

Twelfth Census of the United States.

# CENSUS BULLETIN.

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## AGRICULTURE.

### MASSACHUSETTS.

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 Massachusetts, taken in accordance with the provisions of section 7 of the act of March 3, 1899. This section requires that—

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

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

The farms of Massachusetts, June 1, 1900, numbered 37,715, and had a value of \$158,019,290. Of this amount \$71,093,880, or 45.0 per cent, represents the value of buildings, and \$86,925,410, or 55.0 per cent, the value of land and improvements other than buildings. On the same date the value of farm implements and machinery was \$8,828,950, and that of live stock was \$15,798,464. These values, added to that of farms, give the "total value of farm property," \$182,646,704.

The term "value of farm products," as used in this bulletin, has reference to the value of all crops and animal products, including the value of animals sold or slaughtered

on farms. This valuation for 1899 was \$42,298,274, of which amount \$19,140,730, or 45.3 per cent, represents the value of products of the live-stock industry, and \$23,157,544, or 54.7 per cent, the value of crops, including forest products. The value of farm products in 1899 was \$14,225,774 greater than that reported in 1890, showing an increase of 50.7 per cent, but a large part of this 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. 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 the value of the products fed to live stock on the farms of the producers from the value of all farm products. In 1899 the reported value of products fed was \$8,264,710, leaving \$34,033,564 as the gross farm income for that year. The percentage which this amount is of the "total value of farm property" is referred to in the text of the bulletin as the "percentage of income upon investment." For Massachusetts, in 1899, it was 18.6 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 MASSACHUSETTS.

## GENERAL STATISTICS.

The total land area of Massachusetts is 8,040 square miles, of which 4,917 square miles, or 61.2 per cent, are included in farms. The western end of the state is crossed by two low mountain ranges, from which a rugged table-land, cleft by deep and narrow river valleys, extends to the Connecticut River. East of this river, the surface is hilly or undulating through the central part, and then slopes gradually toward the Atlantic, terminating in low lands in the southeast and in flat capes and islands along the coast.

The western part of the state has but little naturally fertile soil, the land, except in the river valleys, being better suited for grazing than for cultivation. The soil of the central and northeastern counties is generally arable, and with careful and scientific cultivation yields good returns. The southeastern, or coast, counties contain numerous swamps and bogs, where cranberry culture is more extensively engaged in than in any other part of the United States. Cape Cod and the islands consist largely of barren tracts of sand and have but little arable soil.

### NUMBER AND SIZE OF FARMS.

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

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

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900.....	37,715	8,147,064	1,292,132	1,854,932	83.4	41.1
1890.....	34,374	2,998,282	1,657,024	1,341,258	87.2	55.3
1880.....	38,406	3,359,079	2,123,311	1,230,768	87.5	63.4
1870.....	26,500	2,730,283	1,786,221	944,062	103.0	63.6
1860.....	35,001	3,338,724	2,155,512	1,183,212	93.8	64.6
1850.....	34,069	3,356,012	2,133,436	1,222,576	98.5	63.6

Since 1850 the number of farms has increased 3,646, or 10.7 per cent. The total acreage has decreased 6.2 per cent; the improved acreage, 39.4 per cent; and the average size of farms, 16.2 per cent. In the last decade there has been an increase of 9.7 per cent in the number of farms, and of 5.0 per cent in the total acreage. The average size of farms is 4 acres less than in 1890 and smaller than at any previous date.

In Massachusetts, as in nearly all of the North Atlantic states, there has been a very marked decrease since 1880

in the acreage of improved farm land. This change, one of the most significant in New England agriculture, has been accompanied by a decrease in the acreage devoted to cereals, and a marked development in dairying, market gardening, and horticulture, resulting in an increase in the productive power of the average farm. The most fertile lands and those most easily tilled have been retained under cultivation and made increasingly productive. As a result, the aggregate income derived from meadow, orchard, and plow lands is now greater than it was in 1860, although the acreage under cultivation is considerably less. The less fertile lands have been found to afford greater incomes as permanent pasture than as meadow or plow lands, and each decade since 1870 has shown an increasing acreage of such land reported as unimproved.

### FARM PROPERTY AND PRODUCTS.

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

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

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implements and machinery.	Live stock.	Farm products. <sup>1</sup>
1900.....	\$182,646,704	\$158,019,290	\$8,828,950	\$15,798,464	\$42,298,274
1890.....	147,677,402	127,538,284	6,988,940	14,200,178	28,072,690
1880.....	164,288,956	146,197,415	5,134,537	12,957,004	24,160,881
1870.....	133,482,891	116,432,784	6,000,879	17,049,228	82,192,378
1860.....	139,888,690	123,255,948	8,894,998	12,737,744	-----
1850.....	121,933,641	100,076,347	3,209,584	9,647,710	-----

<sup>1</sup> For year preceding that designated.

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

<sup>3</sup> Includes betterments and additions to live stock.

Since 1850 the total value of farm property has increased \$60,713,063, and in the last decade, \$34,969,302. Of the latter amount \$30,481,006, or 87.2 per cent, represents the increase in the value of land and buildings; \$2,890,010, or 8.2 per cent, in that of implements and machinery; and \$1,598,286, or 4.6 per cent, in that of live stock. A portion of the increase shown in the value of implements and machinery is doubtless the result of a more detailed enumeration in 1900 than heretofore.

### COUNTY STATISTICS.

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

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

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With build-ings.	Total.	Improved.	Land and improve-ments (except buildings).	Buildings.	Imple-ments and ma-chinery.	Live stock.		Labor.	Fertilizers.
The State -----	37,715	36,708	3,147,064	1,292,132	\$86,025,410	\$71,093,880	\$8,828,950	\$15,708,464	\$34,033,564	\$7,487,283	\$1,320,600
Barnstable-----	809	758	44,253	16,963	1,045,530	952,360	146,320	178,888	765,172	138,870	18,170
Berkshire-----	3,436	3,281	472,288	200,094	7,968,550	6,432,550	675,070	1,554,587	2,369,262	553,370	52,780
Bristol-----	3,459	3,405	195,694	73,919	5,787,000	5,909,030	780,510	1,222,854	2,829,089	586,550	145,320
Dukes-----	212	210	31,188	14,461	423,240	314,100	85,090	79,005	125,504	21,460	2,560
Essex-----	2,912	2,879	176,889	89,274	9,298,650	6,607,280	918,920	1,891,616	8,350,222	742,303	143,820
Franklin-----	3,280	3,226	350,032	127,786	4,343,180	3,957,380	645,710	1,289,227	2,493,628	378,123	107,100
Hampden-----	2,583	2,533	292,153	121,851	4,827,500	4,468,590	631,860	1,123,418	2,263,039	438,830	98,940
Hampshire-----	3,517	3,310	321,824	134,180	4,935,510	5,149,240	689,040	1,813,692	2,670,534	447,253	157,260
Middlesex-----	4,955	4,875	316,670	145,130	18,256,450	13,660,720	1,685,010	2,680,657	6,376,125	1,707,670	277,300
Nantucket-----	54	51	4,077	2,026	70,450	49,160	8,280	24,119	36,069	5,123	820
Norfolk-----	2,212	2,175	115,053	48,581	6,709,190	5,310,710	560,460	1,055,750	2,117,337	529,000	61,860
Plymouth-----	2,533	2,478	150,175	56,984	4,052,270	4,674,760	252,160	680,211	2,151,114	622,609	61,300
Suffolk-----	162	153	4,280	8,207	3,482,500	990,940	70,220	87,183	402,891	124,886	12,520
Worcester-----	7,550	7,361	669,388	257,733	15,705,390	12,717,070	1,820,300	3,272,257	6,083,678	1,196,260	185,860

The number of farms in the state, June 1, 1900, was 3,341 greater than in 1890, an increase having occurred in every county, except Dukes and Hampden. The largest relative gains are shown for the counties near Boston, the rate of increase for Suffolk county being 285.7 per cent; for Plymouth county, 23.4 per cent; and for Norfolk county, 21.7 per cent. The rates of decrease for Dukes and Hampden counties were 15.9 per cent and 0.7 per cent, respectively.

The portion of the land surface included in farms varied from 12.5 per cent in Nantucket county to 82.2 per cent in Hampshire county, and the average size of farms, from 26.4 acres in Suffolk county to 161.3 acres in Dukes county. A decrease, since 1890, in the area of improved land is shown for all counties except Barnstable, Nantucket, Plymouth, and Suffolk.

The value of farms increased in every county except Dukes, the gain being at the greatest rate in Suffolk, where it amounted to 319.4 per cent. The counties showing the next largest percentages of gain are Nantucket and Plymouth, for which the percentages are 44.9 and 38.7, respectively. For Dukes county the decrease in the value of farms amounts to 8.9 per cent, but, as the farm acreage decreased still more rapidly, there was an increase in the average value per acre from \$21.08 to \$21.57.

While the increase in the value of farms is, in general, the natural result of the development of intensive agriculture and consequent additions to buildings and other improvements, the very marked gain in the immediate vicinity of large cities is due principally to the appreciation in the value of suburban land held in anticipation of its ultimate sale for building purposes. The present high value of the farms of Suffolk county, for example, is not based upon productiveness but rather upon prospective use for other than agricultural purposes.

The total value of live stock was 11.2 per cent greater

in 1900 than in 1890. Berkshire and Dukes counties show decreases of 7.7 per cent and 5.6 per cent, respectively, resulting principally from a decrease in the number of neat cattle. The largest increases were reported for Worcester, Middlesex, and Essex counties, in the order named. Except in Plymouth county there was a general increase in the valuation of implements and machinery throughout the state.

The average expenditure per farm for labor, including the value of board furnished, was \$199 for the state, and ranged from \$95 in Nantucket county to \$771 in Suffolk county. The average expenditure per farm for fertilizers increased from \$26.08 in 1889 to \$35.02 in 1899. The average amount expended in the latter year ranged from \$12 per farm in Dukes county to \$77 per farm in Suffolk county. The percentage of increase per county was greatest in Barnstable, where it amounted to 145.4 per cent, and least in Suffolk, where it was only 1.5 per cent.

#### FARM TENURE.

Table 4 gives a comparative exhibit of farm tenure for 1880, 1890, and 1900. In Table 5 the tenure of farms for 1900 is given by race of farmer, and the farms operated by owners are subdivided into groups, designated as "owners," "part owners," "owners and tenants," and "managers." These terms denote, respectively: (1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other or others owning no part, but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

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

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners. <sup>1</sup>	Cash tenants.	Share tenants.	Own-ers. <sup>1</sup>	Cash tenants.	Share tenants.
1900	87,715	84,112	3,121	482	90.4	8.8	1.8
1890	84,874	81,177	2,304	393	90.7	6.7	2.6
1880	85,406	35,266	2,292	848	91.8	6.0	2.2

<sup>1</sup> Including "part owners," "owners and tenants," and "managers."

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

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.

RACE.	Total number of farms.	Own-ers.	Part own-ers.	Own-ers and tenants.	Man-agers.	Cash tenants.	Share tenants.
The State	87,715	80,616	1,679	350	1,531	3,121	482
White	87,605	80,559	1,677	350	1,527	3,108	478
Colored	110	57	2		4	13	4
Chinese	1	1					1
Indian	22	21					
Negro	87	65	2		4	13	8

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

The State	100.0	81.2	4.2	0.9	4.1	8.3	1.8
White	100.0	81.3	4.2	0.9	4.0	8.3	1.8
Colored	100.0	70.1	1.8	( <sup>1</sup> )	3.6	11.9	3.6

<sup>1</sup> Less than one-tenth of 1 per cent.

The number of farms operated by owners, although it is less than it was in 1880 by 1,154, or 3.3 per cent, is greater than it was in 1890 by 2,935, or 9.4 per cent; the number operated by tenants has increased 463, or 14.7 per cent, since 1880, and 406, or 12.7 per cent, since 1890.

The increase in the number of tenant-operated farms was entirely in the cash-tenant class, the number of share tenants having decreased 43.2 per cent since 1880. In that year 27.0 per cent of all tenants were share tenants, but in 1900 only 13.4 per cent were of that class. This change in the relative number of cash and share tenants is the result of a growing sentiment on the part of both landlord and tenant in favor of the cash-payment system, and indicates greater independence and financial responsibility on the part of the tenant class as a whole. This statement is borne out by the fact that the largest relative numbers of share tenants are found in the western and southeastern counties where cultivation is less intensive than in the central and northeastern counties. In Suffolk, Essex, Norfolk, Middlesex, and Bristol counties, less than 12 per cent of all tenants are share tenants. In the counties of Berkshire, Franklin, Hampshire, and Hampden, approximately 25 per cent are share tenants, and in Dukes, Nantucket, and Barnstable counties, about 40 per cent are of this class.

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. Practically the same conditions with respect to tenure prevail among colored as among white farmers.

OWNERSHIP OF RENTED FARMS.

The ownership of 3,166 of the 3,603 rented farms was ascertained by the enumerators; that of 437 was unreported. The titles to the 3,166 farms are vested in 3,070 owners, an average of 103 farms to every 100 owners. Of the 3,070 owners, 2,998 possess 1 farm each; 58, 2 each; 10, 3 each; and the remaining 4 own 4, 5, 6, and 7 farms, respectively. Of the 3,070 owners, 2,732, possessing 2,828 farms, reside in Massachusetts. The owners of 2,330 of these farms reside in the county in which their farms are located.

The nonresident owners reside in the following groups of states or in foreign countries: 279, in the North Atlantic states; 7, in the South Atlantic states; 24, in the North Central states; 5, in the South Central states; 15, in the Western states; and 8, in foreign countries. None of these nonresidents owns more than 1 farm. The value of the 338 farms owned by nonresidents is \$1,301,215, an average of \$3,850. This amount is so small as to disprove the assumption that any considerable number of the nonresident owners are supported wholly or even mainly from their farms in Massachusetts.

Of the 3,166 rented farms in Massachusetts, 53, worth \$25,000, or over, have an aggregate value of \$2,441,450, and an average value of \$46,065; and 202, worth between \$10,000 and \$25,000 each, have an aggregate value of \$2,847,490, or an average of \$14,096. The remaining 2,911 farms are worth less than \$10,000 each, the average value being \$2,936. The average value of all rented farms in Massachusetts is \$3,595. This low average valuation and the necessarily small average rental received indicate that very few landlords are supported by incomes from rented farms in Massachusetts, and that the number who receive large incomes from that source is insignificant.

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

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

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

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	87,715	88.4	3,147,364	100.0	\$182,646,704	100.0
White farmers	87,605	83.5	3,141,734	99.8	182,418,082	99.9
Colored farmers <sup>1</sup>	110	48.5	5,830	0.2	228,622	0.1
Owners	30,646	79.0	2,422,268	77.0	128,453,189	70.3
Part owners	1,579	114.2	183,243	5.7	13,178,722	7.2
Owners and tenants	356	122.5	43,602	1.4	2,012,569	1.1
Managers	1,531	152.9	234,034	7.4	23,101,923	12.7
Cash tenants	3,121	68.5	213,670	6.8	13,589,876	7.4
Share tenants	482	110.5	53,247	1.7	2,280,926	1.3

<sup>1</sup> Comprising 87 negroes, 22 Indians, and 1 Chinese.



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

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and im- prove- ments (except build- ings).	Build- ings.	Imple- ments and machin- ery.	Live stock.		
The State.....	\$2,305	\$1,885	\$284	\$419	\$903	18.6
White farmers.....	2,308	1,888	285	420	904	18.6
Colored farmers <sup>1</sup> .....	1,038	805	82	153	415	20.0
Owners.....	1,867	1,787	213	375	817	19.5
Part owners.....	4,786	2,473	400	687	1,860	22.3
Owners and tenants.....	2,888	1,864	362	624	1,872	23.9
Managers.....	8,093	5,363	575	1,058	1,678	11.1
Cash tenants.....	2,417	1,387	173	877	815	18.7
Share tenants.....	2,432	1,592	281	427	952	20.1

<sup>1</sup> Comprising 87 negroes, 22 Indians, and 1 Chinese.

The value of the farm property of colored farmers is \$228,622. Of this amount, \$196,001 represents the farm property of negroes; \$31,420, that of Indians; and \$1,201, that of the 1 Chinese farmer reporting.

Farms conducted by cash tenants have the smallest average area, 68.5 acres, and those of managers, the largest, 152.9 acres. Many of the latter are adjuncts of public institutions, while others are conducted for wealthy individuals in connection with their summer homes. These farms, as a rule, are favorably located and highly improved, and the average values of the various forms of farm property, shown in Table 7, are much larger for this class than for any other class of farms grouped by tenure. The ratio which the gross income of these farms bears to the total value of farm property, however, is smaller than for the other groups. This is due to the high average valuation of the land and buildings, and to the fact that many of these farms are not cultivated for profit.

#### FARMS CLASSIFIED BY AREA.

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

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

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	87,715	83.4	3,147,064	100.0	\$182,646,704	100.0
Under 3 acres.....	951	1.8	1,723	0.1	3,465,562	1.9
3 to 9 acres.....	3,614	6.1	22,116	0.7	10,368,767	5.7
10 to 19 acres.....	4,324	13.9	60,199	1.9	14,697,431	8.0
20 to 49 acres.....	8,875	32.7	290,622	9.2	33,621,268	18.4
50 to 99 acres.....	3,910	69.4	618,783	19.7	41,872,005	22.9
100 to 174 acres.....	6,660	123.9	825,328	26.2	37,198,193	20.4
175 to 259 acres.....	2,533	226.6	523,257	16.6	18,418,988	10.1
260 to 499 acres.....	1,454	381.0	474,676	15.1	14,935,101	8.2
500 to 999 acres.....	389	620.0	210,173	6.7	6,056,255	3.3
1,000 acres and over.....	75	1,603.8	120,287	3.8	2,014,004	1.1

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

AREA.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and im- prove- ments (except build- ings).	Build- ings.	Imple- ments and machin- ery.	Live stock.		
The State.....	\$2,305	\$1,885	\$284	\$419	\$908	18.5
Under 3 acres.....	1,587	1,861	105	91	921	25.3
3 to 9 acres.....	1,189	1,420	110	150	495	17.2
10 to 19 acres.....	1,680	1,431	143	195	539	15.9
20 to 49 acres.....	1,752	1,581	181	274	668	17.6
50 to 99 acres.....	2,191	1,833	236	439	883	18.8
100 to 174 acres.....	2,671	2,045	298	570	1,148	20.6
175 to 259 acres.....	3,560	2,539	385	787	1,452	20.0
260 to 499 acres.....	5,373	3,482	518	1,041	1,907	18.3
500 to 999 acres.....	10,186	5,466	667	1,546	2,642	14.8
1,000 acres and over.....	18,721	9,759	1,014	2,359	3,888	14.5

The group of medium-sized farms, containing from 100 to 174 acres each, comprises a larger percentage of the total acreage than any other group. Except for farms of less than 3 acres, the average values of farm property and the average gross incomes given in Table 9 rise in unbroken series. For the group of farms containing less than 3 acres each, the average values are relatively high. This is explained by the fact that this group includes many florists' establishments, and a large number of city dairies. The average gross incomes per acre for the various groups are as follows: Farms under 3 acres, \$508.48; 3 to 9 acres, \$80.83; 10 to 19 acres, \$38.72; 20 to 49 acres, \$20.40; 50 to 99 acres, \$12.71; 100 to 174 acres, \$9.27; 175 to 259 acres, \$7.03; 260 to 499 acres, \$5.76; 500 to 999 acres, \$4.26; and 1,000 acres and over, \$2.42.

In considering the high gross income per acre for farms of less than 3 acres, it should be borne in mind that the incomes of the florists' establishments, nurseries, and city dairies, of which this group is largely composed, are determined, not so much by the acreage of land used, as by the amount of capital invested in buildings, implements, and live stock, and the amounts expended for labor and fertilizers.

#### FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

Tables 10 and 11 present the leading features of the statistics relating to farms classified by principal source of income. If for any farm 40 per cent of the products not fed to live stock consists of hay and grain, the farm is designated a hay and grain farm. Should 40 per cent of the products consist of vegetables, the farm is designated a vegetable farm. The farms of the other groups are classified in the same manner. Farms with no income in 1899 are classified according to the agricultural operations upon other farms in the same locality.

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

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	37,715	83.4	3,147,064	100.0	\$182,646,704	100.0
Hay and grain.....	3,284	82.8	270,151	8.6	14,694,851	8.0
Vegetables.....	3,117	43.3	134,838	4.3	18,602,741	10.2
Fruit.....	1,286	66.0	72,002	2.3	5,760,276	3.2
Live stock.....	8,193	63.1	517,036	16.4	26,602,813	14.6
Dairy produce.....	14,900	96.8	1,442,947	45.8	85,193,721	46.6
Tobacco.....	632	71.8	45,855	1.4	3,285,015	1.8
Flowers and plants.....	597	16.4	6,228	0.2	7,729,450	4.2
Nursery products.....	49	43.7	2,141	0.1	483,248	0.3
Miscellaneous.....	5,657	116.0	656,366	20.9	20,294,589	11.1

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

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implementments and machinery.	Live stock.		
<i>The State.....</i>	<i>\$2,305</i>	<i>\$1,885</i>	<i>\$234</i>	<i>\$419</i>	<i>\$908</i>	<i>18.6</i>
Hay and grain.....	2,427	1,757	187	154	338	7.4
Vegetables.....	3,415	1,957	305	291	1,132	19.0
Fruit.....	2,520	1,525	208	226	962	21.8
Live stock.....	1,246	1,500	167	334	544	16.7
Dairy produce.....	2,630	2,135	288	620	1,110	19.4
Tobacco.....	2,374	2,107	277	440	1,852	35.6
Flowers and plants.....	8,578	4,085	219	95	2,594	19.6
Nursery products.....	7,043	2,394	320	115	5,127	52.0
Miscellaneous.....	1,408	1,689	223	318	768	21.0

Of the 3,284 "hay and grain" farms, only 1,587 report any domestic animals, and many report no crops except small quantities of hay or grain. These facts explain the relatively small percentage of gross income shown in Table 11 for that group.

The importance of dairying is shown by the fact that 45.8 per cent of the farm land of the state is included in farms devoted wholly or principally to this industry.

For the several classes of farms the average values per acre of the products not fed to live stock are: Flowers and plants, \$242.87; nursery products, \$117.35; vegetables, \$26.17; tobacco, \$25.81; fruit, \$16.99; dairy produce, \$11.46; live stock, \$8.62; miscellaneous, \$3.49; hay and grain, \$4.04. The average gross income per acre for all farm land in the state is \$10.81.

The wide variations in the averages and percentages of gross income, shown for the several classes of farms, are largely due to the fact that in computing gross income no deductions are made for expenditures for labor, fertilizers, and similar items. For florists' establishments and nurseries, the average expenditure for these items represents a far greater percentage of the gross income than in the

case of "hay and grain," "live-stock," or "miscellaneous" farms. Were it possible to present the average net incomes, the variations shown would be comparatively slight.

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

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

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

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	37,715	83.4	3,147,064	100.0	\$182,646,704	100.0
\$0.....	416	60.2	25,023	0.8	1,372,383	0.8
\$1 to \$49.....	1,121	34.9	39,165	1.3	2,285,460	1.2
\$50 to \$99.....	1,914	38.7	73,987	2.4	4,250,693	2.3
\$100 to \$249.....	6,739	44.5	239,943	7.6	17,169,360	9.4
\$250 to \$499.....	8,728	68.2	551,948	17.5	28,443,433	15.6
\$500 to \$999.....	8,782	53.7	821,711	26.1	39,439,783	21.6
\$1,000 to \$2,499.....	7,615	122.2	913,076	29.2	51,531,184	28.2
\$2,500 and over.....	2,600	166.7	416,811	13.2	38,151,770	20.9

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

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.					
	Land and im- prove- ments (except build- ings).	Build- ings.	Imple- ments and machin- ery.	Live stock.	Gross income (products of 1899 not fed to live stock).	
The State	\$2,305	\$1,885	\$234	\$419	\$903	18.6
\$0	2,028	1,086	23	102		
\$1 to \$49	996	901	70	72	38	1.9
\$50 to \$99	1,059	999	71	92	80	3.6
\$100 to \$249	1,144	1,166	100	133	172	6.8
\$250 to \$499	1,612	1,249	151	247	359	11.0
\$500 to \$999	1,981	1,888	229	396	709	15.8
\$1,000 to \$2,499	3,042	2,783	351	723	1,546	22.6
\$2,500 and over	8,358	4,737	788	1,378	4,679	30.7

Of the farms of the state, 416, ranging in area from less than 3 to over 1,000 acres, report no income. The average values of the land and improvements, buildings, and live stock of these farms are very high. This, together with the fact that 339 of them are operated by their owners, indicates that many of them are summer homes or country estates, held for pleasure and not for profit. Many of the 1,121 farms with reported incomes of less than \$50 each probably belong to the same class, the only crops raised having been for home consumption. Some, however, 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 definite information concerning the products of the pre-

ceding year. To this extent the reports fall short of giving a complete exhibit of farm income in 1899.

#### LIVE STOCK.

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

Table 14 presents a summary of live-stock statistics.

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

LIVE STOCK.	Age, in years.	ON FARMS.			Not on farms.
		Number.	Value.	Average value.	
Calves	Under 1	43,621	\$357,542	\$8.20	1,405
Steers	1 and under 2	2,476	38,893	15.71	136
Steers	2 and under 3	1,795	47,029	27.11	50
Steers	3 and over	1,943	105,786	54.44	116
Bulls	1 and over	7,209	185,543	25.74	57
Heifers	1 and under 2	84,462	587,080	17.01	1,280
Cows kept for milk	2 and over	184,562	6,546,954	35.47	14,890
Cows and heifers not kept for milk.	2 and over	9,946	262,090	26.35	517
Colts	Under 1	799	47,177	59.05	141
Horses	1 and under 2	2,298	160,121	69.68	219
Horses	2 and over	71,937	5,619,159	78.11	133,269
Mule colts	Under 1	57	2,260	39.65	4
Mules	1 and under 2	27	1,480	54.81	2
Mules	2 and over	214	16,945	79.18	484
Asses and burros	All ages	51	1,709	33.51	55
Lambs	Under 1	18,090	51,520	2.76	617
Sheep (ewes)	1 and over	30,441	125,357	4.12	1,845
Sheep (rams and wethers)	1 and over	3,428	16,719	4.88	297
Swine	All ages	78,925	549,617	6.96	17,219
Goats	All ages	1,254	7,188	5.73	493
Fowls: <sup>1</sup>					
Chickens <sup>2</sup>		1,625,269			
Turkeys		3,018			
Geese		6,369	1,018,119		
Ducks		46,017			
Bees (swarms of)		8,381	35,751	4.27	
Unclassified			14,425		
Value of all live stock.			15,798,464		

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

<sup>2</sup> Including Guinea fowls.

The total value of all live stock on farms, June 1, 1900, was \$15,798,464, of which 36.9 per cent represents the value of horses; 41.4 per cent, the value of dairy cows; 10.0 per cent, that of other neat cattle; 6.5 per cent, that of poultry; and 5.2 per cent, that of all other live stock.

The average value of steers 3 years old and over is comparatively high, as this class includes the valuable working oxen still used in some districts of the state. The number so employed is rapidly decreasing. In 1850, 46,611 working oxen were reported; in 1860, 38,221; in 1870, 24,430; in 1880, 14,571; in 1890, 9,831; while in 1900, the total number of steers over 2 years old was only 3,678, and it is probable that many of these were not working oxen.

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, however, the total value of the domestic animals not on farms is \$11,190,600, an amount only 29.1 per cent less than the total value of farm live stock. The number of horses used in agricultural operations is but little more than half the number employed in towns and cities. Exclusive of poultry and bees not on farms, the total value of live stock in the state is approximately \$26,974,639.

#### CHANGES IN LIVE STOCK KEPT ON FARMS.

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

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

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep. <sup>1</sup>	Swine.
1900	184,562	101,382	75,034	349	33,869	78,925
1890	172,046	84,082	63,688	196	51,438	91,488
1880	150,435	110,616	59,629	243	87,979	80,123
1870	114,771	104,281	41,039	103	78,560	49,178
1860	144,492	135,422	47,786	108	114,829	78,948
1850	180,099	129,895	42,216	34	188,651	81,119

<sup>1</sup> Lambs not included.

The development of intensive agriculture in Massachusetts has been attended by important changes in the general character of live stock kept on farms.

The remarkable growth of dairying is shown by the constantly increasing number of dairy cows, while the gradual transfer of labor and capital from general farming to horticulture and market gardening has necessitated the introduction of much new and improved machinery, and consequently more horsepower. The decline in the raising of sheep and beef cattle is incident to the shifting of the meat-producing industry to the Western states.

The number of dairy cows, June 1, 1900, was 41.9 per cent greater than in 1850, and 7.3 per cent greater than in 1890. The number of "other neat cattle" in 1900 includes 43,621 calves. As it is uncertain whether any calves were reported under this head in 1890, the increase shown for the last decade in the number of "other neat cattle" may be wholly apparent. The number of horses is 77.7 per cent greater than in 1850 and 17.9 per cent greater than in 1890. Sheep have decreased in number 82.0 per cent since 1850, and 34.2 per cent in the last decade. The number of swine has fluctuated from decade to decade but has not changed materially since 1850. There was a decrease of 13.7 per cent between 1890 and 1900.

In comparing the poultry report of 1900 (see Table 14) with that of the Eleventh Census, it should be borne in mind that in 1900 the enumerators were instructed not to report fowls less than 3 months old, while in 1890 no such limitation was made. This fact explains, to a great extent, the decrease in number of turkeys, ducks, and geese, and the very slight increase in the number of chickens. Compared with the figures for 1890, the present census shows decreases in the number of fowls as follows: Turkeys, 48.0 per cent; ducks, 34.8 per cent; and geese, 23.7 per cent.

## ANIMAL PRODUCTS.

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

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

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool	Pounds	195,876	\$40,291
Mohair and goat hair	Pounds	1,120	896
Milk	Gallons	105,571,873	12,885,744
Butter	Pounds	4,980,202	2,571,341
Cheese	Pounds	19,623	1,407,681
Eggs	Dozens	12,928,630	18,412
Poultry			1,284,454
Honey	Pounds	109,050	682,411
Wax	Pounds	6,250	
Animals sold			
Animals slaughtered			
Total			19,140,730

The value of animal products in 1899 was \$19,140,730, or 45.8 per cent of the value of all farm products, and 56.2 per cent of the gross farm income. Of the total value given, 67.3 per cent represents the value of dairy products; 20.8 per cent, that of poultry raised and eggs produced; 11.6 per cent, that of animals sold and slaughtered on farms; and 0.3 per cent, that of wool, mohair, honey, and wax.

## DAIRY PRODUCE.

In no other branch of agriculture in Massachusetts has there been such constant and rapid development as in dairying. Its importance is shown by the fact that in 1899 the proprietors of 14,900 farms, or 39.5 per cent of the total number, derived their principal income from this source, while the total value of all dairy produce constituted 67.3 per cent of the value of all animal products, and 37.9 per cent of the gross farm income. The production of milk in 1899 was 22,999,949 gallons greater than in 1889, a gain of 27.9 per cent. As the number of dairy cows increased but 7.3 per cent in the same period, the increased production of milk is evidence that the dairy-men are not only keeping better cows but are paying more attention to the care of their herds than ten years ago.

Decreases since 1889 of 40.4 per cent in the quantity of butter and of 84.0 per cent in the quantity of cheese produced on farms are significant indications of change in the general character of the dairy industry. Increasing quantities of butter and cheese are made in creameries and cheese factories. This fact, and the increased consumption of milk and cream in cities, account for the change.

Of the \$12,885,744, given in Table 16 as the value of all dairy products in 1899, \$1,416,960, or 11.0 per cent, represents the value of such products consumed on farms, and \$11,468,784, or 89.0 per cent, the amount realized from dairy produce sold. Of the latter amount, \$9,711,380 was derived from the sale of 68,180,759 gallons of milk; \$884,575, from 3,684,696 pounds of butter; \$870,833,

from 2,315,745 gallons of cream; and \$1,996, from 15,138 pounds of cheese.

## POULTRY AND EGGS.

The total value of the products of the poultry industry in 1899 was \$3,979,022, of which amount 35.4 per cent represents the value of fowls raised, and 64.6 per cent, that of eggs produced. Nearly 4,000,000 dozen more eggs were produced in 1899 than ten years before, the per cent of increase being 44.8.

## WOOL.

The production of wool has decreased steadily for half a century, and the clip of 1899 was about one-third as large as that of 1849. The decrease in the last decade was 45,438 pounds, or 18.8 per cent. The average weight of fleeces, however, increased from 4.4 pounds in 1879 to 5.6 pounds in 1899, indicating an improvement in the grade of sheep kept. Sheep raising in Massachusetts is now largely confined to the four western counties and the islands off the Atlantic coast.

## HONEY AND WAX.

The quantity of honey produced in 1899 was 109,050 pounds, a gain of 18,121 pounds, or 19.9 per cent, over the production of 1889. The quantity of wax reported in 1889 was only 1,690 pounds while in 1899, 6,250 pounds were produced.

## HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS.

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

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

CLASSES.	HORSES.			DAIRY COWS.		
	Farms reporting.	Number.	Average per farm.	Farms reporting.	Number.	Average per farm.
Total	31,444	75,034	2.4	28,162	184,562	6.6
White farmers	31,864	74,901	2.4	28,105	184,403	6.6
Colored farmers	80	133	1.7	57	159	2.8
Owners <sup>1</sup>	27,248	62,873	2.3	24,489	152,405	6.2
Managers	1,228	5,345	4.4	1,144	12,972	11.3
Cash tenants	2,592	5,859	2.3	2,194	16,615	7.6
Share tenants	876	957	2.5	335	2,570	7.7
Under 20 acres	6,096	9,587	1.6	4,473	12,807	2.9
20 to 99 acres	15,274	32,431	2.1	13,933	67,633	4.9
100 to 174 acres	6,040	17,112	2.8	5,826	49,861	8.6
175 to 259 acres	2,331	7,882	3.4	2,266	27,795	12.3
260 acres and over	1,703	8,022	4.7	1,664	26,416	15.9
Hay and grain	1,463	3,596	2.5	791	2,506	3.2
Vegetable	2,680	6,347	2.4	1,685	5,592	3.3
Fruit	894	1,840	2.1	517	1,840	2.6
Live stock	6,962	13,456	1.9	5,419	17,811	3.3
Dairy	18,868	86,924	2.7	14,900	150,999	9.2
Tobacco	576	1,073	2.9	502	2,621	5.2
Miscellaneous <sup>2</sup>	5,001	11,198	2.2	4,848	17,693	4.1

<sup>1</sup> Including "part owners" and "owners and tenants."

<sup>2</sup> Including florists' establishments and nurseries.

## CROPS.

The following table presents the statistics of the principal crops of 1899:

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

PRODUCTS.	Acres.	Unit of measure.	Quantity.	Value.
Corn	89,181	Bushels	1,539,980	\$771,277
Wheat	95	Bushels	1,750	1,515
Oats	6,702	Bushels	240,990	84,850
Barley	688	Bushels	14,987	9,264
Rye	4,557	Bushels	60,294	84,291
Buckwheat	2,262	Bushels	86,084	20,830
Clover seed		Bushels	1	6
Grass seed		Bushels	166	581
Hay and forage	610,023	Tons	856,505	9,056,854
Tobacco	3,827	Pounds	6,406,570	956,399
Dry beans	829	Bushels	7,859	15,088
Dry pease	122	Bushels	2,259	2,125
Potatoes	27,521	Bushels	3,346,590	1,800,937
Sweet potatoes	(1)	Bushels	23	11
Onions	1,670	Bushels	748,809	832,553
Miscellaneous vegetables	25,109			8,412,995
Maple sugar		Pounds	192,990	21,124
Maple sirup		Gallons	27,174	27,112
Small fruits	8,346		1,498,714	1,498,714
Grapes	159	Centals	13,083	35,635
Orchard fruits	57,268	Bushels	3,158,781	41,170,868
Nuts				12,106
Forest products				1,944,714
Flowers and plants	584			1,639,750
Seeds	70			40,682
Nursery products	894			260,060
Hay	18	Pounds	7,480	736
Broom corn	11	Pounds	7,050	357
Peanuts	(1)	Bushels	8	6
Miscellaneous				11,325
Total	792,681			23,157,544

<sup>1</sup> Less than 1 acre.

<sup>2</sup> Estimated from number of vines or trees.

<sup>3</sup> Including the value of wine, raisins, etc.

<sup>4</sup> Including the value of cider and vinegar.

Of the total value of the crops of 1899, hay and forage contributed 39.1 per cent; vegetables, including potatoes, sweet potatoes, and onions, 23.9 per cent; fruits and nuts, 11.7 per cent; forest products, 8.4 per cent; flowers and plants, 7.1 per cent; cereals, 4.0 per cent; and other crops, 5.8 per cent.

The average value per acre of the various crops was as follows: Flowers and plants, \$2,807.81; nursery products, \$290.90; tobacco, \$249.91; onions, \$199.01; miscellaneous vegetables, \$121.42; potatoes, \$65.44; cereals, \$17.27; hay and forage, \$14.85; orchard fruits, \$20.45; and small fruits, \$178.97. The crops yielding the highest average returns per acre were grown upon very highly improved land. Their production required a large amount of labor and the greatest relative expenditure for fertilizers.

## HAY AND FORAGE.

The acreage and production of hay and forage reported by the Tenth, Eleventh, and Twelfth censuses are, respectively, 639,498 acres and 684,679 tons; 627,385 acres and 793,167 tons; 610,023 acres and 856,505 tons. These figures show that a constant decrease in acreage has been attended by a steady increase in production. The yield per acre in 1879 was 1.07 tons; in 1889, 1.26 tons; and in 1899, 1.40 tons. The poorest land is being gradually abandoned and an increasing portion of the more fertile soil is being devoted to the cultivation of corn, nonsaccharine sorghum, and similar crops used for forage and ensilage. In 1899, 23,635 acres of such crops, yielding 174,904 tons, were reported. The high yield per acre, 7.4

tons, was an important factor in raising the average yield of hay and forage in 1899 above that of 1889.

## 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. <sup>1</sup>	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899	688	2,262	39,181	6,702	4,557	95
1889	1,785	2,478	34,010	14,331	10,665	112
1879	3,171	5,617	52,555	20,659	21,666	968
PART 2.—BUSHELS PRODUCED.						
1899	14,987	86,084	1,589,980	240,990	60,294	1,750
1889	33,715	81,800	1,330,101	838,819	117,091	1,813
1879	80,128	67,117	1,797,768	645,169	213,716	15,738
1869	138,071	58,049	1,397,807	797,664	239,227	34,648
1859	134,891	123,202	2,157,068	1,180,075	388,085	119,733
1849	112,385	103,895	2,345,490	1,165,146	481,021	31,211

<sup>1</sup> No statistics of acreage were secured prior to 1879.

Of the many changes in New England agriculture, none has attracted more general attention than the decrease in cereal production. No other fact, perhaps, is so largely responsible for the popular notion that agriculture is declining in the Eastern states. A careful study of the tables of this bulletin shows that the farmers of Massachusetts are turning from general farming, and from cereal production in particular, to dairying, poultry raising, market gardening, and fruit growing. This movement is the result, on the one hand, of western competition and the development of transportation facilities, and, on the other hand, of the demands of a rapidly increasing urban population for the products of the special industries mentioned.

Since 1879 the total area devoted to cereals has decreased from 104,631 acres to 53,385 acres, the percentages of decrease for the various grains being as follows: Barley, 79.9; buckwheat, 59.7; corn, 25.5; oats, 67.6; rye, 79.0; and wheat, 90.1. The decrease was most marked in the last decade, in which period the total area devoted to all cereals except corn, decreased in every county. In the western counties, which are best suited to cereals, the decrease was comparatively slight. Consequently, these counties had, in 1899, a greater percentage than in 1889 of the total acreage devoted to cereals other than corn. In 1899, Berkshire, Franklin, Hampden, and Hampshire counties produced 58.5 per cent of the barley raised in the state, 92.7 per cent of the buckwheat, 57.0 per cent of the corn, 83.7 per cent of the oats, 84.5 per cent of the rye, and 42.3 per cent of the wheat.

The second part of the table shows that larger crops of corn and rye were grown in 1849 than in any succeeding census year, and that 1859 was the record year in the production of barley, buckwheat, oats, and wheat. With a few exceptions, the decline from the high point has been continuous, but most marked since 1879. Corn, however,

furnishes an important exception to the general rule. The increase in its production during the last decade is believed to be closely related to the recent growth in dairying. This view is sustained by the fact that the counties having the largest increases in the number of dairy cows report, as a rule, the largest gains in the acreage devoted to corn. The increase in the production of buckwheat in the last decade is due to a more favorable year in 1899, the acreage having decreased.

#### ORCHARD FRUITS.

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

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

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900	1890	1899	1889
Apples.....	1,852,046	1,697,561	8,023,436	1,690,110
Apricots.....	481	403	25	16
Cherries.....	17,258	14,495	6,043	2,413
Peaches.....	301,405	87,004	27,906	7,472
Pears.....	148,503	136,348	39,011	71,559
Plums and prunes.....	49,452	17,296	5,919	2,186

The value of the orchard products of 1899 was \$1,170,868. The counties whose orchard products were valued at more than \$100,000 are as follows: Middlesex, \$245,306; Worcester, \$237,962; Franklin, \$134,675; Berkshire, \$116,290; Essex, \$110,720; and Hampshire, \$102,988. Nantucket county reported no fruit trees.

In 1890, 86.9 per cent, and in 1900, 78.2 per cent of all fruit trees in the state were apple trees. All of the leading fruit-growing counties, except Berkshire and Hampden, reported more apple trees in 1900 than ten years before, the increase for the state being 9.1 per cent.

The most notable gain during the last decade was in the number of peach trees, which increased from 87,004 to 301,405, or 243.4 per cent. Worcester and Middlesex counties have about two-thirds of the total number reported. The number of cherry trees increased 19.1 per cent; pear trees, 8.9 per cent; and plum and prune trees, 185.9 per cent. In addition to those given in Table 20, there were reported in 1900, 7,895 unclassified fruit trees, and 6,441 bushels of fruit. There were manufactured on farms in 1899, 35,366 barrels of cider, 4,301 barrels of vinegar, and 7,530 pounds of dried fruit.

The quantity of fruit produced in any given year is determined largely by the nature of the season. Comparisons between the crops of 1889 and 1899 have little significance, because the latter season was unusually favorable, nearly twice as much fruit having been reported as in 1889.

#### VEGETABLES AND SMALL FRUITS.

The value of all vegetables produced in the state in 1899, including potatoes, sweet potatoes, and onions, was \$5,546,296, of which 32.5 per cent represents the value of potatoes. Aside from the land devoted to potatoes, sweet potatoes, and onions, 28,109 acres were used in growing miscellaneous vegetables. Of this area the products of

11,098 acres were not reported in detail. Of the 17,011 acres which were fully reported, 5,493 acres were devoted to sweet corn; 3,245, to cabbages; 1,645, to tomatoes; 995, to asparagus; 920, to squashes; and 4,713, to other vegetables.

The total area used in growing small fruits was 8,346 acres, and the value of the fruit produced was \$1,493,714, an average of \$179 per acre. Of the total area, 5,125 acres, or 61.4 per cent, were devoted to cranberries. They are grown very extensively in Barnstable and Plymouth counties. In 1899 these counties reported 4,458 acres, or 87.0 per cent of the entire acreage, and 543,003 bushels of cranberries, or 90.7 per cent of the total crop. The average yield per acre for these 2 counties was 121.8 bushels, while for the remainder of the state it was but 83.8 bushels. The total production for the state was 598,906 bushels.

The acreage and production of other berries were as follows: Blackberries and dewberries, 365 acres and 522,860 quarts; currants, 190 acres and 255,580 quarts; gooseberries, 32 acres and 46,390 quarts; raspberries and Logan berries, 413 acres and 558,010 quarts; strawberries, 2,027 acres and 4,997,240 quarts. Of unclassified berries 337,300 quarts from 194 acres were reported. The production of all berries was 25,882,372 quarts.

Grapes were grown in 1899 by 4,902 farmers who obtained 13,083 centals of fruit from 79,639 vines. The total value of the grape crop, including the value of 10,266 gallons of wine made therefrom, was \$35,685.

#### TOBACCO.

Tobacco has been grown as a regular crop in Massachusetts from the earliest colonial days, but no statistics concerning its acreage or production were published prior to 1840. In that year, 64,955 pounds were grown on an estimated area of 40 acres. From this date until the close of the Civil War the production increased rapidly, the state census of 1865 having reported 5,617.5 acres and 9,361,641 pounds. The census of 1870 showed a decided falling off from these figures, and the decline which began at that time continued until 1890, when a product of 2,794,858 pounds was secured from 2,012 acres. The effect of better prices and a growing demand for light tobaccos were reflected in the figures of the state census of 1895, which reported 3,104 acres and 4,967,096 pounds. The present census shows that in 1899 tobacco was grown by 1,009 farmers, who obtained a yield of 6,406,570 pounds from 3,827 acres, a gain in ten years of 129.2 per cent in production and 90.2 per cent in acreage. The average yield per acre was 1,674 pounds, while in 1889 it was but 1,389 pounds. The total value of the crop was \$956,399, an average of \$947.87 for each farm reporting.

The cultivation of tobacco in Massachusetts is confined almost entirely to the valley of the Connecticut River, which flows through Hampden, Hampshire, and Franklin counties. In 1899 these 3 counties produced 99.6 per cent of the total crop. Of the remaining area, Berkshire county reported 22 acres, and Bristol and Worcester counties, 1 acre each.

## FOREST PRODUCTS.

The term "forest products" includes logs, telegraph poles, railroad ties, cord wood, hoops and staves, fence posts, bark, resin, and similar materials cut or produced on farms. The value of such products in 1899 was \$1,944,714, reported by 16,832 farmers. The large income derived from this source is noteworthy, for the reason that a considerable portion of it was from conserved forestry or from trees cultivated on otherwise waste land. The planting of trees for future revenue began in the state as early as 1740, and in more recent years has been practiced on a large scale under the direction of the Massachusetts Forestry Association. The fact that the income which farmers derived from forest products in 1899 is larger than that reported by any preceding census, emphasizes the value of a judicious conservation of the natural resources in forestry.

## FLORICULTURE.

Massachusetts is one of the leading states in the production and sale of flowers and foliage plants. In 1899 the total value of the products of this industry was \$1,639,760, reported by the operators of 734 establishments.

Of this number 597 are commercial florists, depending upon the sale of floral products for the greater part of their income. They had a capital of \$7,690,675 invested in land, buildings, and implements, of which amount \$5,121,133 represents the value of 6,228 acres of land. The high valuation of this land, \$822 per acre, is due to the fact that it comprises many small tracts situated within or adjacent to city limits. The reported value of buildings was \$2,438,965, and of implements, \$180,577. Under the head of expenditures, \$398,805 was reported for labor, and \$35,844 for fertilizers. The total gross income of these commercial florists was \$1,512,581, of which \$1,436,188 was derived from the sale of flowers and plants, and \$76,393 from other products.

Of the total area of 8,710,280 square feet of land under glass, 4,486,106 square feet, equivalent to 5,981,475 square feet of glass surface, were reported by the 597 florists.

The remaining 4,224,174 square feet were reported by 955 farmers and market gardeners engaged in growing early vegetables for the city markets. Most of the truck farms, whose operators report the use of glass, are located in Middlesex county, which supplies a large proportion of the vegetables sold in the Boston markets.

