,930
39 Watch, clock, and jewelry repairing.....	9	4,270			2,250	2,020	11			4	2,200
40 All other industries ¹	61	5,878,333	476,300	474,223	3,236,196	1,691,614	52	263	274,012	2,481	919,523

¹ Embraces agricultural implements, 1; awnings, tents, and sails, 1; bags, paper, 2; belting and hose, leather, 1; boots and shoes, factory product, 1; boxes, wooden packing, 1; brooms and brushes, 2; cars and general shop construction and repairs by steam railroad companies, 2; clothing, women's, dressmaking, 1; collars, burial cases, and undertakers' goods, 2; cotton, compressing, 1; electroplating, 1; engraving, steel, including plate printing, 2; flouring and grist mill products, 1; fruits and vegetables, canning and preserving, 1; furnishing goods, men's, 1; gas, illuminating and heating, 2; glass, cutting, staining, and ornamenting, 1; hand stamps, 2; hats and caps, not including fur hats, and wool hats, 2; hosiery and knit goods, 2; ironwork, architectural and ornamental, 1; leather goods, 1;

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.										
19 276	\$1,310 99,140	1	\$192	27	\$3,974	\$2,315 14,801	\$1,430 6,787	\$283 8,736	\$602 4,278		\$74,631 571,553	\$73,797 563,834	\$834 2,719	\$106,700 796,430	77 78
87 87	32,033 32,100	10	2,692	9 5	713 480	19,839 15,303	3,833 7,340	821 488	15,185 7,475		51,418 92,615	51,270 91,910	148 705	125,058 189,316	79 80
19,028	3,754,972	49	5,303	122	12,573	178,774	1,998	26,714	86,681	\$93,381	2,292,665	2,267,532	25,133	8,110,468	81
11 12	9,030 8,100	3	900			14,608 1,857	1,548 1,200	10 7	12,050 650	1,000	41,155 14,910	41,155 14,910		84,200 72,665	82 83
61 40	34,287 7,060			5 3	735 375	19,897 1,851	16,121 5	1,332 139	2,964 1,707	480	34,043 8,760	33,993 8,660	650 200	163,433 25,290	84 85
284 1,492	55,013 433,344	189 955	31,720 112,842	88 202	10,426 25,800	22,430 211,928		3,012 23,385	18,455 21,120	963 7,843	280,235 2,638,543	278,948 2,646,066	6,947 42,477	491,001 4,158,375	86 87

ironwork, architectural and ornamental, 2; kaolin and other earth grinding, 1; leather goods, 1; oil, not elsewhere specified, 1; oysters, canning and preserving, 1; paper and wood pulp, 2; paper goods, not elsewhere specified, 1; photographic materials, 1; photolithography and photoengraving, 1; pickles, preserves, and sauces, 1; printing materials, 1; refrigerators, 1; saws, 1; scales and balances, 1; shirts, 2; shoddy, 1; show cases, 1; soap and candles, 1; steam fittings and heating apparatus, 1; stencils and brands, 2; stereotyping and electrotyping, 2; surgical appliances, 1; tobacco, stemming and rehandling, 1; typewriters and supplies, 1; umbrellas and canes, 2; wirework, including wire rope and cable, 1.

BY SPECIFIED INDUSTRIES: 1900.

ATLANTA.