## NURSERIES.

The total value of nursery stock sold in 1899 was \$260,069, reported by the operators of 168 farms and nurseries. Of this number, 49 derive their principal income from the nursery business. They had 2,141 acres of land, valued at \$344,605; buildings worth \$117,318; and implements and machinery valued at \$15,685. Their total gross income was \$251,239, of which \$227,764 was derived from the sale of trees, shrubs, and vines, and \$23,475, from the sale of other farm products. The average gross income per acre was \$117.85.

## LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was \$7,487,280, an average of \$199 per farm. The average was highest on the most intensively cultivated farms, having been \$1,086 for nurseries, \$668 for florists' establishments, \$375 for fruit farms, \$340 for market gardens, \$302 for tobacco farms, and \$231 for dairies, while for hay and grain farms, the average was but \$98, and for live-stock farms, but \$86. Managers expended, on an average, \$730; owners, \$164; cash tenants, \$140; and share tenants, \$167. White farmers expended \$199, and colored farmers, \$53 per farm.

Fertilizers purchased in 1899 cost \$1,320,600, an average of \$35 per farm, and an increase since 1890 of 47.3 per cent. The average expenditure was greatest for tobacco farms and least for hay and grain farms, the amounts being \$227 and \$12, respectively. For nurseries the average was \$189; for vegetable farms, \$76; for florists' establishments, \$60; for dairy farms, \$37; for fruit farms, \$30; and for live-stock farms, \$14.



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## MANUFACTURES.

### TURPENTINE AND ROSIN.

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

SIR: I transmit herewith, for publication in bulletin form, a report on the manufacture of spirits of turpentine and rosin, prepared under my direction by Mr. William M. Steuart, chief of the division of manufactures, Census Office.

The statistics included in the report were collected, as in previous censuses, upon the schedule used for the general statistics of manufactures. But owing to the distinctive character of the industry, and its comparative importance in a large section of the South, it was decided to supplement the canvass made by the enumerators and local special agents by a special investigation of the peculiar features and conditions pertaining to the manufacture of these products.

Although the production of spirits of turpentine and rosin has been treated as manufacturing at all census periods, a large part of the work necessary in the industry might more properly be otherwise classified. The boxing of the trees and the gathering of the crude gum are processes analogous to those industries by which forest products are made available as raw material for industries engaged in the utilization of such products and, if it were possible, this branch of the industry should be separated for census purposes from the operations of the distillery plants which manufacture the spirits of turpentine and rosin from the crude turpentine. So closely allied, however, are the several branches of the industry—by far the larger proportion of establishments engaged in it performing all parts of the work—that it has been found impossible to eliminate the capital and expenses pertaining to the forest work so as to obtain statistics relating exclusively to the operations of the distilleries.

The statistics are presented in 7 tables: Table 1 showing comparative figures for the industry at the several censuses; Table 2 showing the quantities of naval stores exported during each year from 1850 to 1900; Table 3

showing, by states and for the United States, a summary of the principal items of information for 1900; Table 4 showing the total quantity of spirits of turpentine, crude turpentine and rosin, and tar and pitch exported from the ports of each state at ten-year periods from 1860 to 1900, inclusive; Table 5 showing statistics of receipts, 1896 to 1901, inclusive, at the principal ports engaged in buying and selling turpentine and rosin; Table 6 showing, by states, the total quantity of crude gum gathered, the quantity and value of spirits of turpentine and rosin, and the average value per barrel of each in 1900; and Table 7 showing, by states, the detailed statistics for the industry in 1900.

Tables 2 and 4, as stated in the text of the report, have been compiled from the several reports of the Bureau of Statistics of the Treasury Department, and are interesting as showing the development of the industry. Table 5 has been compiled from the reports of the boards of trade and similar bodies of the cities included in the table.

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 turpentine and rosin may be fairly inferred from the figures given. No attempt was made, prior to the Twelfth Census, to ascertain in detail any special statistical data as to the quantity of crude gum used and spirits of turpentine and rosin manufactured, and it is therefore impossible to make a comparison of these items of information with the results presented in the reports of any previous census.

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 num-

ber 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 \$11,847,495 invested in the manufacture of spirits of turpentine and rosin in the 1,503 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 \$20,344,888, to produce which involved an outlay of \$778,694 for salaries of officials, clerks, etc.; \$8,393,483 for wages; \$476,171 for miscellaneous expenses, including rent, taxes, etc.; and \$6,186,492 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 spirits of turpentine and rosin 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.*

# TURPENTINE AND ROSIN.

By WILLIAM M. STEUART.

The gathering of resin, or crude turpentine, from the longleaf pine was among the first industries to attract the attention of the early settlers of the territory now forming the state of North Carolina. The primitive methods of gathering and shipping the resin as a raw material were followed by the manufacture of tar and pitch and the distillation of spirits of turpentine, the residuum being sold as rosin. The turpentine industry has extended to other

sections, and is now found in all regions in which the longleaf pine is found in sufficient abundance, and has formed an important feature in the industrial development of the South Atlantic and Eastern Gulf states. Table 1 is a comparative summary of the statistics for the industry as returned at the censuses of 1850 to 1900, 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	1800 to 1900	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860
Number of establishments	1,508	670	508	227	625	856	124.8	81.9	123.8	163.7	127.0
Capital	\$11,847,435	\$4,062,375	\$1,866,890	\$902,225	\$4,013,753	\$1,668,692	191.8	117.7	100.0	177.5	141.3
Salaries officials, clerks, etc., number	1,889	249	( <sup>1</sup> )	( <sup>2</sup> )	( <sup>3</sup> )	( <sup>4</sup> )	3755.1				
Salaries	\$778,694	\$26,944	( <sup>1</sup> )	( <sup>2</sup> )	( <sup>3</sup> )	( <sup>4</sup> )	2790.0				
Wage-earners, average number	41,884	15,266	10,585	2,638	4,214	8,487	174.2	44.9	290.4	137.4	22.6
Total wages	\$8,393,483	\$2,905,647	\$1,028,061	\$476,294	\$770,696	\$147,346	188.8	79.1	240.8	188.2	72.8
Men, 16 years and over	41,875	15,031	9,855	2,626	4,079	8,369	178.8	61.0	294.1	188.1	21.1
Wages	\$8,338,044	\$2,801,502	( <sup>1</sup> )	( <sup>2</sup> )	( <sup>3</sup> )	( <sup>4</sup> )	188.4				
Women, 16 years and over	73	211	( <sup>1</sup> )	( <sup>2</sup> )	( <sup>3</sup> )	( <sup>4</sup> )	22.7	58.3	87.5	140.0	98.5
Wages	\$21,630	\$10,314	( <sup>1</sup> )	( <sup>2</sup> )	( <sup>3</sup> )	( <sup>4</sup> )	109.1				
Children, under 16 years	816	94	242	( <sup>1</sup> )	( <sup>2</sup> )	( <sup>3</sup> )	236.2	61.2	680.6		
Wages	\$33,809	\$4,811	( <sup>1</sup> )	( <sup>2</sup> )	( <sup>3</sup> )	( <sup>4</sup> )	692.7				
Miscellaneous expenses	\$476,171	\$178,662	( <sup>1</sup> )	( <sup>2</sup> )	( <sup>3</sup> )	( <sup>4</sup> )	186.5				
Cost of materials used	\$6,186,492	\$2,874,693	\$2,324,637	\$2,146,090	\$4,824,414	\$1,494,818	115.2	23.7	8.8	150.4	191.8
Value of products	\$20,844,888	\$8,077,379	\$5,876,983	\$3,585,225	\$6,468,369	\$2,855,657	161.9	87.4	68.9	144.6	126.5

<sup>1</sup> Decrease.

<sup>2</sup> Includes proprietors and firm members, with their salaries; number only reported in 1900.

<sup>3</sup> Not reported separately.

<sup>4</sup> Not reported.

In addition to the establishments included in the above table for 1900, there were, in the states of North Carolina and South Carolina, 20 establishments each reporting a product of less than \$500. The combined capital of these establishments was \$6,336, and the total value of their product \$3,195.

The principal products of the industry are resin, which is the crude material obtained by tapping or bleeding the trees, spirits of turpentine, and rosin. The spirits of turpentine and the rosin are obtained by a distillation of the crude resin. Tar is obtained by the destructive distillation of the wood itself. Other products, such as oil of rosin, oil of tar, common pitch, brewers' pitch, etc., are obtained by a redistillation or combination of the products above mentioned. The early application of these products to shipbuilding gave rise to the generic term of "naval stores" as the designation of the industry, but as only a small proportion of the products are now used for this purpose, the term has become a misnomer.

Considered as a manufacture, the industry begins with the delivery of the crude resin at the distillery, but as the majority of the distillers own or lease the forests which supply the resin, it is found impossible to eliminate the capital and expenses pertaining to the care of these forests and the gathering of the resin so as to obtain statistics

which relate exclusively to the operations of the distilleries. Hence the capital reported includes the total amount invested in the business; the employees comprise those engaged in all branches of the industry, including those employed in the forests; and the cost of materials consists of the amounts paid for barrels, casks, cooperage stock, cooperage, etc., and for resin and fuel purchased, if any. The cost of the crude turpentine gathered by distillers operating their own forests is included in the amounts paid as wages, miscellaneous expenses, etc.

The care of the forests, the species of trees from which resin is obtained, and the methods of tapping the trees and gathering the resin, are exhaustively treated in the report of the division of forestry, Department of Agriculture, for 1892, and therefore will not be treated in this report.

In the early stages of the development of the industry, the crude resin was shipped to European and northern ports for distillation. "In the three years—1768 to 1770—88,111 barrels of crude turpentine, 20,646 barrels of pitch, and 88,866 barrels of tar were, on the average, annually exported to the mother country, representing a value of \$215,000 in our present currency."<sup>1</sup> While these figures indicate that the industry was of considerable importance

<sup>1</sup> Report of the Division of Forestry, Department of Agriculture, 1892.

prior to the Revolution, it was largely confined to the district lying between the Tar and Cape Fear rivers in North Carolina, within convenient access to the ports of Wilmington and Newbern, and consisted in gathering the resin and the destructive distillation of wood for the production of tar. Resin was distilled to some extent in northern cities; later, distilleries were operated in Wilmington and in the forests of North Carolina, thus enabling the operation to be carried on in connection with the gathering of the resin. The process was at first effected in clumsy iron retorts, but the introduction of the copper still, in 1834, led to a largely increased yield of volatile oil, and the industry received a strong impetus.<sup>1</sup> The methods of distillation have not changed materially during the one hundred years' history of the industry in the United States. The object of the operation is to obtain the largest possible quantity of spirits of turpentine from a given quantity of resin. The quantity of spirits obtained depends largely upon the character of the crude turpentine and the skill of the distiller. The crude turpentine is composed of "dip," which is the gum in a liquid state, and of "scrape," which is the solidified resin scraped from the tree. The best quality is obtained during the first year the tree is worked, and is known as "virgin dip" or soft white gum; it is almost colorless and contains the largest quantity of volatile oil. In the following year the gum is of a deeper, yellowish color, the "yellow dip," and, with each succeeding year, it becomes darker in color, more viscid, and poorer in volatile oil.<sup>1</sup> The results of the distillation of a given quantity of crude turpentine, and a clear description of the method employed, are given in the following statement taken from the report of the division of forestry, Department of Agriculture, for 1892:

#### DISTILLATION.

"The process of distillation requires experience and care in order to prevent loss in spirits of turpentine, to obtain the largest quantities of rosin of higher grades, and to guard against overheating. After heating the still somewhat beyond the melting point of crude turpentine, a minute stream of tepid water from the top of the condensing tub is conducted into the still and allowed to run until the end of the process; this end is indicated by a peculiar noise of the boiling contents of the still and the diminished quantity of volatile oil in the distillate. On reaching this point the heating of the still and the influx of water have to be carefully regulated. After all the spirits of turpentine has distilled over, the fire is removed, and the contents of the still are drawn off by a tap at the bottom. This residuum, the molten rosin, is first allowed to run through a wire cloth, and is immediately strained again through coarse cotton cloth, or cotton batting made for the purpose, into a large trough, from which it is ladled into barrels. The legal standard weight of the commercial package is 280 pounds gross, no tare being allowed.

"The finest grades of rosin are largely used in the manufacture of paper, for sizing, of soaps, and of fine varnishes; the medium qualities are mostly consumed in the manufacture of yellow soap, sealing wax, in pharmacy, and for other minor purposes; and the lower and lowest qualities are used for pitch in ship and boat building, brewers' pitch, and for the distillation of rosin-oil, which largely enters into the manufacture of lubricating agents."

\* \* \* \* \*

#### COST OF ESTABLISHMENT OF PLANT AND OF WORKING THE CROP.

"Lands, with the privilege of boxing the timber for the term of four years, are rented at the rate of \$50 per crop of 10,000 boxes (about 200 acres with 4,000 to 5,000 trees). The establishment of plant for the working of 20 crops requires an investment of about \$5,000, including the still, houses, sheds, tools, wagons, and working animals, mostly mules.

"The following statement, made by an operator of many years' experience, exhibits the actual expenses incurred for the working of one crop during four years; the work is for the greatest part done by the job:

Chopping 10,000 boxes.....	\$125.00
Inspecting and tallying the same.....	15.00
Cornering 10,000 boxes.....	12.00
Raking around the trees, at \$10 per season.....	40.00
Chipping boxes during 111 weeks, at \$5 per week.....	555.00
Dipping crude resin, 650 barrels, and scraping 480 stands, at 30 cents.....	333.00
Hauling dippings and scrapings, at 30 cents per barrel..	333.00
Distilling, at 20 cents per barrel.....	222.00
Spirit barrels, 122, at \$2.80.....	305.00
Making and filling 795 barrels resin, at 30 cents.....	238.50
Superintendence of the crop.....	80.00

Total working expense of one crop.....	2,258.50
Rent of land for one crop.....	50.00

Cost of one crop..... 2,308.50

"Total expense of operating a plant of 20 crops during four years:

Labor, rent, and materials.....	\$46,170.00
Interest on capital invested, \$5,000, at 6 per cent.....	1,200.00
Loss by depreciation of plant, 10 per cent per year for four years.....	2,000.00
Taxes and incidentals.....	630.00
	50,000.00

"YIELD.—It appears that the yield of the crop of 200 acres distributes itself about as follows:

	Dip.	Scrape.	Total crude turpen- tine.	Total yield, per cent.	Scrape, per cent.	SPIRITS.		Rosin.
						Gal- lons.	Per cent.	
First year.....	Lbs. 67,200	Lbs. 16,800	Lbs. 84,000	30.9	20.0	2,100	81.4	Lbs. 250
Second year.....	54,000	28,000	82,000	30.5	34.8	2,000	82.5	200
Third year.....	28,800	24,000	52,800	19.5	45.5	1,100	18.0	100
Fourth year.....	28,000	24,000	52,000	19.1	46.1	900	14.8	130
	178,000	93,600	271,600	100.0	225.0	6,100	100.0	560

<sup>1</sup> Evidently an error; should be 28,800.

<sup>2</sup> Evidently an error; should be 34.5.

<sup>3</sup> Evidently an error; should be 660.

<sup>1</sup> Report of the Division of Forestry, Department of Agriculture, 1892.

"If we assume that 4,500 trees produce these amounts in four years, the yield per tree in crude turpentine is about 60 pounds. The result at the still would indicate that each tree furnishes between  $1\frac{1}{4}$  and  $1\frac{1}{2}$  gallons of spirits, and one-eighth of a barrel, or 30 pounds, of rosin of better grade, or at best 75 cents' worth of product during the four years, which has cost 55 cents to produce, leaving 5 cents net per tree per year, or from \$1 to \$1.25 per acre.

"From the fact that 4,000 acres of timber land (20 crops of 200 acres each) during four years' working produce 120,000 gallons of spirits of turpentine, or  $7\frac{1}{2}$  gallons per acre and year, it follows that to produce the 17,000,000 gallons reported as the annual product, not

less than 2,250,000 acres must be in orchard; and since the yield of the first year represents 35 per cent of the total annual yield, at least 800,000 acres of virgin forest are newly invaded annually to supply the turpentine stills in operation."

Statistics of the industry were first presented in the reports of the census of 1850, but the manufacture of naval stores had become of considerable importance prior to 1850, the reports of the Treasury Department showing that large quantities of turpentine, rosin, and tar had been exported during each year from 1790 to that time. Table 2 shows the exports of spirits of turpentine, turpentine and rosin, and tar and pitch from 1850 to 1900, inclusive.

TABLE 2.—QUANTITIES AND VALUES OF SPIRITS OF TURPENTINE, TURPENTINE AND ROSIN, AND TAR AND PITCH EXPORTED EACH YEAR: 1850 TO 1900, INCLUSIVE.

YEAR.	SPIRITS OF TURPENTINE.		TURPENTINE AND ROSIN.		TAR AND PITCH.		YEAR.	SPIRITS OF TURPENTINE.		TURPENTINE AND ROSIN.		TAR AND PITCH.	
	Gallons.	Value.	Barrels.	Value.	Barrels.	Value.		Gallons.	Value.	Barrels.	Value.	Barrels.	Value.
1850	644,616	\$229,741	898,111	\$1,142,713	133,833	(1)	1876	5,173,984	\$1,672,068	824,256	\$2,188,623	69,138	\$164,647
1851	868,828	145,410	887,220	1,068,842	112,971	(1)	1877	6,796,927	2,274,689	900,056	2,384,378	72,189	180,410
1852	858,658	187,856	449,194	1,209,173	63,254	(1)	1878	7,638,668	3,333,569	1,042,188	2,329,319	73,407	158,094
1853	634,371	347,492	454,715	1,406,488	59,144	(1)	1879	7,675,556	2,045,673	1,112,816	2,159,141	52,850	101,445
1854	1,669,623	1,055,720	601,280	12,066,306	76,989	(1)	1880	7,091,200	2,132,164	1,040,345	2,368,180	41,221	84,728
1855	2,339,138	1,137,152	731,060	1,761,428	89,999	\$288,028	1881	6,695,628	2,414,719	1,023,710	2,529,423	46,582	109,381
1856	1,844,560	839,048	524,799	1,222,066	87,765	235,487	1882	8,136,493	3,798,034	1,156,012	3,240,803	50,616	129,554
1857	1,522,177	741,346	641,517	1,644,672	96,731	208,610	1883	9,867,344	4,866,229	1,347,256	3,068,182	72,269	174,686
1858	2,467,235	1,089,282	574,678	1,464,210	42,675	100,679	1884	11,800,723	3,885,500	*1,568,470	*3,027,916	*43,544	*91,284
1859	2,682,955	1,306,068	798,088	2,246,581	64,256	141,058	1885	8,987,226	2,690,231	*1,265,452	*2,378,114	*37,672	*66,449
1860	4,072,023	1,916,289	770,652	1,818,238	60,623	151,404	1886	8,217,678	2,811,777	*1,144,857	*2,196,090	*19,068	*36,208
1861	2,941,855	1,192,787	586,207	1,060,257	55,057	143,280	1887	10,209,888	3,489,895	*1,879,257	*2,330,906	*20,471	*39,772
1862	48,507	54,691	65,441	293,400	9,765	55,884	1888	10,589,942	3,580,106	*1,515,017	*2,310,018	*20,306	*39,783
1863	58,565	143,777	17,025	287,991	11,956	102,566	1889	9,681,759	3,777,525	*1,484,573	*2,146,388	*22,028	*41,988
1864	32,548	87,988	2,418	55,551	7,156	70,782	1890	11,248,920	4,590,981	*1,619,704	*2,797,410	*28,806	*56,105
1865	51,863	106,967	11,278	158,138	11,810	77,515	1891	12,243,621	4,668,140	*1,798,792	*3,484,379	*17,265	*39,094
1866	349,825	818,086	250,452	1,504,053	87,885	147,528	1892	13,176,470	4,560,721	*1,968,953	*3,436,795	*22,877	*52,417
1867	1,513,225	880,099	394,104	1,884,565	21,557	54,552	1893	18,416,459	3,983,436	*2,068,388	*3,353,621	*20,042	*40,244
1868	3,068,629	1,627,577	443,501	2,028,514	26,751	110,641	1894	12,618,407	3,437,245	*2,000,793	*3,315,967	*17,230	*37,786
1869	3,148,955	1,444,968	588,989	2,020,519	62,241	195,025	1895	14,152,788	3,998,277	*1,874,769	*3,378,823	*22,778	*41,678
1870	3,246,697	1,357,302	588,316	1,776,625	47,401	143,400	1896	17,431,566	4,613,811	*2,191,254	*4,195,707	*16,865	*34,046
1871	2,453,554	1,009,508	511,959	1,600,651	32,584	93,894	1897	17,302,828	4,447,551	*2,448,036	*4,732,529	*17,640	*34,878
1872	4,495,441	2,521,357	692,728	3,256,354	36,722	131,010	1898	18,351,140	5,380,806	*2,225,423	*3,737,863	*19,816	*36,475
1873	5,114,653	2,667,886	845,162	3,631,996	48,585	177,485	1899	17,761,533	6,100,419	*2,538,174	*3,736,594	*36,903	*86,002
1874	6,784,173	2,753,953	929,342	3,046,431	71,920	238,779	1900	18,090,582	8,554,922	*2,338,364	*3,842,190	*36,535	*77,082
1875	5,699,624	1,924,544	937,527	2,774,419	54,905	127,206							

\* The value of tar and pitch is included in that of turpentine and rosin, 1850 to 1854, inclusive.

\* The quantity and value of pitch, 1884-1900, inclusive, is included with turpentine and rosin, instead of with tar.

The statistics presented in Tables 1 and 2 indicate the prosperity or depression of the industry during the past fifty years. At the census of 1850, returns were received from 856 establishments, reporting a product valued at \$2,855,657. While reports were received from only 625 establishments at the census of 1860, showing a decrease of 231 as compared with 1850, the value of the product increased to \$6,468,369, or 126.5 per cent, and the number of gallons of spirits of turpentine exported increased from 644,616 to 4,072,023. The decrease in the industry during the decade from 1860 to 1870 was due primarily to the war, and was even greater than indicated by Table 1, as the values given for the census of 1870 are expressed in a currency which was at a discount as compared with gold, and should be reduced by about one-fifth for purposes of comparison with the values for prior and subsequent decades. With the exception of temporary depressions, the industry has steadily increased, until the number of establishments amounted, in 1900, to 1,503, with a product

valued at \$20,344,888. The value of the exports of spirits of turpentine, rosin and crude turpentine, and tar and pitch for 1900, amounted to \$12,474,194. During the decade ending with 1900, the exports of spirits of turpentine to foreign countries averaged 15,504,434 gallons annually, the greatest amount, 18,351,140 gallons, being reported for the year 1898.

Turpentine distilleries are frequently located in regions difficult of access, and operated by persons who are ignorant of business methods, keep no book accounts, and are disinclined to furnish statistical information. Under these conditions, it is difficult to gather authentic data. It is possible that these difficulties were greater at prior censuses, and that the industry has not increased during the past decade to the extent indicated by the figures in Table 1. At each census the general enumerators, while enumerating the population, have secured reports from the establishments engaged in this industry. At the census of 1900 the work of the enumerators was supplemented by corre-

spondence, schedules being mailed to all distillers from whom the enumerators failed to secure reports. It is, therefore, possible that the enumeration for 1900 is more complete than that for any prior census.

The rapid increase in the products was necessary to meet the urgent demand for spirits of turpentine and rosin in various fields of industry, such as the manufacture of paint, varnish, paper, soap, lubricants, pharmaceutical prepara-

tions, for illuminating purposes, and in the rubber industry. The depletion of the forests of North Carolina and South Carolina accelerated the development of the industry in other states.

Table 3 shows the distribution of the 1,503 establishments reported in 1900 throughout the South Atlantic and Eastern Gulf states.

TABLE 3.—SUMMARY BY STATES: 1900.

	United States.	Alabama.	Florida.	Georgia.	Louisiana.	Mississippi.	North Carolina.	South Carolina.
Number of establishments.....	1,503	152	366	524	10	145	174	132
Capital:								
Total.....	\$11,847,495	\$1,176,391	\$5,526,618	\$8,785,432	\$74,539	\$798,378	\$217,423	\$268,719
Land.....	\$5,622,040	\$525,973	\$3,206,099	\$1,496,829	\$34,550	\$227,977	\$35,615	\$94,997
Buildings.....	\$1,097,240	\$111,929	\$188,376	\$355,120	\$8,240	\$99,885	\$19,745	\$18,945
Machinery, tools, and implements.....	\$1,575,948	\$161,778	\$562,172	\$559,992	\$16,125	\$153,219	\$66,671	\$55,996
Cash and sundries.....	\$3,552,267	\$376,716	\$1,269,971	\$1,378,491	\$15,624	\$317,292	\$95,392	\$103,781
Salaries of officials, clerks, etc., number.....	1,389	162	748	768	8	147	25	36
Salaries.....	\$778,694	\$67,062	\$306,351	\$320,265	\$8,490	\$67,775	\$5,460	\$8,291
Wage-earners, average number.....	41,864	3,716	15,073	19,199	302	2,288	400	886
Total wages.....	\$8,393,483	\$780,573	\$3,049,200	\$3,772,848	\$54,180	\$530,410	\$70,697	\$135,575
Men, 16 years and over.....	41,375	3,643	14,947	19,028	295	2,197	393	867
Wages.....	\$8,338,014	\$773,717	\$3,034,259	\$3,754,972	\$53,910	\$517,039	\$70,497	\$133,650
Women, 16 years and over.....	173	29	28	49		48	1	18
Wages.....	\$21,830	\$2,877	\$3,977	\$5,303		\$7,558	\$100	\$1,805
Children, under 16 years.....	315	44	98	122	7	43	1	1
Wages.....	\$33,809	\$3,979	\$10,964	\$12,573	\$270	\$5,803	\$100	\$120
Miscellaneous expenses.....	\$476,171	\$59,214	\$201,756	\$178,774	\$359	\$18,655	\$8,616	\$8,297
Cost of materials used.....	\$6,186,492	\$650,681	\$1,222,932	\$2,292,665	\$33,276	\$697,539	\$318,139	\$471,261
Value of products:								
Total.....	\$20,344,888	\$2,033,705	\$6,469,605	\$8,110,468	\$115,324	\$1,772,435	\$1,055,695	\$787,656
Spirits of turpentine:								
Number of barrels.....	754,670	74,078	236,778	305,791	4,304	64,267	39,883	29,569
Value.....	\$14,960,235	\$1,460,582	\$4,800,033	\$6,024,054	\$85,415	\$1,253,934	\$772,772	\$563,445
Rosin:								
Number of barrels.....	2,568,087	245,394	772,587	950,582	14,055	241,607	218,899	120,013
Value.....	\$5,129,263	\$190,832	\$1,639,472	\$2,655,550	\$27,319	\$461,165	\$271,852	\$183,528
Value of all other products.....	\$255,385	\$82,241	\$30,100	\$30,864	\$2,590	\$57,386	\$11,571	\$40,683

In 1850 the industry was largely confined to North Carolina, when 785, or 91.7 per cent of the establishments, with a product valued at \$2,476,252, or 86.7 per cent of the total product, were reported for that state. In 1856 the exports from the ports of Wilmington, Newbern, and Washington were 96,545 gallons of spirits of turpentine and 12,556 barrels of turpentine and rosin, 5.2 and 2.4 per cent, respectively, of the total exports of these products. The industry appears to have reached its highest point in this state about 1860, and since then has gradually decreased. In 1900 there were 174 establishments reported for the state, with products valued at \$1,055,695, or only 5.2 per cent of the total for the United States, while the exports of spirits of turpentine from the ports of the state had decreased to 53,974 gallons.

The industry does not appear to have reached as large proportions in South Carolina. There were 40 establishments, with a product valued at \$235,836, reported for the state at the census of 1850. The industry increased until 1880, when 192 establishments were reported, with a product valued at \$1,893,206, which was the largest product reported for the state. In 1900 there were 132 establishments, with a product of \$787,656. The industry appears to have reached its largest proportions in the Carolinas about 1880, when 5,321,456 gallons of spirits of turpentine and 656,019 barrels of turpentine and rosin were exported from the ports of the two states.

The industry entered the forests of Georgia during the decade ending with 1850, and 364 barrels of turpentine and rosin were exported from the port of Savannah in 1856. The apparently unlimited resources of the forests

of the state have furnished a rich field for the operations of the turpentine distillers, and the industry has been conducted with the intention of obtaining the greatest return for the immediate outlay, irrespective of the waste and wanton destruction of the forests. While the development and increase of the industry under these conditions have been rapid, the possibilities of its continued prosperity are greatly lessened. There were 14 establishments reported for the state at the census of 1850, and the products were valued at \$55,068. As shown by Table 3, Georgia and Florida now rank first and second, respectively, in the number of establishments and value of products reported for the industry, Florida being first and Georgia second with respect to capital invested. There were 524 establishments reported for Georgia, or 34.9 per cent of the total number, and the products were valued at \$8,110,468, or 39.9 per cent of the total. There were 305,791 barrels of spirits of turpentine and 950,582 barrels of rosin produced in the state, or 40.5 and 37.1 per cent, respectively, of the totals for the United States. The growth of the industry in Florida, as indicated by the census statistics, has been most marked during the last decade. There were only 5 establishments reported for the state in 1850, with a product of \$29,671. There was a considerable increase in the value of product shown in 1860, 5 establishments reporting \$100,676. There were 2 establishments, with a product of \$26,116, reported for 1870, while 10 establishments were reported for 1880, with a product valued at \$295,500; 15 were returned for 1890, with a product of \$191,859, as compared with 366 in 1900, with a product valued at \$6,469,605. The num-

ber of establishments and value of products in 1900 formed 24.4 and 31.8 per cent, respectively, of the totals for the United States. The production of spirits of turpentine amounted to 236,778 barrels and that of rosin to 772,537 barrels, being 31.4 and 30.1 per cent, respectively, of the totals for the United States.

The first indication of the existence of the industry in the state of Alabama was at the census of 1850, when 4 establishments, with a product valued at \$17,800, were reported for the state. There were 152 establishments reported for 1900, with a product valued at \$2,033,705.

The products of Mississippi and Louisiana are largely marketed through the port of New Orleans. Statistics of the exports of the United States by districts are not available prior to 1856; in that year 10,511 gallons of spirits of turpentine were exported from the port of New Orleans. At the census of 1850 there were 5 establishments, with a

product valued at \$19,680, reported for Mississippi, and 1 establishment, with a product of \$1,750, for Louisiana, and in 1900, for the former state, 145 establishments manufacturing a product valued at \$1,772,435 were reported, and for the latter, 10 establishments with a product of \$115,324 in value.

Until recent years the products of the industry were sent almost exclusively to the nearest seaport, and from there shipped to northern cities or foreign countries. Therefore, the exports from the ports of the different states are a fair indication of the extent of the industry in those states, or in the regions surrounding the ports, which, in some cases, embrace parts of adjoining states. Table 4 shows the total quantity of spirits of turpentine, turpentine and rosin, and tar and pitch exported from the ports of each state in each decennial year from 1860 to 1900, inclusive.

TABLE 4.—EXPORTS OF SPIRITS OF TURPENTINE, TURPENTINE AND ROSIN, AND TAR AND PITCH BY DECENNIAL YEARS: 1860 TO 1900.

STATE AND PORT. <sup>1</sup>	1900			1890			1880			1870			1860		
	Spirits of turpentine.	Turpentine, rosin, and pitch.	Tar.	Spirits of turpentine.	Turpentine, rosin, and pitch.	Tar.	Spirits of turpentine.	Turpentine and rosin.	Tar and pitch.	Spirits of turpentine.	Turpentine and rosin.	Tar and pitch.	Spirits of turpentine.	Turpentine and rosin.	Tar and pitch.
	Gallons.	Bbls.	Bbls.	Gallons.	Bbls.	Bbls.	Gallons.	Bbls.	Bbls.	Gallons.	Bbls.	Bbls.	Gallons.	Bbls.	Bbls.
United States	18,090,582	2,389,364	36,535	11,248,920	1,619,704	28,806	7,091,200	1,040,845	41,221	3,246,697	583,316	47,401	4,072,023	770,652	60,023
Alabama	153,018	58,646	113	210		7		22,373	154	462	885	104		500	
Mobile	153,018	58,646	113	210		7		22,373	154	462	885	104		500	
Alaska		7													
Arizona			24												
California	45	535	483		25	71	6,055	125	294	1,965	76	112	1,280	2	106
San Diego	45	2	1		25	1									
San Francisco		533	482			70	6,055	125	294	1,965	76	112	1,280	2	106
Connecticut													640	10	197
Middletown														10	7
New Haven													500		174
New London													140		16
Delaware								1,375							
Florida	795,267	243,452	10	1,742	940	59	25,728	12,215	234	90	518	85			
Apalachicola	30,755	52,765													
Fernandina	157,768	14,498	5	50			25,536	8,189							
Key West				1,134	855	54	192	611	194						
Pensacola	476,167	169,281		460	66			7,067			198				
St. Johns	156	20	5	98	19	5		1,348	40	90	277	85			
St. Marks											43				
Tampa	130,421	6,888													
Georgia	14,023,328	1,408,928	2	7,251,929	841,217	40	570,549	91,909	111		519	29	137	134	34
Brunswick	3,173,410	333,019	2	1,699,447	172,104	40	131,600	11,814	80						
Savannah	11,449,918	1,075,909		5,552,482	669,113		438,949	80,095	31		519	29	137	134	34
Louisiana	212,031	47,890	379	599	1,128	126	276	5,089	110	7,558	8,423	241	11,197	18,909	300
New Orleans	212,031	47,890	379	599	1,128	126	276	5,089	110	7,558	8,423	241	11,197	18,909	300
Maine	34,103	831	3	4,062	79	2	90	528			41			160	931
Bangor	34,103	56	1								40			5	
Belfast							90								
Passamaquoddy		775		4,062	75						1			85	
Portland and Falmouth			2		4	2		528						120	931
Maryland	111	174,416	7	3,002	50,928	127	754	7,623	201	6,104	80,626	760	38,080	20,268	2,047
Baltimore	111	174,416	7	3,002	50,928	127	754	7,623	201	6,104	80,626	760	38,080	20,268	2,047
Massachusetts	2,044	18,359	1,641	29,418	7,088	1,447	50,915	3,612	6,066	52,511	11,435	6,292	123,163	16,605	13,027
Boston	2,044	18,357	1,637	29,418	7,037	1,443	50,915	3,577	6,056	52,011	10,134	6,252	122,970	15,640	12,763
Fall River															4
Gloucester															15
New Bedford			4			4			85	4	500	10	45	10	240
Salem											1,291	30	143	955	
Michigan	307,716	3,879	225	5,434	1,939		7,639	103	54		32	39			
Detroit	25,368	3,430	173	5,434	1,939		7,639	103	54		32	39			
Huron	282,353	440	52												
Minnesota		5		7,053	5	85	362	17	7		1	1			
Duluth		5													
Minnesota				7,053	5	85	362	17	7		1	1			
Mississippi		2	7					10	10						
Pearl River		2	7					10	10						
Montana and Idaho	11														

<sup>1</sup> The names of the ports are as they appear in the reports of the Bureau of Statistics of the United States Treasury Department.

TABLE 4.—EXPORTS OF SPIRITS OF TURPENTINE, TURPENTINE AND ROSIN, AND TAR AND PITCH, BY  
DECENNIAL YEARS: 1860 TO 1900—Continued.

STATE AND PORT. <sup>1</sup>	1900			1890			1880			1870			1860		
	Spirits of turpentine.	Turpentine, rosin, and pitch.	Tar.	Spirits of turpentine.	Turpentine, rosin, and pitch.	Tar.	Spirits of turpentine.	Turpentine and rosin.	Tar and pitch.	Spirits of turpentine.	Turpentine and rosin.	Tar and pitch.	Spirits of turpentine.	Turpentine and rosin.	Tar and pitch.
	Gallons.	Bbls.	Bbls.	Gallons.	Bbls.	Bbls.	Gallons.	Bbls.	Bbls.	Gallons.	Bbls.	Bbls.	Gallons.	Bbls.	Bbls.
New Jersey															13
Camden															13
New York	1,630,164	252,801	9,738	894,287	267,801	7,905	1,105,100	227,746	20,572	796,824	464,588	31,072	2,816,768	562,258	30,801
Buffalo Creek	15,426	4,599											905	41	261
Cape Vincent		14		770		25	2,050	3	204					816	
Champlain	27,728	15,880	1,606	32,425	12,259	265	101,224	10,890	8,517	69,960	4,377	4,096		4,815	
Genesee		2											31		
New York	1,587,010	231,322	8,002	861,092	254,894	7,705	1,001,826	210,780	10,820	724,764	455,688	25,694	2,800,558	555,360	29,789
Niagara													12,740	609	12
Oswegatchie		1,084	130		1,148					300		1	180	15	
Oswego								6,573	1,031	1,800	4,473	540	2,879	1,097	289
North Carolina	53,974	139,767	17,404	1,751,270	304,100	18,690	3,680,009	497,456	11,602	2,042,756	33,212	7,677	736,948	77,851	6,264
Edenton															20
Newbern													1,815	5	391
Pamlico		4	4		115	108	906	99	130	1,025	25	358			
Plymouth															101
Washington													1,238	80	192
Wilmington	53,974	139,763	17,400	1,751,270	303,985	18,584	3,629,103	497,357	11,472	2,041,731	33,187	7,819	733,840	77,766	5,560
North and South Dakota	39,649	1,774	840												
Ohio	40					8			5			1			
Cuyahoga	40					8						1			
Sandusky									5						
Oregon				650											
Willamette				650											
Pennsylvania	121	144	85	500	1,201	47	1,443	7,974	1,807	544	3,063	142	25,511	19,845	347
Philadelphia	121	144	85	500	1,201	47	1,443	7,974	1,807	544	3,063	142	25,511	19,845	347
Rhode Island												4	200	594	148
Bristol															30
Newport												4		74	118
Providence													200	460	
South Carolina		21,248		1,293,389	140,399	83	1,691,447	158,563		337,580	25,279	30	315,099	50,753	264
Beaufort													9,481	1,649	60
Charleston		21,248		1,293,389	140,399	8	1,691,447	158,563		337,490	25,267	30	305,613	49,104	204
Georgetown						75				40	12				
Texas	659	126	240	1,515	412	14	762	42		273	818	2			
Brazos de Santiago	90	97		580	27		742	40		240	311	2			
Corpus Christi		29	240	865	135	4	20	2			7				
Galveston	2				250	10									
Paso del Norte										23					
Saluria	567			70											
Texas										10					
Vermont	235,776	15,631	4,750				41				2			80	
Memphremagog	9,768	2,307	2,774												
Vermont	226,008	13,324	1,976				41				2			80	
Virginia			499		2,491		30	3,585		80	4,347	808	3,000	2,743	6,144
Norfolk and Portsmouth			499		2,491			3,585		80	4,087	808	3,000	1,093	6,144
Richmond							30				260			1,715	
Washington	2,525	923	135	3,860											
Puget Sound	2,525	923	135	3,860											
Wisconsin						1									
Superior						1									

<sup>1</sup> The names of the ports are as they appear in the reports of the Bureau of Statistics of the United States Treasury Department.

Considerable quantities of these products are now shipped from the distilleries by rail to Northern and Western states, and also by the same method from the ports of receipt named in the above table. For this reason, the exports do not indicate the extent of the commercial interests of the several ports represented by these products.

The boards of trade, produce exchanges, and other quasi-governmental organizations in the cities have, however, made a practice of compiling statistics of receipts at the ports, and the statistics given in Table 5 have been obtained from these sources.



TABLE 5.—SPIRITS OF TURPENTINE AND ROSIN RECEIPTS AT PORTS.

YEAR.	TOTAL.		WILMINGTON, N. C.		CHARLESTON, S. C.		SAVANNAH, GA.	
	Turpentine.	Rosin.	Turpentine.	Rosin.	Turpentine.	Rosin.	Turpentine.	Rosin.
	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>
1896	465,880	1,708,484	46,568	205,187	10,871	70,240	303,867	1,143,026
1897	494,374	2,048,512	89,928	192,640	7,702	52,478	329,445	1,811,050
1898	464,086	1,760,866	35,278	163,459	3,724	38,597	318,797	1,127,180
1899	488,279	1,766,374	27,981	161,161	2,513	28,085	329,466	1,128,942
1900	461,227	1,705,220	29,761	167,816	1,851	25,949	309,465	1,076,815
1901	498,285	1,755,700	25,541	181,743	2,438	17,681	387,452	1,119,957

YEAR.	BRUNSWICK, GA.		MOBILE, ALA.		NEW ORLEANS, LA.		GARRABELLE, FLA.	
	Turpentine.	Rosin.	Turpentine.	Rosin.	Turpentine.	Rosin.	Turpentine.	Rosin.
	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>
1896	56,588	215,544	20,314	57,745	12,160	56,348	5,067	15,444
1897	66,799	287,416	125,000	1100,000	15,018	87,598	10,482	87,380
1898	65,161	250,152	18,700	50,200	16,605	69,049	15,826	62,279
1899	72,838	257,749	19,004	65,271	17,290	68,772	19,192	66,394
1900	69,489	240,884	13,964	47,366	20,954	91,255	15,743	55,635
1901	71,755	221,757	25,445	68,361	19,268	83,588	16,391	62,613

<sup>1</sup> Estimated.

As shown by Table 3, the total product of spirits of turpentine in the United States during the year 1900 amounted to 754,670 barrels. From Table 5 it appears that 461,227 barrels were received for distribution at the principal ports during that year. These figures therefore indicate that 293,443 barrels were shipped directly from the distilleries to internal points of consumption. The boards of trade of Cincinnati and St. Louis, respectively, report receipts of 52,387 and 18,000 barrels of spirits of turpentine, making a total of 70,387 barrels; but as many points of receipt have no available records, it is impossible to make satisfactory compilations.

The capital invested in the industry in 1900 amounted to \$11,847,495. Table 3 shows that this amount consisted of land valued at \$5,622,040; buildings valued at \$1,097,240; machinery, tools, and implements valued at \$1,575,948; and cash on hand, bills receivable, unsettled ledger accounts, and miscellaneous items of live capital amounting to \$3,552,267. In many instances the land is not owned by the distillers, but is leased for a crop, which generally extends over a period of three or four years. The amount reported for value of land is the land which was owned by the distillers, and includes not only the land on which the still was located, but the forests from which the crude material was obtained. From Table 7 it appears that \$18,714 was paid for rent of works, which represents the yearly expense for the use of the forests. Considered strictly as a manufacturing industry,

the amount invested in forest lands should be deducted from the total capital, leaving \$6,225,455 as the amount of capital engaged in manufactures, as compared with a product valued at \$20,344,888.

In some instances the conditions under which the turpentine industry is conducted are anomalous. For instance: The distillers are, in many cases, advanced money by factors or commission merchants, with which to carry on their operations for a year, the prospective crop being mortgaged to secure the payment of the advances, the factor controlling the output. Under these conditions, the amount of live capital (cash on hand, bills receivable, unsettled ledger accounts, etc.) was abnormally large, including, as it did, the borrowed cash and the amounts represented by bills receivable for products shipped to the commission merchants. It formed 30 per cent of the total capital reported for the industry.

As previously explained, the amount, \$6,186,492, reported as the cost of materials used, does not include the value of the crude turpentine gathered by distillers, but represents only the amounts actually purchased. Using as a basis the reports for establishments that purchase crude turpentine, the office has estimated the total quantity of crude turpentine gathered, and Table 6 presents the total quantity gathered in each state, the quantities and values of the different classes of products, and the average values per barrel of spirits of turpentine and rosin.



TABLE 6.—QUANTITY OF CRUDE TURPENTINE GATHERED, QUANTITIES AND VALUES OF PRODUCTS, AND AVERAGE VALUES PER BARREL OF SPIRITS OF TURPENTINE AND ROSIN, BY STATES: 1900.

STATES.	Crude turpentine gathered.	PRODUCTS.						
		Total value.	Spirits of turpentine.			Rosin.		
			Quantity.	Value.	Average value per barrel.	Quantity.	Value.	All other products, value.
	Barrels.		Barrels.			Barrels.		
United States	4,033,161	\$20,344,888	754,670	\$14,960,235	\$19.82	2,563,087	\$5,129,268	\$255,385
Alabama	378,005	2,033,705	74,078	1,460,582	19.72	245,894	490,882	82,241
Florida	1,212,335	6,469,605	236,778	4,800,038	20.27	772,587	1,639,472	30,100
Georgia	1,615,569	8,110,408	305,791	6,024,054	19.70	950,582	2,055,550	30,864
Louisiana	20,289	115,324	4,304	85,415	19.85	14,055	27,319	2,590
Mississippi	859,629	1,772,435	64,297	1,258,934	19.51	241,607	461,165	57,336
North Carolina	861,729	1,055,695	89,888	772,772	19.87	218,899	271,352	11,571
South Carolina	190,095	787,050	29,569	563,445	19.06	120,013	188,528	40,683

From Table 6 it appears that the total value of products, \$20,344,888, consists of \$14,960,235, the value of 754,670 barrels of spirits of turpentine; \$5,129,268, the value of 2,563,087 barrels of rosin; and \$255,385, the value of the miscellaneous products, such as tar, pitch, rosin-oil, charcoal, refined tar, etc. There were 4,033,161 barrels of crude turpentine consumed by the 1,503 establishments reported. From the distillation of the 4,033,161 casks of crude turpentine resulted 24.4 per cent of spirits of turpentine, 54.5 per cent of rosin, and 21.1 per cent of other products. In obtaining the above percentages, the crude turpentine, rosin, and spirits of turpentine were reduced to pounds, the reduction being based, in the case of crude turpentine and rosin, on the standard weights of the packages, and, in the case of spirits, on the generally accepted specific gravity of the oil.

The totals for all classes of establishments were used, those operating on "virgin dip" as well as those obtaining the raw material in the second, third, or even later years of the period during which the forests were worked. The purity of the crude turpentine, its freedom from "scrape" dirt, sticks, and leaves, and the skill of the operator are the principal factors in the production of a large percentage of spirits. The percentage of waste depends very largely on the care with which the molten rosin is strained. If the rosin is passed through a cloth or fine screen and all "dross" carefully removed, the percentage of waste will be increased.

The following is a statement of the quantities of spirits of turpentine and rosin manufactured during 1900, showing the exports and the domestic consumption:

	Spirits of turpentine.	Rosin.
	Gallons.	Barrels.
Domestic production	38,438,170	2,563,087
Exports	18,090,682	2,369,118
Domestic consumption	20,397,588	193,969

According to this statement, the consumption of spirits of turpentine in the United States is 20,397,588 gallons, or 53 per cent of the quantity manufactured; and of rosin, 193,969 barrels, or only 7.6 per cent of the entire output of the stills.

The imports of the above products are so small as hardly to deserve consideration, there being only 22,183 gallons of spirits and no rosin imported. In the statement the domestic production is reduced to gallons by multiplying by 51, which is generally accepted as the average number of gallons to a barrel.

The statistics for the census of 1900 are presented in detail for each state in Table 7. The highest proportion of spirits and the lowest proportion of waste are reported for the state of Louisiana. It is possible that the distillers in that state obtained a quantity of "virgin dip" during the census year. The lowest proportion of spirits and the highest proportion of waste are reported for North Carolina, where the industry is oldest and the percentage of "virgin dip" is, therefore, small.

Considering the proportions shown in Table 6 in connection with the percentages presented in the statement on page 4, it must be remembered that the figures on which the latter statement is based were obtained from representative establishments, and therefore can not be accepted as indicating the results of the operations of all the distillers in the United States. It is probable that the majority of the distillers are now engaged in working their forests during the second and third years. Therefore, the general percentage of spirits of turpentine would be about as shown for the "third year" in the statement on page 4.

TABLE 7.—TURPENTINE AND ROSIN, BY STATES: 1900.

	United States.	Alabama.	Florida.	Georgia.	Louisiana.	Mississippi.	North Carolina.	South Carolina.
Number of establishments.....	1,503	152	366	524	10	145	174	132
Character of organization:								
Individual.....	713	67	123	232	2	64	140	85
Firm and limited partnership.....	726	79	230	272	7	63	33	42
Incorporated company.....	62	5	13	20	1	17	1	5
Miscellaneous.....	2	1	1	1	1	1	1	1
Established during the decade.....	1,074	137	310	364	8	110	83	62
Established during the census year.....	188	44	14	76	1	25	11	15
Capital:								
Total.....	\$11,847,495	\$1,176,891	\$5,526,618	\$3,785,432	\$74,539	\$798,373	\$217,423	\$268,719
Land.....	\$5,622,040	\$525,973	\$3,208,099	\$1,496,829	\$34,550	\$227,977	\$35,615	\$94,997
Buildings.....	\$1,097,240	\$111,929	\$488,376	\$355,120	\$8,240	\$99,835	\$19,745	\$18,945
Machinery, tools, and implements.....	\$1,575,948	\$161,778	\$562,172	\$559,992	\$18,125	\$158,219	\$66,671	\$55,996
Cash and sundries.....	\$3,552,287	\$376,716	\$1,269,971	\$1,378,491	\$15,624	\$317,292	\$95,892	\$108,781
Proprietors and firm members.....	2,192	236	552	815	15	198	205	171
Salaries of officials, clerks, etc.:								
Total number.....	1,839	162	748	763	8	147	25	86
Total salaries.....	\$778,694	\$87,082	\$308,351	\$320,265	\$3,490	\$67,775	\$5,460	\$3,291
Officers of corporations:								
Number.....	28	4	7	6	—	8	2	1
Salaries.....	\$22,620	\$2,300	\$8,000	\$4,020	—	\$7,100	\$600	\$800
General superintendents, clerks, and salesmen:								
Total number.....	1,861	158	741	757	8	139	23	85
Total salaries.....	\$756,074	\$84,762	\$298,351	\$316,245	\$3,490	\$60,675	\$4,860	\$7,691
Men:								
Number.....	1,856	157	738	756	8	139	23	85
Salaries.....	\$754,812	\$84,090	\$297,451	\$315,955	\$3,490	\$60,675	\$4,860	\$7,691
Women:								
Number.....	5	1	3	1	—	—	—	—
Salaries.....	\$1,262	\$72	\$900	\$290	—	—	—	—
Wage-earners, including pieceworkers, and total wages:								
Greatest number employed at any one time during the year.....	55,563	5,264	20,848	28,459	371	3,727	589	1,310
Least number employed at any one time during the year.....	39,942	3,525	14,718	17,959	252	2,204	368	918
Average number.....	41,864	8,716	15,073	19,199	302	2,288	400	886
Wages.....	\$8,393,433	\$780,573	\$3,049,200	\$3,772,848	\$54,180	\$580,410	\$70,697	\$185,575
Men, 16 years and over:								
Average number.....	41,375	3,643	14,947	19,028	295	2,197	398	867
Wages.....	\$8,393,044	\$778,717	\$3,034,259	\$3,754,972	\$53,910	\$517,039	\$70,497	\$183,550
Women, 16 years and over:								
Average number.....	173	29	28	49	—	48	1	18
Wages.....	\$21,630	\$2,877	\$3,977	\$5,303	—	\$7,568	\$100	\$1,805
Children, under 16 years:								
Average number.....	316	44	98	122	7	43	1	1
Wages.....	\$33,809	\$3,979	\$10,964	\$12,573	\$270	\$5,803	\$100	\$120
Average number of wage-earners, including pieceworkers, employed during each month:								
Men, 16 years and over:								
January.....	42,210	3,840	16,039	19,052	303	1,960	269	747
February.....	43,103	3,994	16,478	19,133	321	2,156	261	765
March.....	46,437	4,265	17,204	20,743	331	2,672	357	910
April.....	45,818	4,185	16,660	20,355	314	2,819	442	1,043
May.....	46,102	4,157	16,618	20,556	326	2,843	495	1,107
June.....	42,190	4,248	14,290	19,548	317	2,250	514	1,023
July.....	38,984	3,268	12,925	18,929	284	2,118	501	959
August.....	38,748	3,294	13,010	18,645	277	2,113	490	919
September.....	38,674	3,215	13,255	18,488	262	2,104	458	892
October.....	38,812	3,205	13,675	18,371	285	2,015	425	836
November.....	37,217	3,017	14,164	17,158	264	1,679	320	615
December.....	38,156	3,027	15,053	17,358	254	1,635	241	588
Women, 16 years and over:								
January.....	224	20	32	81	—	47	1	43
February.....	173	20	34	57	—	46	—	16
March.....	169	23	34	46	—	43	2	16
April.....	189	50	27	44	—	50	2	16
May.....	188	50	27	44	—	49	2	16
June.....	174	34	27	43	—	52	2	16
July.....	171	34	23	45	—	51	2	16
August.....	166	34	24	39	—	51	2	16
September.....	164	30	21	45	—	49	—	16
October.....	144	17	24	39	—	48	—	16
November.....	150	20	26	52	—	45	—	16
December.....	158	20	29	47	—	41	—	16
Children, under 16 years:								
January.....	344	56	89	152	5	37	—	5
February.....	335	53	100	134	5	38	—	5
March.....	337	56	97	125	5	49	—	5
April.....	371	78	103	129	8	52	1	—
May.....	378	76	107	131	8	55	1	—
June.....	319	34	96	128	8	52	1	—
July.....	282	27	83	119	8	44	1	—
August.....	282	81	88	115	8	39	1	—
September.....	284	30	101	105	8	39	1	—
October.....	285	30	99	109	8	39	—	—
November.....	280	26	106	104	6	39	—	—
December.....	290	26	109	114	5	36	—	—
Miscellaneous expenses:								
Total.....	\$476,171	\$59,214	\$201,756	\$178,774	\$959	\$18,655	\$8,516	\$8,297
Rent of works.....	\$18,714	\$8,013	\$2,593	\$1,998	—	\$1,017	\$2,381	\$2,210
Taxes, not including internal revenue.....	\$30,918	\$3,157	\$38,946	\$26,714	\$424	\$4,178	\$1,110	\$1,339
Rent of offices, insurance, interest, and all sundry expenses not hitherto included.....	\$216,230	\$24,616	\$82,911	\$86,681	\$235	\$13,249	\$4,465	\$4,073
Contract work.....	\$160,309	\$18,426	\$77,306	\$63,381	\$300	\$211	\$60	\$625
Cost of materials used:								
Total.....	\$4,136,492	\$650,681	\$1,222,332	\$2,292,665	\$33,275	\$697,539	\$318,139	\$471,261
Crude turpentine purchased.....	\$4,542,383	\$475,953	\$671,371	\$1,673,995	\$22,026	\$578,579	\$719,907	\$405,552
Fuel.....	\$88,604	\$11,512	\$22,522	\$25,138	\$2,854	\$18,085	\$7,206	\$6,792
Mill supplies.....	\$8,008	\$1,066	\$4,178	\$2,537	\$1	\$155	\$65	\$6
All other materials.....	\$1,486,630	\$143,659	\$508,764	\$576,658	\$7,369	\$107,921	\$89,673	\$57,586
Freight.....	\$60,867	\$18,491	\$21,097	\$14,342	\$1,525	\$2,799	\$1,288	\$1,325

TABLE 7.—TURPENTINE AND ROSIN, BY STATES: 1900—Continued.

	United States.	Alabama.	Florida.	Georgia.	Louisiana.	Mississippi.	North Carolina.	South Carolina.
<b>Products:</b>								
Total value	\$20,844,888	\$2,088,705	\$6,469,605	\$8,110,468	\$115,324	\$1,772,435	\$1,055,695	\$787,656
Spirits of turpentine:								
Number of barrels	754,670	74,078	286,778	305,791	4,804	64,287	89,888	29,569
Value	\$14,960,235	\$1,460,582	\$4,800,033	\$6,024,054	\$85,415	\$1,253,934	\$772,772	\$568,445
Rosin:								
Number of barrels	2,563,087	245,394	772,587	950,582	14,055	241,607	218,899	120,913
Value	\$5,129,268	\$490,882	\$1,639,472	\$2,055,550	\$27,319	\$481,165	\$271,652	\$183,528
Value of all other products	\$256,385	\$82,241	\$80,100	\$80,864	\$2,590	\$87,836	\$11,671	\$40,683
<b>Comparison of products:</b>								
Number of establishments reporting for both years	597	58	118	219	2	47	84	79
Value for census year	\$9,198,442	\$923,578	\$2,707,719	\$3,899,129	\$15,800	\$593,977	\$540,446	\$517,793
Value for preceding business year	\$7,813,259	\$842,027	\$2,217,754	\$3,810,508	\$13,900	\$500,130	\$500,303	\$428,642
<b>Power:</b>								
Number of establishments reporting	135	6	63	62	1	1	2	
Total horsepower	866	50	350	422	5	10	29	
Engines, steam:								
Number	116	7	50	54	2	1	2	
Horsepower	706	50	219	398	5	10	29	
Other power:								
Number	28		21	7				
Horsepower	160		131	29				
<b>Establishments classified by number of persons employed, not including proprietors and firm members:</b>								
Total number of establishments	1,508	152	866	524	10	145	174	182
No employees	16	1				2	11	2
Under 5	272	13	5	15	1	89	136	63
5 to 20	253	37	35	73	1	37	21	49
21 to 50	533	67	132	262	6	45	6	15
51 to 100	347	27	157	138	2	20		3
101 to 250	79	7	34	36		2		
251 to 500	8		3					

# CENSUS BULLETIN.

No. 127.

WASHINGTON, D. C.

January 15, 1902.

## MANUFACTURES.

### MAINE.

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 Maine for the census year 1900, taken in accordance with the provisions of section 7 of the act of March 3, 1890. 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 43 cities and towns in the state withdrawn from the enumerators and their manufacturing statistics collected by special agents, in accordance with the further provision of section 7 of the Census Act. Wherever the phrase "urban manufactures" is used in this bulletin, it applies only to those cities and towns which were withdrawn from the enumerators and committed to special agents, and only to manufacturing establishments within the corporate limits of such places.

Three cities in Maine contain a population exceeding 20,000 each: Bangor, Lewiston, and Portland. The manufacturing statistics of these cities are presented by specified industries, and the statistics of Lewiston and Portland are presented in comparison with the returns of the Eleventh Census. The statistics of Bangor were not

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

Mr. Samuel W. Matthews, Commissioner of the Bureau of Industrial and Labor Statistics for the state of Maine, rendered valuable assistance in the preparation of the text for the accompanying report.

The statistics of Maine are presented in 9 tables: Table 1 showing comparative figures for the state at the several censuses; Table 2 showing all the industries of the state divided between hand trades and the manufactures proper, and also the statistics of a governmental establishment, eleemosynary and penal institutions, and establishments with a product of less than \$500, which three latter classes were not reported at previous censuses; Table 3 showing the statistics of the 10 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the cities of Lewiston and Portland 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 Bangor, Lewiston, and Portland 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 Maine 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 Maine manufactures may be fairly inferred from the figures given.

In drafting the schedules of inquiry for the census of

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

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

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

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

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

The reports show a capital of \$122,918,826 invested in manufactures and mechanical industries in the 6,702 establishments reporting for the state of Maine. 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 \$127,861,485, to produce which involved an outlay of \$3,171,433 for salaries of officials, clerks, etc.; \$28,527,849 for wages; \$7,774,216 for miscellaneous expenses, including rent, taxes, etc.; and \$68,863,408 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 Maine, \$127,861,485, 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 Maine, the gross value of products for 1900 was \$127,861,485. The value of materials purchased in a partly manufactured form was \$43,150,529. The difference, \$84,210,956, 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.*

# MAINE.

Table 1 shows the manufacturing and mechanical industries of the state of Maine 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	6,702	5,010	4,481	5,550	3,810	3,974	33.8	11.8	119.3	45.7	14.1
Capital	\$122,918,826	\$80,419,809	\$49,988,171	\$39,796,190	\$22,044,020	\$14,699,152	52.8	60.9	25.6	80.5	50.0
Salaries of officials, clerks, etc., number	3,329	5,406	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	168.4				
Salaries	\$3,171,433	\$3,563,635	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	111.0				
Wage-earners, average number	74,816	70,374	52,954	49,180	34,619	28,020	6.3	32.9	7.7	42.1	23.6
Total wages	\$28,527,849	\$22,962,582	\$13,623,318	\$14,282,205	\$8,868,691	\$7,485,588	24.2	68.6	14.6	70.7	11.8
Men, 16 years and over	53,701	46,881	35,481	34,310	24,827	21,853	14.5	32.3	8.3	38.2	18.6
Wages	\$23,384,835	\$17,827,278	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	31.2				
Women, 16 years and over	18,918	21,051	13,777	13,448	9,792	6,167	110.2	52.8	2.4	37.3	58.8
Wages	\$4,835,171	\$4,891,060	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	11.1				
Children, under 16 years	2,202	2,442	3,746	1,422	( <sup>a</sup> )	( <sup>a</sup> )	19.8	184.8	163.4		
Wages	\$307,843	\$244,249	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	26.0				
Miscellaneous expenses	\$7,774,216	\$5,394,694	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	44.1				
Cost of materials used	\$68,863,408	\$51,520,589	\$51,120,708	\$49,379,757	\$21,553,066	\$13,553,144	33.7	0.8	8.5	129.1	59.0
Value of products, including custom work and repairing	\$127,361,485	\$95,689,500	\$79,829,798	\$79,497,521	\$38,198,254	\$24,661,057	33.1	19.9	0.4	108.1	54.9
Total population	694,466	661,086	648,936	626,915	628,279	583,169	5.0	1.9	3.5	10.2	7.7
Wage-earners engaged in manufactures	74,816	70,374	52,954	49,180	34,619	28,020	6.3	32.9	7.7	42.1	23.6
Per cent of total population	10.8	10.6	8.2	7.8	5.5	4.8					
Assessed value of real estate	\$268,434,909	\$233,946,082	\$173,856,242	\$134,580,157	\$86,717,716	\$64,336,119	14.7	34.6	29.2	55.2	34.8
Value of land and buildings invested in manufactures <sup>c</sup>	\$31,266,656	\$19,237,679	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	( <sup>a</sup> )	62.5				
Per cent of assessed value	11.6	8.2									

<sup>1</sup> Decrease.

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

<sup>3</sup> Not reported separately.

<sup>4</sup> Not reported.

<sup>5</sup> As given for the year 1900 in Dana's supplement, "State and City," to the Commercial and Financial Chronicle, under date of April 13, 1901.

<sup>6</sup> Does not include value of rented property.

Table 1 shows that there has been a marked growth in the manufacturing and mechanical industries of Maine during the half century. The population during these years increased from 583,169 to 694,466, or 19.1 per cent, while the average number of wage-earners employed in manufacturing establishments increased from 28,020 to 74,816, or 167 per cent, embracing, in 1900, 10.8 per cent of the entire population, compared with 4.8 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 110,243, or 15.9 per cent of the total population of the state.

The decade from 1890 to 1900 shows an increase in the value of products of 33.1 per cent, which is greater than for any other decade since 1870. The increase in the value of products from 1870 to 1880, four-tenths of 1 per cent, was really much greater. The values for 1870 were expressed in a currency which was at a discount in gold, and should be reduced by about one-fifth for purposes of comparison with other census years. This also explains the decrease of 4.6 per cent shown in wages during the same decade.

The extensive waterpower of Maine has been an important element contributing to this growth in manufacturing.

The 1,620 lakes of the state, having a total area of 2,300 square miles, and located in many cases near the heads of rivers, are valuable reservoirs of manufacturing power. The total available waterpower has been estimated at between one and two million horsepower.<sup>1</sup> Excellent facilities for commerce are afforded by the rivers, harbors, and railroads. Of the principal rivers the Piscataqua, Sheepscott, and St. Croix admit vessels of 2,000 tons for a few miles, while the Kennebec is navigable for coast vessels to Augusta, and the Penobscot to Bangor.<sup>2</sup> Numerous bays and harbors along the coast have a depth of water sufficient to float the largest ships and afford shelter from storms throughout the year. There are 1,919 miles of railroad in the state, the Maine Central entering all but one of the 16 counties.

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

<sup>1</sup> The Waterpower of Maine, by Walter Wells, pages 8, 28, and 29.

<sup>2</sup> Gazetteer of Maine, by G. J. Varney, page 11.

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	8,356	\$129,922,852	9,226	75,675	\$29,020,183	\$7,801,181	\$69,294,637	\$22,112,832	\$43,528,487	\$3,658,318	\$128,617,181
Hand trades <sup>1</sup>	2,895	4,662,344	3,187	6,692	3,105,667	553,868	4,995,382	72,437	4,733,711	189,234	11,686,966
Governmental establishment	1	6,082,905		559	470,243		205,012		194,464	10,558	764,022
Eleemosynary and penal institutions	4	314,836		5	2,750	668	88,559	21,000	61,015	6,544	101,497
Establishments with a product of less than \$500	1,649	606,225	1,725	295	19,286	26,807	137,658	15,169	122,489		390,177
All other establishments	3,807	118,256,482	4,814	68,124	25,422,182	7,220,343	63,868,026	22,004,226	38,416,818	3,446,982	115,674,519

<sup>1</sup> Includes bicycle and tricycle repairing, 57; blacksmithing and wheelwrighting, 973; boots and shoes, custom work and repairing, 213; carpentering, 277; clothing, men's, custom work and repairing, 178; clothing, women's, dressmaking, 163; dyeing and cleaning, 11; furniture, cabinetmaking, repairing, and upholstering, 83; lock and gun smithing, 21; masonry, brick and stone, 91; millinery, custom work, 270; painting, house, sign, etc., 247; plastering and stucco work, 11; plumbing, and gas and steam fitting, 112; taxidermy, 7; typewriter repairing, 1; watch, clock, and jewelry repairing, 180.

Of the 8,356 establishments of all classes, shown in this table, 4,544, or 54.4 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

\$12,077,143, or only 9.4 per cent of the total products of the state.

In addition to the 8,356 active establishments in the state during the census year, with a capital of \$129,922,852, shown in Table 2, there were 67 idle establishments, with a capital of \$859,049, divided as follows:

INDUSTRIES.	Number of idle establishments.	Capital.	INDUSTRIES.	Number of idle establishments.	Capital.
Brick and tile	11	\$39,543	Lumber and timber products	11	\$39,480
Cheese, butter, and condensed milk, factory product.	3	53,482	Marble and stone work	3	18,525
Felt goods	1	60,000	Soap and candles	1	15,000
Fertilizers	2	189,960	Starch	1	5,000
Fish, canning and preserving	14	11,055	Woolen goods	4	135,600
Flouring and grist mill products	3	4,600	Worsted goods	1	81,000
Iron and steel	1	75,000	All other industries	10	15,924
Leather, tanned, curried, and finished	1	12,000			

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	1,689	\$36,564,100	43,730	\$15,582,291	\$5,181,664	\$40,889,418	\$73,868,312
	1890	1,580	56,706,127	39,651	12,431,794	3,440,023	30,968,565	54,631,124
Increase, 1890 to 1900		109	29,857,973	4,079	3,150,497	1,691,641	9,920,853	18,737,188
Per cent of increase		6.9	52.7	10.3	25.3	49.2	32.0	34.3
Per cent of total of all industries in state	1900	25.2	70.4	58.5	54.6	66.0	59.4	57.6
	1890	31.5	70.5	56.3	54.1	63.8	60.1	57.1
Cotton goods	1900	15	21,087,190	13,723	4,330,297	1,440,425	7,036,287	14,631,036
	1890	23	20,850,764	13,912	4,213,523	1,185,336	8,446,736	15,316,909
Fish, canning and preserving	1900	117	8,481,056	5,567	1,184,850	97,859	2,578,636	4,779,733
	1890	35	527,420	2,342	447,806	94,712	900,674	1,660,881
Flouring and grist mill products	1900	227	1,235,767	192	93,820	43,836	2,827,443	3,399,832
	1890	210	1,194,900	262	95,344	53,632	2,806,869	3,254,690
Foundry and machine shop products	1900	112	4,032,950	2,143	1,036,034	142,334	1,553,168	3,293,706
	1890	82	3,024,473	1,768	916,814	180,559	1,139,070	2,628,572
Leather, tanned, curried, and finished	1900	31	1,376,106	587	229,268	102,332	1,943,204	2,451,713
	1890	51	2,231,702	852	362,841	117,141	2,307,343	3,363,672
Lumber and timber products	1900	333	15,764,538	6,334	2,633,771	514,059	7,994,596	13,489,401
	1890	394	12,978,315	11,540	2,689,845	622,563	6,228,808	11,949,654
Paper and wood pulp	1900	35	17,473,160	4,851	2,162,972	1,394,967	7,118,945	13,221,275
	1890	17	4,273,825	1,509	669,057	322,808	1,673,287	3,231,051
Printing and publishing, newspapers and periodicals	1900	120	1,668,820	1,309	473,026	480,690	514,384	2,130,017
	1890	105	1,140,152	949	433,900	244,936	367,256	1,719,477
Ship and boat building, wooden	1900	115	1,315,820	1,369	749,567	65,463	1,377,769	2,491,765
	1890	85	1,027,756	1,450	777,994	109,032	1,423,175	2,318,565
Wool manufactures	1900	79	14,128,693	7,155	2,688,686	849,699	7,944,986	13,412,784
	1890	73	9,456,890	5,067	1,824,670	509,304	5,675,317	8,737,653

The 10 leading industries of the state in 1900, as shown in Table 3, embraced 1,689 establishments, or 25.2 per cent of the total number in the state; used a capital of \$86,564,100, or 70.4 per cent of the total; gave employment to 43,730 wage-earners, or 58.5 per cent of the total number; and paid \$15,582,291, or 54.6 per cent of the total wages. The value of their products was \$73,368,312, or 57.6 per cent of the total. In the discussion of Table 3, which follows, these industries are ranked with reference to the value of their products.

Table 3 shows that the manufacture of cotton goods is the most important industry in the state. The 15 establishments reported in 1900 gave employment to 13,723 wage-earners, or 18.3 per cent of the wage-earners in the state, and their products were valued at \$14,631,086, or 11.5 per cent of the total value of the products of the state. In 1890 there were 23 establishments, with 13,912 wage-earners, and products valued at \$15,316,909. The decrease in the value of products during the decade was \$685,823, or 4.5 per cent. The waterpower of Maine early attracted the attention of manufacturers of cotton goods. One of the pioneer mills of the state was established at Brunswick in 1809, another at Wilton in 1810, and a third at Gardiner in 1811.<sup>1</sup> Factories were erected at Saco in 1831, at Lewiston in 1844,<sup>2</sup> and at Biddeford in 1845, while in later years Augusta and Waterville secured large plants. Lewiston is, however, the chief center of the industry, while the twin cities of Biddeford and Saco rank next in importance. At present the cotton mills of Maine are all west of the Kennebec River. They are located, without exception, at the falls of large rivers, and are operated by waterpower.

There were 838 establishments engaged in the manufacture of lumber and timber products in 1900, the industry second in rank, with 6,834 wage-earners, and products valued at \$13,489,401. In 1890 there were 894 establishments, with 11,540 wage-earners, and products valued at \$11,849,654. The increase in the value of products during the decade was \$1,639,747, or 13.8 per cent. Lumbering was begun at an early period in Maine, and has continued to be a leading industry. Owing to the scarcity of pine, which originally was the most important timber cut, spruce has now taken the leading place. Hard woods are cut in considerable quantities. The first sawmill in Maine was erected at South Berwick about 1634, and fifty years later the number in the state had increased to 24.<sup>3</sup> Many changes in methods have been introduced during the history of the industry. Dams and canals have been built, steamers have been placed on the lakes to facilitate log driving, and in one instance, at Northwest Carry, Moosehead Lake, a log sluice has been constructed, at large expense, to convey the logs overland from the west branch of the Penobscot River to Moosehead waters, the source of the Kennebec. The primitive mills have given

place to great plants, many of them operated by steam power, particularly those located on tide waters. Maine's wealth of hard woods, already receiving attention, is destined to be much more appreciated. Birch is in great demand for spool wood, both for local manufacture and for shipment to Scotland, while beech is called for to be converted into orange shooks for Florida and the Mediterranean ports. General woodworking plants have been built in many parts of the state, especially at points accessible to the raw material.

The wool manufacture in all its branches, except hosiery and knit goods, ranks third among the industries of the state, with 79 establishments, 7,155 wage-earners, and products valued at \$13,412,784. In 1890 there were 78 establishments, with 5,067 wage-earners, and products valued at \$8,737,653; and there was also 1 establishment reported for the manufacture of worsted goods, the statistics of which are not available for comparison, being included with those of "all other industries" to avoid disclosing operations of individual establishments. The increase in the value of products during the decade was \$4,675,131, or 53.5 per cent. Wool manufactures in Maine date back to a period some years prior to the introduction of cotton mills. In 1820 there were 6 small woolen mills in the state,<sup>4</sup> one of the earliest having been established in that year at Dexter, Penobscot county, by Amos and Jeremiah Abbott, who removed there from Andover, Mass.<sup>5</sup> They purchased the small wool-carding mills already built at Dexter, and a few years later built the present woolen mill. This was, it is claimed, the first firm in Maine to ship woolen cloth out of the state. Owing to the generally favorable conditions for its growth and development, the manufacture of woolen goods is now carried on in nearly every county in the state, water being used for power. The town of Sanford, in the southwestern part of Maine, not far from the New Hampshire line, is the seat of an important branch of this industry, the manufacture of carriage robes, mohair plush, and horse blankets.

There were 35 establishments engaged in the manufacture of paper and wood pulp in 1900, with 4,851 wage-earners, and products valued at \$13,223,275. In 1890 there were 17 establishments, with 1,509 wage-earners, and products valued at \$3,281,051. The increase in the value of products was \$9,942,224, or 303 per cent. Paper manufacturing has been carried on in Maine in a small way since 1735,<sup>6</sup> but it is only within recent years that it has attained importance. The early mills were located, first at Westbrook and later at Mechanic Falls, on the Little Androscoggin; at Gardiner and Skowhegan, on the Kennebec; and at Hampden and Belfast, in eastern Maine.<sup>7</sup> With the discovery of wood pulp as a material for paper manufacture, great changes were brought about. One of the pioneer pulp mills in the state was erected at Brunswick in 1870.

<sup>4</sup> Survey of Maine, 1829, by Moses Greenleaf, page 276.

<sup>5</sup> Report of the Maine Bureau of Industrial and Labor Statistics, 1895, page 104.

<sup>6</sup> The New England States, vol. 1, page 307.

<sup>7</sup> Report of the Maine Bureau of Industrial and Labor Statistics, 1895, page 105.

<sup>1</sup> Maine Historical Magazine, vol. 7, pages 41 and 120.

<sup>2</sup> The New England States, by W. T. Davis, vol. 1, page 154.

<sup>3</sup> Report of the Maine Bureau of Industrial and Labor Statistics, 1895, page 106.



Since that date numerous and costly plants have been built for the manufacture of ground wood, soda, and sulphite pulp. These mills are situated chiefly along the three principal rivers of the state, the Androscoggin, Kennebec, and Penobscot. Recently, immense plants have been constructed at Millinocket on the Penobscot waters, at Madison on the Kennebec River, and at Rumford Falls on the Androscoggin River. Spruce is used generally in the manufacture of wood pulp. A few mills use also small quantities of poplar, fir, pine, and hemlock, while 3 plants use poplar only.

There were 117 establishments engaged in the canning and preserving of fish in 1900, with 5,567 wage-earners, and products valued at \$4,779,733. In 1890, 35 establishments were reported, with 2,342 wage-earners, and products valued at \$1,660,881. The increase in the value of products during the decade was \$3,118,852, or 187.8 per cent. A leading branch of this industry is the canning of small herrings under the name of "sardines." Imports of "sardines" of this sort in 1872 suggested the use of Eastport herrings for the same purpose, and experiments were at once undertaken.<sup>1</sup> The Eastport product was found to be superior to the imported article, and an important industry was thus established in that city in 1875.<sup>2</sup> During the year 1 cannery was operated. In each of the four succeeding years, 1 factory was added to the number, so that, in 1879, 5 establishments were in operation.<sup>3</sup> From that time the industry grew rapidly until, in 1886, there were 45 factories in the state, of which number 32 bordered on Passamaquoddy Bay and its tributary waters, and 13 were located along the coast from Cutler westward.<sup>4</sup> At Eastport and Lubec the "sardine" industry, during the first ten years of its existence, increased to such an extent as to outrank in importance, in that locality, all other branches of business.

There were 227 establishments engaged in flour and grist milling in 1900, with 192 wage-earners, and products valued at \$3,399,832. In 1890, 210 establishments were reported, with 262 wage-earners, and products valued at \$3,254,690. The increase in the value of products during the decade was \$145,142, or 4.5 per cent. From the early settlement of the state, mills have been in use for grinding corn, wheat, and other grain. As the people for many years depended for a livelihood largely on the products of their farms—principally corn and grain—gristmills were a necessity. Small streams affording waterpower were abundant in every section of the state, and gristmills were erected in every considerable settlement. At first these mills were crude, the millstones being cut from the rock in which the country abounded, and serving only to grind the grain into meal; but, as time advanced, improved stones were introduced and much excellent flour was made for home consumption. For several years the state paid a small bounty on every bushel of wheat raised, and in this way greatly stimulated the growth of the cereal. With

very few exceptions, the early gristmills of Maine did custom grinding only, but later an extensive wholesale trade grew up in the larger cities, and mills of greater capacity were erected at these central points. As a result, corn meal, instead of whole corn, is now largely distributed to retailers throughout the state. Within a few years several large flouring plants, using the roller process, have been erected in Aroostook county; in these mills large quantities of native wheat are converted into flour. This has greatly stimulated the growth of wheat in the fertile valley of the Aroostook.

There were 112 establishments engaged in the manufacture of foundry and machine shop products in 1900, with 2,143 wage-earners, and products valued at \$3,298,706. In 1890, 82 establishments were reported, with 1,768 wage-earners, and products valued at \$2,628,572. The increase in the value of products during the decade was \$670,134, or 25.5 per cent. The erection of lumber mills in Maine early led to the construction of foundries and machine shops for the manufacture of shafting, gears, and other mill machinery. As shipbuilding and cotton and woolen manufacture developed, these foundries and shops were also called upon to manufacture the additional ironwork and the special machinery required. But in recent years there has been a change in the custom of all kinds of large manufacturing plants, most of which now have their own machine shops with from one to a dozen employees. This has had a tendency to reduce the number and importance of the general foundry and machine shops. Portland, Bangor, and Lewiston are now the principal points where these are located. One of the early stove foundries in Maine was established at Hampden about the year 1835.

There were 115 establishments engaged in wooden ship and boat building in 1900, with 1,369 wage-earners, and products valued at \$2,491,765. In 1890, 85 establishments were reported, with 1,450 wage-earners, and products valued at \$2,818,565. The decrease in the value of products during the decade was \$326,800, or 11.6 per cent. As far back as 1608, the "Virginia" was built by the Popham colony near the mouth of the Kennebec;<sup>5</sup> and from that time to the present, shipbuilding has been one of the important occupations of this region. In early days, shipyards were established at many points on all the principal rivers and along the coast, and Maine became the leading shipbuilding state in the United States, building more than half of all the sea-going vessels of the nation.<sup>6</sup> Of late years there has been a decline in the industry, and the business is now carried on at but few points. Bath, on the Kennebec, is much the most important center, but ship and boat building is also carried on to a considerable extent at Phippsburg, Waldoboro, Thomaston, Rockland, Camden, Rockport, Belfast, Bucksport, Millbridge, and Machias. A notable feature of modern marine architecture is the greater size of the vessels in comparison with those of early days. Two and three-masted schooners.

<sup>1</sup> Report of the Maine Bureau of Industrial and Labor Statistics, 1895, page 143.

<sup>2</sup> *Ibid.*, 1900, page 78.

<sup>3</sup> *Ibid.*

<sup>4</sup> History of Maine, by W. D. Williamson, vol. 1, page 203.

<sup>5</sup> Our Merchant Marine, 1872, by N. G. Hitchborn, page 15.

have quite largely given place to the large four, five, and six-masted vessels. Of late years the building of steel vessels, especially at the Bath Iron Works, the pioneer steel ship-building plant of the state, has become quite an important branch of the industry. Several Government cruisers, as well as merchant steamships, have been built at Bath.

There were 31 establishments engaged in the tanning, currying, and finishing of leather in 1900, with 587 wage-earners, and products valued at \$2,451,713. In 1890, 51 establishments were reported, with 852 wage-earners, and products valued at \$3,363,672. The decrease in the value of products during the decade was \$911,959, or 27.1 per cent. The early tanneries of Maine were very small, only a few hides being purchased, for a considerable part of the year's output was custom work. Home slaughtered hides and skins were tanned for home use, the shoemaker afterward making his rounds from house to house among the farmers, to work up stocks of finished leather into a year's supply of footwear for the family. There were 200 tanneries in Maine in 1810, with an annual average of 275 hides and skins tanned, and an average product valued at \$1,156. In 1840, 395 tanneries were reported, while the total number of hands employed, 454, averaged less than 2 to an establishment. York county alone contained 101 tanneries, with but 102 hands employed. Between 1840 and 1860 several tanneries of considerable size were built,

and the industry received a further stimulus through the demands of 1861 and the time immediately following, so that during the next fifteen years many large sole-leather plants were established in the eastern part of the state. Hemlock bark has always been the principal material used for tanning purposes in the state, and it is to the increasing scarcity of this bark that the decline in the industry since 1870 must be attributed.

There were 120 establishments engaged in the printing and publishing of newspapers and periodicals in 1900, with 1,309 wage-earners, and products valued at \$2,190,017. In 1890, 105 establishments were reported, with 949 wage-earners, and products valued at \$1,719,477. The increase in the value of products during the decade was \$470,540, or 27.4 per cent. The first newspaper in Maine, the Falmouth Gazette and Weekly Advertiser, was founded at Falmouth, now Portland, January 1, 1785, and has continued, under various names, to the present time. Nearly every considerable town in the state now has its local newspaper.

#### URBAN MANUFACTURES.

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

TABLE 4.—COMPARATIVE SUMMARY, LEWISTON AND PORTLAND, 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	6,702	\$122,918,826	74,816	\$28,527,849	\$7,774,216	\$68,863,408	\$127,361,485
	1890	5,010	80,419,809	70,374	22,962,582	5,394,694	51,520,589	95,689,500
Per cent of increase.....		33.8	52.8	6.3	24.2	44.1	33.7	33.1
Lewiston.....	1900	282	10,984,871	7,159	2,509,030	596,854	4,103,801	8,581,354
	1890	214	8,324,231	7,076	2,418,907	685,894	4,828,710	9,073,856
Per cent of increase.....		31.8	32.0	1.2	3.7	16.1	15.0	5.4
Portland.....	1900	639	6,991,251	5,699	2,612,817	759,854	5,566,225	11,440,201
	1890	662	6,887,557	5,333	2,413,898	585,149	6,286,433	11,371,437
Per cent of increase.....		3.5	1.5	6.8	8.2	29.9	11.5	0.6
Total for 2 cities.....	1900	921	17,976,122	12,858	5,121,847	1,356,708	9,670,026	20,021,555
	1890	876	16,211,788	12,414	4,832,800	1,221,043	11,115,148	20,445,343
Per cent of increase.....		5.1	18.2	3.6	6.0	11.1	13.0	2.1
Per cent of 2 cities to total for state.....	1900	13.7	14.6	17.2	18.0	17.5	14.0	15.7
	1890	17.5	18.9	17.6	21.0	22.6	21.6	21.4

<sup>1</sup> Decrease.

It appears from Table 4 that the number of establishments in these 2 cities, taken together, increased during the decade from 876 to 921, or 5.1 per cent. The average number of wage-earners increased from 12,414 to 12,858, or 3.6 per cent, while the value of products decreased from \$20,445,343 to \$20,021,555, or 2.1 per cent. The percentage of increase in the number of establishments and in the average number of wage-earners was smaller in these 2 cities than in the state as a whole, while the decrease in the value of products stands in contrast to an increase in the state as a whole. In Portland, the leading manufacturing city of the state, the number of establishments decreased during the decade from 662 to 639, or 3.5 per

cent, while the average number of wage-earners increased from 5,333 to 5,699, or 6.8 per cent, and the value of products increased from \$11,371,437 to \$11,440,201, or six-tenths of 1 per cent. The number of establishments, number of wage-earners, and value of products for this city constituted 9.5, 7.6, and 9 per cent, respectively, of the totals for the entire state.

Table 5 presents the totals for the manufacturing industries of the 43 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	6,702	\$122,918,826	7,501	74,816	\$28,527,849	\$7,774,216	\$68,868,408	\$127,861,485	-----	100.0	694,466	-----	100.0
Total for urban manufactures	3,596	78,384,905	3,961	52,015	20,188,982	5,815,718	45,598,178	85,505,162	-----	67.1	289,951	-----	41.8
Auburn	147	3,372,694	159	2,908	1,262,010	257,089	4,144,315	6,326,851	8	5.0	12,951	5	1.9
Augusta	171	3,488,474	190	2,227	708,638	666,785	1,459,662	3,822,679	7	3.0	11,883	6	1.7
Bangor	815	2,748,648	360	2,669	1,291,941	260,703	2,740,237	5,172,788	5	4.1	21,850	3	3.1
Bath	142	3,256,726	154	2,249	1,191,092	179,255	2,128,383	4,036,815	6	3.2	10,477	7	1.5
Belfast	79	517,055	105	679	251,639	36,035	540,314	964,738	24	0.8	4,615	20	0.7
Biddeford	108	6,067,194	122	4,527	1,554,146	519,361	3,098,244	5,760,844	4	4.5	16,145	4	2.3
Brewer	44	785,924	47	864	170,268	72,121	540,326	889,779	26	0.7	4,835	18	0.7
Bridgton	43	788,503	54	376	132,539	37,577	409,096	682,391	30	0.5	1,552	41	0.2
Bristol	37	205,495	40	226	65,030	5,593	137,965	266,880	38	0.2	2,572	34	0.4
Brunswick	80	1,673,359	85	970	350,726	118,462	661,472	1,194,276	22	0.9	5,210	17	0.7
Bucksport	27	127,880	32	116	41,990	5,293	102,919	185,164	41	0.1	2,339	36	0.3
Calais	78	1,715,940	32	865	817,575	98,317	872,768	1,493,126	18	1.2	7,655	10	1.1
Camden	55	1,680,251	69	841	382,191	60,560	935,518	1,618,017	16	1.3	2,825	31	0.4
Caribou	38	206,125	43	125	43,010	8,289	200,245	341,294	36	0.3	2,758	19	0.7
Eastport	62	3,087,366	65	2,213	479,805	48,714	1,020,605	1,905,808	14	1.5	5,311	16	0.8
Ellsworth	32	696,909	92	452	185,292	24,941	482,746	808,858	28	0.6	4,297	27	0.6
Fairfield	32	788,971	32	414	134,660	14,840	330,415	552,083	31	0.4	2,238	37	0.3
Fort Fairfield	37	148,225	40	72	23,365	4,898	140,168	232,827	39	0.2	1,469	42	0.2
Gardiner	79	1,709,577	85	1,098	495,139	119,036	1,760,828	2,930,865	9	2.3	5,501	15	0.8
Gorham	26	73,508	31	34	12,588	3,712	50,442	90,468	42	0.1	2,540	35	0.4
Hallowell	38	1,029,678	43	642	314,614	127,595	684,957	1,247,687	21	1.0	2,714	32	0.4
Kennebunk	45	747,021	41	579	229,176	69,058	485,372	938,399	25	0.7	3,228	25	0.5
Kittery	8	8,627	8	9	3,471	314	7,662	16,129	43	(1)	2,372	30	0.4
Lewiston	282	10,984,871	285	7,159	2,509,030	596,854	4,103,801	8,581,354	2	6.7	23,761	2	3.4
Lisbon	42	2,480,636	34	998	364,775	141,628	1,088,116	1,820,291	15	1.4	3,603	23	0.5
North Berwick	21	312,279	31	229	71,096	23,307	206,230	343,041	35	0.3	1,748	40	0.2
Norway	40	368,801	49	430	166,027	23,928	540,371	824,900	27	0.6	2,902	29	0.4
Old Town	86	1,893,161	89	1,182	428,018	132,983	1,467,466	2,239,837	13	1.8	5,703	14	0.8
Orono	28	1,444,080	34	575	280,836	92,186	704,991	1,345,535	19	1.0	3,257	24	0.5
Paris	35	258,158	38	320	104,671	16,238	216,752	386,455	33	0.3	3,225	26	0.5
Pittsfield	35	1,174,353	38	589	209,714	85,240	535,447	1,020,258	23	0.8	2,208	38	0.3
Portland	639	6,991,251	679	5,699	2,612,817	759,854	5,566,225	11,440,201	1	9.0	50,145	1	7.2
Presque Isle	38	177,595	43	88	30,270	10,491	162,707	273,716	37	0.2	1,256	43	0.2
Richmond	24	194,926	26	169	43,868	7,664	145,212	225,804	40	0.2	2,049	39	0.3
Rockland	118	1,708,483	158	860	358,969	107,276	851,806	1,557,697	17	1.2	3,150	9	1.2
Saco	71	2,151,434	77	2,025	619,462	195,758	1,120,238	2,244,025	12	1.8	6,122	12	0.9
Sanford	67	3,246,015	66	1,893	698,885	240,060	1,891,782	3,254,890	8	2.6	6,078	13	0.9
Skowhegan	69	941,681	75	617	245,314	43,068	761,463	1,252,955	20	1.0	4,266	22	0.6
South Berwick	25	637,153	22	506	190,047	39,370	480,533	788,899	29	0.6	3,188	27	0.5
Thomaston	35	501,265	51	215	108,010	9,854	226,996	442,716	32	0.3	2,688	33	0.4
Waldoboro	42	177,333	52	213	82,002	8,313	174,731	344,072	34	0.3	3,145	28	0.5
Waterville	89	3,972,016	99	2,203	779,808	196,034	1,256,801	2,802,236	11	2.2	9,477	8	1.4
Westbrook	42	3,950,221	46	1,405	604,978	347,064	1,372,266	2,851,660	10	2.2	7,233	11	1.0
Total for state exclusive of urban manufactures	3,106	44,583,921	3,540	22,801	8,338,887	1,958,498	23,265,230	41,356,323	-----	32.9	404,515	-----	58.2
Per cent of urban manufactures to total for state	53.7	63.7	52.8	69.5	70.8	74.8	66.2	67.1	-----	-----	41.8	-----	-----

<sup>1</sup> Less than one-tenth of 1 per cent.