6,454	\$2,574,280	2,120	\$121,777	785	\$106,982	\$1,352,721	\$149,904	\$92,983	\$1,055,838	\$53,996	\$8,571,194	\$8,408,017	\$163,177	\$16,721,899	1
16	4,952			2	180	2,352	1,934	93	325		7,990	7,416	583	23,700	2
56	21,840			1	96	5,648	4,312	252	1,084		19,401	18,270	1,131	61,225	3
88	12,691					6,876	6,335	107	434		15,638	15,820	818	57,497	4
30	13,145	88	14,980	10	1,000	5,654	2,320	400	2,934		26,310	25,630	680	122,125	5
70	25,544	15	2,080	11	1,087	12,138	4,101	652	7,430		99,050	96,240	2,810	218,355	6
317	121,601					10,962	1,754	208	4,000	5,000	226,353	225,665	688	415,886	7
82	81,300					4,103	2,661	465	977		32,855	31,020	1,335	111,460	8
40	27,604	11	2,812			4,254	3,202	297	755		24,476	23,643	833	74,680	9
72	29,700	685	120,900	44	5,798	11,575	7,280	782	3,563		388,908	384,468	4,440	671,406	10
137	43,720	118	19,262	4	520	48,628	7,620	2,372	33,636		258,923	248,300	5,623	450,932	11
652	206,053	650	142,604	465	68,589	150,150		15,125	132,525	2,500	1,156,178	1,119,250	36,928	1,938,228	12
20	5,980	2	440			1,669	1,390	88	241		2,663	2,317	346	17,400	13
48	21,040			1	150	5,467	3,320	190	1,407	550	54,284	53,894	390	108,210	14
145	33,721					37,831		5,665	32,166		243,080	237,095	5,985	385,300	15
595	284,492	1	300	6	1,040	65,227	4,430	7,842	40,755	3,700	443,949	430,880	13,060	1,028,736	16
5	8,216					381	252	14	116		3,720	3,665	55	11,750	17
508	170,000			25	3,550	73,870	6,465	1,600	65,805		277,200	275,450	1,750	703,500	18
32	14,946					13,903	1,160	1,319	11,424		30,203	29,271	927	101,913	19
3	880	1	240			2,940	1,308	577	1,055		2,184	1,827	357	9,880	20
12	2,050					277		217	60		7,670	7,670		14,872	21
521	186,400					26,116	2,280	4,496	17,840	2,000	740,456	740,456		1,137,431	22
6	1,260	47	18,428	9	700	4,210	2,775	550	885		58,905	58,710	255	113,500	23
12	3,370	43	12,871	2	300	6,042	5,280	227	555		59,748	59,713	35	104,608	24
73	31,728			1	100	8,866	2,402	121	6,343		28,407	28,087	320	80,073	25
						2,441	1,626	250	505		41,136	40,695	441	105,100	26
9	12,540					1,496	1,146	190	160		14,485	14,423	62	37,510	27
19	8,704	1	600	3	540	10,905	2,720	1,930	6,825		112,474	111,522	952	182,279	28
17	6,200					4,163	2,430	448	485	800	30,292	29,250	12	68,685	29
66	20,996	60	11,080	2	300	204,408	3,060	13,062	248,286		440,637	439,063	1,574	1,068,437	30
2	600	5	1,264	2	808	1,747	1,448	142	157		2,647	2,580	67	9,900	31
135	49,820					7,793	4,665	1,013	2,115		92,856	92,499	357	201,986	32
280	125,164	107	22,716	22	2,682	20,618	10,049	2,164	11,245		143,149	138,476	4,674	405,964	33
145	120,703	13	4,122	2	161	141,818	4,735	4,318	99,005	33,710	146,994	139,865	7,129	636,730	34
22	10,678			1	100	5,922	4,456	615	851		29,711	29,624	87	73,516	35
153	37,675			26	3,874	7,345	2,140	2,657	2,548		397,718	396,412	1,306	504,360	36
32	12,876					6,762									
11	9,030	4	890	2	240	14,608	1,891	214	5,157		26,390	26,215	115	50,832	37
4	2,200	3	900			8,031	1,543	10	12,050	1,000	41,155	41,155		84,200	38
2,069	855,508	271	43,348	144	15,667	349,485	2,118	29	404	480	1,931	1,891	40	13,503	39
							33,761	23,452	201,171	1,101	2,837,559	2,790,061	47,498	5,361,829	40

leather, tanned, curried, and finished, 1; liquors, distilled, 1; liquors, malt, 1; looking-glass and picture frames, 1; marble and stone work, 1; masonry, brick and stone, 2; mattresses and spring beds, 2; optical goods, 1; paper goods, not elsewhere specified, 1; paving and paving materials, 1; photolithography and photoengraving, 1; pickles, preserves, and sauces, 1; pottery, terra cotta, and fire-clay products, 2; roofing and roofing materials, 1; sewing machine repairing, 1; show cases, 1; soap and candles, 1; steam fittings and heating apparatus, 1; stereotyping and electrotyping, 2; sugar and molasses, refining, 2; trunks and valises, 2; typewriters and supplies, 1; woolen goods, 1.

TABLE 8.—MANUFACTURES IN CITIES

AUGUSTA.