Of the 6,702 establishments in the state, 3,596, or 53.7 per cent, were located in these 43 cities and towns. They furnished employment to 52,015 wage-earners, or 69.5 per cent of the total number, and the value of their products, \$85,505,162, formed 67.1 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 Bangor, Lewiston, and Portland 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 imple-ments.	Cash and sundries.		Num-ber.	Salaries.	Total.	
										Average number.	Wages.
1 The State	6,702	\$122,918,826	\$18,105,141	\$18,161,515	\$31,770,449	\$59,881,721	7,501	\$,329	\$3,171,433	74,816	\$28,527,849
2 Androscoggin	600	18,857,529	1,292,998	8,299,611	5,580,986	8,683,934	610	505	521,188	11,977	4,521,549
3 Arrostook	376	2,950,091	237,810	415,953	636,578	1,660,350	414	82	49,141	1,539	562,447
4 Cumberland	1,019	15,831,213	1,870,743	2,244,100	8,958,137	7,758,233	1,124	770	710,248	9,909	4,252,332
5 Franklin	200	4,648,253	946,048	876,121	1,083,122	1,742,962	215	122	134,820	1,788	675,226
6 Hancock	352	2,844,748	355,225	274,115	406,483	1,308,925	396	116	74,018	2,418	1,008,132
7 Kennebec	569	14,567,283	1,323,740	2,546,925	4,404,850	6,291,768	623	316	351,656	7,909	3,126,647
8 Knox	368	4,943,062	807,580	935,981	874,714	2,324,787	443	115	97,249	3,009	1,315,757
9 Lincoln	176	781,927	83,817	150,186	237,489	310,485	201	16	12,429	784	262,098
10 Oxford	331	4,348,072	630,184	652,352	1,855,545	1,709,991	383	117	87,643	2,492	913,947
11 Penobscot	760	11,091,637	1,003,417	1,852,637	2,599,785	5,635,898	840	346	821,693	6,916	2,945,485
12 Piscataquis	154	3,480,822	1,066,340	391,610	684,300	1,338,572	166	48	45,066	1,363	533,631
13 Sagadahoc	204	4,997,388	617,604	694,596	1,404,610	2,280,578	217	130	146,584	2,810	1,399,315
14 Somerset	303	6,402,058	612,638	991,380	1,700,141	3,097,899	341	109	119,705	2,929	1,097,804
15 Waldo	277	1,208,936	99,755	159,238	391,312	618,631	370	41	29,577	1,279	440,520
16 Washington	425	11,772,892	1,257,147	1,088,993	2,467,606	7,009,146	497	243	194,635	6,753	1,665,214
17 York	588	14,632,815	900,095	1,637,817	3,934,791	8,109,612	661	253	275,881	10,971	3,806,750

TABLE 7.—MANUFACTURES BY

1 All industries	6,702	\$122,918,826	\$18,105,141	\$18,161,515	\$31,770,449	\$59,881,721	7,501	3,329	\$3,171,433	74,816	\$28,527,849
2 Agricultural implements	17	584,247	56,500	114,916	111,827	301,004	15	27	17,195	218	100,033
3 Awnings, tents, and sails	39	109,338	8,200	10,800	10,083	85,775	50	2	700	135	69,339
4 Baskets, and rattan and willow ware	5	9,580	175	700	1,705	7,000	27	2	500	208	10,773
5 Bicycle and tricycle repairing	67	60,965	2,110	4,810	23,965	80,080	66	1	72	45	18,230
6 Blacksmithing and wheelwrighting	973	856,204	87,815	215,637	194,135	358,617	1,053	4	2,214	450	203,938
7 Bookbinding and blank book making	9	83,408			18,680	14,728	9	6	3,000	58	24,070
8 Boot and shoe cut stock	5	37,249	800	1,000	8,500	27,449	5	17	7,400	36	5,367
9 Boots and shoes, custom work and repairing	213	73,435	4,365	10,680	81,052	27,338	216	1	890	85	36,040
10 Boots and shoes, factory product	48	5,148,278	135,285	540,950	663,326	3,808,717	41	345	345,556	6,432	2,664,672
11 Bottling	18	167,230	23,500	18,500	36,980	93,800	14	10	9,368	82	39,418
12 Boxes, fancy and paper	9	94,746	1,000	5,500	80,046	58,200	6	6	6,450	187	54,571
13 Boxes, wooden packing	28	444,449	58,577	100,200	116,742	170,930	20	20	13,188	404	156,966
14 Brass castings and brass finishing	6	119,714	7,300	18,781	33,343	65,290	7	6	4,134	50	28,751
15 Bread and other bakery products	106	490,861	49,850	62,750	89,160	289,101	122	83	61,150	492	218,054
16 Brick and tile	71	454,953	94,101	93,085	68,438	199,329	78	24	7,914	392	162,105
17 Bridges	3	15,500			12,000	3,500	5	2	1,600	40	20,600
18 Brooms and brushes	8	23,846	335	1,040	2,800	19,671	7	3	2,100	41	18,739
19 Carpentering	277	900,627	81,220	125,990	136,146	557,271	307	87	83,515	1,672	890,092
20 Carriage and wagon materials	4	36,671	850	2,800	7,545	25,476	6	1	1,092	14	6,171
21 Carriages and wagons	165	602,778	57,420	118,350	71,528	355,475	189	16	10,100	339	178,634
22 Cars and general shop construction and repairs by steam railroad companies	19	921,905	72,900	876,350	217,081	255,074		37	31,332	571	300,755
23 Charcoal	3	2,690	210	500	500	1,480	3			4	912
24 Cheese, butter, and condensed milk, factory product	61	429,510	16,951	117,260	81,654	218,645	39	89	16,646	162	70,233
25 Chemicals	5	550,426	2,355	47,396	467,459	33,236	3	7	2,733	12	4,928
26 Cleansing and polishing preparations	3	10,400	5,150	400	400	4,460	1	1	100	5	1,856
27 Clothing, men's, custom work and repairing	178	394,516	20,897	29,644	40,460	303,515	193	19	8,619	751	240,558
28 Clothing, men's, factory product	42	443,752	10,650	33,578	60,664	338,860	52	39	27,921	1,270	271,967
29 Clothing, women's, dressmaking	163	138,239	22,765	63,805	16,935	34,734	176	29	10,760	476	105,439
30 Clothing, women's, factory product	9	193,050			13,800	179,750	11	23	11,800	290	72,679
31 Coffins, burial cases, and undertakers' goods	10	80,435	4,650	7,000	6,325	62,460	15	1	200	53	26,554
32 Confectionery	56	174,855	8,800	9,900	55,685	100,470	64	46	30,500	240	75,898
33 Cooperage	76	138,548	11,430	22,280	25,997	78,841	82	5	5,200	154	57,449
34 Cotton goods	15	21,037,190	983,306	3,498,246	7,988,603	8,612,035	1	100	231,815	13,723	4,330,237
35 Cutlery and edge tools	11	123,667	18,100	16,525	23,300	65,742	10	7	6,298	63	21,149
36 Dyeing and cleaning	11	17,040	1,200	6,100	6,515	3,225	11	1	365	23	8,330
37 Electrical construction and repairs	8	17,875		600	5,875	11,400	10	1	200	15	8,300
38 Electroplating	4	2,375			1,775	600	5			1	325
39 Fertilizers	3	49,850	1,050	4,800	26,400	17,000	1	2	3,400	34	6,990
40 Fish, canning and preserving	117	8,481,056	187,355	740,815	2,045,117	5,558,289	135	177	139,497	5,567	1,184,850
41 Flavoring extracts	10	80,137	2,922	9,817	7,685	59,713	10	14	27,000	46	21,630
42 Flouring and grist mill products	227	1,235,767	125,492	265,164	277,261	567,850	287	18	11,560	192	93,820
43 Foundry and machine shop products	112	4,032,390	393,793	552,348	879,903	2,136,906	117	133	135,472	2,143	1,036,034
44 Fruits and vegetables, canning and preserving	59	865,825	42,845	132,493	230,928	459,559	99	102	50,854	904	203,509
45 Fur goods	5	27,015	100	200	3,165	23,550	7	5	1,725	26	12,939
46 Furniture, cabinetmaking, repairing, and upholstering	83	162,449	12,435	23,575	35,036	91,403	97	9	6,608	135	65,979
47 Furniture, factory product	14	421,836	57,500	62,621	53,650	248,065	12	39	36,271	334	127,051
48 Gas, illuminating and heating	9	1,426,118	148,161	178,500	910,556	138,901		47	29,063	61	37,953
49 Hairwork	3	3,075			150	2,925	3			4	1,200
50 Hand stamps	3	87,760	7,500	15,000	11,750	3,500	2	1	800	5	2,830
51 Hosiery and knit goods	3	9,000			4,400	4,600	6			37	7,425

## BY COUNTIES: 1900.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average num- ber.	Wages.	Average num- ber.	Wages.	Average num- ber.	Wages.										
53,701	\$23,884,895	18,913	\$4,885,171	2,202	\$807,843	\$7,774,216	\$791,726	\$793,786	\$5,287,813	\$901,441	\$68,868,408	\$66,716,940	\$2,146,468	\$127,361,485	1
7,249	3,155,858	4,499	1,325,407	229	40,284	1,066,155	69,902	161,409	775,728	59,061	10,784,566	10,504,346	280,220	19,162,297	2
1,464	546,979	68	14,468	7	1,000	115,376	15,381	19,265	78,949	1,781	2,967,642	2,945,221	22,421	4,378,336	3
7,237	3,551,209	2,565	683,522	107	17,601	1,400,306	352,365	108,631	788,546	150,762	9,466,228	9,178,623	286,605	18,947,126	4
1,523	633,229	218	40,411	22	1,586	810,878	6,130	25,015	278,681	1,052	2,188,114	2,080,322	107,792	8,975,697	5
2,081	984,123	256	63,000	76	11,009	90,964	19,283	11,173	54,608	6,000	1,886,768	1,361,337	25,421	3,211,549	6
5,395	2,546,131	2,243	540,766	271	39,750	1,802,106	75,367	88,817	777,141	361,281	7,258,870	7,057,855	201,015	15,055,860	7
2,432	1,200,110	494	113,562	23	2,085	244,760	35,853	27,228	170,714	10,965	2,714,598	2,483,539	231,059	5,212,923	8
622	226,696	108	27,657	54	7,740	22,800	8,865	4,795	11,902	2,238	504,319	492,589	11,730	1,110,100	9
1,980	812,294	477	97,980	26	8,673	207,930	18,241	33,430	161,259	73,344	2,447,877	2,321,507	126,370	4,093,474	10
5,962	2,717,497	912	223,844	42	4,144	824,410	90,320	66,895	693,851	161,051	8,160,462	7,888,695	271,767	14,217,201	11
1,078	453,041	283	80,890	2	200	106,690	11,594	13,863	76,074	5,159	1,889,707	1,347,284	42,423	2,419,787	12
2,594	1,350,880	193	46,183	23	2,252	278,561	18,932	17,598	194,644	52,387	3,032,093	2,929,619	102,474	5,474,089	13
2,332	926,962	571	166,706	26	4,136	310,853	22,975	31,965	252,258	3,655	3,306,076	3,195,185	110,890	5,834,804	14
883	350,101	387	89,212	9	1,207	66,912	8,660	6,488	41,009	10,755	859,478	837,432	22,046	1,717,828	15
4,104	1,830,653	1,791	242,949	858	92,612	252,555	17,542	43,165	189,698	1,950	3,947,958	3,871,362	76,596	7,069,209	16
6,696	2,649,072	3,848	1,079,114	427	78,564	1,173,160	35,253	134,499	842,357	161,051	8,449,663	8,222,024	227,639	15,472,205	17

## SPECIFIED INDUSTRIES: 1900.

53,701	\$23,884,885	18,913	\$4,895,171	2,202	\$907,843	\$7,774,216	\$791,726	\$793,786	\$5,287,313	\$901,441	\$68,863,408	\$66,716,940	\$2,146,468	\$127,361,485	1
215	99,277	2	600	1	156	28,480	402	2,699	25,829		98,197	84,941	13,256	290,261	2
116	53,274	19	6,065			6,540	3,570	420	2,550		152,631	161,554	1,077	263,095	3
80	4,683	110	5,740	18	350	392	87	20	335		2,217	2,151	66	20,925	4
45	18,280					8,281	5,836	476	2,469		32,731	31,213	1,518	94,003	5
448	203,679			2	259	43,585	28,584	5,490	9,181	380	891,254	860,974	30,280	1,294,857	6
25	14,702	38	9,368			7,332	1,604	221	507	5,000	32,000	31,486	514	82,250	7
8	1,979	28	3,388			15,898	1,882	111	8,565	10,340	78,341	77,345	996	134,981	8
79	84,566	5	1,864	1	110	16,047	13,210	386	1,901	550	74,134	71,048	3,088	212,657	9
4,846	2,014,993	2,064	645,694	22	3,985	402,027	13,297	20,380	367,350	1,000	8,366,747	8,323,240	43,507	12,295,847	10
80	38,998	1	800	1	120	14,050	2,992	643	10,415		325,847	324,032	1,815	430,138	11
38	19,646	149	34,925			7,580	2,700	826	3,454	600	98,887	95,753	3,134	208,250	12
397	155,704	1	467	6	795	31,908	850	2,387	26,421	2,250	348,021	343,826	4,195	699,853	13
50	28,761					6,026	533	637	4,856		52,590	49,140	3,450	119,573	14
260	184,411	126	27,962	6	681	45,182	23,852	3,761	17,569		643,856	625,444	18,412	1,204,581	15
391	162,025			1	80	24,940	3,455	3,248	16,425	1,812	106,026	7,300	98,726	439,975	16
40	20,600					1,817	311	36	970		31,753	30,845	908	60,657	17
25	15,451	15	3,138	1	150	3,784	620	268	1,296	1,600	68,311	67,734	577	113,290	18
1,666	888,557			6	1,535	183,576	11,157	5,793	66,124	100,602	1,429,496	1,424,296	5,200	8,056,220	19
14	6,171					2,889	610	188	2,096		13,772	12,842	930	30,163	20
337	173,084	1	350	1	200	25,269	6,072	4,318	11,896	2,983	274,772	266,155	8,617	719,859	21
571	300,755					35,435		6,715	28,720		487,604	476,758	10,846	857,136	22
4	912					46		16	30		1,200	1,200		2,670	23
141	64,707	21	5,576			23,065	1,648	2,291	16,278	3,848	1,407,050	1,394,778	12,272	1,727,684	24
12	4,928					2,991	500	263	2,228		16,758	14,068	2,690	31,638	25
5	1,856					433	848	48	37		2,714	2,673	36	9,760	26
145	85,061	605	155,372	1	125	53,817	27,431	3,187	12,159	11,040	365,856	358,861	6,995	877,292	27
253	83,923	1,007	186,902	10	1,142	75,749	6,120	2,737	20,595	46,297	683,471	675,761	7,710	1,335,836	28
9	4,970	464	100,219	3	250	26,538	24,095	669	1,614	160	119,290	115,585	3,705	353,328	29
7	3,800	283	68,879			7,410	3,292	243	3,875		164,455	153,458	997	287,749	30
51	26,960	2	694			3,137	1,350	525	1,262		76,539	74,777	762	136,895	31
99	44,928	140	30,732	1	188	44,235	12,797	1,837	29,451	150	261,427	256,992	4,435	512,743	32
154	56,999			4	450	21,518	2,363	472	2,208	16,480	114,092	111,573	2,519	260,973	33
0,197	2,342,275	6,760	1,864,335	766	123,687	1,440,425	3,600	242,230	788,375	406,220	7,036,287	6,889,102	177,185	14,681,086	34
63	21,149					4,976	899	967	3,110		29,882	26,242	3,640	78,476	35
16	6,815	7	2,015			3,402	2,269	180	1,003		5,642	4,792	850	35,183	36
15	8,300					1,328	879	99	350		11,690	11,391	209	27,112	37
1	325					430	392	10	28		770	770	245	4,550	38
34	6,990					2,120		220	1,900		22,190	21,940	250	40,002	39
2,895	833,157	1,746	245,302	926	106,801	97,859	3,777	11,585	82,322	175	2,578,636	2,512,716	65,920	4,779,733	40
11	6,226	35	15,404			16,283	1,154	492	14,637		86,688	86,335	353	168,621	41
192	93,820					43,836	11,475	9,700	22,661		2,827,443	2,804,852	22,591	3,399,832	42
2,120	1,030,673	23	5,361			142,334	10,107	26,522	105,645	60	1,553,168	1,483,836	69,832	3,298,706	43
487	144,508	316	49,385	101	9,616	48,119	4,936	5,444	32,239	500	762,102	751,454	10,648	1,335,671	44
13	8,524	18	4,415			3,275	1,640	190	1,445		35,085	34,255	830	66,200	45
116	60,330	18	5,374	2	225	15,952	10,576	987	4,389		131,368	128,550	2,818	307,368	46
322	124,237	11	2,664	1	150	35,463	4,000	2,463	24,000	5,000	284,216	282,779	1,437	530,737	47
61	37,958					60,139		14,237	45,902		73,994	66,443	6,951	285,055	48
6	2,830	4	1,200			531	496	35	50		2,182	2,152	30	6,400	49
4	1,300	31	6,000	2	125	355	110	85	210		2,836	2,600	236	9,681	50
						6,389	200	58	1,531	4,600	10,810	10,700	110	29,075	51

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.
52	House furnishing goods, not elsewhere specified.	5	\$4,645	\$370	\$950	\$1,825	\$1,500	5			8	\$2,715
53	Ironwork, architectural and ornamental.	3	171,488	18,900	11,650	14,600	131,338	2	6	\$10,000	70	32,789
54	Kindling wood.	4	53,072	600	7,600	26,039	18,833	4	2	1,250	65	21,373
55	Leather, tanned, curried, and finished.	31	1,376,106	28,433	156,467	85,246	1,105,965	30	36	26,793	587	229,263
56	Lime and cement.	20	1,942,007	485,338	681,515	143,225	631,929	32	34	26,296	582	248,371
57	Lock and gun smithing.	21	20,476	2,000	4,000	7,880	6,595	27			7	3,146
58	Looking-glass and picture frames.	18	73,295	400	3,000	4,890	65,005	22	8	3,768	72	39,738
59	Lumber and timber products.	838	15,764,533	4,427,513	1,450,231	2,681,620	7,205,274	1,112	257	223,607	6,834	2,633,771
60	Lumber, planing mill products, including sash, doors, and blinds.	70	1,351,555	88,745	180,845	303,411	773,554	81	56	42,373	742	351,793
61	Marble and stone work.	78	2,769,910	746,615	256,255	636,981	1,120,109	92	74	67,318	2,246	1,090,915
62	Masonry, brick and stone.	91	491,123	25,535	45,240	67,770	352,578	104	18	13,055	1,292	729,772
63	Mattresses and spring beds.	8	19,323	850	1,750	4,450	12,773	11			26	10,206
64	Millinery, custom work.	270	437,131	28,735	52,450	12,755	343,194	309	33	12,325	398	106,495
65	Mineral and soda waters.	34	219,497	21,991	41,453	87,660	65,393	43	18	10,268	86	35,076
66	Models and patterns.	5	5,775	50	100	3,200	2,425	6			6	2,915
67	Monuments and tombstones.	102	450,845	83,270	40,655	61,349	265,571	132	22	20,647	303	170,548
68	Oil, not elsewhere specified.	5	95,585	5,900	21,000	48,550	20,135	3	3	5,000	38	10,038
69	Oilcloth, floor.	3	146,954	3,500	78,000	16,500	48,954	7	4	3,550	264	146,700
70	Painting, house, sign, etc.	247	293,783	25,340	49,740	83,817	184,886	279	15	6,332	678	328,460
71	Paper and wood pulp.	35	17,478,160	2,671,385	3,866,120	6,148,974	4,786,681	12	258	445,348	4,851	2,162,972
72	Patent medicines and compounds.	29	455,752	3,400	7,895	19,036	425,421	26	25	22,857	130	40,764
73	Paving and paving materials.	8	78,284	28,500	9,300	26,175	14,309	5	9	5,165	151	60,550
74	Photography.	98	148,134	1,475	11,325	83,834	51,500	104	5	2,620	81	29,554
75	Pickles, preserves, and sauces.	3	12,200	225	1,075	2,700	8,200	2	5	5,200	19	4,310
76	Plastering and stucco work.	11	12,905		350	2,460	10,095	14	1	1,000	58	32,654
77	Plumbing, and gas and steam fitting.	112	624,171	52,300	74,890	67,385	429,596	136	41	24,790	500	274,272
78	Pottery, terra cotta, and fire-clay products.	8	158,382	2,500	5,000	2,000	158,882	4	9	10,909	155	70,225
79	Printing and publishing, book and job.	79	363,434	10,775	25,075	221,976	105,608	83	21	15,248	276	122,247
80	Printing and publishing, newspapers and periodicals.	120	1,668,820	36,225	113,560	716,944	802,101	101	219	132,099	1,309	478,026
81	Roofing and roofing materials.	9	363,176	164,028	23,300	53,900	121,948	6	9	6,340	167	72,735
82	Saddlery and harness.	160	275,285	17,375	49,065	35,155	173,690	178	2	782	168	72,518
83	Ship and boat building, wooden.	115	1,315,820	106,500	91,975	125,520	991,825	150	28	23,326	1,369	749,567
84	Shirts.	6	101,051	1,000	13,000	13,209	78,845	7	9	6,250	283	80,350
85	Slaughtering and meatpacking, wholesale.	3	34,800			3,100	31,700	5	4	1,215	14	7,220
86	Slaughtering, wholesale, not including meat packing.	8	97,880	8,400	34,750	2,430	52,300	7	2	1,625	24	10,680
87	Soap and candles.	8	21,883	5,125	8,550	2,760	5,448	9			6	2,519
88	Sporting goods.	3	6,675	900	1,200	1,450	3,125	3			2	650
89	Starch.	45	344,849	23,530	150,750	71,305	98,701	46	17	3,475	111	34,824
90	Taxidermy.	7	19,680	150	1,400	2,723	15,407	9			17	11,329
91	Tinsmithing, copper smithing, and sheet-iron working.	117	315,419	24,745	44,350	58,200	188,124	143	17	7,537	209	110,292
92	Tobacco, cigars and cigarettes.	54	134,076	2,450	3,700	8,281	119,645	59	10	5,630	182	86,161
93	Tools, not elsewhere specified.	5	78,600	1,300	5,500	40,800	31,000	7	2	1,200	47	22,600
94	Trunks and valises.	10	324,923	2,850	16,500	99,658	205,915	7	29	25,549	218	98,548
95	Vinegar and cider.	11	16,933	1,035	3,350	7,800	4,748	12	1	440	9	2,475
96	Watch, clock, and jewelry repairing.	180	159,238	6,575	15,425	65,391	71,907	189	7	3,660	109	49,933
97	Wood, turned and carved.	52	693,544	32,600	101,775	190,299	368,870	56	34	20,297	851	290,887
98	Woolen goods.	76	12,612,058	723,715	1,833,515	2,759,954	7,319,874	34	190	241,988	6,280	2,339,323
99	Worsted goods.	3	1,486,635	17,600	110,081	250,439	1,108,565	3	27	26,782	875	305,363
100	All other industries <sup>1</sup> .	101	6,984,511	404,558	774,852	1,273,403	3,531,668	84	192	207,597	3,371	1,384,826

<sup>1</sup> Embraces artificial limbs, 1; babbit metal and solder, 1; belting and hose, leather, 2; bicycles and tricycles, 1; blacking, 2; boot and shoe findings, 2; brassware, 1; carpets, rag, 1; carriages and sleds, children's, 1; cars and general shop construction and repairs by street railroad companies, 1; china decorating, 2; clocks, 1; coffee and spice, roasting and grinding, 2; cordage and twine, 2; cotton waste, 1; dyeing and finishing textiles, 1; dyestuffs and extracts, 1; electrical apparatus and supplies, 2; engraving and die-sinking, 1; engraving, wood, 1; explosives, 1; fancy articles, not elsewhere specified, 2; felt goods, 2; firearms, 1; fireworks, 1; food preparations, 2; fur hats, 1; furnishing goods, men's, 2; furs, dressed, 1; gas machines and meters, 1; glass, cutting, staining, and ornamenting, 1; gloves and mittens, 1; glue, 1; grease and tallow, 2; hand knit goods, 2; hats and caps, not including fur hats, and wool hats, 1; bones and whetstones, 1; iron

TABLE 8.—MANUFACTURES IN CITIES

## BANGOR.

		315	\$2,743,648	\$131,500	\$244,735	\$589,875	\$1,777,738	360	176	\$142,561	2,669	\$1,291,941
1	All Industries											
2	Awnings, tents, and sails.	3	16,303			2,103	14,200	4			19	10,100
3	Bicycle and tricycle repairing.	6	3,225			1,425	1,800	9			6	2,241
4	Blacksmithing and wheelwrighting.	26	32,475	1,300	5,200	10,100	15,875	30	2	774	28	14,402
5	Boots and shoes, custom work and repairing.	13	4,565			3,100	1,465	13			6	4,085
6	Boots and shoes, factory product.	4	180,100	4,000	40,000	40,000	96,100	5	14	19,500	418	162,200
7	Bottling.	7	85,275	3,500	2,500	2,375	26,900	10	8	1,268	15	9,550
8	Bread and other bakery products.	3	20,400			7,900	12,500	3	6	5,250	17	7,325
9	Carpentering.	21	53,426	1,200	4,900	5,475	41,851	24	1	160	153	88,054
10	Carriages and wagons.	8	13,300	1,500	2,500	2,200	7,100	9			22	11,468
11	Cheese, butter, and condensed milk, factory product.	3	40,900	1,100	5,000	9,800	25,000	2	3	1,036	15	7,400

## 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.		
Aver- age num- ber.	Wages.	Aver- age num- ber.	Wages.	Aver- age num- ber.	Wages.										
6	\$2,365	2	\$350			\$379	\$152	\$27	\$200		\$6,293	\$6,252	\$41	\$14,075	52
70	82,789					1,789		589	1,200		156,285	154,765	1,520	210,800	53
48	16,866	12	4,147	5	\$860	2,617	200	272	2,145		28,579	21,782	1,797	62,976	54
584	228,761			3	507	102,332	571	10,958	90,803		1,943,204	1,930,242	12,962	2,451,713	55
582	248,871					97,878	10,862	13,448	69,846	\$3,722	646,239	449,248	196,991	1,226,972	56
7	3,146					2,380	1,701	165	464	50	5,395	4,737	658	22,960	57
62	85,616	10	4,122			6,256	3,954	530	1,772		79,447	79,113	334	158,840	58
6,775	2,621,110	54	11,674	5		514,059	45,520	98,237	344,776	25,626	7,994,596	7,991,030	3,566	13,459,401	59
738	351,078	1	215	3	500	60,839	13,807	8,502	44,974	2,496	767,908	748,957	18,951	1,414,504	60
2,246	1,090,915					97,237	12,637	12,793	63,026	3,781	172,409	151,065	21,844	1,838,040	61
1,292	729,772					37,786	3,748	1,864	14,769	17,405	765,117	757,326	7,791	1,933,508	62
21	8,820	5	1,886			1,143	760	103	280		19,334	19,079	255	53,776	63
77	32,615	397	105,895			60,747	41,276	3,162	14,809	1,500	598,561	592,391	6,170	1,007,585	64
6	2,915	4	1,780	5	730	14,004	2,711	1,476	9,817		167,490	165,691	1,799	235,187	65
						715	591	22	102		4,818	4,443	876	12,920	66
808	170,543					110,756	4,764	2,396	9,524	94,072	228,670	224,321	4,349	669,998	67
83	10,088					1,704	124	580	1,000		17,290	15,950	1,340	41,500	68
260	145,600	4	1,200			7,515		1,800	5,715		302,050	289,250	12,800	567,000	69
672	328,360			1	100	30,310	15,074	1,645	8,376	5,215	261,611	258,245	3,866	836,957	70
4,560	2,082,923	291	80,049			1,894,967	199,251	122,071	1,067,754	5,891	7,118,945	6,385,344	733,601	13,223,275	71
40	19,669	87	20,379	3	516	113,069	5,810	510	106,449	300	124,629	123,649	980	390,367	72
151	60,550					1,769	480	506	833		11,828	10,619	1,209	107,954	73
47	21,257	34	8,297			20,786	13,959	785	5,567	475	69,042	66,129	2,913	210,243	74
4	1,810	15	8,000			513	865	48	100		39,691	39,421	270	54,450	75
58	32,654					1,334	1,103	13	218		15,395	15,323	72	60,070	76
499	273,896	1	376			35,351	18,105	3,751	12,925	570	729,256	724,342	4,914	1,288,882	77
155	70,225					36,779		2,164	34,615		57,716	52,847	24,569	222,260	78
209	102,325	63	19,526	4	396	30,258	11,198	1,791	10,450	6,519	133,485	126,290	7,195	415,370	79
664	331,651	615	137,137	30	4,238	480,690	27,923	9,468	390,423	52,876	514,384	490,179	24,205	2,190,017	80
167	72,735					11,043	483	916	9,689		51,488	42,671	8,817	155,432	81
161	72,118	2	400			18,349	11,854	1,096	4,499		214,859	210,893	3,966	423,868	82
1,369	749,567					65,468	6,936	4,705	13,051	35,771	1,877,769	1,870,751	7,018	2,491,755	83
41	20,200	242	60,150			10,585	2,479	661	7,445		122,982	120,721	2,261	247,650	84
14	7,220					5,717	802	127	4,788		134,388	133,855	483	156,236	85
28	10,880	1	800			1,102		534	568		322,693	322,100	593	397,503	86
6	2,519					782	84	307	341		12,342	11,913	429	21,460	87
2	650					305	75	55	175		1,505	1,475	30	5,916	88
111	34,324					9,176	300	2,216	6,660		358,716	350,180	8,536	555,576	89
16	11,145	1	184			4,113	1,192	139	2,780	52	7,336	7,133	203	43,891	90
203	108,952	5	1,190	1	150	26,384	15,912	2,158	3,088	726	187,124	182,291	4,833	474,877	91
142	78,117	37	7,624	3	420	37,053	6,432	711	29,535	375	98,648	97,624	1,019	284,817	92
47	22,600					4,391	750	441	3,200		40,190	34,845	5,345	80,600	93
194	94,097	24	4,451			31,628	7,770	1,437	22,421		183,622	178,790	4,832	441,402	94
9	2,475					388	65	129	194		6,348	6,089	279	15,014	95
100	47,223	7	2,324	2	386	30,619	16,532	978	5,395	7,714	62,755	60,112	2,043	261,755	96
726	273,520	107	14,725	18	2,122	32,420	4,491	4,714	17,997	5,218	332,898	323,331	9,567	853,298	97
4,230	1,778,171	1,941	584,122	109	21,030	653,319	4,791	54,166	599,911	448	6,842,679	6,639,415	203,264	11,633,232	98
364	154,958	420	131,809	91	18,596	190,380	500	1,117	183,763		1,102,307	1,062,489	39,868	1,779,552	99
2,844	1,239,922	491	139,169	36	5,535	271,894	16,196	29,738	216,973	8,942	2,662,719	2,574,330	88,339	6,426,521	100

and steel, 1; iron and steel, forgings, 1; kaolin and other earth grinding, 1; lasts, 2; leather goods, 2; lithographing and engraving, 2; matches, 1; musical instruments, organs and materials, 1; oakum, 1; optical goods, 2; paints, 2; perfumery and cosmetics, 1; photographic materials, 1; photolithographing and photoengraving, 1; pipes, tobacco, 1; plated and britannia ware, 2; plumbers' supplies, 1; pumps, not including steam pumps, 2; refrigerators, 1; sand and emery paper and cloth, 1; sausage, 1; saws, 1; shipbuilding, iron and steel, 2; shoddy, 2; show cases, 1; silk and silk goods, 1; stencils and brands, 1; stereotyping and electrotyping, 1; surgical appliances, 1; toys and games, 1; typewriter repairing, 1; umbrellas and canes, 1; upholstering materials, 2; varnish, 1; washing machines and clothes wringers, 1; window shades, 2; wirework, including wire rope and cable, 1; woodenware, not elsewhere specified, 2; wool pulling, 1.

## BY SPECIFIED INDUSTRIES: 1900.

## BANGOR.

2,239	\$1,170,588	427	\$120,928	3	\$425	\$260,703	\$53,941	\$18,103	\$149,072	\$39,587	\$2,740,287	\$2,698,230	\$42,057	\$5,172,733	1
11	7,850	8	2,250			1,031	475	116	440		21,242	21,095	147	41,050	2
6	2,241					882	785	10	137		1,640	1,580	110	8,200	3
28	14,402					2,868	2,272	180	466		22,562	21,109	1,453	65,030	4
6	4,085					1,453	1,198	7	248		5,781	5,700	81	18,890	5
333	135,800	85	26,400			40,859	446	1,675	37,738	1,000	708,964	706,519	2,445	967,883	6
15	9,550					2,859	1,450	136	1,273		68,465	68,275	190	102,350	7
17	7,325					1,805	1,405	130	270		85,501	84,704	797	63,130	8
153	88,054					7,538	1,689	217	1,512	4,120	105,759	105,517	242	227,731	9
22	11,468					1,376	804	202	170	200	9,971	9,631	340	80,579	10
15	7,400					1,686	600	293	793		159,989	158,639	1,800	196,103	11



TABLE 8.—MANUFACTURES IN CITIES

## BANGOR—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
12 Clothing, men's, custom work and repairing.	17	\$15,050			\$3,225	\$11,825	17			58	\$17,177
13 Clothing, men's, factory product.	4	39,350			8,850	35,500	6	5	\$2,900	76	28,000
14 Clothing, women's, dressmaking.	26	9,975	\$2,000	\$2,000	2,655	3,320	27			54	12,462
15 Clothing, women's, factory product.	2	8,500			1,500	7,000	5			18	5,200
16 Coffins, burial cases, and undertakers' goods.	3	21,100			1,600	19,500	4	1	200	22	12,300
17 Confectionery.	6	33,175			8,775	24,400	9	2	988	48	17,210
18 Flouring and grist mill products.	3	32,300	5,000	10,000	8,500	8,800	3	1	800	5	2,250
19 Foundry and machine shop products.	5	424,708	24,500	53,185	53,200	298,823	2	29	32,215	168	87,402
20 Furniture, cabinetmaking, repairing, and upholstering.	5	7,700			900	6,800	6	2	2,000	15	6,683
21 Lumber, planing mill products, including sash, doors, and blinds.	8	39,000	1,500	7,500	11,500	18,500	4			23	11,050
22 Masonry, brick and stone.	9	202,280	2,900	900	19,980	178,500	14	5	3,655	510	282,225
23 Millinery, custom work.	10	38,175	3,000	3,000	550	31,625	11			40	12,686
24 Mineral and soda waters.	6	19,875	700	300	14,125	4,250	8	2	728	5	1,843
25 Monuments and tombstones.	5	13,875		550	1,075	11,750	8	1	52	23	19,660
26 Painting, house, sign, etc.	15	25,060			3,110	21,950	19	2	750	88	47,078
27 Photography.	5	10,075			7,600	2,475	6			5	1,810
28 Plumbing, and gas and steam fitting.	9	77,690			6,490	71,200	13	5	3,172	59	31,425
29 Printing and publishing, book and job.	9	46,875		1,000	29,622	16,353	9	1	804	39	15,233
30 Printing and publishing, newspapers and periodicals.	6	138,710			65,992	72,718	5	37	23,414	73	39,428
31 Saddlery and harness.	7	11,175	100	400	1,575	9,100	7			18	6,872
32 Ship and boatbuilding, wooden.	4	7,900	1,000	800	1,800	4,300	4			14	8,683
33 Tobacco, cigars and cigarettes.	3	34,621	1,000	1,000	1,300	31,321	3	5	3,050	43	23,900
34 Trunks and valises.	3	33,063	1,500	2,500	9,063	75,000	2	8	7,200	74	28,688
35 Watch, clock, and jewelry repairing.	12	12,425			6,750	5,675	12			13	6,360
36 All other industries <sup>1</sup> .	43	987,022	75,700	101,500	240,560	569,262	47	41	33,085	484	240,355

<sup>1</sup> Embraces bookbinding and blank book making, 2; boxes, fancy and paper, 1; brass castings and brass finishing, 1; brick and tile, 1; brooms and brushes, 1; cars and general shop construction and repairs by steam railroad companies, 1; chemicals, 1; clocks, 1; cooperage, 2; dyeing and cleaning, 2; electrical construction and repairs, 1; electroplating, 2; fur goods, 1; gas, illuminating and heating, 1; hand stamps, 1; hosiery and knit goods, 1; leather, tanned, curried, and finished, 1; lock and gun smithing, 2; looking-glass and picture frames, 2; lumber and timber products, 2; marble and stone work, 1; mattresses and spring

## LEWISTON.

1	All industries	282	\$10,984,871	\$601,250	\$2,040,082	\$3,700,081	\$4,643,458	285	181	\$202,483	7,159	\$2,509,030
2	Bicycle and tricycle repairing	4	2,750			900	1,850	2			4	2,140
3	Blacksmithing and wheelwrighting	10	13,900	1,500	3,150	2,675	6,575	11	1	240	12	5,730
4	Boots and shoes, custom work and repairing.	16	3,008		930	1,450	628	16			4	1,408
5	Bottling	3	3,955			555	3,400	3			8	3,690
6	Bread and other bakery products	11	19,050	4,000	1,000	4,000	10,050	13	7	2,388	19	7,984
7	Brick and tile	5	28,942	5,800	1,700	3,700	17,742	4	1	210	21	10,915
8	Carpentering	10	21,085	550	1,700	4,085	14,750	10	1	450	52	25,050
9	Carriages and wagons	5	62,085	9,000	10,000	5,425	37,660	7	2	1,600	33	16,665
10	Clothing, men's, custom work and repairing.	12	33,830	11,000	5,500	3,280	14,050	15	2		53	19,738
11	Clothing, women's, dressmaking	28	6,485			2,550	3,985	29			60	15,495
12	Clothing, women's, factory product	3	14,900			300	14,600	3	3	900	31	7,316
13	Confectionery	9	7,702		500	3,952	3,250	9	1	250	9	3,225
14	Cotton goods	5	7,651,502	345,500	1,535,066	2,633,324	3,087,112	36	86	82,323	4,604	1,555,510
15	Flouring and grist mill products	3	48,200	5,000	12,800	3,600	26,800	3	5	3,100	11	5,400
16	Foundry and machine shop products	4	135,391	20,000	41,650	47,250	26,491	5	4	4,768	95	36,149
17	Furniture, cabinetmaking, repairing, and upholstering.	6	2,036		100	386	2,150	6			2	1,095
18	Lock and gun smithing	3	4,400		325	1,675	2,400	3			1	620
19	Looking-glass and picture frames	4	4,255			490	3,705	6			3	1,620
20	Lumber, planing mill products, including sash, doors, and blinds.	4	242,979	21,500	29,120	18,700	173,659	7	10	8,393	112	55,301
21	Masonry, brick and stone	11	45,857	1,100	4,000	12,875	27,882	13	2	1,050	91	46,735
22	Millinery, custom work	22	50,321	9,000	11,000	784	29,537	24	12	2,500	61	16,391
23	Monuments and tombstones	3	41,475	7,500	10,975	8,661	14,339	3	1	520	43	18,070
24	Painting, house, sign, etc.	16	14,815	1,100	4,250	2,140	7,325	16			38	16,192
25	Patent medicines and compounds	3	1,100			200	900	2			1	305
26	Photography	3	14,235			6,895	7,340	9	2	900	10	4,530
27	Plumbing, and gas and steam fitting.	8	57,020	3,800	1,600	5,370	46,250	8	5	3,845	41	22,943
28	Printing and publishing, book and job.	7	26,227		200	13,950	7,077	7			18	8,574
29	Printing and publishing, newspapers and periodicals.	4	232,852	20,000	80,000	62,500	70,352	2	26	19,334	98	41,704
30	Saddlery and harness	4	12,500	1,100	800	1,900	8,700	3			14	6,100
31	Tobacco, cigars and cigarettes	10	16,004			1,920	14,084	12	1	500	30	14,447
32	Watch, clock, and jewelry repairing.	11	7,989	700	800	3,255	3,234	12			6	3,364
33	Woolen goods	3	515,661	18,500	45,500	90,000	361,661	3	8	7,580	270	95,563
34	All other industries <sup>1</sup>	27	1,641,760	114,600	237,416	695,334	593,910	22	53	62,132	1,304	439,061

<sup>1</sup> Embraces awnings, tents, and sails, 1; belting and hose, leather, 1; bookbinding and blank book making, 1; boots and shoes, factory product, 1; brass castings and brass finishing, 1; brooms and brushes, 1; china decorating, 1; clothing, men's, factory product, 1; dyeing and cleaning, 1; finishing textiles, 1; fancy articles, not elsewhere specified, 1; food preparations, 1; fur goods, 1; gas, illuminating and heating, 1; hand knit goods, 1; lumber and timber products, 2;

## BY SPECIFIED INDUSTRIES: 1900—Continued.

## BANGOR—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	\$5,680	47	\$11,422	1	\$125	\$5,843	\$2,110	\$92	\$601	\$3,040	\$29,971	\$29,409	\$562	\$66,689	12
18	8,808	58	19,192			2,863	1,856	210	1,297		78,788	78,313	475	126,300	13
		54	12,462			2,464	2,354	62	43		4,065	3,480	585	30,117	14
		18	5,200			820	680	65	95		15,707	15,650	57	26,080	15
21	12,000	1	800			1,325	900	225	200		39,820	39,595	225	62,925	16
23	11,510	25	5,700			3,477	1,740	150	1,537		58,913	57,333	1,530	101,600	17
5	2,250					1,320	800	145	375		158,130	156,850	1,250	177,500	18
168	87,402					19,628	1,900	3,322	14,406		115,932	111,534	4,398	290,300	19
11	5,669	4	1,014			1,407	1,128	29	250		6,955	6,780	175	20,460	20
28	11,050					1,895	955	406	534		11,560	10,610	950	27,800	21
510	232,225					11,065	575	160	4,205	6,125	298,503	292,033	6,470	633,270	22
		40	12,686			5,092	3,675	301	1,116		54,104	53,725	379	82,557	23
5	1,848					2,226	1,005	126	1,095		7,469	7,183	286	23,525	24
23	19,660					1,399	1,130	156	113		9,918	9,781	187	39,109	25
88	47,673					7,268	1,696	76	496	5,000	31,160	30,755	405	109,405	26
1	450	4	1,860			2,124	1,295	61	468	300	6,785	6,425	360	17,500	27
58	81,049	1	876			5,124	3,261	324	1,539		95,622	94,636	986	160,589	28
23	10,716	15	4,417	1	150	3,215	1,790	277	1,148		20,612	19,581	1,081	59,208	29
60	34,304	12	4,974	1	150	50,522	2,004	753	45,908	1,852	32,591	30,569	2,022	160,020	30
13	6,872					1,531	1,172	94	265		17,037	16,862	175	30,325	31
14	8,683					652	250	60	342		4,837	4,617	220	20,638	32
30	24,000	13	1,900			6,048	738	125	5,185		17,326	17,266	60	64,391	33
68	27,188	6	1,500			4,215	1,200	540	2,475		59,439	58,714	725	113,275	34
12	6,150	1	200			2,671	1,650	65	506	350	7,233	7,168	115	27,500	35
449	237,231	35	9,575			54,252	7,523	7,353	21,771	17,600	417,936	406,662	11,274	925,784	36

beds, 2; patent medicines and compounds, 1; pottery, terra cotta, and fire-clay products, 1; roofing and roofing materials, 1; saws, 1; slaughtering and meat packing, wholesale, 1; slaughtering, wholesale, not including meat packing, 1; taxidermy, 1; tinsmithing, coppersmithing, and sheet-iron working, 2; tools, not elsewhere specified, 1; window shades, 1; woolen goods, 1; wool pulling, 1.

## LEWISTON.

3,837	\$1,580,907	3,164	\$898,725	158	\$29,398	\$596,854	\$45,111	\$110,412	\$395,780	\$45,551	\$4,103,801	\$3,957,673	\$140,128	\$8,681,354	1
4	2,140					446	348	5	93		1,687	1,687		5,372	2
12	5,730					1,826	1,384	82	360		6,088	5,543	545	22,633	3
4	1,408					1,295	1,068	11	216		3,219	3,005	214	10,895	4
8	3,690					1,970	470		1,500		11,065	10,980	85	20,886	5
10	7,624	1	110	2	250	4,849	2,272	215	2,362		36,553	34,977	1,581	64,637	6
21	10,915					2,352	1,000	234	1,118		8,376	834	7,992	26,460	7
52	25,050					2,385	497	13	1,175	700	76,263	76,263		112,417	8
33	16,665					2,825	500	425	1,400		33,421	32,676	745	64,350	9
15	8,809	38	10,929			4,303	2,059	200	1,444	600	25,802	25,393	409	64,360	10
		60	15,495			3,248	2,706	6	476	60	14,358	13,975	383	46,528	11
		31	7,316			1,944	921	23	1,000		33,590	33,500	90	50,000	12
8	2,925	1	300			2,176	1,380	76	720		12,345	11,533	812	25,362	13
1,886	796,852	2,585	733,603	133	25,055	381,561		83,870	205,266	42,425	2,192,679	2,111,795	80,884	4,638,115	14
11	5,400					1,601	120	381	1,100		128,600	126,080	2,510	155,712	15
95	36,149					3,735	442	1,216	2,077		37,112	34,387	2,725	88,893	16
2	1,095					582	423	3	156		2,024	1,957	67	6,700	17
1	620					558	412	41	105		720	535	185	3,500	18
2	1,370					850	565	10	275		4,084	4,084		8,770	19
112	56,301	1	250			13,840	3,477	2,368	8,005		85,856	82,055	3,801	197,625	20
91	46,735					4,183	1,023	345	2,790		55,851	55,776	75	120,740	21
		61	16,391			10,803	6,123	179	3,001	1,500	68,146	67,677	469	121,880	22
43	18,070					1,225		385	840		7,287	6,922	365	42,400	23
88	16,192					1,912	750	55	1,107		9,837	9,772	115	39,333	24
1	305					849	156		193		1,273	1,268	10	2,660	25
8	4,055	2	475			3,365	2,280	65	1,020		10,919	10,739	180	29,130	26
41	22,943					3,204	1,515	284	1,355	50	57,038	56,633	405	101,245	27
17	7,874	1	700			1,722	843	84	795		6,657	6,064	593	22,960	28
70	27,926	26	13,563	2	210	27,034	640	1,910	24,263	216	34,622	31,879	2,743	132,295	29
14	6,100					642	270	122	250		10,599	10,447	152	20,230	30
28	14,081	2	366			6,555	1,339	112	5,104		16,290	16,122	168	52,315	31
6	3,364					1,906	1,386	30	490		2,233	2,270	18	11,530	32
191	72,049	70	23,514			54,580		3,105	51,475		242,594	234,523	8,066	441,123	33
1,007	359,470	276	75,703	21	3,883	97,543	8,737	14,567	74,244		866,938	836,757	30,241	1,830,568	34

mineral and soda waters, 1; optical goods, 1; photographic materials, 1; pipes, tobacco, 1; plumbers' supplies, 1; roofing and roofing materials, 1; shirts, 1; tinsmithing, coppersmithing, and sheet-iron working, 1; wood, turned and carved, 2.