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 All industries	388	\$9,016,619	\$911,724	\$1,904,696	\$3,304,309	\$2,895,890	380	264	\$278,036	7,138	\$1,815,879
2 Bicycle and tricycle repairing	9	12,160	400	150	2,500	9,110	8	3	1,000	15	6,150
3 Blacksmithing and wheelwrighting	25	12,865	5,850	2,850	2,330	1,835	25	1	750	42	13,748
4 Boots and shoes, custom work and repairing.	16	1,925			675	1,250	17			11	8,100
5 Bread and other bakery products	7	33,175	10,200	23,600	2,150	2,225	7	1	600	30	9,350
6 Carpentering	36	35,280	7,500	14,300	5,340	8,140	36	3	3,100	262	105,561
7 Carriages and wagons	5	77,150	6,000	10,000	7,475	53,675	7			48	17,024
8 Clothing, men's, custom work and repairing.	18	68,160	10,000	20,000	3,325	29,835	21	9	11,500	88	38,016
9 Clothing, women's, dressmaking	67	33,500	9,150	17,950	4,615	1,785	67			105	19,929
10 Confectionery	7	40,890	13,400	17,500	3,425	6,565	8	3	1,150	29	6,511
11 Cotton, compressing	3	5,500			5,300	200		17	13,252	225	32,878
12 Cotton goods	8	5,133,374	498,619	1,177,000	2,281,604	1,176,151		42	67,137	3,459	680,877
13 Dyeing and cleaning	5	6,300	2,000	3,000	875	425	5			10	2,925
14 Flouring and grist mill products	6	147,377	35,500	28,000	15,715	68,162	7	15	10,410	48	11,625
15 Furniture, cabinetmaking, repairing, and upholstering.	7	4,215			670	3,545	6			13	8,920
16 Ice, artificial	3	131,000	9,000	22,000	96,000	4,000		8	8,340	37	6,900
17 Lock and gun smithing	3	1,800			900	900	4			4	600
18 Looking-glass and picture frames	3	2,375			225	2,150	3			8	960
19 Lumber and timber products	5	25,630	8,285	120	13,500	3,725	6	2	480	46	9,225
20 Lumber, planing mill products, including sash, doors, and blinds.	4	279,850	37,000	37,000	81,200	124,650	3	34	33,400	255	92,000
21 Masonry, brick and stone	17	52,525	7,350	12,550	4,650	27,975	18	2	2,000	286	108,610
22 Mattresses and spring beds	4	1,300	200	300	280	580	4			7	1,738
23 Millinery, custom work	13	17,750	1,000	3,000	700	13,050	13	2	600	42	10,655
24 Monuments and tombstones	3	8,800	50	250	2,500	6,000	4	2	1,200	46	18,700
25 Painting, house, sign, etc	24	10,405	2,500	3,900	2,045	1,960	25			78	24,465
26 Photography	5	4,500			3,000	1,500	7			7	2,700
27 Plumbing, and gas and steam fitting	8	78,300	6,000	10,000	3,850	58,450	10	10	6,598	93	36,752
28 Printing and publishing, book and job	6	82,500			67,500	15,000	8	2	2,560	212	25,427
29 Printing and publishing, newspapers and periodicals	5	152,450	20,500	35,500	65,950	30,500	4	10	11,064	108	58,532
30 Roofing and roofing materials	5	42,860	10,000	18,000	5,425	9,435	5			35	16,600
31 Saddlery and harness	3	1,470			115	1,355	3			8	1,096
32 Tinsmithing, coppersmithing, and sheet-iron working	5	6,485			1,375	5,110	5			12	4,080
33 Tobacco, cigars and cigarettes	5	5,430	2,750	200	375	2,105	5	1	600	9	2,178
34 Watch, clock, and jewelry repairing	14	18,720	3,000	7,000	2,910	5,810	15			11	6,650
35 All other industries ¹	34	2,480,538	205,470	440,526	615,810	1,218,732	24	97	102,295	1,454	426,402

¹ Embraces awnings, tents, and sails, 2; boots and shoes, factory product, 1; bottling, 1; brick and tile, 2; brooms and brushes, 1; cars and general shop construction and repairs by steam railroad companies, 2; clothing, men's, factory product, 1; cotton, ginning, 1; cotton waste, 1; druggists' preparations, not including prescriptions, 1; electrical apparatus and supplies, 1; fancy articles, not elsewhere specified, 1; fertilizers, 2; foundry and machine shop products, 2; gas, illuminating, 1; glass, 1; hardware, 1; ice, 1; iron, 1; leather, 1; lime, 1; machinery, 1; metal, 1; millinery, 1; millstones, 1; oil, 1; paint, 1; paper, 1; pottery, 1; rubber, 1; shoes, 1; stone, 1; sugar, 1; textiles, 1; tobacco, 1; tools, 1; wood, 1; wool, 1; yarn, 1; zinc, 1.