TABLE 8.—MANUFACTURES IN CITIES

## PORTLAND.

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	639	\$6,991,251	\$503,023	\$755,747	\$1,381,330	\$4,351,151	679	611	\$519,425	5,699	\$2,612,817
2	Awnings, tents, and sails	7	4,660			1,510	3,150	9	1	200	18	5,960
3	Bicycle and tricycle repairing	4	3,550			1,500	2,050	4			8	2,900
4	Blacksmithing and wheelwrighting	43	38,245	4,850	7,325	7,675	13,395	57			55	32,138
5	Bookbinding and blank book making	4	21,015			10,980	10,035	4	6	3,000	87	16,504
6	Boots and shoes, custom work and repairing.	38	13,355	1,760	1,850	5,617	4,188	36			17	8,429
7	Boots and shoes, factory product	3	87,293			18,071	69,222	2	6	8,610	180	86,960
8	Bread and other bakery products	23	233,810	14,800	26,800	40,460	151,750	25	51	34,546	212	97,382
9	Brick and tile	3	27,700	1,200	9,500	5,000	12,000	4			30	16,630
10	Carpentering	55	407,943	35,200	51,675	67,696	253,372	60	60	67,838	408	268,902
11	Carriages and wagons	9	82,438	7,000	12,500	4,525	58,408	11	6	3,120	57	32,275
12	Cars and general shop construction and repairs by steam railroad companies.	4	194,650	35,800	57,150	43,620	53,080		10	9,112	153	84,028
13	Clothing, men's, custom work and repairing.	28	80,606		5,500	7,496	67,610	33	11	5,404	168	64,781
14	Clothing, men's, factory product	4	147,000			10,500	136,500	8	15	12,800	159	44,790
15	Clothing, women's, dressmaking	22	81,810	15,000	52,000	4,285	10,555	29	25	9,950	183	31,944
16	Clothing, women's, factory product	3	169,650			11,500	158,150	3	20	10,900	241	60,163
17	Confectionery	12	89,250	200	400	33,118	55,532	9	40	28,392	133	37,156
18	Dyeing and cleaning	3	19,500	1,200	5,300	2,800	1,200	2	1	365	11	5,013
19	Electrical construction and repairs	3	4,875			1,775	3,100	4			2	880
20	Fish, canning and preserving	5	10,290	2,000	3,000	1,440	3,850	5			14	6,180
21	Flavoring extracts	4	61,832	1,372	7,717	5,575	47,168	3	14	27,000	40	19,560
22	Flouring and grist mill products	4	34,600	3,800	3,000	16,000	6,800	3	1	1,000	6	3,280
23	Foundry and machine shop products	18	985,587	140,100	125,500	193,900	526,087	19	36	42,408	528	257,801
24	Fruits and vegetables, canning and preserving.	3	122,935	600	2,025	35,008	85,302	4	3	3,681	55	20,544
25	Furniture, cabinetmaking, repairing, and upholstering.	11	19,350		500	4,385	14,465	12	4	2,500	43	24,045
26	Furniture, factory product	4	171,365	500	19,121	20,500	131,244	4	18	20,266	144	49,299
27	Lock and gun smithing	6	3,105		75	1,900	1,130	7			2	1,026
28	Looking-glass and picture frames	6	23,950			1,550	22,400	7	8	3,768	37	19,918
29	Lumber, planing mill products, including sash, doors, and blinds.	9	400,280	12,000	33,275	102,731	252,274	7	22	17,952	211	117,974
30	Marble and stone work	10	69,635	2,800	7,370	13,140	46,825	15	3	2,800	57	33,092
31	Masonry, brick and stone	12	87,920	7,900	2,250	4,820	22,950	15	3	1,900	141	94,035
32	Millinery, custom work	22	65,805	100	200	505	65,000	22	19	7,175	70	18,913
33	Oil, not elsewhere specified	3	12,685		4,000	3,550	5,135	3	1	1,000	3	1,370
34	Painting, house, sign, etc	32	54,030	1,500	700	5,737	46,093	35	1	780	128	66,922
35	Patent medicines and compounds	6	16,704			2,500	14,204	9	4	4,500	18	6,066
36	Paving and paving materials	3	7,550	3,000	1,000	900	2,650	2	5	2,125	19	6,300
37	Photography	10	20,600			10,375	10,225	11	2	720	16	5,187
38	Plastering and stucco work	8	12,125		350	2,225	9,550	11	1	1,000	54	31,069
39	Plumbing, and gas and steam fitting	20	113,931	6,875	1,500	9,700	96,356	21	18	10,357	130	68,253
40	Printing and publishing, book and job	22	188,830	7,500	15,000	107,285	59,045	22	20	14,884	159	78,727
41	Printing and publishing, newspapers and periodicals.	19	337,893			120,016	217,877	9	56	40,515	268	127,777
42	Saddlery and harness	8	15,803		1,300	2,075	12,428	10			14	7,200
43	Ship and boat building, wooden	6	5,275		300	975	4,000	7			14	10,016
44	Shirts	3	1,228			625	603	3			4	1,600
45	Smithing, coppersmithing, and sheet-iron working.	18	76,458		1,500	14,450	60,508	21	6	4,296	66	41,046
46	Tobacco, cigars and cigarettes	5	5,450			950	4,500	6			15	8,750
47	Watch, clock, and jewelry repairing	22	20,584			10,475	10,639	21	3	2,260	30	15,236
48	Wood, turned and carved	3	17,335	8,000	2,000	3,250	4,085	3			2	700
49	All other industries <sup>1</sup>	69	2,379,671	188,976	289,064	406,660	1,494,971	62	112	112,301	1,283	571,786

<sup>1</sup> Embraces agricultural implements, 1; babbitt metal and solder, 1; blacking, 1; boot and shoe cut stock, 1; boot and shoe findings, 1; bottling, 2; boxes, fancy and paper, 2; boxes, wooden packing, 1; brass castings and brass finishing, 1; bridges, 2; brooms and brushes, 1; carriage and wagon materials, 1; cars and general shop construction and repairs by street railroad companies, 1; cleansing and polishing preparations, 1; coffee and spice, roasting and grinding, 1; cooperage, 2; cutlery and edge tools, 1; electrical apparatus and supplies, 2; electroplating, 2; engraving and diesinking, 1; fancy articles, not elsewhere specified, 1; fur goods, 1; fur hats, 1; gas, illuminating and heating, 1; glass, cutting, staining, and ornamenting, 1; hairwork, 1; hand stamps, 2; hats and caps, not including fur hats, and

## BY SPECIFIED INDUSTRIES: 1900—Continued.

## PORTLAND.

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.		
Aver- age num- ber.	Wages.	Aver- age num- ber.	Wages.	Aver- age num- ber.	Wages.										
4,288	\$2,262,430	1,880	\$354,985	31	\$5,402	\$759,854	\$158,207	\$49,995	\$111,266	\$140,386	\$5,566,225	\$5,444,790	\$121,435	\$11,440,201	1
15	5,385	3	575			807	753	10	44		15,027	14,953	74	27,227	2
8	2,900					1,057	718	29	310		4,232	4,008	224	11,800	3
55	32,138					5,982	5,243	242	342	150	25,770	23,972	1,798	106,719	4
17	9,758	20	5,746			6,119	660	112	347	5,000	22,807	22,540	267	56,900	5
17	8,429					3,711	3,332	61	318		11,910	11,581	329	40,250	6
97	60,647	83	26,313			9,082	2,400	680	6,002		192,111	190,561	1,550	821,231	7
138	80,381	74	17,001			16,063	7,808	1,654	6,601		292,778	286,705	6,073	536,361	8
36	15,630					2,601	1,110	327	1,161		10,789	529	10,210	48,050	9
464	267,567			4	1,395	182,185	5,171	2,857	50,894	78,763	483,837	480,894	2,993	1,094,788	10
55	31,725	1	350	1	200	5,205	1,038	602	3,379	186	61,291	59,776	1,515	158,205	11
153	84,028					10,355		2,265	8,090		133,420	130,235	3,185	238,925	12
87	28,705	121	35,996			16,554	8,639	877	3,038	4,000	78,848	77,482	1,366	217,751	13
39	13,990	120	27,800			38,085	1,450	1,500	11,535	13,600	256,380	255,400	980	473,000	14
8	4,520	175	27,424			14,634	14,153	229	252		74,749	74,051	698	151,230	15
7	3,800	234	56,363			4,646	1,711	155	2,780		105,168	104,308	850	211,669	16
36	16,558	96	20,410	1	188	81,972	5,560	928	25,489		135,395	135,395		269,656	17
10	4,353	1	660			1,834	1,144	100	590		2,947	2,750	197	19,078	18
2	860					273	194	24	55		1,407	1,333	74	4,192	19
14	6,180					906	430	153	323		27,881	26,981	890	39,975	20
6	4,260	34	15,300			13,585	818	434	12,333		76,664	76,391	273	150,059	21
6	3,280					1,980	820	330	830		109,256	107,711	1,545	126,552	22
525	256,801	8	1,000			27,481	3,840	5,711	17,930		263,219	250,919	17,300	683,528	23
28	14,944	27	5,600			6,850	2,750	2,473	1,627		72,996	72,020	976	128,219	24
35	21,956	6	1,864	2	225	4,436	2,980	193	1,263		44,744	44,107	637	98,988	25
139	47,635	5	1,661			16,547	2,752	1,213	7,582	5,000	205,812	204,570	742	332,500	26
2	1,026					653	599	19	35		959	783	176	6,800	27
36	19,646	1	272			2,800	1,767	345	688		25,580	25,357	223	63,070	28
211	117,974					23,253	6,500	794	15,959		263,019	261,164	1,855	451,100	29
57	38,002					3,613	1,900	454	259	1,000	42,461	41,765	696	113,700	30
141	94,035					5,845	1,121	481	2,213	2,080	67,902	67,896	6	272,671	31
3	1,370	70	18,913			8,840	7,432	256	1,152		161,090	160,568	522	240,166	32
128	65,922					234	124	60	100		10,365	9,775	590	14,500	33
7	3,250	8	2,300	3	516	5,363	3,510	282	1,866	200	52,914	52,633	281	158,742	34
19	6,300					6,740	1,500	50	5,130		27,392	27,103	289	59,490	35
						501	280	31	190		6,413	6,376	37	17,800	36
9	3,530	7	1,657			3,425	2,462	121	692	150	7,216	6,903	313	25,215	37
54	31,069					1,200	979	13	208		13,600	13,528	72	64,970	38
130	68,258					9,894	4,940	789	4,145	20	212,645	211,259	1,386	360,926	39
129	68,251	29	10,320	1	156	19,711	5,325	844	6,752	6,790	79,218	75,782	3,466	244,789	40
190	100,983	64	24,864	14	1,930	64,812	8,712	1,832	43,999	9,769	59,140	55,069	4,071	359,421	41
14	7,200					1,758	1,460	60	233		10,903	10,711	197	29,045	42
14	10,616					643	590	13	40		1,750	1,740	10	22,350	43
65	40,696	4	1,000			279	279				1,665	1,645	20	4,400	44
		1	350			9,718	6,404	444	2,515	350	53,474	52,544	930	172,233	45
14	8,850	1	400			2,234	674	53	1,507		9,115	8,995	120	28,450	46
27	14,200	2	900	1	136	11,470	3,387	95	824	7,164	22,871	22,494	377	78,282	47
2	700					426	110	106	210		1,403	1,341	62	4,200	48
1,089	521,077	190	49,948	4	716	208,942	22,618	20,239	159,926	6,164	1,721,197	1,670,207	50,990	3,122,928	49

wool hats, 1; iron and steel, 1; ironwork, architectural and ornamental, 1; kindling wood, 1; lasts, 1; leather, tanned, curried, and finished, 1; lumber and timber products, 2; matches, 1; mattresses and spring beds, 1; mineral and soda waters, 1; models and patterns, 2; optical goods, 1; paints, 1; perfumery and cosmetics, 1; photolithography and photoengraving, 1; pickles, preserves, and sauces, 1; plated and britannia ware, 2; pottery, terra cotta, and fire-clay products, 1; refrigerators, 1; roofing and roofing materials, 2; sausage, 1; show cases, 1; soap and candles, 1; stencils and brands, 1; taxidermy, 1; trunks and valises, 2; typewriter repairing, 1; umbrellas and canes, 1; window shades, 1; wirework, including wire rope and cable, 1.

TABLE 9.—MANUFACTURES IN CITIES AND

CITIES AND TOWNS.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
Total for cities and towns.....	2,360	\$57,615,185	\$5,291,515	\$8,211,389	\$15,047,960	\$29,064,271	2,637	1,361	\$1,375,812	36,488	\$13,775,174
Auburn.....	147	8,372,694	236,372	431,898	519,802	2,185,122	159	205	173,186	2,908	1,262,010
Augusta.....	171	3,483,474	110,035	426,750	1,466,965	1,484,724	190	102	117,290	2,227	793,633
Bath.....	142	3,256,726	838,399	366,951	688,690	1,863,686	154	89	87,551	2,249	1,191,092
Belfast.....	79	517,055	15,950	58,867	125,724	217,014	105	24	17,721	679	251,639
Biddeford.....	108	6,067,194	304,586	650,800	2,282,952	2,828,856	122	44	75,545	4,527	1,554,146
Brewer.....	44	785,924	83,450	166,100	111,110	375,264	47	25	22,540	864	170,268
Bridgton.....	48	788,603	83,787	171,630	170,744	306,342	54	12	9,469	376	182,539
Bristol.....	37	205,495	25,925	43,000	65,870	70,700	40	4	4,650	226	65,080
Brunswick.....	80	1,073,859	166,450	267,428	610,551	628,980	85	33	29,754	970	350,726
Bucksport.....	27	127,830	23,520	18,050	37,535	48,725	32	4	4,650	116	41,990
Calais.....	73	1,715,940	463,268	108,818	184,067	959,762	82	42	41,650	855	317,575
Camden.....	55	1,080,251	137,732	125,971	271,714	1,144,534	59	34	29,519	841	382,191
Caribou.....	38	206,125	12,700	36,600	61,200	95,625	43	3	3,255	125	43,010
Eastport.....	62	3,037,366	75,954	255,855	621,367	2,084,190	65	69	61,838	2,213	479,805
Ellsworth.....	82	696,999	157,375	50,430	129,990	359,204	92	24	14,412	452	185,292
Fairfield.....	32	788,971	104,050	74,100	354,575	256,246	32	19	16,464	414	184,660
Fort Fairfield.....	37	148,225	18,800	40,800	32,620	56,005	40	7	2,200	72	23,365
Gardiner.....	79	1,709,577	314,950	209,200	374,182	751,245	85	56	56,696	1,093	495,139
Gorham.....	26	73,608	7,303	24,742	18,716	22,747	31	1	414	34	12,688
Hallowell.....	38	1,029,678	121,825	128,350	147,254	632,249	43	34	48,760	642	314,614
Kennebunk.....	45	747,024	51,850	53,660	241,149	400,365	41	33	32,970	579	229,176
Kittery.....	8	8,627	1,085	765	2,055	4,722	8	8	—	9	3,471
Lisbon.....	42	2,480,686	131,731	431,894	744,467	1,172,544	34	37	53,985	998	364,775
North Berwick.....	21	312,279	31,450	25,000	42,330	213,499	31	5	5,500	229	71,006
Norway.....	40	368,801	3,705	21,975	75,610	267,511	49	14	13,040	430	166,027
Old Town.....	86	1,893,161	125,814	487,694	477,301	802,352	89	50	44,570	1,182	428,018
Orono.....	28	1,444,080	159,290	232,530	352,698	699,562	34	21	30,023	575	230,836
Paris.....	36	268,153	7,316	50,250	46,180	154,412	38	12	10,222	320	104,671
Pittsfield.....	35	1,174,353	56,568	234,153	275,357	606,270	38	17	21,031	589	209,714
Presque Isle.....	33	177,595	24,260	20,950	38,625	93,770	43	8	5,810	88	30,270
Richmond.....	24	194,926	6,500	34,925	76,565	76,936	26	10	6,844	169	43,868
Rockland.....	113	1,708,483	297,263	559,000	263,331	584,889	158	45	33,473	860	358,969
Saco.....	71	2,151,434	118,129	256,988	400,533	1,375,764	77	12	23,897	2,025	619,462
Sanford.....	67	3,246,015	130,265	272,500	572,785	2,270,455	66	85	84,645	1,893	698,385
Skowhegan.....	69	941,681	182,400	108,500	195,172	455,609	75	29	32,019	617	245,314
South Berwick.....	25	637,153	23,525	112,550	113,360	377,718	22	26	23,870	506	190,047
Thomaston.....	35	501,265	183,150	84,625	21,480	212,010	51	10	9,100	215	103,610
Waldoboro.....	42	177,333	23,327	22,575	50,834	80,597	52	7	3,939	213	82,002
Waterville.....	39	3,972,016	181,050	326,050	1,506,877	1,458,039	99	56	54,512	2,203	779,808
Westbrook.....	42	3,950,221	745,421	660,430	1,264,593	1,279,777	46	52	72,858	1,405	604,978

## TOWNS 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.										
24,916	\$10,897,316	10,330	\$2,695,437	1,242	\$182,421	\$4,198,307	\$110,468	\$335,502	\$2,783,303	\$619,034	\$33,187,865	\$32,183,816	\$1,004,049	\$60,310,874	1
1,985	957,686	880	298,140	43	6,184	257,089	20,209	25,317	200,563	11,000	4,144,815	4,110,398	34,417	6,326,851	2
1,242	587,828	910	196,434	75	14,376	666,785	29,506	25,765	365,258	256,256	1,459,662	1,418,883	40,779	3,822,679	3
2,147	1,167,749	99	22,961	3	382	179,255	12,239	11,801	106,306	48,909	2,126,388	2,074,324	52,064	4,036,815	4
892	178,535	281	77,272	6	832	86,035	6,389	2,495	19,851	7,297	540,814	524,964	15,850	964,738	5
2,404	954,745	1,927	567,315	196	32,086	519,361	12,413	89,810	264,121	153,017	8,098,244	3,050,019	48,225	5,769,844	6
328	160,890	36	9,378			72,121	8,393	6,829	84,559	22,840	540,826	527,709	12,617	889,779	7
803	109,367	73	23,172			37,577	2,201	2,555	32,696	125	409,096	394,072	15,024	662,391	8
168	52,520	81	7,835	27	4,675	5,593	275	1,123	3,190	1,000	137,965	134,912	3,053	266,380	9
516	227,817	392	113,761	62	9,648	118,462	8,385	11,801	97,518	750	551,472	539,040	12,432	1,194,275	10
110	41,123	6	862			5,293	1,095	1,280	2,918		102,919	102,379	540	185,164	11
697	289,403	156	27,912	2	260	98,317	4,538	15,859	77,670	850	872,768	868,780	3,988	1,493,126	12
639	338,339	202	48,852			60,560	4,504	9,925	50,181	1,000	933,518	918,883	19,650	1,618,017	13
111	40,660	11	2,050	3	300	8,289	2,124	1,642	4,523	100	200,245	196,231	3,964	341,294	14
1,218	354,732	697	92,571	298	32,502	43,714	5,857	5,201	37,481	175	1,020,605	992,192	28,413	1,905,808	15
374	159,041	78	26,251			24,941	4,275	3,070	16,246	750	482,746	475,571	7,175	808,858	16
384	125,916	29	8,594	1	150	14,840	2,279	2,247	10,311		380,415	312,364	18,051	552,083	17
63	21,805	9	1,560			4,898	1,305	882	2,711		140,163	137,568	2,595	232,327	18
891	449,019	202	46,120			119,036	25,900	11,373	77,763	1,000	1,760,828	1,710,747	50,081	2,930,595	19
81	11,823	3	715			5,712	1,392	1,312	1,008		50,442	48,826	1,616	90,468	20
526	285,261	116	29,353			127,595	1,995	3,966	30,394	91,240	634,957	627,002	7,956	1,247,687	21
432	191,860	135	35,907	12	1,909	69,053	6,808	2,671	59,579		485,372	476,563	8,809	936,399	22
9	3,471					314	95	16	203		7,662	7,535	127	16,129	23
702	287,803	278	73,978	13	2,994	141,638	1,078	15,172	125,333		1,038,116	985,118	52,998	1,820,291	24
152	57,003	77	14,003			23,307	692	2,521	20,194		206,230	200,882	5,348	343,011	25
272	122,089	158	43,938			23,928	5,003	2,367	16,558		540,371	534,098	6,273	824,900	26
937	389,950	213	35,519	32	2,549	132,983	16,322	11,580	99,369	5,712	1,467,466	1,416,867	50,599	2,239,837	27
557	226,764	18	4,072			92,186	157	7,776	79,775	4,478	704,991	643,250	61,741	1,345,535	28
305	101,681	6	1,750	9	1,240	16,233	1,477	2,017	12,714		216,752	213,969	2,783	336,455	29
415	154,028	162	53,862	12	1,824	85,240	2,233	3,767	79,190		535,447	520,303	15,144	1,020,258	30
77	28,260	9	1,760	2	250	10,491	2,086	1,244	7,161		162,707	161,150	1,567	273,716	31
75	24,673	75	17,425	19	1,770	7,664	723	645	5,746	550	148,212	144,193	4,019	225,804	32
652	320,374	187	36,800	21	1,795	107,276	21,890	12,277	69,209	3,900	851,806	739,125	112,681	1,557,607	33
1,339	467,818	591	132,469	95	19,175	195,758	7,034	21,410	167,134	150	1,120,293	1,070,349	49,944	2,244,025	34
1,011	435,596	766	238,643	116	24,146	240,060	8,173	7,333	229,304	250	1,891,762	1,811,671	80,091	3,254,390	35
473	209,399	135	84,570	9	1,845	43,063	14,106	4,605	23,044	1,413	761,463	748,237	13,226	1,252,955	36
322	142,156	184	47,891			39,370	994	3,229	35,138	9	480,533	474,266	6,267	788,899	37
206	107,060	9	1,550			9,354	1,863	1,450	6,536		226,996	194,311	32,685	442,716	38
192	78,252	21	3,750			8,313	1,674	1,098	4,553	388	174,731	171,545	3,186	344,072	39
1,235	555,564	787	201,715	181	22,029	196,031	10,016	26,586	157,057	2,375	1,236,801	1,236,588	20,213	2,802,236	40
1,024	490,251	381	114,727			347,064	154,810	27,922	160,332	4,000	1,372,266	1,278,897	93,369	2,851,600	41

Twelfth Census of the United States.

# CENSUS BULLETIN.

No. 128.

WASHINGTON, D. C.

January 16, 1902.

## MANUFACTURES.

### LOUISIANA.

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 Louisiana 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 5 cities and towns in the state withdrawn from the enumerators and their manufacturing statistics collected by special agents, in accordance with the further provision of section 7 of the Census Act. Wherever the phrase "urban manufactures" is used in this bulletin, it applies only to those cities and towns which were withdrawn from the enumerators and committed to special agents, and only to manufacturing establishments within the corporate limits of such places.

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

Mr. A. L. Redden, of New Orleans, rendered valuable assistance in the preparation of the text for the accompanying report.

The statistics of Louisiana 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 establishments with a product of less than \$500, which latter class was not reported at previous censuses; Table 3 showing the statistics of the 8 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the city of New Orleans at the censuses of 1880, 1890, and 1900; Table 5 showing the urban manufactures of the state in comparison with the totals for the entire state and the state exclusive of the cities and towns withdrawn from the enumerators; Table 6 showing the statistics for the state by parishes; Table 7 showing the statistics for the state by specified industries; Table 8 showing the statistics for the city of New Orleans by specified industries; and Table 9 showing the totals for all industries in each of the cities and towns withdrawn from the enumerators (exclusive of the city of New Orleans).

Table 1 shows the growth of manufactures in Louisiana 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 Louisiana 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 \$118,084,294 invested in manufactures and mechanical industries in the 4,350 establishments reporting for the state of Louisiana. 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 \$121,181,683, to produce which involved an outlay of \$3,090,185 for salaries of officials, clerks, etc.; \$15,385,715 for wages; \$7,999,870 for miscellaneous expenses, including rent, taxes, etc.; and \$82,299,893 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 Louisiana, \$121,181,683, 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 Louisiana, the gross value of products for 1900 was \$121,181,683. The value of materials purchased in a partly manufactured form was \$51,411,310. The difference, \$69,770,373, 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.



# LOUISIANA.

Table 1 shows the manufacturing and mechanical industries of the state 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 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	4,350	2,618	1,558	2,557	1,744	1,008	66.5	68.3	139.8	46.6	78.0
Capital	\$113,034,294	\$84,754,121	\$11,462,468	\$18,318,974	\$7,151,172	\$5,032,424	225.4	203.2	187.4	166.1	42.1
Salaries of officials, clerks, etc., number	3,914	3,524	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	11.9				
Salaries	\$3,090,185	\$3,036,995	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	1.8				
Wage-earners, average number	42,210	28,377	12,167	30,071	8,789	6,217	48.7	133.2	159.5	242.1	41.4
Total wages	\$15,385,715	\$10,122,569	\$4,860,371	\$4,593,470	\$3,683,679	\$2,038,928	52.0	132.1	15.1	24.7	81.1
Men, 16 years and over	35,581	20,907	10,171	23,687	7,873	5,458	69.5	106.1	157.0	200.2	44.2
Wages	\$14,122,777	\$8,868,867	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	59.2				
Women, 16 years and over	5,448	6,798	1,835	4,210	916	759	119.9	409.2	168.8	359.6	20.7
Wages	\$1,112,812	\$1,183,229	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	6.0				
Children, under 16 years	1,231	612	661	2,224	( <sup>1</sup> )	( <sup>1</sup> )	101.1	17.4	170.3		
Wages	\$150,126	\$70,473	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	113.0				
Miscellaneous expenses	\$7,999,870	\$5,760,753	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	112.7				
Cost of materials used	\$32,299,893	\$33,282,724	\$14,442,506	\$12,412,023	\$6,738,486	\$2,459,508	147.3	180.4	16.4	84.2	174.0
Value of products, including custom work and repairing	\$121,181,683	\$57,806,713	\$24,205,183	\$24,161,905	\$15,587,473	\$6,779,417	109.6	138.8	0.2	55.0	129.9
Total population	1,381,625	1,118,587	939,946	726,915	708,002	517,762	23.5	19.0	29.3	2.7	36.7
Wage-earners engaged in manufactures	42,210	28,377	12,167	30,071	8,789	6,217	48.7	133.2	159.5	242.1	41.4
Per cent of total population	3.1	2.5	1.3	4.1	1.2	1.2					
Assessed value of real estate	\$191,376,383	\$159,619,875	\$122,362,297	\$191,343,376	\$280,704,988	\$176,623,654	19.9	30.4	136.1	181.8	58.9
Value of land and buildings invested in manufactures	\$27,443,599	\$9,646,289	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	184.5				
Per cent of assessed value	14.3	6.0									

<sup>1</sup> Decrease.

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

<sup>3</sup> Not reported separately.

<sup>4</sup> Not reported.

<sup>5</sup> As given in the Biennial Report of the Auditor of Public Accounts of the State of Louisiana, May, 1900.

<sup>6</sup> Does not include value of rented property.

Although Louisiana is an agricultural state, Table 1 shows that there has been a steady growth in the manufacturing and mechanical industries during the half century. The population during these years increased from 517,762 to 1,381,625, or 166.8 per cent, while the average number of wage-earners employed in manufacturing establishments increased from 6,217 to 42,210, or 578.9 per cent, embracing, in 1900, 3.1 per cent of the entire population, compared with 1.2 per cent in 1850. Probably the best indication of the importance of the wage-earning class is afforded by the greatest number employed at any one time during the year. In 1900 this was 74,250, or 5.4 per cent of the total population of the state.

The manufactures of Louisiana are founded principally upon the abundant raw materials of its forests of pine, cypress, and useful hard woods, which cover more than 75 per cent of the area of the state, and upon the products of its sugar-cane, cotton, and rice fields. Industrial development, however, has been retarded by the high price of fuel, a price

in many localities prohibitive, but conditions have been much improved by the completion of a part of the improvements of the Warrior River in Alabama,<sup>1</sup> and by the opening of a canal connecting the Mississippi River with the Gulf of Mexico through Lake Borgne.<sup>2</sup> This has given through water rates for coal from the nearest mines, thus materially lessening the cost and creating competition with coal from other fields, while the discovery of oil in Texas and Louisiana has furnished a cheap substitute for coal.

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

<sup>1</sup> Annual Report of the Chief of Engineers, U. S. A., 1901, page 366.

<sup>2</sup> First Annual of the New Orleans Maritime Association, 1901, page 183.

TABLE 2.—SUMMARY FOR ALL ESTABLISHMENTS.

CLASSES.	Number of establishments.	Capital.	Proprietors and firm members.	WAGE-EARNERS.		Miscellaneous expenses.	COST OF MATERIALS USED.				Value of products, including custom work and repairing.
				Average number.	Total wages.		Total.	Purchased in raw state.	Purchased in partially manufactured form.	Fuel, freight, etc.	
Total	6,740	\$114,232,593	7,273	44,912	\$15,437,750	\$3,040,267	\$32,450,094	\$27,435,415	\$51,543,207	\$3,471,472	\$121,702,645
Hand trades <sup>1</sup>	1,057	2,377,048	1,151	3,000	1,340,520	471,222	2,155,631	19,027	2,099,206	47,808	5,066,819
Establishments with a product of less than \$500	2,390	1,148,299	2,512	2,702	52,035	40,397	150,201	18,304	131,897		520,062
All other establishments	3,293	110,707,246	3,610	39,210	14,045,195	7,528,648	80,134,262	27,398,084	49,312,104	3,424,074	116,114,831

<sup>1</sup> Includes bicycle and tricycle repairing, 23; blacksmithing and wheelwrighting, 361; boots and shoes, custom work and repairing, 131; carpentering, 65; clothing, men's, custom work and repairing, 34; clothing, women's, dressmaking, 29; dyeing and cleaning, 22; furniture, cabinetmaking, repairing, and upholstering, 57; lock and gun smithing, 29; masonry, brick and stone, 17; millinery, custom work, 61; painting, house, sign, etc., 86; paper hanging, 4; plastering and stuccowork, 4; plumbing, and gas and steam fitting, 34; sewing machine repairing, 6; taxidermy, 1; watch, clock, and jewelry repairing, 93.

Of the 6,740 establishments of all classes, shown in this table, 3,447, or 51.1 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 \$5,587,811, or only 4.6 per cent of the total value of the products of the state.

In addition to the 6,740 active establishments in the state during the census year, with a capital of \$114,232,593,

shown in Table 2, there were 76 idle establishments, with a capital of \$409,431, divided as follows:

INDUSTRIES.	Number of idle establishments.	Capital.
Bread and other bakery products	1	\$31,000
Brick and tile	3	7,415
Cotton, spinning	34	36,365
Lumber and timber products	11	69,929
Paving and paving materials	1	10,000
Sugar and molasses, refining	19	341,932
All other industries	7	2,820

TABLE 3.—COMPARATIVE SUMMARY OF EIGHT LEADING 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	998	\$34,923,908	22,300	\$3,550,047	\$3,787,575	\$66,691,482	\$37,181,916
	1890	273	12,737,998	7,904	2,933,031	1,007,600	21,619,089	23,272,588
Increase, 1890 to 1900		725	72,185,910	14,402	5,617,016	2,779,966	45,672,393	58,909,328
Per cent of increase		265.6	566.7	182.2	191.6	275.9	217.8	258.4
Per cent of total of all industries in state	1900	22.9	75.1	52.8	55.6	47.3	81.0	71.9
	1890	10.4	36.7	27.9	29.0	26.8	63.2	48.9
Bags, other than paper	1900	5	319,310	330	74,334	46,754	3,081,840	3,443,468
	1890	3	201,500	89	32,101	9,755	579,175	669,945
Cars and general shop construction and repairs by steam railroad companies.	1900	19	782,588	1,378	800,398	19,699	562,658	1,429,099
	1890	6	156,136	61	43,421	101	61,592	112,847
Foundry and machine shop products	1900	69	2,949,113	1,313	654,053	97,441	1,288,939	2,672,761
	1890	49	1,658,159	1,095	659,786	59,371	922,659	2,151,586
Lumber and timber products	1900	432	20,093,044	10,171	3,337,020	505,025	9,449,678	17,408,618
	1890	127	5,714,313	3,311	1,160,528	228,217	3,089,179	5,745,191
Lumber, planing mill products, including sash, doors, and blinds	1900	28	1,040,035	881	323,446	45,109	855,165	1,573,481
	1890	27	947,837	643	349,854	51,198	716,967	1,405,576
Oil, cottonseed and cake	1900	24	4,622,569	1,317	347,051	235,358	5,792,469	7,026,432
	1890	7	1,082,752	387	136,132	48,124	1,058,115	1,573,623
Rice, cleaning and polishing	1900	37	1,318,144	412	180,523	162,104	4,954,135	5,736,451
	1890	16	1,038,700	355	133,608	92,420	3,423,650	4,009,901
Sugar and molasses, refining	1900	384	52,799,105	6,504	2,838,222	2,616,085	40,711,598	47,891,691
	1890	38	1,943,601	1,963	417,643	518,384	11,167,852	12,693,013

The 8 leading industries of the state in 1900, as shown in Table 3, embraced 998 establishments, or 22.9 per cent of the total number in the state; used a capital of \$84,928,908, or 75.1 per cent of the total; gave employment to 22,806 wage-earners, or 52.8 per cent of the total number; and paid \$8,550,047, or 55.6 per cent of the total wages. The value of their products was \$87,181,916, or 71.9 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 refining of sugar and molasses is the most important industry in the state. The 384 establishments reported in 1900 gave employment to 6,504 wage-earners, or 15.4 per cent of the wage-earners employed in the state, and the products were valued at \$47,891,691, or 39.5 per cent of the total value of the products of the state. In 1890 there were 38 establishments, 1,963 wage-earners, and products valued at \$12,603,913. The establishments reported for 1890 did not include those located on plantations; the increase shown in the industry as now reported is largely due to the inclusion of small plants operated principally for the benefit of the plantations on which they are located, and treating from 500 to 1,500 tons of cane per day, the product being a high grade of clarified sugar. One of the greatest obstacles in the way of the local manufacture is the enforced idleness during the greater part of the year of expensive plants, thus entailing a loss on capital invested. An industry is now being developed which is intended to keep these plants in operation for a longer period, and utilize a waste product. This is the manufacture of paper from bagasse, the woody fiber of the sugar-cane after the juice has been expressed. With a small admixture of jute or manila, this material has been found to make one of the finest grades of heavy paper.

The manufacture of lumber and timber products ranks second in importance, with 432 establishments, 10,171 wage-earners, and products valued at \$17,408,513. In 1890 there were 127 establishments, 3,311 wage-earners, and products valued at \$5,745,194. The increase in the value of products during the decade was \$11,663,319, or 203 per cent. In 1890 the production was almost exclusively yellow pine lumber, cypress shingles, and white oak pipestaves. In 1900, while yellow pine products were still the most important, there had been a great increase in products manufactured from cypress and hard woods, as a result of improved methods of logging, and the utilization of the waste of shingle mills. Many of the largest establishments in the state, some of them with a capacity of 80,000 to 100,000 feet per day, were engaged in cypress sawing alone. The manufacture of pipestaves has been practically abandoned.

A forest of longleaf pine covers 3,880 square miles of the upper part of eastern Louisiana, and there is a large area of this timber in the southwestern part. The excellence of the growth is such that the yield of lumber per

acre is among the greatest of the timber pine area of the Southern states. South of the Red River bottom the forests of longleaf pine continue unbroken to the Sabine River, and to the treeless savannas of the coast in Calcasieu parish, their eastern boundary. According to actual measurement, a selected acre of standing timber in this parish will yield not less than 35,000 feet of lumber, board measure.<sup>1</sup>

The cypress forests of the state are practically untouched, only slight impression has been made upon the pine areas, and the hard-wood forests, except that they have been culled of the choicest of white oak, remain in their primal state. Several large purchases of these forests of hard wood have recently been made by capitalists, and mills are planned for converting the wood into lumber on an extensive scale. In some cases the machinery is now in place, and in others, contracts have been made for the building of plants. At no other time in the history of the state has there been as many large lumber manufacturing plants under construction, nor has the state ever before attracted so much attention from leading lumber manufacturers.

Several of the ports of Louisiana profit by the large manufacture of lumber and timber products. The lumber trade of Lake Charles for the past ten years, according to the board of trade returns, was 200,000,000 feet per annum. New Orleans is first in the value of logs exported from Southern ports, and exceeds all other Southern ports combined in export of staves and headings.<sup>2</sup>

The manufacture of cottonseed oil and cake holds third place among the manufacturing industries of the state. There were 24 establishments in 1900, with 1,317 wage-earners, and products valued at \$7,026,452. In 1890 there were 7 establishments, 387 wage-earners, and products valued at \$1,573,626. The increase in the value of products during the decade was \$5,452,826, or 346.5 per cent. The excellent facilities of the port of New Orleans for distributing these products have greatly stimulated the industry, attracting seed from a distance and causing the manufacture to assume proportions larger than the local production of cotton would have permitted. The refining of cottonseed oil is a branch of the industry recently started in New Orleans.

There were 37 establishments engaged in the cleaning and polishing of rice in 1900, with 412 wage-earners, and products valued at \$5,736,451. In 1890, 16 establishments were reported, with 355 wage-earners, and products valued at \$4,009,901. The increase in the value of products during the decade was \$1,726,550, or 43.1 per cent. During the last year of the decade a great impetus was given the industry by the introduction of new methods of cultivating rice and the establishment of irrigating plants

<sup>1</sup> Department of Agriculture, Division of Forestry, *The Timber Products of the Southern United States*, 1897, pages 44 and 45.

<sup>2</sup> Internal Commerce, *The Lumber Trade of the United States*, November, 1900. Treasury Department, Bureau of Statistics, pages 1097 and 1098.

in the principal rice-producing section. Many farmers from the Northwest have moved to the state and engaged in rice culture. At the time the census was taken in 1900 this development had barely commenced.

There were 5 establishments engaged in the manufacture of bags, other than paper, in 1900, with 330 wage-earners, and products valued at \$3,443,468. In 1890 there were 3 establishments, with 89 wage-earners, and products valued at \$669,945. The increase in the value of products during the decade was \$2,773,523, or 414 per cent. The bags or sacks manufactured are of burlap and other coarse cloth, and are extensively used throughout the Southern states in the handling of cottonseed, cottonseed meal, and fertilizers. The manufacture is dependent upon the other industries of the state, and has kept pace with them, the products having increased in much larger proportion than the number of establishments or the capital invested. This has been accomplished by the enlargement of the factories already established, and the material increase of their facilities and the number of wage-earners employed.

There were 69 establishments engaged in the manufacture of foundry and machine shop products in 1900, with 1,313 wage-earners, and products valued at \$2,672,761. In 1890, 49 establishments were reported, with 1,095 wage-earners, and products valued at \$2,151,586. The increase in the value of products during the decade was \$521,175, or 24.2 per cent. Several of these establishments make a specialty of the manufacture of sugar machinery.

There were 28 establishments engaged in the manufacture of planing mill products in 1900, with 881 wage-earners, and products valued at \$1,573,481. In 1890, 27 establishments were reported, with 643 wage-earners, and products valued at \$1,405,576. The increase in the value of products during the decade was \$167,905, or 11.9 per cent.

There were 19 establishments engaged in car construction and general shop work of steam railroad companies in 1900, with 1,378 wage-earners, and products valued at \$1,429,099. In 1890, 6 establishments were reported, with 61 wage-earners, and products valued at \$112,847. The increase in the value of products during the decade was \$1,316,252, or 1,166.4 per cent.

The statistics of the manufacture of cotton goods can not be shown in detail, because there are only 2 establishments in the state, but it is beginning to assume importance. Several large cotton factories are projected, or are in process of erection. Conditions in Louisiana are favorable to this industry, and there are many small towns, along the great trunk-line railroads that traverse the state, where large cotton factories can be operated to advantage, employing a portion of the local population, and using cotton grown within easy hauling distance.

#### URBAN MANUFACTURES.

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

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

	DATE OF CENSUS.			PER CENT OF INCREASE.	
	1900	1890	1880	1890 to 1900	1880 to 1890
Number of establishments	1,525	1,961	915	22.2	114.3
Capital	\$46,080,061	\$26,319,277	\$8,565,808	75.1	207.3
Wage-earners, average number	19,512	22,342	9,504	12.7	135.1
Total wages	\$7,668,167	\$8,275,112	\$3,717,557	27.3	122.6
Miscellaneous expenses	\$4,765,271	\$8,295,077	( <sup>b</sup> )	44.6	-----
Cost of materials used	\$43,385,680	\$28,271,445	\$10,771,892	53.5	162.5
Value of products, including custom work and repairing	\$63,574,388	\$48,295,449	\$18,808,096	31.6	156.8

<sup>1</sup> Does not include cotton compressing in 1900.

<sup>2</sup> Decrease.

<sup>3</sup> Not reported.

It appears from Table 4 that the number of establishments in New Orleans decreased during the decade ending with the year 1900 from 1,961 to 1,525, or 22.2 per cent, and the average number of wage-earners decreased from 22,342 to 19,512, or 12.7 per cent, while the value of products increased from \$48,295,449 to \$63,574,388, or 31.7 per cent. The number of establishments, number of wage-earners, and value of products for this city, in 1900,

constituted 35.1, 46.2, and 52.5 per cent, respectively, of the totals for the entire state.

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

TABLE 5.—URBAN MANUFACTURES.

	Number of establishments.	Capital.	Proprietors and firm members.	WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.
				Average number.	Total wages.			
Total for state .....	4,350	\$113,084,204	4,761	42,210	\$15,335,715	\$7,999,870	\$82,299,893	\$121,181,688
Total for urban manufactures.....	1,718	53,560,653	1,335	22,088	8,608,141	5,207,060	49,165,273	71,556,118
Baton Rouge .....	27	778,570	22	302	110,855	95,917	406,588	748,401
Gretna .....	15	2,097,620	10	714	173,014	112,816	3,547,337	4,015,904
New Orleans .....	1,525	46,080,061	1,657	19,512	7,668,167	4,765,271	43,366,680	63,574,388
Plaquemine .....	87	2,455,308	40	604	264,944	138,813	940,399	1,485,737
Shreveport .....	114	1,519,094	106	956	391,161	94,243	884,319	1,731,688
Total for state exclusive of urban manufactures .....	2,632	59,523,641	2,926	20,122	6,777,574	2,792,810	33,134,620	49,625,565
Per cent of urban manufactures to total for state.....	39.5	47.4	38.5	52.3	55.9	65.1	59.7	59.0

Of the 4,350 establishments in the state, 1,718, or 39.5 per cent, were located in these 5 cities and towns. They furnished employment to 22,088 wage-earners, or 52.3 per cent of the total number, and the value of their products, \$71,556,118, formed 59 per cent of the total for the state.

Table 6 shows the totals for the state by parishes.

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

Table 8 shows the totals for the city of New Orleans by specified industries.

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

TABLE 6.—MANUFACTURES

1	PARISHES 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.....	4,850	\$118,084,204	\$12,795,630	\$14,661,469	\$41,421,587	\$44,205,608	4,761	3,944	\$3,090,185	42,210	\$15,885,715
2	Acadia.....	62	721,671	59,885	166,250	104,091	831,445	62	50	47,634	259	100,452
3	Ascension.....	66	2,506,546	17,005	443,016	1,896,487	649,488	66	54	16,884	519	214,800
4	Assumption.....	51	2,541,648	52,960	456,850	1,708,825	268,013	71	38	32,453	580	222,031
5	Avoyelles.....	71	884,986	10,276	82,442	254,674	87,644	73	17	7,644	150	89,484
6	Bienville.....	28	47,646	5,544	10,480	24,240	7,382	32	2	1,500	80	14,327
7	Bossier.....	57	1,877,829	474,918	87,880	891,288	423,813	80	47	46,766	682	231,805
8	Caddo.....	132	2,832,762	285,340	411,789	804,018	831,615	133	123	110,248	1,360	506,167
9	Calcasieu.....	135	2,619,886	543,517	241,739	667,877	1,161,203	141	112	111,631	1,179	430,880
10	Caldwell.....	12	40,915	6,550	9,990	24,050	6,325	17	5	2,100	71	23,211
11	Catahoula.....	29	126,275	17,472	16,400	66,003	26,400	34	6	3,406	96	15,715
12	Claiborne.....	69	110,285	17,645	14,455	52,900	25,285	86	6	2,500	118	25,259
13	Concordia.....	43	204,651	15,910	62,033	144,581	72,127	39	14	8,188	155	42,439
14	De Soto.....	42	405,052	158,847	24,985	123,835	102,885	58	15	11,537	322	82,832
15	East Baton Rouge.....	68	991,049	60,299	151,217	502,411	277,122	55	48	32,462	873	127,741
16	East Carroll.....	41	240,717	156,650	20,526	58,700	10,812	87	9	1,776	87	17,066
17	East Feliciana.....	58	95,014	8,961	19,665	54,578	11,810	48	8	489	125	19,923
18	Franklin.....	23	52,709	2,595	10,121	30,975	9,018	28	2	889	43	8,957
19	Grant.....	32	880,926	362,401	65,028	234,275	229,222	34	32	27,455	658	192,289
20	Iberia.....	97	4,251,235	450,167	560,648	2,323,233	917,187	107	139	67,547	1,360	462,590
21	Iberville.....	78	6,138,172	679,466	507,450	1,841,670	2,109,686	84	99	56,999	1,151	476,509
22	Jackson.....	7	9,075	8,585	990	3,815	685	10	87	80,702	8	811
23	Jefferson.....	26	3,456,383	226,639	536,702	1,301,710	1,891,832	24	26	15,643	1,002	283,957
24	Lafayette.....	64	682,759	19,348	118,435	501,470	43,506	71	26	15,643	192	76,401
25	Lafourche.....	51	3,810,452	184,505	692,440	2,308,828	634,679	60	109	25,868	848	856,983
26	Lincoln.....	44	100,729	23,312	18,045	40,070	24,302	56	1	500	73	11,514
27	Livingston.....	15	884,900	127,305	32,550	116,812	108,298	17	20	25,366	223	79,827
28	Madison.....	34	59,180	2,290	16,040	40,050	750	38	3	116	37	3,431
29	Morehouse.....	48	777,837	80,687	20,072	87,348	83,750	49	11	2,228	134	83,417
30	Natchitoches.....	89	715,270	105,090	77,387	283,949	156,244	95	42	27,966	478	118,358
31	Orleans.....	1,625	40,080,001	4,716,321	5,532,964	10,783,407	25,048,369	1,657	1,810	1,821,924	19,512	7,668,167
32	Ouachita.....	60	1,569,560	269,293	183,579	464,592	652,096	87	54	51,629	713	270,420
33	Plaquemines.....	12	1,289,330	8,430	202,150	830,550	198,200	13	24	14,660	217	75,788
34	Pointe Coupee.....	87	817,175	19,500	155,800	505,525	136,850	91	12	1,328	200	62,238
35	Rapides.....	114	2,800,817	718,177	156,601	845,170	580,869	136	50	89,566	808	255,693
36	Red River.....	29	65,795	2,358	10,785	47,800	4,792	33	3	281	45	6,223
37	Richland.....	22	44,630	2,270	7,320	32,040	3,000	27	3	288	81	4,946
38	Sabine.....	37	713,273	311,527	42,951	179,486	179,309	43	29	15,662	239	64,416
39	St. Bernard.....	8	160,430	7,300	21,000	72,000	59,230	9	4	2,500	44	19,425
40	St. Charles.....	14	1,101,687	64,900	140,200	490,300	409,287	11	23	8,268	250	99,785
41	St. Helena.....	17	47,005	13,075	6,870	22,590	4,470	17	1	600	39	9,453
42	St. James.....	65	4,814,423	267,001	688,292	1,707,665	2,181,465	79	93	50,688	1,306	434,689
43	St. John the Baptist.....	22	1,551,110	22,050	255,560	835,450	488,100	26	28	7,397	234	108,675
44	St. Landry.....	192	606,610	48,614	84,392	275,658	96,916	198	31	14,856	304	71,621
45	St. Martin.....	30	836,376	85,870	504,035	207,600	207,600	36	29	11,071	190	73,071
46	St. Mary.....	85	8,178,194	1,083,058	1,220,028	4,046,748	1,828,360	81	221	107,509	2,028	772,561
47	St. Tammany.....	29	669,978	168,172	114,562	180,501	200,738	34	48	34,885	841	236,467
48	Tangipahoa.....	54	1,322,139	458,557	110,386	295,190	463,000	66	47	38,431	935	261,742
49	Tensas.....	50	74,690	2,615	19,575	50,550	1,950	48	4	1,950	43	7,265
50	Terrebonne.....	36	3,147,574	100,915	312,316	1,800,903	907,440	43	103	50,417	574	230,582
51	Union.....	37	148,617	7,453	10,790	47,735	82,539	46	4	3,700	185	40,842
52	Vermilion 1.....	42	204,225	8,231	51,735	118,940	30,819	47	13	6,294	98	31,519
53	Vernon.....	8	736,194	201,623	79,549	126,814	318,208	6	26	22,977	254	119,206
54	Washington.....	27	69,729	7,720	9,685	34,055	18,260	42	1	800	90	14,323
55	Webster.....	31	263,912	7,457	19,980	124,313	112,162	34	14	12,980	243	64,469
56	West Baton Rouge.....	28	1,654,902	17,455	308,375	1,200,565	128,507	33	62	11,050	276	115,269
57	West Carroll.....	10	13,703	1,150	2,700	9,600	253	11	1	92	9	1,475
58	West Feliciana.....	25	108,467	8,000	22,625	67,262	10,680	30	10	4,641	85	21,160
59	Winn.....	17	61,425	18,220	8,855	18,270	6,080	22			49	10,080

1 Two establishments in Cameron parish are included in Vermilion parish to avoid disclosing operations of individual establishments.

TABLE 7.—MANUFACTURES BY

1	All industries.....	4,850	\$118,084,294	\$12,795,630	\$14,661,469	\$41,421,587	\$44,205,608	4,761	3,944	\$3,090,185	42,210	\$15,885,715
2	Awnings, tents, and sails.....	6	24,300	2,000	2,000	1,700	18,600	7	6	3,200	81	17,892
3	Bags, other than paper.....	5	819,310			27,510	791,800	4	43	27,782	330	74,334
4	Baskets, and rattan and willow ware.....	7	19,287	2,700	3,500	887	12,700	7	6	4,000	44	17,667
5	Bicycle and tricycle repairing.....	23	25,826	400	900	8,226	16,300	27			29	11,499
6	Blacksmithing and wheelwrighting.....	301	302,919	64,119	61,805	74,390	102,605	392	5	1,788	384	166,076
7	Bookbinding and blank book making.....	8	83,600	2,000	1,800	20,100	14,600	8	24	7,250	48	23,022
8	Boots and shoes, custom work and repairing.....	131	135,861	20,275	37,730	17,439	60,417	138	5	1,718	199	51,522
9	Boots and shoes, factory product.....	12	289,845	18,000	25,700	72,938	177,712	20	27	26,360	397	145,604
10	Boxes, fancy and paper.....	3	21,000			7,500	13,500	3	6	4,400	87	17,100
11	Boxes, wooden packing.....	6	92,706	8,150	7,200	20,000	57,356	5	13	11,592	107	34,230

## BY PARISHES: 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.										
35,531	\$14,122,777	5,448	\$1,112,812	1,231	\$150,126	\$7,999,870	\$507,293	\$845,500	\$6,068,419	\$573,658	\$82,299,893	\$79,742,221	\$2,557,672	\$121,181,683	1
248	98,866	3	750	8	886	50,523	1,155	3,081	46,137	150	1,366,324	1,340,770	25,554	1,714,453	2
491	210,192	10	2,007	18	2,601	244,406	19,163	37,421	184,317	3,505	1,269,448	1,173,404	96,044	1,631,007	3
585	212,839	23	6,008	22	8,134	256,994	241	47,220	209,693		1,976,839	1,804,314	172,525	2,513,267	4
146	38,651	1	280	8	503	15,874	352	2,377	11,414	1,231	183,430	160,379	22,051	304,469	5
74	14,108			6	219	715	65	320	330		20,126	19,238	888	50,939	6
678	231,345			4	460	35,566	611	3,905	30,890	100	711,052	698,536	12,516	1,191,264	7
1,283	491,387	57	5,858	20	1,922	140,357	22,860	17,534	99,271	692	2,525,108	2,467,026	58,032	3,749,752	8
1,151	425,893	10	3,299	18	1,778	103,380	8,228	14,487	85,671		2,097,944	2,072,352	25,592	3,164,872	9
69	22,911			2	300			217	344		23,175	23,931	244	71,756	10
96	15,715					3,122	44	532	2,546		42,421	41,481	940	97,498	11
109	24,162	4	475	5	622	3,901	274	609	3,018		40,606	38,424	2,182	104,344	12
151	41,571	1	400	3	498	15,202	16	4,649	10,537		180,988	173,335	7,263	321,110	13
317	81,867	1	300	4	605	7,037	27	1,873	5,787		239,506	238,534	972	498,072	14
367	126,667	4	945	2	229	100,704	2,745	7,189	90,767		432,867	453,883	28,384	866,912	15
85	16,802			2	264	4,366	700	2,520	1,146		32,352	29,688	2,664	98,262	16
124	19,868			1	55	2,096	820	632	1,144		44,443	41,391	3,052	103,968	17
41	8,687			2	270	1,066	25	400	641		22,221	21,298	923	53,851	18
552	191,284	1	250	5	755	14,046		2,506	11,515	25	467,202	466,593	609	853,607	19
1,303	453,995	7	1,430	50	6,905	181,906	3,086	20,940	131,632	26,348	2,085,269	1,984,883	100,386	3,526,923	20
1,136	472,548	10	2,423	6	838	302,631	6,638	36,192	143,413	116,388	2,132,938	2,030,169	102,769	3,044,333	21
8	811					46		46			1,585	1,505	80	5,401	22
972	283,079	3	617	27	5,261	144,376	1,243	35,738	104,124	3,271	3,906,288	3,841,070	65,218	4,632,841	23
178	74,957			14	1,444	28,570	1,632	2,651	17,186	7,101	333,228	313,722	19,506	543,128	24
810	350,439	16	2,842	22	8,702	181,585	744	38,430	86,454	3,957	2,120,087	1,976,628	150,459	3,094,329	25
64	10,419	7	1,006	2	89	1,976	845	658	973		28,760	27,652	1,108	70,656	26
219	73,327			4	1,600	8,015		2,254	5,761		197,426	197,271	155	427,720	27
37	3,491					1,055	185	480	840	50	10,742	9,570	1,172	37,222	28
133	33,334	1	83			4,930	446	688	3,896		63,695	60,905	2,790	161,821	29
452	110,158			26	3,200	20,896	777	5,529	14,590		505,100	495,097	10,003	799,296	30
13,653	6,537,494	6,135	1,045,171	724	85,502	4,765,271	402,741	296,716	3,777,051	288,763	43,336,680	42,660,186	726,494	68,574,388	31
703	267,449	12	2,530	8	450	85,102	5,615	7,349	72,133		715,756	695,416	20,340	1,239,012	32
201	74,038	7	1,000	9	750	67,638	130	12,144	45,914		622,840	622,698	50,142	890,400	33
195	61,759	4	419	1	60	76,500	320	8,140	68,040		359,915	323,223	36,692	521,527	34
783	262,124	12	2,559	8	1,010	64,483	3,787	7,287	62,715	700	1,104,023	1,080,224	23,799	1,901,528	35
45	6,223					890		413	477		16,133	14,690	1,493	42,339	36
30	4,871			1	75	980	175	264	541		11,613	10,670	943	33,011	37
283	64,295			1	120	17,014	160	6,019	10,760	75	274,763	274,010	753	427,953	38
43	19,300			1	125	28,456	504	1,605	7,347	14,000	120,719	114,484	6,235	176,827	39
286	96,546	14	3,240			63,387	250	14,574	48,898	165	636,292	626,731	59,561	738,043	40
88	9,408			1	75	1,138	530	294	314		29,021	28,706	315	60,162	41
1,271	427,784	23	5,130	12	1,775	163,960	2,578	33,391	114,119	8,872	1,928,469	1,778,326	150,143	2,650,694	42
232	108,615	2	360			108,127	185	17,822	62,747	25,873	1,005,850	922,959	82,881	1,220,974	43
234	70,354	1	400	9	867	29,640	696	4,934	23,605	405	320,765	296,100	24,665	557,101	44
184	72,491	5	1,230	1	150	53,842	70	5,261	37,193	11,318	389,488	366,517	22,971	667,500	45
1,982	765,980	10	1,834	36	4,767	313,432	2,760	47,367	239,517	53,759	3,804,246	3,600,201	204,045	5,749,854	46
817	232,816	2	480	22	3,171	21,202	156	3,247	17,199	600	337,673	311,596	26,077	756,946	47
875	255,814	5	951	55	5,497	36,254	4,653	3,703	24,848	3,050	450,392	435,756	14,636	917,825	48
43	7,265					1,836	1,020	371	445		15,823	13,586	2,242	48,811	49
492	227,457	47	6,680	35	2,895	124,475	1,144	47,671	73,960	1,700	1,587,517	1,480,938	106,529	2,223,005	50
132	46,062	2	100	1	180	7,265	6,600	395	270		106,298	105,465	833	203,417	51
91	30,424	4	805	3	320	11,137	715	714	7,768	1,940	251,247	240,327	10,920	324,805	52
253	119,006			1	200	25,169		1,813	23,356		261,969	261,432	537	536,021	53
85	18,953			5	870	808		313	495		16,388	15,694	694	50,722	54
284	63,314			9	1,155	6,057	330	1,724	3,943		304,156	303,080	1,076	434,613	55
261	112,527	4	1,020	11	1,602	72,666		24,894	42,742	5,030	373,472	310,099	63,373	1,182,308	56
9	1,475					118	40	74	4		4,759	4,406	353	12,937	57
82	20,660			3	500	8,352	100	821	7,396	35	114,600	110,639	3,961	203,828	58
46	9,650			3	430	657	50	242	340	25	21,191	20,953	238	49,674	59

## SPECIFIED INDUSTRIES: 1900.

35,531	\$14,122,777	5,448	\$1,112,812	1,231	\$150,126	\$7,999,870	\$507,293	\$845,500	\$6,068,419	\$578,658	\$82,299,893	\$79,742,221	\$2,557,672	\$121,181,683	1
25	15,440	4	2,134	2	818	8,569	2,479	168	922		80,724	30,679	45	61,873	2
94	30,134	286	44,200			40,754	8,528	1,924	36,802		3,081,840	3,076,979	4,861	3,443,468	3
42	17,495			2	172	1,732	1,830	175	177		12,070	12,010	60	51,310	4
25	11,047			4	452	6,953	4,334	146	1,973		17,903	17,240	663	55,675	5
876	154,980			8	1,096	25,401	17,288	2,536	5,027	500	176,266	162,725	12,541	592,822	6
89	21,160	4	1,122	5	740	4,405	1,916	150	2,339		21,888	21,006	332	64,192	7
195	50,927	1	250	3	345	23,305	17,886	1,149	1,970	2,800	91,704	91,730	34	242,788	8
826	183,500	37	8,108	34	3,396	21,062	4,405	1,403	15,254		442,002	435,606	6,396	660,987	9
20	5,580	61	10,920	6	600	3,813	2,100	43	1,070		42,880	42,360	500	81,000	10
107	34,280					16,202	2,067	104	19,031		121,084	118,472	2,612	280,900	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.....	157	\$931,542	\$91,500	\$142,075	\$133,328	\$261,039	168	89	\$53,998	926	\$296,191
13	Brick and tile.....	58	672,138	182,255	209,280	112,901	167,702	66	48	25,335	1,044	200,033
14	Brooms and brushes.....	8	16,090	1,000	1,000	4,475	9,615	8	8	2,050	65	24,763
15	Carpentering.....	65	144,987	20,100	27,300	22,895	65,692	67	8	1,974	309	147,880
16	Carriages and wagons.....	49	264,047	54,220	45,530	41,486	123,411	60	18	8,359	291	120,906
17	Cars and general shop construction and repairs by steam railroad companies.	19	782,588	72,750	201,539	260,894	247,435	-----	43	46,844	1,378	800,398
18	Clothing, men's, custom work and repairing.	84	205,384	8,750	16,275	14,100	166,259	97	15	9,330	298	127,490
19	Clothing, men's, factory product.....	25	1,167,806	10,500	20,090	46,840	1,090,466	44	112	99,450	2,052	389,405
20	Clothing, women's, dressmaking.....	29	48,043	6,450	10,850	4,953	25,790	30	5	1,740	142	27,757
21	Clothing, women's, factory product.....	14	460,295	202,400	155,500	19,570	82,825	15	18	10,310	609	232,409
22	Coffee and spice, roasting and grinding	9	282,051	4,000	8,000	34,609	236,252	11	45	49,870	50	20,469
23	Confectionery.....	24	179,177	26,000	37,200	36,221	79,753	29	21	9,358	129	45,853
24	Cooperage.....	86	400,543	72,495	73,005	45,160	209,883	90	34	22,748	480	171,113
25	Cordials and syrups.....	6	63,310	5,500	10,805	15,505	25,500	7	23	6,480	14	5,938
26	Cotton, compressing.....	4	875,300	92,637	157,145	120,657	4,861	-----	19	20,412	132	23,140
27	Cotton, ginning <sup>1</sup> .....	952	1,762,587	44,253	428,084	1,240,362	40,888	1,054	111	9,039	1,119	132,612
28	Dyeing and cleaning.....	22	36,432	5,250	10,250	11,882	9,050	22	4	1,606	41	13,855
29	Electrical construction and repairs.....	13	91,535	-----	-----	10,428	81,107	12	26	16,768	77	36,196
30	Electroplating.....	8	9,613	-----	-----	5,032	4,581	6	2	1,980	13	6,305
31	Fertilizers.....	6	1,290,162	46,894	292,956	181,420	760,492	-----	27	51,107	278	87,256
32	Fish, canning and preserving.....	6	186,689	10,150	35,121	33,533	107,880	12	8	9,500	236	44,710
33	Flouring and grist mill products.....	69	121,281	10,945	30,871	47,855	31,610	75	2	2,100	70	11,536
34	Food preparations.....	8	47,474	2,200	16,900	13,290	15,184	10	8	4,680	85	13,624
35	Foundry and machine shop products.....	69	2,949,113	301,683	244,173	606,703	1,796,554	78	112	147,939	1,813	654,653
36	Furniture, cabinetmaking, repairing, and upholstering.	57	161,035	72,500	20,800	13,239	45,496	60	6	2,676	115	54,308
37	Furniture, factory product.....	7	257,920	22,250	44,569	47,568	143,533	15	17	11,260	241	80,582
38	Gas, illuminating and heating.....	3	1,706,847	73,171	107,233	1,364,171	162,272	-----	34	37,143	61	40,665
39	Grease and tallow.....	4	17,430	1,300	5,500	8,700	6,930	8	3	2,000	18	6,500
40	Hairwork.....	4	1,375	-----	-----	255	1,720	-----	4	-----	1	300
41	Ice, artificial.....	34	2,232,961	886,779	486,881	1,250,066	100,235	15	74	65,690	289	121,567
42	Ironwork, architectural and ornamental.	9	97,349	8,300	9,200	9,700	70,149	10	1	600	60	24,730
43	Leather, tanned, curried, and finished.	3	6,193	1,960	858	925	2,450	3	-----	-----	4	1,341
44	Liquors, malt.....	6	8,299,325	355,110	1,097,483	500,178	1,846,555	-----	57	87,556	374	224,985
45	Lock and gun smithing.....	29	18,330	2,600	1,300	6,679	7,751	31	-----	-----	14	5,164
46	Looking-glass and picture frames.....	11	25,710	-----	-----	2,010	23,700	18	6	5,000	16	8,979
47	Lumber and timber products.....	482	20,063,044	6,625,622	1,369,580	4,516,161	7,641,681	522	568	565,123	10,171	3,337,020
48	Lumber, planing mill products, including sash, doors, and blinds.	28	1,040,035	126,932	123,713	259,760	529,630	30	67	64,117	881	323,446
49	Marble and stone work.....	8	2,470	-----	150	270	2,050	3	-----	-----	7	4,140
50	Masonry, brick and stone.....	17	554,285	8,700	13,000	82,565	450,020	19	23	21,700	736	445,240
51	Mattresses and spring beds.....	10	55,785	11,950	11,195	6,913	26,327	9	9	4,680	116	21,062
52	Millinery, custom work.....	61	120,556	15,355	31,475	4,675	69,051	65	55	15,142	203	44,785
53	Mineral and soda waters.....	37	273,885	19,150	27,307	132,711	94,217	31	36	21,270	152	55,066
54	Monuments and tombstones.....	16	80,953	8,300	16,425	11,615	44,613	18	5	7,710	83	33,732
55	Oil, cottonseed and cake.....	24	4,622,569	274,093	780,819	1,071,024	1,896,633	6	164	159,210	1,317	347,051
56	Oysters, canning and preserving.....	3	64,250	4,900	31,200	8,700	19,450	5	9	6,540	97	33,915
57	Painting, house, sign, etc.....	86	66,240	4,250	13,350	10,180	38,460	37	4	2,460	214	92,435
58	Paints.....	3	140,491	21,500	18,600	32,499	67,892	3	13	14,242	21	10,116
59	Paper hanging.....	4	9,645	1,000	2,200	195	6,250	5	1	300	17	7,750
60	Patent medicines and compounds.....	9	478,743	10,000	40,000	12,567	416,176	4	79	131,966	159	64,605
61	Paving and paving materials.....	6	354,260	15,751	8,000	23,509	367,000	7	7	8,220	220	133,301
62	Photography.....	34	58,250	450	1,405	31,630	24,765	38	12	4,476	58	28,288
63	Pickles, preserves, and sauces.....	6	34,325	2,500	6,500	3,475	21,850	10	9	6,000	65	13,542
64	Plastering and stucco work.....	4	4,275	700	1,300	425	1,850	4	-----	-----	19	6,208
65	Plumbing, and gas and steam fitting.....	34	860,820	31,500	42,563	11,307	275,450	39	38	34,608	172	89,602
66	Pottery, terra cotta, and fire-clay products.	3	10,865	5,250	2,500	1,750	1,365	4	1	700	20	6,888
67	Printing and publishing, book and job.	57	525,875	8,600	12,000	326,067	179,208	58	64	57,793	456	185,182
68	Printing and publishing, newspapers and periodicals.	184	1,132,148	83,700	88,205	542,297	417,946	123	127	129,937	873	592,895
69	Rice, cleaning and polishing.....	37	1,818,144	119,109	450,260	522,250	726,525	26	126	141,122	412	180,523
70	Roofing and roofing materials.....	17	158,483	31,000	9,039	11,885	106,559	21	19	13,342	163	47,901
71	Saddlery and harness.....	52	449,211	10,450	15,300	33,950	389,511	58	52	54,310	218	107,835
72	Sewing machine repairing.....	6	6,300	1,300	3,300	195	1,505	6	1	240	3	980
73	Ship and boat building, wooden.....	15	212,643	125,850	19,100	35,814	31,879	10	23	15,232	247	105,196
74	Shirts.....	6	44,345	-----	-----	3,820	40,525	7	5	2,110	130	24,896
75	Soap and candles.....	4	147,200	46,500	42,200	25,250	33,250	2	13	15,416	37	25,125
76	Stencils and brands.....	3	11,640	-----	-----	6,600	5,040	4	-----	-----	6	4,340

<sup>1</sup> 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 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.											
680	\$261,287	222	\$31,626	24	\$3,278	\$114,867	\$37,437	\$11,832	\$65,548	\$50	\$1,393,789	\$1,955,744	\$38,015	\$2,295,753	12	
944	248,423	2	480	98	11,730	47,404	4,280	3,450	36,324	3,350	102,476	9,974	92,502	631,588	13	
56	23,768	4	520	5	475	1,272	832	20	420		59,456	59,216	240	119,220	14	
305	147,112			4	768	100,878	3,527	1,747	4,081	91,578	220,122	219,726	396	576,525	15	
285	119,835			6	1,071	12,915	6,841	1,752	4,047	275	132,072	126,114	5,958	369,431	16	
1,377	800,299			1	99	19,699	1,348	10,082	3,269		562,658	548,788	13,870	1,429,099	17	
234	116,252	61	10,932	8	306	31,544	22,949	1,581	6,791	220	187,718	186,967	751	479,351	18	
251	112,609	1,730	271,376	71	5,420	84,679	21,023	2,814	52,942	7,900	1,170,767	1,164,423	6,344	2,047,069	19	
2	1,000	135	26,585	5	172	15,524	6,510	204	680	8,100	63,871	63,816	56	126,422	20	
		482	228,399	27	4,010	15,545	2,724	373	12,448		485,631	485,361	270	849,823	21	
32	17,681	16	2,706	2	82	38,010	5,417	1,084	31,509		524,608	518,275	6,333	666,713	22	
94	39,159	32	6,594	3	100	25,216	15,524	2,737	6,955		195,453	192,315	3,138	353,157	23	
478	170,818			2	300	26,967	7,227	2,534	14,078	3,128	435,260	434,092	1,163	789,401	24	
18	5,838			1	100	4,540	1,600	575	2,465		155,999	155,530	469	192,433	25	
132	23,140					10,967		6,017	4,950		16,827	8,490	8,337	104,962	26	
1,115	182,478			4	134	32,925	3,321	10,502	18,862	240	360,007	307,863	52,144	1,129,871	27	
26	10,325	14	3,426	1	104	7,086	4,384	423	2,279		8,308	6,206	2,102	51,494	28	
75	35,881			2	312	11,755	4,454	196	6,905	200	99,166	98,528	638	213,231	29	
11	6,105			2	200	1,570	1,410	35	125		6,675	6,375	300	20,396	30	
259	83,656	19	3,600			103,720	265	1,116	102,339		614,431	596,461	17,970	909,551	31	
45	22,450	161	21,260	30	1,000	6,408		2,239	4,169		67,583	65,368	2,215	144,879	32	
64	11,420			6	116	2,717		1,040	1,602	25	325,297	321,465	3,832	388,326	33	
34	13,394			1	230	2,471	1,864	357			41,904	38,153	3,751	86,605	34	
1,308	653,317	1	381	4	355	97,441	12,109	6,453	77,877	1,002	1,288,939	1,245,765	38,174	2,672,761	35	
103	51,750	8	2,031	4	522	11,931	9,632	788	1,541	20	45,328	45,020	308	163,047	36	
210	80,532			1	50	19,654	1,298	775	17,586		137,465	135,939	1,526	319,728	37	
61	40,665					101,234		57,214	47,020		71,114	65,002	6,112	455,335	38	
18	6,500					1,037	324	193	520		46,943	46,210	733	61,500	39	
1	300					1,007	960	5	42		1,645	1,645		4,175	40	
282	120,765	1	210	6	562	83,733	756	15,012	67,965		135,536	62,648	122,888	570,600	41	
58	24,360			2	370	3,373	1,388	230	1,755		45,399	44,686	718	92,125	42	
4	1,341					78		44	84		0,355	6,355		10,157	43	
353	221,195	7	1,360	14	2,430	792,468		42,621	749,847		403,440	348,541	54,899	1,472,062	44	
14	5,164					4,820	4,306	97	171	246	15,255	15,117	138	41,295	45	
15	8,738	1	241			8,026	4,291	313	3,067	350	35,207	35,207		69,148	46	
10,062	3,317,967	1	400	103	18,653	505,025	13,873	82,193	408,953		9,449,678	9,449,106	572	17,408,513	47	
837	321,941			14	1,505	45,109	2,635	3,121	39,333		855,165	849,419	5,746	1,673,481	48	
7	4,140					938	618	15	305		5,720	5,720		17,600	49	
736	445,240					137,769	1,958	2,848	8,963	125,100	667,335	662,135	5,200	1,288,110	50	
70	16,214	21	2,948	25	1,303	3,972	2,592	334	946	100	113,574	112,139	1,435	161,944	51	
2	1,130	194	42,936	7	719	36,853	16,436	1,882	18,535		192,901	192,854	47	366,996	52	
137	53,045	1	830	14	1,191	27,678	4,337	1,853	21,457	31	107,505	103,934	3,571	285,357	53	
89	33,732					5,263	1,620	675	2,938	30	65,733	64,793	940	138,672	54	
1,308	348,839	9	3,162			295,358	2,400	51,421	241,493	42	5,792,469	5,067,426	125,043	7,026,432	55	
81	32,165	7	1,000	9	750	3,123		463	2,660		109,205	108,405	800	165,458	56	
210	91,795			4	640	8,420	6,121	445	1,354	500	77,414	77,958	56	232,909	57	
19	9,544	2	572			19,452	815	18,637	18,637		82,271	80,155	2,116	132,102	58	
17	7,750					1,517	584	49	884		5,049	5,049		19,587	59	
93	49,807	58	14,110	8	1,188	80,763	5,460	5,478	69,825		265,008	264,182	825	752,101	60	
220	133,801					1,525	120	903	502		233,304	272,404	10,900	476,937	61	
46	24,706	8	2,920	4	662	17,991	14,249	287	3,455		34,770	34,665	105	124,060	62	
33	10,632	29	2,560	8	350	2,009	1,260	224	1,125		75,115	74,445	670	117,388	63	
19	6,208					690	408	67	25	209	4,740	4,740		16,010	64	
168	89,014			4	588	36,723	11,151	2,977	22,020	575	327,027	325,384	1,143	568,442	65	
17	6,208			8	180	585	150	5	430		5,517	3,485	2,032	21,877	66	
385	174,769	41	7,099	30	3,314	49,789	22,528	2,545	14,039	10,677	154,212	143,211	11,001	533,970	67	
733	508,281	52	18,202	65	3,352	161,333	19,055	6,581	106,179	29,568	307,421	290,490	16,931	1,436,738	68	
400	176,980			12	3,543	162,104	4,410	17,394	131,503	3,797	4,954,135	4,881,602	72,533	5,736,151	69	
163	47,901					12,906	2,804	1,267	8,335	500	155,812	154,940	872	218,857	70	
204	105,653			14	1,682	24,716	14,454	1,693	8,549	120	478,261	475,197	3,064	801,449	71	
8	980					617	444	73		100	1,475	1,475		6,000	72	
247	105,196					9,732	2,127	2,372	5,233		71,621	68,951	2,670	250,307	73	
6	3,138	124	21,258			3,691	1,790	101	1,800		74,550	74,160	390	140,050	74	
36	24,909			1	216	3,014	12	872	2,130		118,498	116,459	2,039	185,600	75	
6	4,340					2,673	1,940		683	50	1,909	1,909		10,100	76	

TABLE 7.—MANUFACTURES BY

	MANUFACTURING AND MECHANICAL INDUSTRIES.	Num-ber of estab-lish-ments.	CAPITAL.					Propri-eters and firm mem-bers.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and imple-ments.	Cash and sundries.		Num-ber.	Salaries.	Total.	
											Average num-ber.	Wages.
77	Sugar and molasses, refining	384	\$52,799,105	\$2,211,748	\$6,898,871	\$24,556,664	\$19,636,827	468	1,056	\$436,109	6,504	\$2,838,222
78	Tinsmithing, coppersmithing, and sheet-iron working.	99	442,951	47,225	49,190	86,691	259,845	105	30	27,640	877	165,416
79	Tobacco, chewing, smoking, and snuff	8	314,875	11,000	30,500	57,847	215,528	1	34	45,225	284	71,620
80	Tobacco, cigars and cigarettes	34	510,483	86,800	79,175	39,716	355,242	39	27	48,240	1,200	407,087
81	Trunks and valises	6	84,987			8,575	81,412	6	6	4,400	40	20,956
82	Turpentine and rosin	10	74,539	84,550	8,240	16,125	15,621	15	8	3,490	302	54,180
83	Upholstering materials	14	114,050	10,500	10,150	18,100	75,800	20	4	3,170	139	31,843
84	Watch, clock, and jewelry repairing	93	176,035	11,975	22,500	46,173	95,387	111	11	6,262	105	57,974
85	Wood, turned and carved	3	10,580	2,000	3,150	4,460	980	2	1	600	14	5,074
86	All other industries <sup>1</sup>	90	8,591,687	498,979	841,389	1,481,344	819,975	90	113	99,391	2,122	614,769

<sup>1</sup> Embraces artificial feathers and flowers, 2; axle grease, 1; baking and yeast powders, 2; bluing, 1; boot and shoe uppers, 2; bottling, 2; boxes, cigar, 2; brass castings and brass finishing, 2; carriage and wagon materials, 1; cars and general shop construction and repairs by street railroad companies, 2; chocolate and cocoa products, 1; coffins, burial cases, and undertakers' goods, 2; corsets, 1; cotton goods, 2; cutlery and edge tools, 2; electrical apparatus and supplies, 2; engraving and diesinking, 2; engraving, steel, including plate printing, 2; fireworks, 2; flags and banners, 1; flavoring extracts, 2; furnishing goods, men's, 1; gas machines and meters, 2; glass, cutting, staining, and ornamenting, 2; hand stamps, 2; hats and caps, not including fur hats, and wool hats, 2; hosiery and knit goods, 1; house furnishing goods, not elsewhere specified, 1; instruments, professional and scientific, 2; jewelry, 1; liquors, distilled, 1; lithographing and engraving, 1;

TABLE 8.—MANUFACTURES IN NEW ORLEANS

1	All industries <sup>1</sup> .....	1,525	\$46,080,061	\$4,715,321	\$5,532,964	\$10,783,407	\$25,048,369	1,657	1,840	\$1,821,921	19,512	\$7,668,167
2	Awnings, tents, and sails.....	6	24,800	2,000	2,000	1,700	18,600	7	6	8,200	31	17,892
3	Bags, other than paper.....	5	819,810			27,510	791,800	4	43	27,782	330	74,384
4	Baskets, and rattan and willow ware.....	7	19,287	2,700	3,500	387	12,700	7	6	4,000	44	17,667
5	Bicycle and tricycle repairing.....	12	6,796			3,971	2,825	16			18	7,073
6	Blacksmithing and wheelwrighting.....	97	121,855	35,260	26,000	20,788	89,307	111	4	1,644	209	92,573
7	Bookbinding and blank book making.....	8	38,500	2,000	1,800	20,100	14,600	8	24	7,250	48	23,022
8	Boots and shoes, custom work and repairing.....	100	112,728	17,475	34,600	13,109	47,639	104	5	1,718	175	42,344
9	Boots and shoes, factory product.....	12	289,345	13,000	25,700	72,933	177,712	20	27	26,360	397	145,004
10	Boxes, fancy and paper.....	3	21,000			7,500	13,500	3	6	4,400	87	17,100
11	Boxes, wooden packing.....	4	82,856	8,000	6,500	17,500	50,356	8	12	11,192	103	38,880
12	Bread and other bakery products.....	127	873,420	79,050	124,200	423,263	246,917	137	88	53,093	871	280,108
13	Brooms and brushes.....	7	15,965	1,000	1,000	4,375	9,590	7	3	2,050	65	24,763
14	Carpentering.....	48	138,087	26,050	24,175	20,045	62,817	58	8	1,974	281	135,555
15	Carriages and wagons.....	24	149,489	30,600	26,550	22,019	70,320	31	8	5,618	221	98,514
16	Cars and general shop construction and repairs by steam railroad companies.....	6	472,485	22,650	110,740	162,266	176,829		21	24,389	915	560,057
17	Clothing, men's, custom work and repairing.....	57	177,060	6,700	13,175	9,695	147,490	67	15	9,380	247	104,100
18	Clothing, men's, factory product.....	24	1,154,956	10,500	20,000	46,465	1,077,991	43	112	99,450	2,045	886,809
19	Clothing, women's, dressmaking.....	20	41,795	6,000	9,500	3,785	22,510	21	5	1,740	114	22,132
20	Clothing, women's, factory product.....	14	460,295	202,400	155,500	19,570	82,825	15	18	16,310	509	232,409
21	Coffee and spice, roasting and grinding.....	9	282,951	4,000	8,000	34,699	236,252	11	45	49,370	50	20,469
22	Confectionery.....	18	154,086	26,000	37,000	24,498	66,588	23	20	8,458	99	36,247
23	Cooperage.....	55	246,017	53,150	48,800	25,885	117,182	60	26	17,618	317	120,830
24	Cordials and sirups.....	6	63,810	5,500	16,805	15,505	25,500	7	23	6,480	14	5,988
25	Dyeing and cleaning.....	18	35,645	5,250	10,260	11,670	8,475	18	4	1,606	37	13,025
26	Electrical construction and repairs.....	13	91,635			10,428	81,107	12	26	16,768	77	36,196
27	Electroplating.....	3	9,613			5,032	4,581	6	2	1,380	13	6,305
28	Fertilizers.....	3	948,051	31,894	243,929	75,396	591,832		16	37,600	202	58,484
29	Food preparations.....	8	47,474	2,200	16,800	13,280	15,184	10	8	4,680	35	13,624
30	Foundry and machine shop products.....	39	2,235,868	242,023	170,523	437,708	1,385,614	42	84	120,593	1,016	625,733
31	Furniture, cabinetmaking, repairing, and upholstering.....	47	153,613	72,000	28,800	11,244	40,969	50	6	2,578	108	51,213
32	Furniture, factory product.....	6	256,420	22,250	44,569	46,568	148,038	13	17	11,260	238	78,152
33	Hairwork.....	4	1,975			255	1,720	4			1	800
34	Ice, artificial.....	10	1,538,230	319,400	353,300	833,280	31,650	1	28	38,180	135	48,610
35	Ironwork, architectural and ornamental.....	9	97,319	8,300	9,200	9,700	70,149	10	1	600	60	24,730
36	Liquors, malt.....	6	3,299,326	355,110	1,097,483	500,178	1,346,555		57	87,556	374	224,985
37	Lock and gun smithing.....	26	16,030	2,400	900	6,129	7,501	27			12	4,634
38	Looking-glass and picture frames.....	10	24,600			1,760	22,900	17	6	5,000	15	8,790
39	Lumber and timber products.....	10	1,315,907	252,632	105,402	289,001	688,872	10	65	79,530	543	205,084
40	Lumber, planing mill products, including sash, doors, and blinds.....	9	435,957	93,772	60,375	130,762	195,448	10	29	27,182	321	127,157
41	Masonry, brick and stone.....	14	549,768	8,000	12,000	81,815	447,943	16	23	21,700	677	429,200
42	Mattresses and spring beds.....	9	44,785	10,700	8,800	4,563	20,719	9	7	2,280	108	18,082
43	Millinery, custom work.....	29	73,750	9,250	22,475	3,200	58,825	29	53	14,217	173	38,547
44	Mineral and soda waters.....	11	119,407	13,800	18,500	40,089	51,718	5	19	15,290	88	35,327
45	Monuments and tombstones.....	11	66,345	4,000	14,100	10,880	37,365	12	3	6,940	74	23,812
46	Oil, cottonseed and cake.....	5	670,736	30,954	74,265	131,731	383,786		18	23,625	158	64,756
47	Painting, house, sign, etc.....	31	62,160	4,000	12,600	9,535	36,025	31	3	1,960	195	87,215
48	Paints.....	3	140,491	21,500	18,600	32,499	67,892	3	13	14,242	21	10,116
49	Paperhanging.....	4	9,645	1,000	2,200	1,195	6,250	5	1	300	17	7,750
50	Patent medicines and compounds.....	7	473,538	10,000	40,000	11,542	411,998	4	72	180,130	154	63,529
51	Paving and paving materials.....	6	354,260	15,751	8,000	23,509	307,000	7	7	8,220	220	133,301

<sup>1</sup> Does not include cotton compressing.

## 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.										
6,229 368	\$2,782,107 163,700	124	\$27,774	151 9	\$23,841 1,716	\$2,616,085 49,834	\$29,444 14,407	\$439,046 2,648	\$1,865,977 32,251	\$281,618 30	\$40,711,598 412,322	\$39,017,668 406,267	\$1,693,930 6,055	\$17,891,691 786,625	77 78
81 807 84	34,357 848,044 19,708	186 384	35,228 58,180	17 9 6	2,035 863 1,248	460,888 213,588 7,096	1,616 11,364 2,670	4,276 5,196 125	454,996 196,948 4,301	80	421,508 506,258 29,001	419,822 502,764 28,851	1,686 8,494 150	1,088,524 1,407,083 91,450	79 80 81
295 103 92 14 879	58,910 25,135 55,926 5,074 392,638	83 1 — — 934	6,853 861 — — 188,865	7 8 12 — 309	270 855 1,684 — 33,766	959 6,056 21,011 401 968,787	— 1,771 14,954 — 25,252	424 565 1,379 64 9,142	235 8,720 3,967 837 929,343	300 — 711 — 50	83,275 278,455 63,805 2,438 1,464,284	80,921 270,117 62,255 2,128 1,404,825	2,354 3,338 1,550 310 59,669	115,824 368,512 236,826 10,234 8,606,808	82 83 84 85 86

millinery and lace goods, 1; mirrors, 1; muelage and paste, 1; musical instruments and materials, not specified, 1; optical goods, 2; perfumery and cosmetics, 2; photolithography and photoengraving, 1; plated and britannia ware, 1; plumbers' supplies, 2; printing and publishing, music, 1; printing materials, 1; refrigerators, 2; regalia and society banners and emblems, 2; safes and vaults, 1; salt, 2; scales and balances, 1; show cases, 1; steam fittings and heating apparatus, 1; steam packing, 2; stereotyping and electrotyping, 1; surgical appliances, 2; taxidermy, 1; umbrellas and canes, 2; varnish, 1; vinegar and cider, 1; wirework, including wire rope and cable, 2; wood, preserving, 2.

## BY SPECIFIED INDUSTRIES: 1900.

13,653	\$6,537,494	5,135	\$1,045,171	724	\$85,502	\$4,765,271	\$402,741	\$296,716	\$3,777,051	\$288,763	\$43,336,680	\$42,660,186	\$726,494	\$63,674,888	1
25	15,440	4	2,134	2	318	8,569	2,479	168	922	—	30,724	30,679	45	61,373	2
94	30,184	236	44,200	—	—	46,754	8,628	1,924	86,302	—	8,081,840	8,076,979	4,861	3,443,468	3
42	17,495	—	—	2	172	1,732	1,380	175	177	—	12,070	12,010	60	61,310	4
16	6,867	—	—	2	206	4,310	3,896	66	858	—	9,207	8,690	517	29,845	5
205	91,949	—	—	4	624	15,899	12,508	1,895	1,721	275	91,147	87,348	3,799	288,681	6
39	21,160	4	1,122	5	740	4,405	1,916	160	2,839	—	21,838	21,006	332	64,192	7
172	41,999	—	—	8	945	19,971	16,138	1,002	1,631	2,800	72,262	72,248	14	192,260	8
326	183,500	37	8,108	34	3,396	21,062	4,405	1,403	15,254	—	442,002	435,606	6,396	669,987	9
20	5,580	61	10,920	6	600	3,813	2,100	43	1,670	—	42,880	42,880	500	81,000	10
103	33,830	—	—	—	—	14,922	1,867	24	13,031	—	117,142	114,642	2,500	222,400	11
638	246,029	221	31,626	17	2,453	108,700	33,838	11,282	63,680	—	1,307,615	1,272,394	35,221	2,135,738	12
56	23,768	4	520	5	476	1,212	772	20	430	—	59,156	58,916	240	118,620	13
277	134,737	—	—	4	768	92,861	3,334	1,676	3,678	91,178	202,402	202,084	318	627,939	14
218	58,116	—	—	3	398	9,705	6,195	1,256	1,939	275	32,826	32,826	4,167	269,491	15
915	550,057	—	—	—	—	7,499	1,343	4,739	1,412	—	347,663	340,379	7,284	629,608	16
196	95,396	48	8,398	3	306	24,018	18,007	1,397	4,894	220	139,270	138,582	688	368,596	17
250	111,335	1,724	270,054	71	5,420	31,774	20,568	2,814	50,492	7,900	1,164,267	1,157,923	6,344	2,096,009	18
2	1,000	106	20,960	6	172	14,864	6,095	191	478	8,100	59,700	59,700	—	111,490	19
82	17,681	482	228,399	27	4,010	15,545	2,724	873	12,448	—	485,631	485,561	270	849,323	20
77	31,913	16	2,706	2	82	38,010	5,417	1,084	31,509	—	524,608	518,275	6,333	666,713	21
815	120,520	19	4,234	3	100	21,690	12,834	2,671	6,185	—	150,713	148,317	2,396	282,637	22
13	5,838	—	—	2	800	18,812	6,472	1,527	10,357	456	265,412	264,796	616	515,335	23
25	9,915	1	—	1	100	4,540	1,500	675	2,465	—	155,999	155,530	469	192,433	24
75	35,884	11	3,006	1	104	6,146	3,480	423	2,243	—	8,045	8,006	2,039	47,030	25
11	6,105	—	—	2	200	11,755	4,464	190	6,905	200	99,166	98,628	635	213,231	26
183	54,884	—	—	—	—	1,570	1,410	35	125	—	6,675	6,375	300	20,896	27
34	13,394	19	3,600	1	230	31,439	727	80,712	200	—	488,913	476,013	12,870	695,696	28
1,013	525,555	—	—	2	228	2,471	1,884	387	200	—	41,904	38,153	8,751	86,605	29
96	48,660	8	2,031	4	522	72,313	10,426	4,926	56,151	810	1,092,119	1,065,734	26,385	2,199,354	30
237	78,102	—	—	—	—	10,576	8,743	662	1,151	20	41,616	41,344	272	151,162	31
1	500	—	—	1	50	19,374	1,113	775	17,486	—	135,109	133,799	1,310	312,923	32
134	43,370	—	—	—	—	1,007	960	5	42	—	1,545	1,545	—	4,175	33
58	24,660	1	240	2	370	52,428	420	10,429	41,589	—	116,396	42,055	74,341	308,683	34
853	221,195	—	—	—	—	8,378	1,383	230	1,765	—	45,399	44,686	713	92,125	35
12	4,634	7	1,360	14	2,430	792,468	—	42,621	749,847	—	403,440	348,541	54,899	1,472,062	36
14	8,628	—	—	—	—	4,429	8,978	82	125	246	14,499	14,367	132	33,310	37
537	202,084	1	162	6	3,000	7,609	4,126	316	3,067	—	34,902	34,902	—	67,748	38
321	127,157	—	—	—	—	69,869	500	9,449	59,920	—	854,049	854,049	—	1,403,845	39
677	429,200	—	—	—	—	29,841	1,645	1,595	26,601	—	277,191	276,160	1,031	552,251	40
64	13,624	—	—	—	—	137,689	1,305	2,327	8,957	125,100	612,015	606,815	5,200	1,204,750	41
84	84,622	19	2,558	25	1,900	3,372	2,592	334	446	—	107,949	106,664	1,285	149,064	42
74	28,312	166	32,828	7	719	28,820	12,281	1,455	15,084	—	144,502	144,502	—	267,962	43
149	61,624	1	470	3	285	16,001	2,444	972	12,585	—	61,393	60,149	1,244	160,165	44
191	88,576	—	—	—	—	4,575	1,620	628	2,297	30	58,398	57,938	960	121,703	45
19	9,544	9	3,162	—	—	65,376	2,400	5,669	57,307	—	832,522	817,070	15,452	1,043,623	46
17	7,750	—	—	—	—	7,690	5,797	412	981	500	67,719	67,663	56	212,209	47
83	48,231	2	572	4	640	19,452	—	816	18,637	—	32,271	30,165	2,116	132,102	48
220	133,801	58	14,110	8	1,188	1,617	584	49	884	—	5,049	5,049	—	19,587	49
						78,907	4,880	5,478	63,569	—	259,972	259,182	790	730,731	50
						1,625	120	908	502	—	283,804	272,404	10,900	476,937	51

TABLE 8.—MANUFACTURES IN NEW ORLEANS

MANUFACTURING AND MECHANICAL INDUSTRIES, AND CITIES AND TOWNS.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
52 Photography .....	20	\$18,060		\$150	\$24,750	\$23,160	22	12	\$1,476	50	\$25,538
53 Pickles, preserves, and sauces .....	5	19,075	\$2,500	1,500	3,225	11,850	9	8	4,800	50	9,992
54 Plastering and stuccowork .....	4	4,275	700	1,300	425	1,850	4			19	6,208
55 Plumbing, and gas and steam fitting .....	27	327,830	28,000	38,468	7,078	258,789	82	37	34,618	149	76,582
56 Pottery, terra cotta, and fire-clay products.	3	10,865	5,250	2,500	1,760	1,865	4	1	700	20	6,388
57 Printing and publishing, book and job .....	51	507,670	8,600	12,000	312,382	174,688	53	61	57,218	452	183,062
58 Printing and publishing, newspapers and periodicals.	36	794,066	68,200	60,015	357,275	308,576	31	110	114,587	620	428,819
59 Rice, cleaning and polishing .....	9	555,234	70,000	202,000	265,000	318,234	11	51	64,303	153	78,346
60 Roofing and roofing materials .....	15	157,133	81,000	8,539	11,685	106,009	17	18	13,092	161	46,701
61 Saddlery and harness .....	32	413,196	7,150	11,550	28,765	365,731	40	48	51,910	192	98,201
62 Sewing machine repairing .....	4	800			95	205	4				
63 Ship and boat building, wooden .....	6	171,847	114,600	18,500	23,314	20,433	2	19	11,032	137	57,402
64 Shirts .....	6	44,315			8,820	40,525	7	5	2,110	130	24,396
65 Soap and candles .....	4	147,200	46,500	42,200	25,250	33,250	2	18	15,416	37	25,125
66 Stencils and brands .....	3	11,640			6,600	5,040	4			6	4,340
67 Sugar and molasses, refining .....	10	17,778,184	1,888,321	1,291,743	3,196,175	11,396,945	16	118	122,653	781	407,859
68 Tinsmithing, coppersmithing, and sheet-iron working.	74	392,965	40,450	45,800	69,416	237,209	75	28	26,820	308	128,732
69 Tobacco, cigars and cigarettes .....	27	502,518	85,100	78,300	38,006	350,122	30	26	47,520	1,176	402,934
70 Trunks and valises .....	6	34,987			3,575	31,412	6	6	4,400	40	20,956
71 Upholstering materials .....	8	96,900	6,000	7,500	13,800	60,600	10	4	3,170	117	27,905
72 Watch, clock, and jewelry repairing .....	57	109,535	7,500	13,100	30,508	58,427	68	9	4,852	82	47,874
73 All other industries <sup>1</sup> .....	98	4,746,020	260,229	632,508	2,580,103	1,273,000	101	173	182,041	2,571	739,800

<sup>1</sup> Embroidered artificial feathers and flowers, 2; axle grease, 1; baking and yeast powders, 2; bluing, 1; boot and shoe uppers, 2; bottling, 2; boxes, cigar, 2; brass castings and brass finishing, 2; brick and tile, 1; carriage and wagon materials, 1; cars and general shop construction and repairs by street railroad companies, 2; chocolate and cocoa products, 1; coffins, burial cases, and undertakers' goods, 1; corsets, 1; cotton goods, 2; cutlery and edge tools, 2; electrical apparatus and supplies, 2; engraving and diesinking, 2; engraving, steel, including plate printing, 2; fireworks, 2; fish, curing and preserving, 2; flags and banners, 1; flavoring extracts, 2; flouring and grist mill products, 1; furnishing goods, men's, 1; gas, illuminating and heating, 1; gas machines and meters, 2; glass, cutting, staining, and ornamenting, 2; hand stamps, 2; hats and caps, not including fur hats, and wool hats, 2; hosiery and knit goods, 1; house furnishing goods, not elsewhere

TABLE 9.—MANUFACTURES IN CITIES AND

1	Total for cities and towns.....	193	\$7,480,592	\$1,008,004	\$1,120,066	\$2,505,127	\$2,757,395	178	241	\$201,003	2,576	\$939,974
2	Baton Rouge.....	27	778,570	58,900	123,757	317,731	253,092	22	40	31,782	302	110,855
3	Gretna.....	15	2,697,620	211,239	449,152	986,019	1,051,210	10	69	65,412	714	173,014
4	Plaquemine.....	37	2,455,308	508,709	265,300	697,830	981,469	40	48	30,528	604	264,944
5	Shreveport.....	114	1,549,094	234,066	281,857	563,517	469,621	106	84	73,281	956	391,161

## BY SPECIFIED INDUSTRIES: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
41	\$22,546	5	\$2,380	4	\$662	\$16,528	\$13,154	\$248	\$3,126		\$29,912	\$29,847	\$65	\$102,880	52
22	7,632	28	2,360			1,759	1,140	194	425		55,915	55,545	370	74,383	53
19	6,208					690	408	57	25	\$200	4,740	4,740		16,010	54
145	74,994			4	588	84,043	9,902	2,751	20,815	575	296,560	295,565	995	514,270	55
17	6,208			3	180	585	150	5	430		5,517	8,485	2,032	21,877	56
881	172,649	41	7,099	30	3,314	48,889	22,022	2,500	13,690	10,677	150,577	139,679	10,898	573,987	57
572	415,160	29	11,172	19	2,487	189,327	9,660	5,017	95,232	29,418	246,335	232,679	18,656	1,114,879	58
146	75,923			7	3,028	78,941	4,200	12,588	53,405	8,797	2,602,555	2,565,147	37,408	2,924,564	59
161	46,701					12,681	2,634	1,262	8,235	500	148,638	147,823	815	238,357	60
179	96,669			13	1,532	20,681	11,878	1,314	7,339	120	456,013	452,984	3,029	739,941	61
						444	444				475	475		8,000	62
137	57,402					8,953	2,040	2,250	4,663		25,773	23,246	2,527	132,771	63
6	3,188	124	21,258			3,691	1,790	101	1,800		74,550	74,160	390	140,050	64
36	24,909			1	216	3,014	12	872	2,130		118,498	116,459	2,039	185,600	65
6	4,340					2,673	1,940		683	50	1,909	1,909		10,100	66
781	407,859					474,039	4,600	58,974	410,465		20,948,723	20,675,680	278,043	22,684,920	67
299	127,016			9	1,716	46,089	11,903	2,365	30,791	30	350,200	344,778	5,427	652,249	68
797	344,701	376	57,905	3	328	210,620	10,893	5,168	194,479	80	499,411	495,947	3,464	1,388,305	69
34	19,708			6	1,248	7,096	2,670	125	4,301		29,001	28,851	150	91,450	70
88	22,395	27	5,350	2	160	5,563	1,593	440	3,580		256,550	253,745	2,805	340,785	71
69	45,876	1	364	12	1,634	15,086	11,187	823	2,365	711	52,747	51,402	1,345	184,626	72
1,001	464,616	1,240	289,853	327	35,301	1,520,715	27,122	71,862	1,421,731		1,978,645	1,912,653	65,992	5,154,499	73

specified, 1; instruments, professional and scientific, 2; jewelry, 1; leather, tanned, curried, and finished, 1; liquors, distilled, 1; lithographing and engraving, 1; marble and stone work, 2; millinery and lace goods, 1; mirrors, 1; mucilage and paste, 1; musical instruments and materials, not specified, 1; optical goods, 2; perfumery and cosmetics, 2; photolithographing and photoengraving, 1; plated and britannia ware, 1; plumbers' supplies, 2; printing materials, 1; refrigerators, 2; regalia and society banners and emblems, 2; safes and vaults, 1; scales and balances, 1; show cases, 1; steam fittings and heating apparatus, 1; steam packing, 2; stereotyping and electrotyping, 1; surgical appliances, 2; taxidermy, 1; tobacco, chewing, smoking, and snuff, 2; turpentine and rosin, 1; umbrellas and canes, 2; varnish, 1; vinegar and cider, 1; wirework, including wire rope and cable, 1; wood, preserving, 2; wood, turned and carved, 2.