MACON.

1	All industries -----	182	\$5,076,005	\$307,716	\$323,563	\$1,605,206	\$2,339,520	173	263	\$272,138	3,700	\$1,047,437
2	Bicycle and tricycle repairing -----	5	4,152			2,302	1,850	6			7	1,900
3	Blacksmithing and wheelwrighting -----	12	9,511	1,600	3,529	1,335	3,047	13			17	5,456
4	Boots and shoes, custom work and repairing -----	13	1,744			1,131	613	12			16	6,153
5	Bread and other bakery products -----	5	47,550	15,000	23,500	1,425	7,625	7	5	1,758	12	5,056
6	Carpentering -----	8	4,650			1,150	3,500	3			54	9,500
7	Carriages and wagons -----	7	29,600	6,000	2,000	4,250	17,350	9	3	1,840	62	17,106
8	Cars and general shop construction and repairs by steam railroad companies -----	4	189,681	23,100	83,100	55,600	27,881		17	18,540	572	265,164
9	Clothing, men's, custom work and repairing -----	11	31,577			1,432	30,145	13	7	3,450	30	14,466
10	Clothing, women's, dressmaking -----	7	2,175			925	1,250	5	2	710	66	10,192
11	Confectionery -----	4	58,400			4,000	54,400	2	19	20,150	63	17,320
12	Cotton goods -----	3	1,270,213	55,500	207,178	527,121	480,414		26	47,316	920	190,413
13	Dyeing and cleaning -----	3	1,464	500	200	885	379	4			15	2,422
14	Foundry and machine shop products -----	3	257,795	30,000	35,000	23,000	169,795		13	18,420	167	65,000
15	Furniture, cabinetmaking, repairing, and upholstering -----	8	2,225		125	1,190	910	8			8	3,240
16	Lumber, planing mill products, including sash, doors, and blinds -----	5	262,413	26,500	31,000	58,786	146,127	5	17	13,270	202	49,847
17	Millinery, custom work -----	8	17,240			840	16,400	9	7	4,280	29	8,605
18	Painting, house, sign, etc -----	3	2,450			400	2,050	3			12	5,270
19	Photography -----	4	7,500	1,200	600	4,400	1,300	5				
20	Plumbing, and gas and steam fitting -----	6	30,142			3,400	26,742	6	4	2,400	74	22,100
21	Printing and publishing, book and job -----	6	32,225			16,700	15,525	6	4	2,400	35	11,523

BY SPECIFIED INDUSTRIES: 1900—Continued.

AUGUSTA.

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.										
4,887	\$1,363,110	2,081	\$382,634	670	\$70,135	\$618,938	\$61,202	\$117,348	\$435,288	\$5,100	\$6,244,286	\$6,108,844	\$135,942	\$10,069,750	1
15	6,160					1,664	1,172	186	306		12,173	11,969	204	26,475	2
41	13,676			1	72	2,490	1,741	239	610		12,492	11,738	754	46,800	3
11	3,100					1,679	1,317	66	296		4,650	4,650		14,681	4
30	9,850					2,045	1,030	375	640		81,377	30,465	912	61,585	5
262	105,561					4,233	2,282	735	1,116	100	183,561	183,551	10	860,825	6
47	16,880			1	144	3,197	782	1,280	1,135		20,677	19,895	782	50,505	7
68	32,440	18	5,890	2	216	9,952	3,543	707	5,702		53,878	53,803	75	135,825	8
		101	19,644	4	285	5,212	4,437	401	374		87,525	87,475	50	150,010	9
27	8,094	2	417			1,750	1,060	448	242		24,663	24,264	399	46,250	10
225	32,873					21,170	15,000	1,219	4,951		9,045	4,480	4,505	86,548	11
1,344	327,919	1,514	301,337	601	61,621	220,902		71,938	143,914	5,000	2,089,563	2,027,226	62,337	3,429,348	12
7	2,200	3	725			1,555	750	155	650		1,405	1,875	80	7,350	13
47	11,500			1	65	10,426	450	2,244	7,732		671,435	670,295	1,140	739,781	14
10	3,520			3	400	756	696	60			2,632			11,200	15
37	6,900					9,000		2,400	6,600		17,800	5,300	12,500	58,000	16
2	400			2	200	565	470	40	55		1,345	1,320	25	3,250	17
3	560					822	780	30	12		3,600	3,600		6,925	18
46	9,225					1,760	50	135	1,575		10,110	10,110		27,850	19
240	89,500			15	2,500	13,697	450	2,822	10,425		198,340	196,990	1,350	373,120	20
286	108,610					1,828	538	729	561		161,826	161,826		300,573	21
4	1,350	3	388			440	360	25	55		5,185	5,185		12,300	22
		39	10,315	3	340	6,438	5,620	306	512		57,150	57,150		94,550	23
46	18,700					1,590	840	425	325		18,130	17,960	170	48,300	24
77	24,890			1	75	1,907	1,437	296	174		17,375	17,375		69,950	25
3	1,400	4	1,300			1,497	1,370	110	17		2,990	2,990		12,216	26
91	36,540			2	212	3,031	1,345	898	788		148,915	148,765	150	236,952	27
151	23,407	61	2,020			3,595	1,960	1,035	600		19,186	18,345	841	70,132	28
81	51,970	21	5,800	6	763	19,611	960	1,820	16,831		34,875	31,780	3,095	140,300	29
35	16,600					1,929	684	335	910		39,582	39,362	220	69,166	30
4	850			4	246	506	486	20			1,695	1,695		4,975	31
12	4,080					985	690	55	240		5,780	5,771	9	14,325	32
7	2,066			2	112	1,627	166	58	1,413		4,049	4,049		11,610	33
7	6,000			4	650	2,904	2,379	165	360		5,273			23,400	34
1,121	388,839	315	35,328	18	2,235	258,175	6,367	25,641	226,267		2,296,104	2,249,780	46,324	3,334,473	35

nating and heating, 1; liquors, distilled, 1; liquors, malt, 1; marble and stone work, 1; mineral and soda waters, 1; oil, cottonseed and cake, 2; optical goods, 2; patent medicines and compounds, 1; sewing machine repairing, 1; shirts, 1; stencils and brands, 1; trunks and valises, 1; vinegar and cider, 1.

MACON.

2,762	\$893,430	669	\$114,249	269	\$39,758	\$445,078	\$37,433	\$39,092	\$341,733	\$26,815	\$3,741,167	\$3,652,893	\$88,301	\$6,495,767 1
5	1,750			2	150	1,221	902	117	202		725	558	167	6,500 2
17	5,456					1,555	1,353	72	130		4,660	4,397	263	20,811 3
15	5,099			1	54	979	878	19	82		4,409	4,388	21	15,373 4
12	5,056					2,455	660	835	960		18,130	17,545	585	35,872 5
54	9,500					704	384		320		31,450	31,450		52,322 6
52	17,106					2,314	1,092	352	870		35,918	35,087	831	81,558 7
572	205,161					9,185		3,012	4,999	1,171	202,475	198,816	3,659	495,364 8
29	13,906	1	560			4,065	2,080	125	1,800		17,780	17,487	293	48,770 9
31	12,770	66	10,192			533	422	30	81		3,492	3,432	60	16,734 10
		24	3,458	8	1,092	10,059	3,100	1,173	5,786		131,425	129,235	2,190	179,500 11
443	104,627	307	57,629	170	28,157	65,831		10,220	38,918	16,693	819,829	803,130	16,699	1,237,125 12
15	2,422					443	390	13	45		456	456		5,550 13
167	65,000					7,633	600	1,723	5,365		183,358	178,208	5,150	289,173 14
8	3,240					805	647	31	127		2,260			9,900 15
198	49,247			4	600	11,595	1,760	2,743	6,092	1,060	165,827	165,427	400	302,703 16
1	325	27	8,020	1	260	6,721	4,122	337	2,262		42,735	42,735		76,300 17
12	5,270					219	224		25		3,006	3,005	1	15,100 18
73	22,000			1	100	1,231	960	108	163		3,638	3,638		9,700 19
31	10,855	4	668			2,540	1,837	103	510		51,924	51,449	475	95,400 20
						3,967	2,220	643	1,104		11,535	13,501	1,031	43,350 21