## TOWNS UNDER 20,000 IN POPULATION: 1900.

2,506	\$922,249	58	\$16,258	12	\$1,467	\$441,789	\$27,488	\$58,283	\$200,893	\$65,780	\$5,778,593	\$5,634,849	\$143,744	\$7,981,730	1
300	110,398	1	400	1	57	95,917	2,654	4,714	88,549		406,588	387,078	19,460	748,401	2
714	173,014					112,816	1,008	27,880	83,938		8,547,337	3,499,163	48,174	4,015,904	3
600	264,256			4	688	138,813	1,816	13,507	58,602	65,388	910,399	895,297	45,102	1,485,737	4
892	374,581	57	15,858	7	722	94,243	22,460	12,132	59,809	342	894,819	858,311	31,008	1,731,688	5

# CENSUS BULLETIN.

No. 129.

WASHINGTON, D. C.

January 17, 1902.

## MANUFACTURES.

### COTTONSEED PRODUCTS.

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

SIR: I transmit herewith, for publication in bulletin form, a report on the manufacture of cottonseed products in the United States during the census year, prepared under my direction by Mr. Daniel C. Roper, of South Carolina, expert special agent.

In view of the comparatively brief history of the cottonseed oil manufacture, its remarkable growth, and the great economic possibilities arising from the increased utilization of its products, it has been decided that the industry deserves more detailed treatment than is given to manufacturing industries in general, or than it has heretofore received.

This report is a departure from the lines usually followed in other bulletins reporting manufacturing industries, being peculiar in that no data relating to capital, wage-earners, and wages, miscellaneous expenses, or any expense for materials other than the cost of the cottonseed, are included. It is, in short, intended as a complement of and supplement to previous bulletins on cotton ginning issued from this office.

As fully explained in the text, the statistics here presented pertain only to the manufacture of crude cottonseed oil and such by-products as oil-cake and meal, hulls, and linters. Therefore, the data should not be confused with those appearing under the classification, "oil, cottonseed and cake," in the general statistics of manufactures by states and for the United States, since the latter include not only the statistics for the manufacture of the crude products, but also those for the refining processes. As further ex-

plained, also, the reason for including only the statistics of materials and products is that in a large proportion of the establishments reporting both operations are carried on, and it has been found impossible to separate the statistics in regard to capital, wages, etc.

From the report it appears that there were 357 establishments engaged in the extraction of cottonseed oil in the United States, using 2,479,386 tons of cottonseed, costing \$28,632,616, an average cost of \$11.55 per ton. The total value of the products was \$42,411,835. The several products were as follows: Cottonseed oil, 93,325,729 gallons, valued at \$21,390,674, which makes the average 22.9 cents per gallon; oil-cake and meal, 884,391 tons, valued at \$16,030,576, an average of \$18.13 per ton; hulls, 1,169,286 tons, valued at \$3,189,354, an average of \$2.73 per ton; and linters, 57,272,053 pounds, valued at \$1,801,231, an average of 3.1 cents per pound.

As the quantity of seed crushed was only a part (53.1 per cent) of the quantity produced, statistics for both are presented, the latter being 4,668,346 tons, valued at \$54,345,677, and the former 2,479,386 tons, costing at the mills \$28,632,616. The available and the actual value of the crude manufactured products are \$80,371,375 and \$42,411,835, respectively. The estimated value of the lint cotton produced during the census year is \$338,836,921. There is also presented the combined value of the lint and seed produced, \$393,182,598, and the value of the entire cotton crop, including the value of the available crude manufactured products from the seed, \$419,208,296. In addition to this data, complete statements of averages and percentages of the seed and its products are shown.

For comparative purposes, a table of annual export of cottonseed oil from an early period in its manufacture to the present is presented.

The cottonseed-oil mills are usually located in close proximity to the ginneries, and the industry is constantly becoming of more vital importance to the cotton-growing communities of the South. It offers a new avenue of employment to the people, and affords increased opportunities for the profitable investment of surplus capital; it improves sanitary conditions by disposing of that which

was formerly considered waste material and was either allowed to rot on the earth or was dumped into streams, thus polluting water supplies.

Very respectfully,

A handwritten signature in cursive script, appearing to read "S. A. D. North".

*Chief Statistician for Manufactures.*

# COTTONSEED PRODUCTS.

By DANIEL C. ROPER, *Expert Special Agent.*

Reports have been received from 357 establishments engaged in the manufacture of cottonseed products during the census year ending May 31, 1900. These establishments are located in 15 different states and territories, but it is impossible to publish separate totals for 4 of these states without disclosing the operations of individual establishments. The statistics for these 4 states are therefore grouped under the head of "All other states" in

the tables of this report, and include establishments distributed as follows: Florida, 1; Kansas, 1; Missouri, 2; and Illinois, 1.

Table 1 shows by states and territories and for the United States the number of establishments, the quantity and cost of cottonseed crushed for oil extraction, and the quantity and value of each of the products, together with the total value of all products.

TABLE 1.—NUMBER OF ESTABLISHMENTS, QUANTITY, COST, AND AVERAGE COST PER TON OF COTTONSEED CRUSHED; AND QUANTITY, VALUE, AND AVERAGE VALUE PER UNIT OF PRODUCTS MANUFACTURED: 1900.

STATES AND TERRITORIES.	Number of establishments.	COTTONSEED.			PRODUCTS.			
		Tons.	Cost.	Average cost per ton.	Total value.	OIL.		
						Gallons.	Value.	Average value per gallon.
United States	357	2,479,386	\$28,632,616	\$11.55	\$42,411,835	93,325,729	\$21,390,674	Cents. 22.9
Alabama	27	172,093	2,019,085	11.73	2,952,254	6,704,951	1,520,834	22.7
Arkansas	20	190,015	2,245,710	11.82	3,188,812	7,224,971	1,644,465	22.8
Georgia	46	271,833	3,246,814	11.94	4,787,100	10,606,693	2,468,386	23.3
Indian Territory	6	26,415	297,939	11.28	446,078	981,885	207,251	22.2
Louisiana	21	250,983	2,833,767	11.29	4,397,891	9,692,640	2,222,762	22.9
Mississippi	41	394,678	4,577,995	11.60	6,671,031	15,039,565	3,364,278	22.4
North Carolina	20	107,660	1,318,663	12.20	1,880,015	4,388,277	979,637	22.3
Oklahoma	6	26,425	247,520	9.37	410,063	937,021	186,761	19.9
South Carolina	48	156,642	2,186,408	13.96	3,043,547	6,162,218	1,545,934	25.1
Tennessee	15	168,307	1,848,829	10.98	2,737,038	6,454,173	1,363,555	21.1
Texas	102	692,604	7,560,661	10.92	11,519,656	24,354,695	5,696,263	23.4
All other states <sup>1</sup>	5	21,731	254,225	11.70	378,350	884,640	190,518	22.8

STATES AND TERRITORIES.	PRODUCTS—continued.								
	Cake and meal.			Hulls.			Linters.		
	Tons.	Value.	Average value per ton.	Tons.	Value.	Average value per ton.	Pounds.	Value.	Average value per pound.
United States	884,391	\$16,030,576	\$18.13	1,169,286	\$3,189,354	\$2.73	57,272,053	\$1,801,231	Cents. 3.1
Alabama	60,889	1,076,150	17.82	80,167	217,925	2.72	4,331,016	137,345	3.2
Arkansas	65,459	1,142,102	17.45	90,688	248,770	2.74	4,613,519	153,475	3.3
Georgia	91,637	1,713,038	18.69	132,344	405,581	3.06	6,398,850	200,095	3.1
Indian Territory	9,185	182,807	19.90	13,074	32,972	2.52	678,975	23,048	3.4
Louisiana	91,348	1,715,424	18.78	114,446	287,650	2.51	6,133,661	172,055	2.8
Mississippi	141,529	2,618,405	18.50	185,060	394,791	2.14	9,199,737	291,557	3.2
North Carolina	36,088	678,973	18.81	52,139	145,923	2.80	2,149,996	75,477	3.5
Oklahoma	9,481	163,785	17.28	12,424	40,897	3.29	525,550	18,620	3.5
South Carolina	57,986	1,169,645	20.17	71,542	217,886	3.05	3,223,892	110,082	3.4
Tennessee	59,613	1,045,795	17.54	79,858	196,105	2.46	4,058,473	131,588	3.2
Texas	252,938	4,371,377	17.28	328,119	975,489	2.97	15,544,379	476,627	3.1
All other states <sup>1</sup>	8,693	153,075	17.61	9,480	23,360	2.48	419,025	11,367	2.7

<sup>1</sup> Includes establishments distributed as follows: Florida, 1; Kansas, 1; Missouri, 2; Illinois, 1.

The cost of the cottonseed crushed for oil extraction was \$28,632,616 and the values of the products were as follows: oil, \$21,390,674; cake and meal, \$16,030,576; hulls, \$3,189,354; linters, \$1,801,231—a total of \$42,411,835. The value of the seed was increased 48.1 per cent by the manufacture.

The refining of oil and the manufacture of fertilizers were conducted in connection with oil extraction by a

number of the establishments reported in Table 1, but this report does not cover any operation subsequent to the extraction of oil. Statistics of cottonseed oil refining are not included, both because such operations do not come within the proper scope of this report, and because it is impracticable to present statistics of the quantity of oil refined without danger of duplication, owing to the different stages of refinement in which the oil is pur-



chased by different mills. This report, moreover, does not show the capital, wages, and miscellaneous expenses of the establishments, for the reason that it has been impracticable to differentiate the capital, labor, and expenses covering the several industries included in the operations of these establishments so as to present such statistics for oil extraction only. In comparing the statistics of this report with the general statistics of manufacturing industries, it should be remembered that the classification "oil, cottonseed and cake," in the general statistics, includes, in addition to the industry covered by this report, the refining of cottonseed oil and some manufacturing of fertilizers. The value of products, as given in the general statistics, includes also the value of a considerable quantity of fertilizers manufactured at the oil mills by combining cottonseed meal with phosphate rock. The statistics of mills which crush cottonseed for use as a fertilizer without extracting oil are not included in this report, but are included in the general tables of manufactures under the classification "fertilizers."

Among the economic developments which have characterized the industrial progress of the United States during the past quarter of a century, none has attracted more attention and brought about more desirable results than the manufacture of cottonseed products. Prior to 1860, the disposal of cottonseed gave the ginner and the community great concern. The seed was usually hauled to a remote place to rot, or dumped into some convenient stream of running water. With the growth of population and increase in cotton culture, this careless method of disposal often became a great nuisance. In this connection, the following extract from one of the laws of Mississippi is interesting history:

"ARTICLE 18. Every owner or proprietor of any cotton gin erected within half a mile of any city, town, or village, is hereby required to remove or destroy all cottonseed which may fall from such gin, so that the same shall not prejudice the health of the

inhabitants of such city, town, or village, and every person being an owner or proprietor of a cotton gin situate as aforesaid, who shall neglect or refuse to remove or destroy the cottonseed in and about such gin, having received five days' notice, shall forfeit and pay the sum of \$20 for every day he or she shall neglect or refuse to remove or destroy the cottonseed as aforesaid, to be recovered by warrant in the name of the state before any justice of the peace of the proper county for the use and benefit of said county.

"ARTICLE 19. No person who shall be the owner or proprietor of any cotton gin shall be authorized to throw or permit to be thrown the cottonseed from such gin into any river, creek, or other stream of water which may be used by the inhabitants for drinking or fishing therein; and any person offending herein shall forfeit and pay for every such offense the sum of \$200 to be recovered in any court of competent jurisdiction, by action of debt or information in the name of any person who will sue for the same, one moiety thereof to such person and the other moiety to the county in which the offense is committed."

The low commercial rating of cottonseed so vividly indicated in this law was current in many localities until the introduction of the intensive system of cotton farming, which is practically coeval with the introduction of the cottonseed-oil mill; although, in localities where the soil required replenishing, a few thrifty farmers early began the use of the seed as a fertilizer. It was discovered that through the manipulations of the oil mill all of the value of the seed as a fertilizer was retained, and at the same time it was, through its by-products, made to contribute marvelously to the general economy of wealth. The result is that from a product that was deemed a nuisance in 1857 there was produced in 1900 a value of \$42,411,835, and only 53.1 per cent of the available raw material was utilized.

Table 2 shows by states and territories and for the United States the number of establishments, the average consumption of cottonseed per establishment, the average quantity and value of the several products manufactured from 1 ton of seed, and the per cent that each is of the total weight and value.

<sup>1</sup> Revised Code of Mississippi: 1857, page 207.

TABLE 2.—NUMBER OF ESTABLISHMENTS, AVERAGE CONSUMPTION OF SEED, AVERAGE PRODUCTION PER TON OF SEED, AND PER CENT OF EACH TO TOTAL.

STATES AND TERRITORIES.	Number of establishments.	Average consumption of seed per establishment.	PRODUCTS.							
			Average per ton of seed.							
			Quantity.					Value.		
			Oil.	Cake and meal.	Hulls.	Linters.	Waste.	Total.	Oil.	Cake and meal.
United States -----	357	Tons. 6,945	Gallons. 37.6	Pounds. 718	Pounds. 943	Pounds. 23	Pounds. 39	\$17.11	\$8.63	\$6.46
Alabama -----	27	6,374	39.0	702	932	25	48	17.15	8.84	6.25
Arkansas -----	20	9,501	38.0	689	954	24	48	16.78	8.65	6.01
Georgia -----	46	5,909	39.0	674	974	24	85	17.61	9.08	6.30
Indian Territory -----	6	4,403	35.3	695	990	26	24	16.39	7.85	6.92
Louisiana -----	21	11,952	38.6	728	912	24	46	17.52	8.86	6.83
Mississippi -----	41	9,626	38.1	717	988	23	37	16.90	8.52	6.63
North Carolina -----	20	5,333	40.8	670	969	20	36	17.46	9.10	6.31
Oklahoma -----	6	4,404	35.5	718	940	20	56	16.52	7.07	6.20
South Carolina -----	48	3,263	39.3	740	913	21	31	19.43	9.87	7.47
Tennessee -----	15	11,220	38.4	708	919	24	31	16.26	8.10	6.21
Texas -----	102	6,790	35.2	731	917	22	36	16.63	8.22	6.81
All other states <sup>1</sup> -----	5	4,346	38.4	800	868	19	25	17.41	8.77	7.04

<sup>1</sup> Includes establishments distributed as follows: Florida, 1; Kansas, 1; Missouri, 2; Illinois, 1.

TABLE 2.—NUMBER OF ESTABLISHMENTS, AVERAGE CONSUMPTION OF SEED, AVERAGE PRODUCTION PER TON OF SEED, AND PER CENT OF EACH TO TOTAL—Continued.

STATES AND TERRITORIES.	PRODUCTS—continued.									
	Average per ton of seed—Continued.		Per cent of each to total.							
	Value—Continued.		Weight.					Value.		
	Hulls.	Linters.	Oil. <sup>1</sup>	Cake and meal.	Hulls.	Linters.	Waste.	Oil.	Cake and meal.	Hulls. Linters.
United States -----	\$1.29	\$0.73	14.1	35.7	47.2	1.2	2.0	50.4	37.9	7.5 4.2
Alabama -----	1.26	0.80	14.6	35.1	46.6	1.3	2.4	51.5	36.4	7.4 4.7
Arkansas -----	1.31	0.81	14.3	34.4	47.7	1.2	2.4	51.6	35.8	7.8 4.7
Georgia -----	1.49	0.74	14.6	33.7	48.7	1.2	1.8	51.6	35.8	8.4 4.2
Indian Territory -----	1.25	0.87	13.2	34.8	49.6	1.3	1.2	46.4	41.0	7.4 5.2
Louisiana -----	1.14	0.69	14.5	36.4	45.6	1.2	2.3	50.5	39.1	6.6 3.8
Mississippi -----	1.01	0.74	14.3	35.9	46.9	1.2	1.9	50.4	39.3	6.9 4.4
North Carolina -----	1.35	0.70	15.2	33.5	48.5	1.0	1.8	52.0	36.2	7.8 4.0
Oklahoma -----	1.55	0.70	13.3	35.9	47.0	1.0	2.8	45.5	40.0	10.0 4.5
South Carolina -----	1.39	0.70	14.7	37.0	45.7	1.1	1.6	50.7	38.4	7.2 3.7
Tennessee -----	1.17	0.78	14.4	35.4	47.5	1.2	1.6	49.9	38.2	7.2 4.7
Texas -----	1.41	0.69	13.2	36.6	47.4	1.1	1.8	49.5	38.0	8.4 4.1
All other states <sup>2</sup> -----	1.08	0.52	14.4	40.0	43.4	1.0	1.3	50.3	40.5	6.2 2.9

<sup>1</sup> Estimated on the basis of 7.5 pounds per gallon.

<sup>2</sup> Includes establishments distributed as follows: Florida, 1; Kansas, 1; Missouri, 2; Illinois, 1.

At the census of 1870 but 26 cottonseed-oil mills were reported. The number increased to 45 in 1880; 119 in 1890; and 357 in 1900; an increase of 73.1 per cent between 1870 and 1880; 164.4 per cent between 1880 and 1890; and 200 per cent between 1890 and 1900. But it should be noted that the censuses prior to 1900 included all establishments engaged in refining cottonseed oil, while, as previously explained, this report includes only such establishments as are engaged in extracting the oil; accordingly, the figures given above are probably not quite correct as regards the increase between 1890 and 1900.

The general average consumption of seed per establish-

ment for the season covered by the census year was 6,945 tons.

Table 2 shows the average quantity of products per ton of seed for the United States in 1900, as follows: Crude oil, 37.6 gallons (equivalent to 282 pounds); cake and meal, 713 pounds; hulls, 943 pounds; linters, 23 pounds; and waste, 39 pounds.

Table 3 is a statement of the number of gallons of cottonseed oil exported from 1870 to 1901, inclusive, together with the total value and the average value per gallon.

TABLE 3.—EXPORTS OF COTTONSEED OIL, 1870 TO 1901.<sup>1</sup>

YEAR.	Gallons.	Value. <sup>2</sup>	Average value per gallon.	YEAR.	Gallons.	Value. <sup>2</sup>	Average value per gallon.
			Cents.				Cents.
1870 -----	( <sup>3</sup> )	\$14,946		1886 -----	6,240,189	\$2,115,974	33.9
1871 -----	( <sup>3</sup> )	140,577		1887 -----	4,067,133	1,578,935	38.5
1872 -----	547,165	293,546	53.6	1888 -----	4,468,597	1,925,739	43.2
1873 -----	709,576	370,506	52.2	1889 -----	2,690,700	1,298,609	48.3
1874 -----	782,067	372,827	47.7	1890 -----	13,384,385	5,291,178	39.5
1875 -----	417,387	216,640	51.9	1891 -----	11,003,100	3,975,305	36.1
1876 -----	281,054	146,185	52.0	1892 -----	13,863,278	4,982,235	36.0
1877 -----	1,705,422	842,218	49.4	1893 -----	9,462,074	3,927,556	41.5
1878 -----	4,992,349	2,514,323	50.4	1894 -----	14,958,309	6,008,405	40.2
1879 -----	5,352,530	2,232,880	41.7	1895 -----	21,187,728	6,513,313	32.2
1880 -----	6,997,796	3,225,414	46.1	1896 -----	19,445,848	5,476,510	28.2
1881 -----	3,444,084	1,465,255	42.5	1897 -----	27,138,882	6,897,361	25.0
1882 -----	713,549	330,260	46.3	1898 -----	40,230,784	10,137,619	25.2
1883 -----	415,611	216,779	52.1	1899 -----	50,627,219	12,077,519	23.9
1884 -----	3,605,946	1,570,671	43.6	1900 -----	46,902,390	14,127,938	30.1
1885 -----	6,364,279	2,614,592	41.1	1901 -----	49,866,741	16,541,321	33.5

<sup>1</sup> Commerce and Navigation of the United States.

<sup>2</sup> The value of cottonseed oil, at the time of exportation, in the ports of the United States whence exported.

<sup>3</sup> Quantity not stated.

The first cottonseed-oil mill in the United States was erected at Natchez, Miss., in 1834, but the industry did not acquire commercial importance until after the Civil War. In fact, the history of the industry prior to 1870 records more failure than success. The quantity of cottonseed crushed, and the resulting products, were not reported prior to the present census. It is, therefore, impossible to

trace the growth of this industry statistically, except in so far as it is indicated by the exports which are presented in Table 3. In the earlier years of its manufacture, cottonseed oil was almost entirely exported to foreign countries, and export figures for those years, therefore, represent very nearly the production of the country. The export of cottonseed oil in 1872 was 547,165 gallons, and it is estimated

approximately 3 per cent of the cottonseed produced ... that year was required for the production of this quantity of oil. The export in 1880 was 6,997,796 gallons, and represented a consumption of 20 per cent of the seed produced in that year. It would not be safe to estimate on this basis for 1890, as by that time the home consumption of cottonseed oil had become an important factor. The export of cottonseed oil in 1900 was 46,902,390 gallons, which constituted 50.2 per cent of the total production for that year.

Table 3 further shows that in 1872 and 1899 cottonseed oil reached its maximum and minimum prices, commanding in the former year 53.6 cents, and in the latter 23.9 cents per gallon in the ports from which it was exported. The low price in 1879 was due to the large quantities of

oil obtained from the seed crops of 1878 and 1879. The increase in the production from 281,054 gallons in 1876 to 5,852,530 gallons in 1879 was much in excess of the supply required for the limited field in which it was then utilized. About this time, however, it was discovered that cottonseed oil could be advantageously combined with beef fat to make a substitute for lard. Then followed the further discoveries that this oil could be utilized in packing American sardines and, in combination with other substances, in making artificial butter. This increased the demand and gave a permanent stimulus to the industry.

Table 4 is a statement of the quantity and value of cottonseed oil exported to each country.

TABLE 4.—DESTINATIONS OF COTTONSEED OIL EXPORTED DURING THE YEAR ENDING JUNE 30, 1900.<sup>1</sup>

COUNTRIES.	COTTONSEED OIL.		COUNTRIES.	COTTONSEED OIL.	
	Gallons.	Value.		Gallons.	Value.
Total	46,902,390	\$14,127,588			
<i>Europe.</i>			<i>North America—Continued.</i>		
Austria-Hungary	4,824,560	1,448,571	West Indies—Continued.		
Belgium	1,914,502	591,747	Dutch	1,410	\$461
Denmark	487,885	143,779	French	475,503	161,119
France	13,595,564	4,076,067	Haiti	431	200
Germany	4,256,573	1,330,240	Porto Rico	15,355	6,639
Gibraltar	11,250	4,000	Santo Domingo	127,669	54,798
Italy	2,660,276	874,758	<i>South America.</i>		
Malta, Gozo, etc.	110,187	86,801	Argentina	135,739	55,621
Netherlands	9,411,170	2,736,774	Brazil	766,842	284,936
Russia, Black Sea	120	40	Chile	61,081	24,889
Sweden and Norway	204,519	56,718	Colombia	11,821	4,546
United Kingdom	1,585,436	492,100	Ecuador	3,261	1,344
<i>North America.</i>			Guiana:		
Bermuda	30	13	British	75,234	26,177
British Honduras	199	74	Dutch	53	22
Dominion of Canada:			French	5,200	1,957
Nova Scotia, New Brunswick, etc.	1,603	596	Peru	57	17
Quebec, Ontario, Manitoba, etc.	370,392	113,756	Uruguay	213,504	84,066
British Columbia	22	17	Venezuela	134	55
Newfoundland and Labrador	30,874	11,641	<i>Asia.</i>		
Central American states:			Japan	7,393	2,366
Costa Rica	1,996	861	Turkey in Asia	7,753	2,341
Guatemala	303	112	<i>Oceania.</i>		
Honduras	1,773	591	British Australasia	89,357	32,610
Nicaragua	5,855	2,148	<i>Africa.</i>		
Salvador	6,743	3,267	British Africa	27,244	7,718
Mexico	4,134,679	1,021,613	French Africa	611,202	193,299
West Indies:			Portuguese Africa	1,310	423
British	269,759	85,640	Turkey in Africa—Egypt	240,928	83,305
Cuba	123,961	33,135	All other Africa	6,250	2,600
Danish	7,418	2,530			

<sup>1</sup> Commerce and Navigation of the United States, 1900.

Table 4 shows that Europe received 39,061,992 gallons, or 83.3 per cent of the quantity of cottonseed oil exported in 1900. France received 13,595,564 gallons, which was 34.8 per cent of the European consignment and 29 per cent of the total exported. The Netherlands received 9,411,170 gallons, which was 24.1 per cent of the European consignment and 20.1 per cent of the total quantity exported.

The better grades of oil are exported to the Netherlands, where they are made into artificial butter, while the inferior grades are sent to France for use in making soap.

Table 5 is a summary, by states and for the United States, of the value of the lint cotton produced during the census year; the quantity and actual value of the seed, and the value it would have if crushed for oil; the quantity and cost of seed actually crushed, and the value of its products; the actual value of the cotton crop, and the value it would have if all the seed were crushed; the percentages that the value of the seed and the potential value of its products are of the value of the crop, and that the seed crushed is of the entire quantity produced; and the percentage of the increase in value by manufacture.

TABLE 5.—COMPARATIVE SUMMARY OF THE QUANTITY AND VALUE OF THE COTTON AND COTTONSEED PRODUCED IN 1899, AND RELATIVE VALUE TO TOTAL CROP OF MANUFACTURED AND UNMANUFACTURED SEED.

STATES AND TERRITORIES.	Value of lint cotton.	SEED PRODUCED.			SEED CRUSHED.		
		Quantity.	Value.	Potential value if crushed for oil.	Quantity.	Cost to the mills.	Value of crude products.
		Tons.			Tons.		
United States	\$338,836,921	4,668,346	\$54,845,677	\$80,371,375	2,479,336	\$28,632,616	\$42,411,835
Alabama	38,826,694	539,260	6,325,520	9,248,309	172,093	2,019,085	2,952,251
Arkansas	25,401,005	352,792	4,170,001	5,919,350	190,015	2,245,710	3,188,812
Georgia	45,958,082	615,530	7,349,428	10,899,483	271,833	3,246,814	4,787,100
Indian Territory	5,169,876	71,894	809,949	1,212,770	26,415	297,939	446,078
Louisiana	25,212,686	350,176	3,958,487	6,135,084	250,983	2,838,767	4,397,891
Mississippi	44,556,009	618,833	7,184,651	10,458,278	394,678	4,577,995	6,671,031
North Carolina	15,854,380	220,200	2,609,370	3,844,692	107,660	1,313,663	1,880,015
Oklahoma	2,591,384	35,991	337,236	558,580	26,425	247,520	410,063
South Carolina	30,341,895	418,553	5,843,000	8,132,485	156,642	2,186,408	3,043,547
Tennessee	7,619,073	105,820	1,161,904	1,720,638	103,307	1,848,829	2,737,038
Texas	93,921,632	1,304,509	14,193,038	21,693,985	692,604	7,560,661	11,519,656
All other states <sup>2</sup>	3,381,205	34,878	408,073	607,226	21,781	254,225	378,350

STATES AND TERRITORIES.	VALUE OF COTTON CROP.		PER CENT.			
	Value of lint cotton and seed.	Potential value if all seed were crushed.	Value of seed produced to value of cotton crop.	Potential value of seed if crushed to value of cotton crop.	Quantity of seed crushed to quantity produced.	Increase in value of seed by manufacture.
United States	\$393,182,598	\$419,208,296	13.8	20.4	53.1	48.1
Alabama	45,152,214	48,075,003	14.0	20.5	31.9	46.2
Arkansas	29,371,006	31,320,855	14.1	20.0	53.9	42.0
Georgia	59,307,510	56,797,565	13.8	20.3	44.2	47.4
Indian Territory	5,979,825	6,382,646	13.5	20.3	36.8	40.7
Louisiana	29,166,178	31,347,770	13.6	21.0	71.7	55.2
Mississippi	51,740,660	55,014,287	13.9	20.2	63.8	45.7
North Carolina	13,469,750	19,699,072	14.1	20.8	48.9	43.1
Oklahoma	2,328,620	3,149,964	11.5	19.1	73.4	65.7
South Carolina	36,184,895	38,474,380	16.1	22.5	37.4	39.2
Tennessee	8,780,977	9,899,706	13.2	19.6	159.1	48.0
Texas	108,117,630	115,618,617	13.1	20.1	59.0	52.4
All other states <sup>2</sup>	3,789,278	3,986,431	10.8	16.0	62.3	48.8

<sup>1</sup> Does not include \$313,232, the value of the cotton product of Kentucky and Virginia, there being no oil mills reported from those states.

<sup>2</sup> Includes the statistics reported by establishments distributed as follows: Florida, 1; Kansas, 1; Missouri, 2; Illinois, 1.

It is not to be assumed that the statistics of cotton and seed production, and the percentages derived from them, presented in the foregoing table, under "All other states," apply to Illinois, there being no cotton grown in that state.

In ascertaining the value of the cotton crop of 1899, the quantities of cotton produced, as reported in Census Bulletin No. 58, on cotton ginning, have been multiplied by the average price per pound, or 7.2 cents for upland and 14.4 cents for sea-island cotton, as given in "The Cotton Crop of 1899-1900," issued by the United States Department of Agriculture.

The quantity of seed produced has been ascertained as previously explained, and the value by multiplying the total quantity produced by the average price paid for that portion of the seed which was used by the cottonseed-oil mills. The values of the lint and seed constitute the total value of the cotton crop.

From Table 5 it will be seen that more seed was crushed in Tennessee than was produced in that state. This was due to the fact that several large cottonseed-oil mills located in Memphis used seed produced in Mississippi and Arkansas. Of the seed produced in the state, in each case, Alabama crushed 31.9 per cent; Arkansas, 53.9; Georgia, 44.2; Indian Territory, 36.8; Louisiana, 71.7; Mississippi, 63.8; North Carolina, 48.9; Oklahoma, 73.4; South Caro-

lina, 37.4; and Texas, 53. Of the total amount of seed produced in the United States, 53.1 per cent was used by the oil mills.

Table 5 shows also that the value of the seed was increased 48.1 per cent by the manufacture. The value of the entire seed crop, as shown by the table, was \$54,845,677, or 13.8 per cent of the total value of the cotton crop, including the value of the seed, while the value of the products from the manufacture of all the seed produced would have been \$80,371,375, or 20.4 per cent of the total value of the cotton crop. The value of the total seed crop to the farmers is represented by the former figure. The products obtained from the manufacture of 53.1 per cent of the seed crop were valued by the mills at \$42,411,835. The economic value produced by crushing this seed was \$13,779,219, and had the entire production of seed been crushed, \$26,025,698 would have been added to the general economy of wealth. These values would be materially increased by including the value of the meal after it has been converted into fertilizers and the value of oil after it has been carried through its various channels of refinement.

Table 6 is a statement of the quantity and value of the several crude products obtainable from one ton of cottonseed.

TABLE 6.—CRUDE PRODUCTS PER TON OF COTTON-SEED.

PRODUCTS.	Quantity.		Value.	
	Pounds. 2,000	Per cent. 100.0	Dollars. 17.09	Per cent. 100.0
Total.....				
Oil.....	282	14.1	8.61	50.4
Cake and meal.....	718	35.7	6.48	37.9
Hulls.....	943	47.1	1.29	7.5
Linters.....	23	1.1	0.71	4.2
Waste.....	89	2.0		

Considering the average value of a ton of cottonseed as \$11.55, the increase in value by its manufacture, as revealed by the above table, is \$5.54.

**WASTE.**—Upon reaching the oil mill the seed is screened for the purpose of removing sand, bolls, leaves, and sticks. The quantity of these foreign particles varies in different localities, according to the care used in picking and the natural condition of the seed, which is itself variable with soils and seasons. Seed produced on light soil often carries considerable sand. The average waste in screening, for the United States, as shown in Table 1, was 39 pounds per ton, leaving for the further processes 1,961 pounds for each 2,000 pounds of seed entering the mill.

**LINTERS.**—More or less short lint, called "linters," adheres to the seed as it comes from the gin, according to the character of the machinery used and the variety of seed. Sea-island cottonseed is entirely freed from lint by the first ginning, and is, therefore, not reginned at the oil mill before being crushed for oil extraction. Upland cottonseed varies in the quantity of lint which remains after the first ginning, some carrying considerable lint, while other seed approaches very closely to the condition of the sea-island variety. Table 2 shows that the quantity of lint secured by the oil mills from the necessary reginning of the seed varied from 19 to 26 pounds per ton, and that the average for the United States was 23 pounds per ton. This short lint was sold at an average price of 3.1 cents per pound. The total quantity obtained was 57,272,053 pounds, valued at \$1,801,231.

**HULLS.**—From the delinting machinery the seed passes to the grinders, where it is cut into pieces, then to a revolving screen so constructed that the meats fall through its meshes and the hulls roll out as tailings, while supplementary shakers make the separation of the meats and hulls complete.

In the beginning of the industry, hulls were often used as fuel in the engines, the ashes being utilized as a fertilizer. This custom, however, has largely been abandoned since the discovery of better uses for the hulls. These hulls are beginning to contribute largely to the wealth of the country. Paper stock made from them has already attracted attention, and one or two plants have recently been erected for this manufacture.

Cattle feeding is, however, by far the most useful purpose to which these hulls have yet been applied and this use of the product is one which must greatly increase. A mixture of ground hulls and cottonseed meal makes one of the best feeds known to the stock-raising and dairy industries. The proportions employed are about five parts hulls to one of meal in weight. "Two and a half million tons of hulls will fatten for market an equal number of heavy beef cattle or maintain that number of dairy cattle."<sup>1</sup> The possession of this seed, with all the essential elements of animal food which it contains, may enable the South to compete with the Northwest in producing the meat supply of the country. The quantity of hulls secured from the seed crushed in 1900 was 1,169,286 tons.

**MEAL AND CAKE.**—Stripped of lint and hulls, the cottonseed meats or kernels are heated and subjected to hydraulic pressure to extract the oil. The compact residue, known as cake, was formerly used in this condition for cattle feed, and formed a large percentage of the cottonseed products exported. The plan of mixing hulls and meal as a feed and the use of meal as a fertilizer has brought about the present almost universal plan of grinding the cake into meal both for domestic uses and foreign export. Indeed, the prevailing use of this meal is that of a fertilizer. It either goes directly into this channel in its original state or becomes an important element in the manufacture of commercial fertilizers. The demand for meal as a cattle feed is rapidly increasing in states west of the Mississippi River.

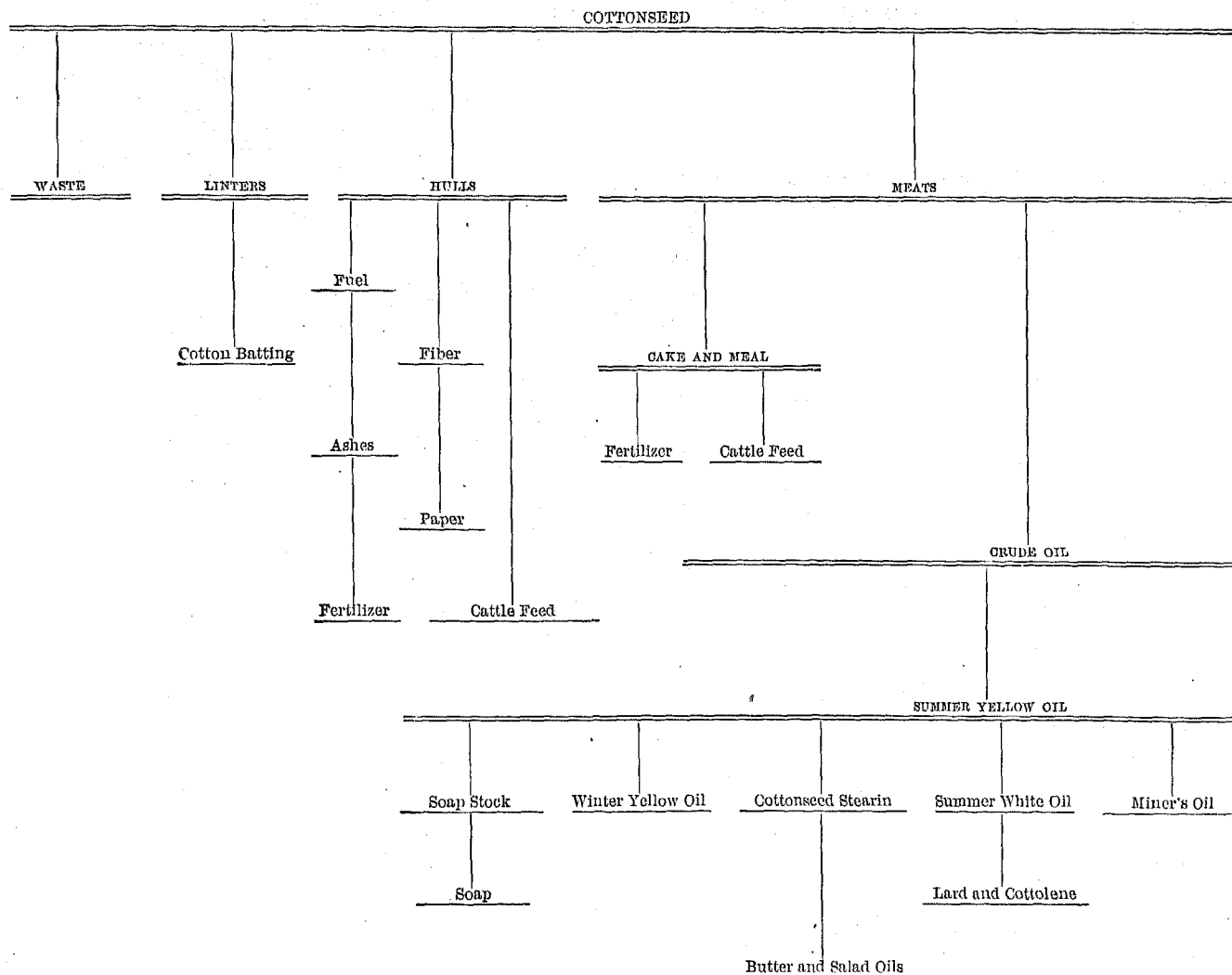
**OIL.**—The most valuable and by far the most interesting product of cottonseed is oil. The quantity obtainable from a ton of seed varies with the natural condition of the seed, the manner in which it is cared for, and the character of the machinery by which it is treated. Among the reports made to the Census Office a range of from twenty-five to fifty gallons per ton is given; for the United States, as shown in Table 2, there was an average of 37.6 gallons per ton. Actual analysis shows a proportion of somewhat more than fifty gallons of oil per ton of seed, and it would appear that through improved machinery this maximum quantity is rapidly being attained.

In the beginning of the industry cottonseed oil was looked upon only as an adulterant and was used principally in Holland, Italy, and France. This source of demand still exists, but the oil is rapidly gaining ground upon its own merits. Its edibility is the basis of its value, and when it falls below the standard in this particular it must command lower prices.

The several products that may be derived from a given quantity of cottonseed are presented in the following diagram:

<sup>1</sup> Cotton and Cotton Oil, by D. A. Tompkins.

DIAGRAM SHOWING PRODUCTS OBTAINABLE FROM COTTONSEED.



The above diagram illustrates the history of a given quantity of cottonseed from the time it reaches the oil mill until it is separated into products, such as fertilizers, lint, cattle feed, paper stock, and oils adapted to various uses.

As appears from this diagram, the oil resulting from the first refining process is known in commerce as "summer yellow oil" and is classed by the trade as "prime" when it is entirely free from water, sediment, and alkali.

The next step is to get what is called "winter yellow oil," obtained by chilling the "summer yellow oil" until it is partially crystallized and by separating the stearin in presses. This latter product is utilized in making "butter and salad oils," and candles.

"Summer yellow oil," thoroughly mixed with two to three per cent of fuller's earth and filtered, yields the next grade of oil, which is known in commerce as "summer white oil," from which is obtained "compound" lard and cottolene.

"Miner's oil" is a white oil secured from the "summer yellow oil" by the use of sulphuric acid, and is mixed with petroleum for use in miners' lamps.

Soap stock is the residue obtained from the refining

processes. It contains from 50 to 60 per cent of fatty acids and is used in making soaps. Mixed with other greases, this stock makes one of the finest grades of laundry soap. It is also utilized in making cylinders for phonographs.

Experiments with cottonseed oil as an adulterant of linseed oil for paints and for lubricants have not been attended with much success. In the case of linseed oil, this is due to the failure to supply the necessary drying qualities. As a lubricant it has been excluded on account of its gummy nature, except for the most ordinary purposes. Some success has attended experiments for the removal of the gum and its use as a substitute for rubber, leaving the oil capable of use as a lubricant.

Prejudice against the use of cottonseed oil in the preparation of foods is gradually growing less, a fact vividly illustrated by the following excerpt:

"If the outsider does not know that olive oil has a legitimate and a strong competitor in cotton oil, the olive grower knows it. He knows it as a hard commercial fact, as the truth has been driven right into his pocketbook.

"France is really the home of the olive grove. In southern France the farmers are disposed to abandon the cultivation of olive groves," writes Consul Skinner, from Marseilles, 'because of

low and unsatisfactory prices.' After a careful investigation of the field our consul makes the following startling statements as to olive oil and the European taste for it:

"It is doubtful if olive oil will ever recover its old-time place, as many vegetable oils, notably American cottonseed oil, are being produced in increased quantities from year to year, and are gaining in the estimation of the public.

"Pure olive oil for edible purposes is at present practically unknown in any important market, and if it were offered for sale it is doubtful whether it would be accepted by the public, except as an inferior article, as the average consumer at the present time prefers the neutralized taste of a mixture of the olive and vegetable oils, and would mistake the fruity flavor of the pure juice of the olive for an adulterated product.'

"If the producers of olive oil have really recognized the superior merits of cotton oil, why should we be so particular about the oil of olives? This transition of taste and gravitation of trade from the olive to the cotton product doubtless led France to her recent extraordinary legislation in favor of French makes of cotton oil for blending purposes."<sup>1</sup>

<sup>1</sup> The National Provisioner, August 18, 1900.

In some localities competition for seed among the mills is already affecting the percentage of profit of mills operated only for crude products. As the total quantity of seed crushed approaches the quantity available, the cost of the seed will tend to increase and to cause the equipment of more oil refineries in connection with the oil mills in order to secure for their products all that the market will permit. The advantage of small refineries in connection with the cottonseed-oil plants is illustrated by the following comparison:<sup>2</sup>

<i>Crude products only.</i>		<i>Crude and refined products.</i>	
Cost of seed.....	\$12.00	Cost of seed.....	\$12.00
Cost of operation.....	3.00	Cost of operation.....	20.00
Total cost.....	15.00	Total cost.....	32.00
Value of products, crude oil, meal, hulls, and lint.....	18.00	Value of products, butter oil, salad oil, compound lard, butterine, beef.....	40.00
Profit.....	3.00	Profit.....	8.00

<sup>2</sup> Cotton and Cotton Oil, by D. A. Tompkins.

Twelfth Census of the United States.

# CENSUS BULLETIN.

No. 130.

WASHINGTON, D. C.

January 20, 1902.

## MANUFACTURES.

### NORTH CAROLINA.

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

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

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

There were 15 cities and towns in the state withdrawn from the enumerators and their manufacturing statistics collected by special agents, in accordance with the further provision of section 7 of the census act. Wherever the phrase "urban manufactures" is used in this bulletin, it applies only to those cities and towns which were withdrawn from the enumerators and committed to special agents, and only to manufacturing establishments within the corporate limits of such places.

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

Mr. B. R. Lacy, treasurer of the state of North Carolina,  
CP 15M

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

The statistics of North Carolina are presented in 9 tables: Table 1 showing comparative figures for the state at the several censuses; Table 2 showing all the industries of the state divided between hand trades and the manufactures proper, and also the statistics of 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 10 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the city of Wilmington 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 city of Wilmington by specified industries; and Table 9 showing the totals for all industries in each of the cities and towns withdrawn from the enumerators (exclusive of the city of Wilmington).

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

In drafting the schedules of inquiry for the census of 1900 care was taken to preserve the basis of comparison with prior censuses. Comparison may be made safely with respect to all the items of inquiry except those relating to capital, salaried officials, clerks, etc., and their salaries,



the average number of employees, and the total amount of wages paid. Live capital, that is, cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries, was first called for at the census of 1890. No definite attempt was made, prior to the census of 1890, to secure a return of live capital invested.

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

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

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

In some instances, the number of proprietors and firm members, shown in the accompanying tables, falls short of the number of establishments reported. This is accounted for by the fact that no proprietors or firm members are reported for corporations or cooperative establishments. The number of salaried officials, clerks, etc., is the greatest number reported employed at any one time during the year. For the cotton-ginning industry, this number may appear excessive as compared with the amount of salaries paid; but allowance should be made for the fact that a 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 \$76,503,894 invested in manufactures and mechanical industries in the 7,226 establishments reporting for the state of North Carolina. This sum represents the value of land, buildings, machinery, tools, and implements, and the live capital utilized, but does not include the capital stock of any of the manufacturing corporations of the state. The value of the products is returned at \$94,919,663, to produce which involved an outlay of \$2,434,621 for salaries of officials, clerks, etc.; \$13,868,430 for wages; \$9,118,637 for miscellaneous expenses, including rent, taxes, etc.; and \$53,072,388 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 North Carolina, \$94,919,663, 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 North Carolina, the gross value of products for 1900 was \$94,919,663. The value of materials purchased in a partly manufactured form was \$20,344,508. The difference, \$74,575,155, 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.*

# NORTH CAROLINA.

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

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

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

	DATE OF CENSUS.						PER CENT OF INCREASE.				
	1900	1890	1880	1870	1860	1850	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860
Number of establishments	7,226	3,667	3,802	3,642	3,689	2,663	97.1	18.6	4.4	11.8	38.5
Capital	\$76,508,894	\$32,745,995	\$13,045,639	\$3,140,473	\$9,693,703	\$7,456,860	132.6	151.0	60.3	116.0	30.0
Salaries of officials, clerks, etc., number	3,001	2,589	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	15.9				
Salaries	\$2,434,621	\$1,278,415	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	90.4				
Wage-earners, average number	70,570	33,625	18,109	13,622	14,217	14,601	103.9	85.7	32.9	14.2	12.6
Total wages	\$13,868,430	\$6,552,121	\$2,740,768	\$2,195,711	\$2,689,441	\$2,383,456	111.7	139.1	24.8	118.4	12.8
Men, 16 years and over	44,549	22,665	12,818	11,339	12,102	12,473	96.6	76.8	13.0	16.3	13.0
Wages	\$10,477,765	\$5,260,422	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	99.2				
Women, 16 years and over	15,644	6,227	2,939	1,422	2,115	2,128	151.2	111.9	106.7	132.8	10.6
Wages	\$2,394,417	\$908,857	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	163.5				
Children, under 16 years	10,377	4,733	2,352	861	( <sup>3</sup> )	( <sup>3</sup> )	119.2	101.2	173.2		
Wages	\$996,248	\$382,842	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	160.2				
Miscellaneous expenses	\$9,118,637	\$3,329,101	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	173.9				
Cost of materials used	\$53,072,388	\$22,789,187	\$13,090,937	\$12,824,603	\$10,203,228	\$4,602,501	132.0	74.1	2.1	25.7	121.7
Value of products, including custom work and repairing	\$94,919,663	\$40,375,450	\$20,095,037	\$19,021,327	\$16,678,698	\$9,111,050	135.1	100.9	5.6	14.0	83.1
Total population	1,893,810	1,617,947	1,399,750	1,071,361	992,622	869,039	17.1	15.6	30.7	7.9	14.2
Wage-earners engaged in manufactures	70,570	33,625	18,109	13,622	14,217	14,601	109.9	85.7	32.9	14.2	12.6
Per cent of total population	3.7	2.1	1.3	1.3	1.4	1.7					
Assessed value of real estate	\$165,968,278	\$142,068,332	\$101,709,326	\$83,322,012	\$116,366,573	\$71,702,740	16.8	39.7	22.1	128.4	62.3
Value of land and buildings invested in manufactures <sup>5</sup>	\$19,291,964	\$8,668,264	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	122.7				
Per cent of assessed value	11.6	6.1									

<sup>1</sup> Decrease.