TABLE 8.—MANUFACTURES IN CITIES

MACON—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 imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
22	Printing and publishing, newspapers and periodicals.	4	\$44,100			\$28,500	\$15,600	1	26	\$19,376	60	\$28,584
23	Saddlery and harness	6	93,159	\$1,500	\$2,000	7,459	82,200	9	11	6,280	70	21,139
24	Tinsmithing, coppersmithing, and sheet-iron working.	8	3,450			1,100	2,350	3			7	8,037
25	Watch, clock, and jewelry repairing.	8	4,080			1,625	2,455	8			15	7,230
26	All other industries ¹	41	2,668,509	146,816	435,331	856,750	1,229,612	36	102	111,948	1,197	277,764

¹ Embraces agricultural implements, 1; brick and tile, 2; brooms and brushes, 2; cars and general shop construction and repairs by street railroad companies, 1; clothing, men's, factory product, 1; cooperage, 2; cotton, compressing, 1; druggists' preparations, not including prescriptions, 1; fertilizers, 1; flouring and grist mill products, 1; furniture, factory product, 2; gas, illuminating and heating, 1; hosiery and knit goods, 1; ice, artificial, 1; liquors, malt, 1; looking-glass and picture

SAVANNAH.

1	All industries	155	\$5,716,491	\$566,850	\$928,194	\$1,868,399	\$2,853,048	157	220	\$231,377	2,870	\$1,176,150
2	Bicycle and tricycle repairing	4	5,700			3,100	2,600	4			17	5,110
3	Blacksmithing and wheelwrighting	18	35,090	8,500	4,850	7,390	14,350	19			64	26,115
4	Boots and shoes, custom work and repairing.	3	2,885			2,025	860	8	1	600	17	6,260
5	Bread and other bakery products.	16	38,525	8,000	6,500	10,925	13,100	16	2	720	49	27,154
6	Carriages and wagons.	3	37,600	14,500	8,000	5,300	9,800	3	1	1,500	32	15,276
7	Cars and general shop construction and repairs by steam railroad companies.	3	326,489	30,050	99,000	81,200	116,239		19	21,858	721	395,450
8	Clothing, men's, custom work and repairing.	3	9,400			400	9,000	3			26	17,300
9	Confectionery	4	23,695			5,057	18,638	3	10	5,540	43	17,053
10	Fertilizers	3	1,392,954	9,500	171,000	54,000	1,158,454	3	9	26,023	235	67,332
11	Foundry and machine shop products.	6	276,282	50,000	88,400	60,250	77,632	11	8	11,050	230	98,385
12	Furniture, cabinetmaking, repairing, and upholstering.	4	8,900	2,400	4,600	500	1,400	4			5	2,130
13	Lumber, planing mill products, including sash, doors, and blinds.	4	204,341		27,225	71,500	105,616	6	10	7,900	123	43,560
14	Mineral and soda waters	3	14,200			9,800	4,400	1	6	6,020	26	7,725
15	Patent medicines and compounds	3	31,000	2,000	4,000	1,000	24,000	1	2	1,700	21	5,016
16	Photography	4	8,050			4,100	3,950	5			12	4,909
17	Plumbing, and gas and steam fitting.	10	58,600	7,000	3,500	2,900	40,200	12	3	2,240	57	29,618
18	Printing and publishing, book and job.	5	72,320			88,943	33,377	7	3	3,696	75	32,961
19	Printing and publishing, newspapers and periodicals.	4	175,800	20,000	30,000	92,500	33,300	1	47	33,420	157	82,672
20	Saddlery and harness	3	9,137			2,575	6,562	3	1	1,000	13	4,909
21	Tinsmithing, coppersmithing, and sheet-iron working.	5	107,600	27,600	6,000	3,900	70,100	7			49	30,357
22	Tobacco, cigars and cigarettes	7	7,505			700	6,805	7			14	5,317
23	Trunks and valises	3	4,950			250	4,700	3			11	4,100
24	Watch, clock, and jewelry repairing	11	7,700			3,950	3,750	14			7	6,640
25	All other industries ¹	26	2,857,763	387,800	470,119	906,134	1,094,215	21	98	108,110	866	241,871

¹ Embraces baking and yeast powders, 2; brass castings and brass finishing, 1; brooms and brushes, 1; carpentering, 1; cooperage, 1; cotton, compressing, 1; dyeing and cleaning, 1; electrical construction and repairs, 1; gas, illuminating and heating, 1; ice, artificial, 2; liquors, malt, 2; lock and gun smithing, 1; looking-glass and picture frames, 1; lumber and timber products, 1; monuments and tombstones, 2; oil, cottonseed and cake, 1; oil, not elsewhere specified, 1; painting, house, sign, etc., 1; printing materials, 1; rice, cleaning and polishing, 1; stencils and brands, 1; turpentine and rosin, 1.

TABLE 9.—MANUFACTURES IN CITIES AND

1	Total for cities and towns	668	\$14,369,349	\$916,701	\$2,100,408	\$4,942,167	\$6,410,073	731	525	\$172,928	12,704	\$3,150,477
2	Americus	57	455,056	57,750	54,450	216,330	126,526	61	31	25,320	545	210,047
3	Athens	71	801,199	43,725	86,836	233,977	389,661	73	37	21,631	851	176,758
4	Barnesville	18	531,638	19,400	67,050	173,515	271,718	17	23	21,570	578	119,623
5	Brunswick	73	423,826	49,400	70,002	155,440	148,384	76	18	16,540	550	247,516
6	Cartersville	40	182,523	26,770	14,540	58,595	32,613	49	9	3,475	124	23,890
7	Columbus	135	5,690,882	333,098	835,443	1,763,107	2,759,284	152	196	192,656	4,814	1,201,320
8	Dalton	40	776,504	20,810	112,990	354,757	287,947	62	27	18,405	838	144,745
9	Gainesville	50	317,775	45,345	37,945	114,135	120,350	65	20	14,506	544	132,657
10	Griffin	29	1,407,625	20,775	243,625	632,853	510,309	28	23	27,969	1,021	229,790
11	La Grange	30	978,366	36,635	132,094	470,297	339,340	28	12	11,228	716	133,158
12	Marietta	34	693,134	55,790	99,392	184,542	358,410	35	40	34,719	633	180,157
13	Newnan	27	824,721	33,557	114,800	178,654	497,710	27	29	25,056	466	102,567
14	Rome	64	1,328,118	173,646	230,641	355,965	567,866	58	55	59,854	944	248,249

BY SPECIFIED INDUSTRIES: 1900—Continued.

MACON—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.										
58	\$28,144	1	\$260	1	\$130	\$6,772	\$1,480	\$940	\$3,952	\$400	\$14,765	\$12,661	\$2,104	\$80,170	22
58	19,845	2	254	10	1,040	6,516	2,400	550	3,566	-----	117,708	117,693	15	160,150	23
7	3,037	-----	-----	-----	-----	522	432	25	65	-----	5,213	5,174	89	11,659	24
15	7,230	-----	-----	-----	-----	952	856	41	55	-----	3,796	3,755	41	17,450	25
889	236,381	237	33,208	71	8,175	296,226	8,634	15,785	264,259	7,548	1,858,593	1,804,495	54,098	8,189,233	26

frames, 2; lumber and timber products, 1; masonry, brick and stone, 1; mineral and soda waters, 2; monuments and tombstones, 2; oil, cottonseed and cake, 2; paper hanging, 1; patent medicines and compounds, 1; paving and paving materials, 1; refrigerators, 1; roofing and roofing materials, 1; sewing machine repairing, 1; shirts, 1; slaughtering and meat packing, wholesale, 1; tobacco, cigars and cigarettes, 2; umbrellas and canes, 1; vinegar and cider, 1.

SAVANNAH.

2,782	\$1,157,417	85	\$18,267	3	\$466	\$400,918	\$65,208	\$50,681	\$352,229	\$1,800	\$3,015,884	\$3,822,410	\$98,474	\$6,401,816	1
17	5,110	-----	-----	-----	-----	1,831	1,436	177	218	-----	1,784	1,600	184	11,400	2
64	25,115	-----	-----	-----	-----	4,520	3,242	632	646	-----	22,392	21,423	969	78,720	3
16	6,010	1	250	-----	-----	896	759	72	65	-----	7,027	6,895	132	16,600	4
47	26,674	2	480	-----	-----	4,734	2,820	926	988	-----	90,461	88,989	1,472	156,065	5
32	15,276	-----	-----	-----	-----	1,206	396	420	890	-----	14,762	14,475	287	45,480	6
721	395,450	-----	-----	-----	-----	9,499	-----	7,157	2,342	-----	300,713	299,596	1,117	727,520	7
24	16,800	2	500	-----	-----	3,258	2,880	235	143	-----	22,935	22,900	35	53,080	8
27	14,635	16	2,418	-----	-----	3,837	2,508	254	1,075	-----	87,111	86,386	725	135,756	9
235	67,332	-----	-----	-----	-----	88,426	1,185	6,690	80,551	-----	418,111	399,129	13,982	615,639	10
230	98,885	-----	-----	-----	-----	12,523	1,050	5,173	6,300	-----	89,786	88,861	6,425	275,738	11
5	2,130	-----	-----	-----	-----	638	300	201	137	-----	3,024	3,024	-----	9,854	12
122	43,060	1	500	-----	-----	10,398	2,020	1,856	7,022	-----	145,057	144,707	350	227,372	13
26	7,725	-----	-----	-----	-----	2,158	748	233	1,122	-----	7,858	7,808	50	31,700	14
6	1,776	15	3,240	-----	-----	9,050	990	210	7,850	-----	25,926	25,926	-----	74,500	15
8	4,125	8	700	1	84	2,812	2,170	227	445	-----	6,185	6,185	-----	20,425	16
57	29,618	-----	-----	-----	-----	2,723	1,740	537	446	-----	70,086	69,511	575	133,614	17
59	29,234	16	3,727	-----	-----	6,896	2,690	622	3,581	-----	34,800	33,740	1,060	91,430	18
143	78,380	13	4,160	1	132	26,349	840	1,627	22,082	1,800	61,137	57,715	3,422	237,600	19
13	4,909	-----	-----	-----	-----	1,797	1,560	147	90	-----	19,982	19,970	12	36,194	20
49	30,387	-----	-----	-----	-----	2,227	1,080	652	495	-----	104,025	103,170	855	155,335	21
14	5,317	-----	-----	-----	-----	3,838	1,428	180	2,230	-----	5,782	5,782	-----	18,894	22
11	4,100	-----	-----	-----	-----	1,915	1,500	113	302	-----	11,330	11,330	-----	22,220	23
7	6,540	-----	-----	-----	-----	2,971	2,346	296	323	-----	2,950	2,950	-----	20,760	24
849	239,329	16	2,292	1	250	265,330	29,520	22,489	213,377	-----	2,367,610	2,305,788	61,822	3,266,020	25

TOWNS UNDER 20,000 IN POPULATION: 1900.

3,096	\$2,380,755	2,920	\$504,459	1,688	\$166,263	\$337,275	\$66,697	\$112,084	\$648,318	\$10,176	\$9,828,109	\$9,506,338	\$321,771	\$17,172,114	1
565	206,949	14	2,470	6	628	27,701	4,646	5,264	17,791	-----	327,672	313,737	13,935	694,511	2
473	129,882	230	36,300	148	10,570	42,289	6,638	6,112	29,359	180	557,261	540,505	16,756	953,722	3
268	83,938	195	26,519	115	9,166	23,177	580	4,365	13,242	-----	600,524	591,294	9,230	1,083,749	4
534	244,292	6	1,970	10	1,254	89,144	12,065	6,479	13,200	7,370	551,817	541,411	10,406	1,171,378	5
103	22,188	8	975	8	727	5,684	1,368	1,273	2,627	416	78,083	70,667	2,516	160,715	6
2,781	787,180	1,591	365,921	442	48,219	409,320	17,735	42,346	348,779	400	3,534,218	3,452,085	82,133	6,039,799	7
388	89,944	224	35,828	226	18,973	30,916	2,943	6,975	19,278	1,700	1,043,269	1,030,322	12,947	1,489,412	8
496	118,642	45	7,525	63	6,490	18,325	4,325	3,057	10,943	-----	460,952	454,212	12,740	735,221	9
522	146,776	263	55,358	236	27,656	44,981	1,012	8,973	34,946	50	561,874	540,717	21,157	1,079,133	10
331	75,599	174	23,745	211	23,814	33,493	1,996	5,451	31,106	-----	463,372	447,845	15,527	732,053	11
591	171,233	24	4,055	68	4,869	37,926	3,433	4,034	30,479	-----	386,114	373,710	12,398	764,959	12
360	89,505	49	8,240	47	4,822	43,451	1,535	6,510	25,346	-----	403,963	394,315	9,648	679,189	13
739	223,627	97	15,553	108	9,069	75,793	8,421	11,175	56,202	-----	337,990	326,112	101,878	1,570,273	14