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

<sup>3</sup> Not reported separately.

<sup>4</sup> Not reported.

<sup>5</sup> As given for the year 1900 in Dana's supplement, "State and City," to the Commercial and Financial Chronicle, under date of April 13, 1901.

<sup>6</sup> Does not include value of rented property.

Although North Carolina is an agricultural state, Table 1 shows that there has been a large growth in its manufacturing and mechanical industries during the half century. The population during these years increased from 869,039 to 1,893,810, or 117.9 per cent, while the average number of wage-earners employed in manufacturing establishments increased from 14,601 to 70,570, or 383.3 per cent, embracing, in 1900, 3.7 per cent of the entire population, compared with 1.7 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 93,325, or 4.9 per cent of the total population of the state. Both the greatest percentage of increase and the greatest absolute increase in the value of products are shown for the decade ending with 1900.

North Carolina has waterpower estimated at 3,500,000 horsepower, of which, at present, only 639,000 is available, according to a calculation by the late W. C. Kerr, state

geologist. When the electrical transmission of energy becomes more general in the state, a much greater proportion of this power can be profitably applied to manufactures. Table 1 shows that during the last decade the number of men among the wage-earners increased 96.6 per cent, while the number of women increased 151.2 per cent, and the number of children, 119.2 per cent. Steps have already been taken to check the increase of child labor shown by these figures. In the absence of legislation, nearly all the mill owners have agreed to discontinue the employment of children under 12 years of age.

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 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	12,210	\$78,290,034	13,988	74,976	\$13,974,225	\$9,175,717	\$58,530,990	\$30,479,165	\$20,647,961	\$2,403,864	\$96,180,049
Hand trades <sup>1</sup>	1,023	908,504	1,160	2,219	637,000	104,389	1,542,972	1,993	1,493,595	47,334	8,153,290
Educational, eleemosynary, and penal institutions	13	71,127	1	64	8,037	1,820	91,136	7,345	75,157	8,634	173,496
Establishments with a product of less than \$500	4,371	1,715,013	5,514	4,342	97,758	55,260	367,466	139,170	228,296		1,036,890
All other establishments	6,203	75,595,390	7,313	68,361	13,181,430	9,014,243	51,529,416	30,330,657	18,850,913	2,317,846	91,700,383

<sup>1</sup> Includes bicycle and tricycle repairing, 40; blacksmithing and wheelwrighting, 396; boots and shoes, custom work and repairing, 93; carpentering, 68; clothing, men's, custom work and repairing, 54; clothing, women's, dressmaking, 22; dyeing and cleaning, 9; furniture, cabinetmaking, repairing, and upholstering, 33; lock and gun smithing, 8; masonry, brick and stone, 13; millinery, custom work, 139; painting, house, sign, etc., 26; paper hanging, 2; plastering and stuccowork, 1; plumbing, and gas and steam fitting, 33; sewing machine repairing, 5; taxidermy, 1; watch, clock, and jewelry repairing, 80.

Of the 12,210 establishments of all classes shown in this table, 5,994, or 49.1 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 \$4,190,170, or only 4.4 per cent of the total value of the products of the state.

In addition to the 12,210 active establishments in the state during the census year, with a capital of \$78,290,034, shown in Table 2, there were 174 idle establishments, with a capital of \$762,243, divided as follows:

INDUSTRIES.	Number of idle establishments.	Capital.	INDUSTRIES.	Number of idle establishments.	Capital.
Brick and tile	28	\$71,005	Kaolin and other earth grinding	2	\$32,500
Chemicals	1	42,000	Leather, tanned, curried, and finished	4	38,810
Cotton, ginning	40	27,375	Lumber and timber products	34	162,182
Flouring and grist mill products	12	14,332	Rice, cleaning and polishing	2	66,000
Furniture, factory product	2	16,800	Tobacco, chewing, smoking, and snuff	4	125,075
Hosiery and knit goods	3	84,900	Woodenware, not elsewhere specified	1	52,300
Iron and steel	1	11,000	All other industries	40	16,964

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	4,071	\$65,067,116	55,642	\$10,406,314	\$8,020,076	\$4,833,174	\$77,351,282
	1890	2,068	25,055,097	24,045	4,318,600	2,288,972	17,474,811	28,707,151
Increase, 1890 to 1900		2,003	40,012,019	31,597	6,087,714	5,731,104	26,858,863	48,644,131
Per cent of increase		96.9	159.7	131.4	141.0	250.4	153.7	169.4
Per cent of total of all industries in state	1900	56.3	85.1	78.8	75.0	88.0	88.5	81.5
	1890	56.4	76.5	71.5	65.9	68.8	76.7	71.1
Cars and general shop construction and repairs by steam railroad companies.	1900	12	539,513	1,141	550,504	29,259	893,150	1,511,376
	1890	9	210,463	434	186,262	(1)	200,335	393,576
Cotton goods	1900	177	33,011,516	30,273	5,127,087	1,080,918	17,886,624	28,372,798
	1890	91	10,775,134	8,515	1,475,932	423,324	6,239,902	9,563,443
Fertilizers	1900	18	2,818,921	427	109,192	108,209	1,044,267	1,497,625
	1890	12	1,513,142	343	89,800	89,316	656,769	994,135
Flouring and grist mill products	1900	1,773	2,905,310	1,019	213,627	65,395	7,218,904	8,867,462
	1890	1,039	2,334,130	1,124	205,946	67,793	4,879,218	5,279,068
Furniture, factory product	1900	44	1,023,374	1,759	333,729	51,921	725,060	1,547,805
	1890	6	126,350	152	38,647	2,754	58,808	159,000
Leather, tanned, curried, and finished	1900	75	1,299,798	266	105,132	32,635	1,129,402	1,502,378
	1890	55	116,364	107	24,183	3,913	115,507	190,837
Lumber and timber products	1900	1,770	18,385,097	11,751	2,491,089	321,048	7,743,235	14,862,593
	1890	713	5,376,807	6,466	1,202,994	232,088	3,038,960	5,898,742
Lumber, planing mill products, including sash, doors, and blinds	1900	101	1,366,823	1,939	473,589	78,377	1,801,478	2,892,068
	1890	42	488,770	584	195,070	26,284	515,213	915,070
Oil, cottonseed and cake	1900	21	1,841,856	564	133,195	110,161	2,160,996	2,676,871
	1890	11	743,675	318	56,596	31,877	402,199	529,746
Tobacco, chewing, smoking, and snuff	1900	80	6,874,908	6,403	869,170	6,192,103	4,230,049	13,620,816
	1890	90	3,370,267	6,002	843,105	1,411,623	1,867,400	4,783,481

<sup>1</sup> Not reported.

<sup>2</sup> Exclusive of 1 establishment for the manufacture of "furniture, chairs," for which no figures are available, as the statistics were included in "all other industries."

The 10 leading industries of the state in 1900, as shown by Table 3, embraced 4,071 establishments, or 56.3 per cent of the total number in the state; used a capital of \$65,067,116, or 85.1 per cent of the total; gave employment to 55,642 wage-earners, or 78.8 per cent of the total number; and paid \$10,406,314, or 75 per cent of the total wages. The value of their products was \$77,351,282, or 81.5 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 177 establishments reported in 1900 gave employment to 30,273 wage-earners, or 42.9 per cent of the wage-earners employed in the state, and the products were valued at \$28,372,798, or 29.9 per cent of the total value of the products of the state. In 1890 there were 91 establishments, 8,515 wage-earners, and products valued at \$9,563,443. The increase in the value of products during the decade was \$18,809,355, or 196.7 per cent.

The growth of the manufacture of cotton goods has been steady since 1850. The period both of greatest absolute increase and of greatest percentage of increase in the value of products was during the decade ending with 1900. In 1890 the state was tenth in rank in this manufacture in the United States; it is now third, Massachusetts being first and South Carolina second. In 1890 among Southern states it ranked third; it is now second, South Carolina preceding it, and Georgia taking third place. Although second in value of products, it is first in number of establishments, in average number of employees, and in total wages paid. The amount of cotton consumed yearly by the spindles now running is nearly equivalent to the annual cotton crop of the state, which in 1899 was 473,155 commercial bales.

The manufacture of lumber and timber products ranks second among the industries of the state, with 1,770 establishments, 11,751 wage-earners, and products valued at \$14,862,593. In 1890 there were 713 establishments, 6,466 wage-earners, and products valued at \$5,898,742. The increase in the value of products during the decade was \$8,963,851, or 152 per cent. The growth of this industry during the last two decades has been remarkable.

There were 80 establishments engaged in the manufacture of chewing and smoking tobacco and snuff in 1900, the industry third in rank, with 6,403 wage-earners, and products valued at \$13,620,816. In 1890 there were 90 establishments, 6,002 wage-earners, and products valued at \$4,783,484. The increase in the value of products during the decade was \$8,837,332, or 184.7 per cent. Tobacco has been for years one of North Carolina's best-known products, certain brands of its smoking tobacco and cigarettes having both a national and foreign reputation.

There were 1,773 establishments engaged in the manufacture of flouring and grist mill products in 1900, with 1,019 wage-earners, and products valued at \$8,867,462. In 1890 there were 1,039 establishments, 1,124 wage-

earners, and products valued at \$5,279,068. The increase in the value of products during the decade was \$3,588,394, or 68 per cent.

There were 101 establishments engaged in the manufacture of planing mill products in 1900, with 1,939 wage-earners, and products valued at \$2,892,058. In 1890 there were 42 establishments, 584 wage-earners, and products valued at \$915,070. The increase in the value of products during the decade was \$1,976,988, or 216 per cent.

There were 21 establishments engaged in the manufacture of cottonseed oil and cake in 1900, with 564 wage-earners, and products valued at \$2,676,871. In 1890 there were 11 establishments, 318 wage-earners, and products valued at \$529,746. The increase in the value of products during the decade was \$2,147,125, or 405.3 per cent.

There were 44 establishments engaged in the manufacture of furniture in 1900, with 1,759 wage-earners, and products valued at \$1,547,305. In 1890 there were 6 establishments, 152 wage-earners, and products valued at \$159,000. The increase in the value of products during the decade was \$1,388,305, or 873.1 per cent. The little town of High Point, the center of this new development, is already noted for its manufacture of furniture.

There were 12 establishments engaged in car construction and general shop work of steam railroad companies in 1900, with 1,141 wage-earners, and products valued at \$1,511,376. In 1890 there were 9 establishments, 434 wage-earners, and products valued at \$393,576. The increase in the value of products during the decade was \$1,117,800, or 284 per cent.

There were 75 establishments engaged in the tanning, currying, and finishing of leather in 1900, with 366 wage-earners, and products valued at \$1,502,378. In 1890 there were 55 establishments, 107 wage-earners, and products valued at \$190,887. The increase in the value of products during the decade was \$1,311,491, or 687.1 per cent.

There were 18 establishments engaged in the manufacture of fertilizers in 1900, with 427 wage-earners, and products valued at \$1,497,625. In 1890 there were 12 establishments, 343 wage-earners, and products valued at \$994,135. The increase in the value of products during the decade was \$503,490, or 50.6 per cent. Nearly all the phosphate rock used as a basis for fertilizer manufacture is brought into the state from Tennessee, South Carolina, and Florida. Some years ago much of this rock was mined in North Carolina, and large deposits still exist in the state, but imbedded in them are small white pebbles which, crushed with the phosphate rock, lower the grade of the fertilizer. No plan for separating them has yet been devised. Much of the cottonseed meal produced in the state is used as a source of ammonia in the manufacture of fertilizers. Slaughterhouse material, brought from Chicago and Omaha, is employed for the same purpose. The potash used is imported from Germany.

## URBAN MANUFACTURES.

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

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

	DATE OF CENSUS.		Per cent of increase, 1890 to 1900.
	1900	1890	
Number of establishments	124	121	2.5
Capital	\$1,819,333	\$1,752,667	3.8
Wage-earners, average number	1,469	1,358	8.2
Total wages	\$446,413	\$460,608	13.1
Miscellaneous expenses	\$125,277	\$105,671	18.7
Cost of materials used	\$1,361,258	\$1,014,384	34.2
Value of products, including custom work and repairing	\$2,246,237	\$1,904,147	18.0

<sup>1</sup> Decrease.

It appears from Table 4 that there has been an increase during the past decade in the manufactures of this city. The number of establishments increased from 121 to 124, or 2.5 per cent; the average number of wage-earners from 1,358 to 1,469, or 8.2 per cent; and the value of products from \$1,904,147 to \$2,246,237, or 18 per cent. The number of establishments, number of wage-earners, and value of products, in this city in 1900, constituted 1.7, 2.1, and 2.4 per cent, respectively, of the totals for the entire state.

Table 5 presents the totals for the manufacturing industries of the 15 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 -----	7,226	\$76,508,894	8,473	70,570	\$13,868,430	\$9,118,637	\$53,072,388	\$94,919,663	-----	100.0	1,893,810	-----	100.0
Total for urban manufactures	1,079	25,268,994	1,076	23,144	4,945,503	6,695,366	17,857,196	36,106,411	-----	38.0	139,017	-----	7.3
Asheville -----	136	1,413,523	148	1,149	357,411	59,602	1,090,523	1,904,109	8	2.0	14,694	3	0.8
Charlotte -----	112	4,102,312	101	2,888	699,846	218,221	2,822,587	4,702,301	3	5.0	18,091	2	1.0
Concord -----	82	2,040,351	23	1,853	410,215	61,304	1,162,109	1,081,411	7	2.1	7,910	8	0.4
Durham -----	82	1,727,205	87	2,787	585,289	2,867,522	2,502,449	7,081,540	1	7.4	6,679	9	0.4
Fayetteville -----	46	446,970	39	461	81,424	15,737	316,650	570,127	15	0.6	4,070	12	0.2
Goldsboro -----	46	620,932	44	507	123,899	26,336	677,409	1,086,831	13	1.1	5,877	11	0.3
Greensboro -----	79	1,711,623	72	1,587	295,820	152,048	1,015,571	1,790,523	9	1.9	10,095	5	0.5
High Point -----	47	834,673	37	1,116	205,009	72,356	617,131	1,173,715	12	1.2	4,168	13	0.2
Newbern -----	81	1,027,885	86	1,162	284,952	39,476	1,069,070	1,704,251	10	1.8	9,090	7	0.5
Raleigh -----	135	1,611,089	136	1,358	441,038	107,133	1,203,099	2,204,056	5	2.3	15,613	4	0.7
Reidsville -----	37	851,705	45	888	169,545	298,043	563,307	1,234,783	11	1.3	3,262	15	0.2
Salem -----	34	1,375,661	42	1,506	270,027	715,301	854,716	2,037,240	6	2.2	3,642	14	0.2
Salisbury -----	43	885,275	40	793	163,401	25,721	548,020	915,254	14	1.0	6,277	10	0.3
Wilmington -----	124	1,819,333	127	1,469	446,413	125,277	1,861,258	2,246,237	4	2.4	20,976	1	1.1
Winston -----	46	4,800,421	47	3,420	461,214	2,411,259	1,982,964	5,436,030	2	5.7	10,008	6	0.5
Total for state exclusive of urban manufactures	6,147	51,234,900	7,397	47,426	8,922,927	2,423,271	35,215,192	58,813,252	-----	62.0	1,754,793	-----	92.7
Per cent of urban manufactures to total for state	14.9	33.0	12.7	32.8	35.7	73.4	33.6	38.0	-----	-----	7.3	-----	-----

Of the 7,226 establishments in the state, 1,079, or 14.9 per cent, were located in these 15 cities and towns. The capital reported for these establishments was \$25,268,994, or 33 per cent of that for the entire state. They furnished employment to 23,144 wage-earners, or 32.8 per cent of the total number, and the value of their products, \$36,106,411, formed 38 per cent of the total for the state.

Table 6 shows the totals for the state by counties.

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

Table 8 shows the totals for the city of Wilmington by specified industries.

Table 9 shows the totals for all industries in the cities and towns withdrawn from the enumerators, exclusive of the city of Wilmington.

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.....	7,226	\$76,503,894	\$8,135,807	\$11,156,157	\$28,531,456	\$28,680,474	8,473	3,001	\$2,434,621	70,570	\$18,868,430
1 Alamance.....	134	3,717,762	143,019	925,823	1,478,711	1,170,200	150	105	77,004	3,829	717,124
2 Alexander.....	66	167,871	15,320	15,825	108,057	23,169	100	6	1,440	192	25,425
3 Alleghany.....	40	47,546	4,370	10,720	22,196	10,260	54			26	4,317
4 Anson.....	69	315,549	19,062	31,124	139,594	125,169	83	14	5,817	359	44,586
5 Ashe.....	64	63,157	9,450	13,535	36,155	4,017	82	8	450	34	6,118
6 Beaufort.....	58	571,101	104,213	62,250	251,841	152,797	62	44	33,010	650	199,486
7 Bertie.....	31	126,764	16,554	9,815	34,175	66,220	41	1	600	183	31,600
8 Bladen.....	64	127,940	40,451	9,172	54,372	23,445	79	2	1,100	162	38,759
9 Brunswick.....	33	1,111,460	33,844	155,952	70,691	851,473	35	7	6,994	241	52,452
10 Buncombe.....	208	1,579,162	223,515	212,076	459,263	679,308	229	78	52,849	1,369	416,191
11 Burke.....	80	442,682	35,311	70,896	119,682	216,793	94	11	7,159	310	64,071
12 Cabarrus.....	85	2,132,378	56,822	394,404	1,199,499	531,653	106	44	37,174	2,133	437,348
13 Caldwell.....	100	1,073,475	520,764	36,707	274,510	191,494	180	16	13,438	451	87,120
14 Camden.....	8	28,322	10,090	1,600	11,675	4,957	9			19	2,682
15 Carteret.....	16	72,015	1,995	9,975	33,295	21,750	22	3	1,500	191	28,809
16 Caswell.....	23	39,784	4,410	6,745	10,920	17,709	23	4	1,500	46	6,490
17 Catawba.....	105	1,800,258	45,140	134,320	544,504	576,294	149	33	24,780	1,132	206,314
18 Chatham.....	78	270,787	31,407	44,685	110,780	83,915	106	11	5,062	355	54,219
19 Cherokee.....	33	84,394	17,474	5,960	50,120	10,840	94	7	5,500	43	11,101
20 Chowan.....	26	353,055	224,590	54,320	415,070	164,075	29	9	9,000	262	80,476
21 Clay.....	24	14,000	1,950	2,940	8,265	845	27	1	156	11	1,776
22 Cleveland.....	114	1,030,462	46,949	162,191	470,138	351,184	154	37	18,750	761	119,674
23 Columbus.....	69	1,164,376	236,362	39,761	235,933	552,770	77	32	42,116	489	111,760
24 Craven.....	116	1,564,294	434,761	171,974	505,335	452,224	123	67	51,902	1,653	388,635
25 Cumberland.....	144	2,058,064	191,675	355,095	990,796	520,498	144	58	44,132	1,628	304,565
26 Currituck.....	9	21,240	2,455	3,480	10,375	4,430	10	1	500	23	2,765
27 Dare.....	8	25,950	3,605	2,800	14,385	5,160	8	5	4,800	32	5,300
28 Davidson.....	99	609,277	19,543	76,045	208,919	304,765	136	34	12,541	879	158,779
29 Davie.....	44	106,005	9,295	22,020	49,310	24,880	57	5	980	164	34,102
30 Duplin.....	60	204,304	10,015	47,325	114,742	32,222	75	5	700	248	32,768
31 Durham.....	114	3,015,298	162,346	461,082	1,331,053	1,060,817	126	170	273,991	4,144	805,173
32 Edgecombe.....	57	776,888	49,961	155,330	332,362	239,235	56	45	28,075	965	185,925
33 Forsyth.....	165	6,574,713	273,485	665,192	817,027	4,789,014	215	333	345,304	5,410	811,398
34 Franklin.....	75	247,488	42,823	43,260	128,200	33,155	98	8	5,313	334	45,070
35 Gaston.....	96	4,035,958	244,435	551,919	2,138,886	1,100,718	104	86	71,256	3,966	731,486
36 Gates.....	23	41,020	11,750	4,630	16,110	8,530	27	2	1,300	79	16,245
37 Graham.....	9	22,243	2,490	750	3,303	15,700	9			10	2,400
38 Granville.....	76	155,929	21,012	14,580	54,639	65,698	93	3	2,400	153	28,650
39 Greene.....	45	61,305	21,740	7,735	27,660	4,670	52	1	150	65	10,467
40 Guilford.....	193	3,092,848	221,427	682,122	957,581	1,231,718	191	156	116,327	3,262	594,793
41 Halifax.....	75	1,279,288	162,725	255,522	468,260	392,781	71	81	76,704	1,478	288,392
42 Harnett.....	53	125,230	26,356	15,519	47,395	35,900	75	8	3,260	227	38,425
43 Haywood.....	52	343,295	94,780	40,770	58,165	149,580	56	13	14,759	152	31,475
44 Henderson.....	75	94,314	13,970	19,610	41,919	13,815	85	9	4,160	192	35,698
45 Hertford.....	30	54,385	10,780	8,600	24,545	10,460	35	8	1,235	94	24,031
46 Hyde.....	19	578,353	362,180	21,523	84,202	110,443	20	3	3,300	234	49,900
47 Iredell.....	134	609,500	36,999	103,155	264,887	264,459	187	18	3,944	861	130,312
48 Jackson.....	60	272,539	125,320	9,840	57,392	79,987	61	9	7,370	218	41,328
49 Johnston.....	101	226,371	67,839	30,164	90,602	46,766	124	14	8,730	349	54,628
50 Jones.....	15	22,447	3,247	3,900	13,550	1,750	18			27	6,005
51 Lenoir.....	68	562,982	136,071	79,667	237,869	109,375	73	25	15,960	569	129,353
52 Lincoln.....	67	1,014,869	57,580	138,797	525,370	293,122	89	20	14,279	790	130,566
53 McDowell.....	75	143,339	26,405	17,535	59,602	39,797	81	9	2,865	251	49,091
54 Macon.....	57	46,296	7,923	9,843	8,125	56	56	1	300	49	8,214
55 Madison.....	83	568,955	44,071	24,206	61,696	438,982	98	6	2,450	187	56,418
56 Martin.....	28	128,247	18,232	24,025	54,355	31,635	31	12	10,400	180	44,245
57 Mecklenburg.....	181	5,108,591	227,995	632,922	2,083,868	2,163,806	169	235	209,821	3,983	874,214
58 Mitchell.....	79	348,355	53,532	50,150	91,763	152,910	93	3	2,368	122	31,521
59 Montgomery.....	112	558,728	99,387	68,040	221,889	169,412	137	50	22,778	875	154,733
60 Moore.....	158	708,252	96,557	81,153	235,431	295,111	176	43	28,205	819	162,234
61 Nash.....	70	337,736	96,245	126,650	388,692	326,209	88	14	10,326	524	86,794
62 New Hanover.....	135	2,997,332	733,593	474,724	933,198	963,198	137	122	104,038	1,869	573,335
63 Northampton.....	65	257,729	129,014	16,985	83,055	23,675	83	5	1,360	324	60,505
64 Onslow.....	36	64,006	20,305	9,140	24,530	10,031	42	6	2,250	35	18,499
65 Orange.....	53	333,093	27,163	92,181	208,040	55,704	63	9	5,296	237	42,406
66 Pamlico.....	21	101,315	6,315	6,450	23,765	64,735	34	8	2,678	158	34,035
67 Pasquotank.....	32	482,690	64,395	62,190	222,035	134,070	42	34	30,342	523	117,835
68 Pender.....	26	54,036	8,357	4,343	19,214	21,122	31	1	420	62	11,788
69 Perquimans.....	16	293,375	152,655	13,130	92,270	40,820	22	6	4,230	146	40,121
70 Person.....	59	212,826	51,213	30,985	96,940	33,688	73	5	1,375	177	25,431
71 Pitt.....	94	336,697	74,462	35,620	92,420	134,195	126	18	3,242	535	91,399
72 Polk.....	20	47,290	6,250	6,590	27,125	7,325	20	1	1,200	91	13,307
73 Randolph.....	134	1,752,824	163,469	372,266	804,314	412,775	146	79	47,551	2,035	316,986
74 Richmond.....	65	1,542,044	101,792	332,715	656,526	451,011	50	48	35,927	1,338	246,482
75 Robeson.....	171	566,860	121,105	46,770	278,303	120,682	204	27	12,582	679	131,763

## 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.										
44,549	\$10,477,765	15,644	\$2,394,417	10,377	\$996,248	\$9,118,637	\$222,439	\$369,933	\$8,414,187	\$112,078	\$53,072,888	\$51,667,271	\$1,405,117	\$94,919,668	1
2,063	470,775	1,184	185,022	582	61,327	182,160	1,302	19,221	151,290	10,347	2,177,681	2,107,196	70,485	3,738,159	2
185	19,275	86	4,750	21	1,400	7,546	250	601	6,695		179,451	178,396	1,055	270,025	3
24	4,161			2	156	621	29	281	801	10	69,707	69,514	193	102,200	4
135	25,582	118	18,811	106	5,243	11,883	3,089	893	7,851		171,671	165,381	6,290	302,671	5
34	6,118					877	25	251	601		94,816	94,284	532	136,131	6
635	107,896			15	1,590	25,695	1,223	7,648	16,824		593,898	588,905	4,988	1,031,281	7
132	31,470			1	180	4,973	348	740	3,879	6	71,560	71,208	352	150,873	8
162	88,759					1,761	356	519	886		143,748	142,239	1,509	274,310	9
239	52,853			2	99	20,946	203	5,453	15,290		853,913	846,230	7,688	457,258	10
1,068	361,582	219	35,836	82	18,773	69,495	22,198	8,498	38,474	265	1,258,157	1,225,047	33,110	2,210,315	11
248	56,172	80	4,680	32	3,219	10,424	232	2,028	8,150	14	670,854	664,970	5,384	907,172	12
1,193	281,022	519	107,113	421	49,213	65,811	4,189	10,861	51,261		1,308,971	1,209,073	99,898	2,231,581	13
832	66,170	110	20,345	9	605	11,417	719	2,925	7,767	6	414,553	412,170	2,338	682,513	14
19	2,682					251	90	106	55		9,394	9,275	119	18,998	15
101	19,434	71	7,405	19	1,970	3,608	255	1,884	1,966		123,965	120,925	3,040	180,036	16
35	5,639	6	460	5	400	22,504	40	255	22,209		44,984	44,846	638	85,474	17
620	146,210	249	86,842	313	24,262	63,990	1,302	4,739	57,744	205	1,033,742	1,003,758	29,984	1,578,711	18
189	38,414	49	6,720	117	9,085	14,501	481	1,604	12,466		299,550	295,049	4,501	463,384	19
43	11,101					1,198	520	382	296		64,484	63,464	1,020	110,852	20
245	77,876	4	400	13	2,200	34,552	722	2,671	31,259		864,034	862,851	1,180	599,424	21
11	1,776					203		57	108	88	24,370	24,190	180	37,010	22
391	80,096	178	25,909	192	18,669	30,670	1,073	4,186	25,851	60	671,238	656,072	15,106	1,026,431	23
483	111,222	2	160	4	378	36,119	435	6,380	29,804		880,283	873,875	6,408	898,369	24
1,508	372,560	104	12,563	41	8,512	51,833	6,925	7,132	37,726		1,438,588	1,427,170	11,388	2,334,472	25
933	211,430	446	68,978	249	24,157	58,082	2,569	6,035	47,741	1,737	964,881	936,247	28,634	1,660,375	26
23	2,765					657		128	529		12,832	12,499	333	23,817	27
32	5,300					418		301	117		19,613	18,878	740	42,657	28
487	112,523	212	32,656	180	18,600	74,281	849	2,895	70,407	130	624,278	601,672	22,606	1,046,589	29
145	32,723	8	741	11	638	15,669	260	928	14,331	150	130,549	126,214	4,335	245,831	30
137	20,542	66	9,990	45	2,236	5,498	197	514	4,787		94,816	94,093	723	180,394	31
1,913	494,466	1,656	256,010	575	54,697	2,444,270	9,745	18,824	2,415,701		3,316,848	3,240,633	76,215	3,443,912	32
563	149,512	187	24,400	215	12,013	26,912	3,346	4,542	19,024		765,602	743,642	22,020	1,163,129	33
2,977	544,343	1,321	189,517	1,112	77,538	3,202,062	12,153	31,978	3,144,071	10,860	3,166,888	3,087,995	78,893	3,156,895	34
189	28,841	73	8,872	72	7,857	8,045	412	2,126	5,607		273,880	262,032	11,848	383,837	35
1,904	429,861	1,186	198,266	876	103,359	93,214	890	14,894	73,030	3,800	2,331,714	2,221,404	110,310	3,947,200	36
79	16,245					1,321	887	182	252		47,550	47,342	208	84,028	37
10	2,400					110		301	61		13,223	13,218	5	18,980	38
146	27,538	6	1,056	1	56	12,414	2,300	747	9,189	228	149,027	146,637	2,390	254,414	39
64	10,412			1	55	3,136	222	558	39,195		40,193	39,195	998	82,004	40
2,263	477,648	550	77,006	449	39,539	244,079	11,233	14,850	218,481	4,510	2,116,599	2,018,839	97,760	3,691,216	41
1,009	236,787	280	41,181	189	10,954	75,956	3,421	4,020	68,515		695,261	687,012	8,249	1,391,773	42
217	37,146	2	425	8	854	10,480	1,012	494	8,974		124,823	121,978	2,845	200,710	43
149	31,100	1	175	2	200	4,132	235	1,200	2,697		204,974	204,658	416	331,423	44
136	28,402	40	5,980	16	1,806	6,474	888	682	4,890	54	111,013	106,799	4,214	192,394	45
91	23,872			3	159	2,207	411	295	844	657	63,969	63,326	643	118,733	46
224	48,700	10	1,200			25,789	7,850	1,626	16,238	25	108,283	108,111	172	211,322	47
503	99,153	192	24,870	166	6,289	152,944	2,967	4,583	144,651	743	609,761	588,465	21,296	1,131,721	48
217	41,678	1	150			2,486	445	847	1,194		148,869	144,607	4,262	280,037	49
835	53,320	3	372	11	936	9,371	1,157	1,427	6,677	110	297,474	289,850	7,624	477,226	50
27	6,005					1,110	780	190	140		26,888	26,532	351	48,210	51
372	101,117					19,564	2,280	2,101	15,173	10	409,887	405,369	4,518	692,535	52
316	71,227	246	38,137	228	21,202	18,681	269	3,078	12,336	3,001	585,832	574,280	11,552	937,753	53
228	46,267			25	2,824	20,349	1,984	759	17,556	50	195,906	192,336	3,570	354,321	54
44	7,838			5	376	939	824	300	815		68,355	68,579	776	98,868	55
184	56,106			3	312	2,120	580	638	877	25	260,424	260,264	160	425,887	56
162	42,211	3	600	15	1,434	4,125	217	1,013	2,745	150	140,001	139,706	295	270,888	57
2,210	631,818	1,102	174,882	676	67,514	239,215	17,907	25,790	191,514	3,914	3,504,674	3,364,450	140,224	5,736,050	58
120	31,136	1	300	1	85	1,593	293	455	845		258,332	248,017	10,315	393,470	59
703	143,427	46	5,484	66	5,822	18,626	1,879	2,377	14,239	31	500,819	556,464	4,355	1,039,277	60
680	148,285	64	7,923	75	6,026	23,070	2,348	3,537	15,290	1,395	627,029	619,357	7,672	1,069,191	61
335	63,498	81	13,720	108	9,576	37,018	937	2,743	12,270	21,068	318,953	310,166	8,787	561,146	62
1,509	524,282	263	41,453	97	8,100	155,435	13,644	25,094	104,467	7,230	1,913,582	1,870,981	42,601	3,131,899	63
322	60,175	2	330			7,947	1,185	975	5,787		157,750	157,350	400	349,558	64
84	18,259			1	240	2,798	502	857	1,809	100	104,593	104,163	430	192,620	65
165	25,478	50	8,942	82	7,986	11,809	888	1,011	9,970		247,407	238,279	9,128	363,154	66
155	33,893			3	192	8,951	4,100	339	3,950	562	108,626	102,946	680	206,710	67
402	100,790	62	10,585	59	6,480	19,421	2,739	1,863	14,814	5	574,524	565,763	8,756	979,890	68
59	11,288			3	500	946	213	313	415		64,238	63,814	421	98,569	69
145	40,061			1	60	4,065	20	497	3,518	80	196,295	195,999	296	303,759	70
123	20,880	50	4,326	4	225	12,254	1,291	924	10,039		151,781	150,431	1,350	251,691	71
337	70,184	189	19,179	59	2,536	18,820	6,333	2,034	10,453		648,035	641,717	6,318	896,681	72
30	5,507	50	7,300	11	1,000	1,146	275	209	662		60,664	60,134	530	87,464	73
803	168,243	823	112,445	404	36,298	67,249	2,434	9,190	53,501	2,124	1,551,933	1,525,812	23,091	2,259,093	74
707	159,600	419	69,512	212	17,370	57,146	145	7,031	49,635	335	674,160	661,801	12,359	1,192,096	75
653	128,448	13	2,405	13	915	12,705	1,916	2,569	7,970	310	506,868	502,743	4,125	907,687	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	Rockingham	103	\$2,394,721	\$131,054	\$277,115	\$781,624	\$1,204,928	116	87	\$80,125	2,163	\$382,751
78	Rowan	133	1,695,241	94,901	296,999	807,890	495,488	159	56	41,380	1,822	500,663
79	Rutherford	93	2,281,835	83,045	337,357	1,139,157	722,276	102	24	18,673	2,082	279,196
80	Sampson	108	196,353	37,884	23,741	63,309	71,419	120	6	1,450	180	26,851
81	Scotland	73	470,417	32,744	55,875	193,477	188,321	82	21	10,017	408	71,690
82	Stanly	72	986,323	56,451	186,115	479,150	264,607	98	20	18,717	776	140,407
83	Stokes	60	151,769	40,155	18,507	67,008	26,099	78	2	550	93	17,581
84	Surry	138	896,233	57,145	127,396	263,221	448,471	187	77	37,293	1,196	216,739
85	Swain	41	83,081	12,025	11,162	37,445	22,449	44	6	3,515	81	15,004
86	Transylvania	29	27,790	4,255	6,260	12,480	4,795	27			15	4,383
87	Tyrrell	6	13,080	655	2,050	10,025	350	5	1	365	30	5,647
88	Union	89	491,042	33,570	76,372	276,150	104,950	131	11	9,297	540	83,028
89	Vance	45	384,882	7,922	55,527	208,555	112,878	45	16	11,303	587	104,636
90	Wake	231	1,938,657	104,709	292,122	822,672	619,154	253	161	104,092	1,681	498,586
91	Warren	71	115,735	31,335	17,397	46,797	20,206	79	3	1,093	133	23,661
92	Washington	28	259,760	70,500	28,470	111,484	49,246	28	9	6,401	335	74,300
93	Watauga	68	71,320	21,226	7,974	35,241	6,888	86	1	106	52	7,351
94	Wayne	100	719,564	59,318	113,514	256,503	200,229	112	46	35,712	668	151,464
95	Wilkes	162	683,915	92,428	65,532	119,176	406,779	190	31	27,305	377	80,384
96	Wilson	45	527,638	49,280	89,485	166,671	222,252	52	18	10,128	361	80,802
97	Yadkin	110	141,668	19,650	19,337	61,566	41,115	142	6	687	191	33,689
98	Yancey	43	81,003	39,220	5,530	25,025	11,228	47	3	644	41	8,605

TABLE 7.—MANUFACTURES BY

1 All Industries	7,226	\$76,503,891	\$8,135,807	\$11,156,157	\$28,531,466	\$28,680,474	8,473	3,001	\$2,434,621	70,570	\$13,868,430
2 Agricultural implements	9	77,537	3,330	12,600	24,600	37,007	14	7	3,970	91	20,169
3 Awnings, tents, and sails	4	1,935	450	850	135	450	4			5	1,436
4 Baskets, and rattan and willow ware	3	6,100	810	890	2,300	2,000	3	4	600	32	6,592
5 Bicycle and tricycle repairing	40	26,530	2,750	3,070	10,305	10,400	45			30	9,476
6 Blacksmithing and wheelwrighting	396	173,256	30,385	33,441	45,549	63,681	454	1	50	298	72,657
7 Boots and shoes, custom work and repairing	93	37,381	2,265	7,085	12,723	15,308	100	2	460	46	12,656
8 Boots and shoes, factory product	8	37,700	200	1,850	7,450	28,200	1	3	1,618	40	14,107
9 Bottling	13	33,124	6,800	4,600	9,315	11,909	7	9	6,190	42	9,952
10 Boxes, wooden packing	11	44,235	5,236	9,093	16,060	18,246	18	2	600	183	23,821
11 Bread and other bakery products	22	33,422	4,450	8,950	10,102	9,920	28	14	1,728	45	12,680
12 Brick and tile	157	445,187	91,710	72,795	129,981	150,701	216	36	10,949	1,403	269,012
13 Brooms and brushes	3	2,060	100	400	275	1,285	5			6	1,856
14 Carpentering	68	114,937	20,700	18,485	10,310	65,462	76	9	6,350	575	210,132
15 Carriages and wagons	160	866,933	72,294	147,472	101,884	545,283	205	29	19,257	802	236,855
16 Cars and general shop construction and repairs by steam railroad companies	12	539,513	35,540	165,435	166,365	171,173		47	38,463	1,141	550,504
17 Clothing, men's, custom work and repairing	54	69,069	3,000	4,000	6,330	55,739	61	5	3,600	172	55,629
18 Clothing, men's, factory product	14	495,616	2,900	23,657	51,806	417,253	9	87	71,471	860	148,267
19 Clothing, women's, dressmaking	22	19,530	2,750	11,650	2,035	8,075	21			75	15,217
20 Coffins, burial cases, and undertakers' goods	7	176,820	5,950	21,600	27,550	121,720	5	11	6,734	121	29,925
21 Confectionery	18	41,035	10,500	11,500	7,090	11,945	20	1	1,200	33	6,899
22 Cooperage	33	79,078	8,880	8,790	23,455	37,953	38	10	5,658	151	32,501
23 Cotton, compressing	3	180,000	30,000	45,000	95,000	10,000		17	11,340	158	84,717
24 Cotton, ginning	424	618,415	21,288	111,115	369,615	11,397	550	24	1,379	456	57,126
25 Cotton goods	177	33,011,516	1,399,341	5,848,808	16,290,457	9,476,910	41	659	586,730	30,273	5,127,087
26 Dyeing and cleaning	9	2,505	600	500	675	730	9	1	208	14	2,368
27 Dyeing and finishing textiles	5	298,831	4,700	33,800	184,022	71,309	5	8	6,650	184	45,340
28 Fertilizers	18	2,818,921	99,534	403,281	213,508	2,102,598	16	51	65,838	427	109,192
29 Flouring and grist mill products	1,773	2,905,310	281,754	711,152	1,459,824	452,589	2,042	64	31,316	1,019	213,627
30 Foundry and machine-shop products	61	1,017,758	83,380	119,227	288,331	526,820	70	63	55,933	797	273,021
31 Fruits and vegetables, canning and preserving	19	30,340	3,035	4,575	7,480	16,250	20	2	300	78	10,736
32 Furniture, cabinetmaking, repairing, and upholstering	33	34,956	2,595	5,500	8,930	17,931	41	1	365	20	5,411
33 Furniture, factory product	44	1,023,374	36,502	142,780	265,665	578,427	82	118	64,999	1,759	333,729
34 Gas, illuminating and heating	10	682,566	38,900	36,690	541,698	65,278		19	14,579	47	14,256
35 Hosiery and knit goods	24	674,869	16,925	52,852	360,420	244,672	15	64	46,224	1,495	255,253
36 Ice, artificial	23	523,243	37,465	63,300	381,956	40,522	13	37	32,317	161	52,647
37 Kaolin and other earth grinding	8	268,925	130,550	14,303	34,561	89,006	2	11	8,693	163	29,245
38 Leather goods	3	8,940		540	540	8,400	3			2	650
39 Leather, tanned, curried, and finished	75	1,299,798	36,863	180,040	60,755	1,022,140	94	28	29,259	366	105,132
40 Lime and cement	4	11,100	1,300	550	3,500	5,700	4			21	2,400
41 Liquors, distilled	250	168,922	8,575	27,170	61,379	71,798	253	11	5,555	302	51,804
42 Liquors, vinous	5	76,190	5,160	35,375	23,205	12,450	7	25	37,000	56	9,030
43 Lock and gun smithing	8	4,640	1,200	1,475	1,375	590	9			4	1,130
44 Looking-glass and picture frames	4	10,800	3,000	8,000	1,400	3,400	4	1	100	3	1,235
45 Lumber and timber products	1,770	18,345,097	4,680,335	940,267	4,580,819	3,233,676	2,426	422	297,404	11,751	2,491,089
46 Lumber, planing mill products, including sash, doors, and blinds	101	1,366,823	110,178	142,730	327,218	786,697	100	126	33,990	1,939	473,589

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

## BY COUNTIES: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
1,144	\$243,993	584	\$87,619	435	\$51,139	\$416,230	\$1,195	\$10,844	\$335,641	\$5,550	\$1,586,998	\$1,554,676	\$32,322	\$2,865,312	77
1,189	878,482	377	72,029	256	55,152	118,819	2,361	5,771	109,762	925	1,347,513	1,285,305	62,208	2,320,671	78
871	181,812	841	105,782	370	41,602	54,695	998	7,638	45,999	60	1,182,875	1,155,191	27,684	1,779,551	79
158	24,101	6	920	16	1,830	3,530	807	752	2,471		227,840	225,049	2,291	323,963	80
273	56,039	63	10,284	72	5,367	12,861	2,440	1,533	6,172	2,716	373,850	367,427	6,423	609,193	81
367	78,439	225	39,708	184	22,260	17,962	616	4,981	12,365		684,553	664,317	20,236	1,127,189	82
92	17,481	1	100			2,665	42	868	1,755		175,458	173,408	2,050	277,763	83
774	174,296	235	27,761	187	14,682	246,617	4,478	3,481	221,508	17,150	689,520	678,284	11,236	1,397,998	84
78	14,525			8	479	7,755	154	336	2,546	4,719	92,432	92,056	376	156,990	85
18	3,968	1	150	1	265	2,551	281	240	2,030		29,697	28,646	1,051	48,517	86
30	5,647					270		120	150		19,257	19,157	100	81,664	87
336	57,822	139	20,804	65	4,402	10,898	346	2,303	8,059	100	334,999	317,397	17,602	594,999	88
346	79,226	151	20,920	90	4,550	4,793	1,479	944	2,370		304,154	293,728	10,426	539,937	89
1,209	426,951	223	50,642	159	20,993	114,063	17,099	16,338	74,760	5,866	1,440,057	1,393,666	46,491	2,641,730	90
128	22,988	3	433	2	240	4,219	907	771	2,113	428	108,037	107,160	877	190,198	91
314	71,043	2	825	19	2,932	9,774	236	1,550	7,938		218,899	218,148	751	381,237	92
51	7,251			1	100	4,638	227	322	4,085	4	69,824	69,102	222	108,977	93
559	187,895	44	8,498	65	5,571	36,027	4,034	4,031	27,942	20	755,054	732,930	22,124	1,232,181	94
364	78,824	3	540	10	1,020	50,498	339	2,538	47,606	10	582,421	579,641	2,780	874,289	95
304	72,875	23	8,652	84	4,275	28,387	1,165	2,271	21,801	150	286,053	274,611	11,412	538,050	96
154	30,507	24	2,466	13	716	50,326	144	660	49,487	35	185,845	183,747	2,098	354,513	97
41	8,605					544	55	229	210	50	65,414	65,245	99	99,860	98

## SPECIFIED INDUSTRIES: 1900.

44,549	\$10,477,765	15,644	\$2,394,417	10,877	\$996,248	\$9,118,637	\$222,439	\$369,933	\$3,414,187	\$112,078	\$53,072,388	\$51,667,271	\$1,405,117	\$94,919,663	1
86	19,719			5	450	1,971	85	427	1,024	485	41,017	37,977	3,070	99,128	2
5	1,486					139	90	24	25		4,470	4,470		9,250	3
20	3,892	7	1,890	5	1,200	415		55	360		3,770	3,695	175	16,055	4
31	9,004			5	472	4,240	2,709	634	892	5	20,877	20,407	470	57,144	5
291	72,255			7	402	14,574	10,448	1,303	2,136	687	120,669	110,881	10,288	394,468	6
45	12,570			1	86	4,826	3,581	184	521	40	31,619	31,185	434	94,899	7
40	14,107					1,058	80	128	850		53,297	53,129	168	73,493	8
40	9,802			2	150	3,378	1,385	991	1,002		62,036	61,372	724	100,779	9
83	14,286	56	8,060	42	1,475	2,459	1	228	2,230		30,956	30,553	603	76,093	10
42	12,298	2	300	1	82	7,496	5,173	579	1,744		57,996	55,813	2,178	106,665	11
1,320	260,824			88	8,218	19,277	5,157	2,247	11,563	310	146,911	20,446	126,465	641,280	12
5	1,276			1	80	239	145	9	85		4,364	4,364		6,800	13
572	269,917			8	215	17,575	1,971	1,048	2,454	12,102	558,418	557,152	1,266	947,890	14
781	234,173	1	165	20	2,517	30,099	4,025	5,570	20,002	502	522,017	509,409	12,608	1,059,237	15
1,139	559,128	2	376			29,259		4,831	23,861	567	833,150	830,850	12,300	1,511,576	16
91	37,298	71	17,734	10	597	12,752	8,315	1,046	3,207	124	98,823	91,550	1,773	222,041	17
188	41,657	650	100,440	72	6,170	23,238	4,070	2,899	14,869	1,400	639,472	634,758	4,714	1,087,285	18
		75	15,217			1,890	1,228	118	544		4,474	4,105	369	32,055	19
118	29,585	2	240	1	100	4,284		656	3,598		39,402	36,077	3,325	119,479	20
20	4,923	9	1,531	4	445	3,598	2,382	396	770	50	34,796	33,839	907	70,002	21
149	32,275			2	226	2,751	393	563	1,233	562	76,801	75,686	1,115	163,086	22
158	34,717					13,993	2,500	2,402	9,021		11,015	2,085	8,930	78,650	23
455	57,021			1	105	7,637	1,554	2,719	3,364		78,539	60,351	18,188	337,443	24
12,780	2,765,457	10,364	1,629,036	7,129	732,594	1,030,918	2,775	135,903	865,958	26,222	17,886,624	16,668,190	718,431	28,372,738	25
9	1,982	1	100	4	286	1,681	865	16	800		919	501	328	9,570	26
142	38,031	42	7,309			13,366	822	1,106	11,438		95,210	84,443	10,767	175,750	27
426	109,117			1	75	103,209	89	17,535	90,625	10	1,044,287	1,019,964	24,303	1,497,625	28
1,010	212,962			9	665	65,895	6,006	20,403	38,249	737	7,218,904	7,157,834	61,570	8,867,462	29
775	289,883	6	1,380	16	1,758	40,200	5,642	7,425	26,393	740	737,681	717,273	20,303	1,394,770	30
29	6,506	41	3,805	8	425	414	75	146	193		44,494	43,415	1,079	64,440	31
19	5,311	1	100			3,211	2,691	159	356	5	12,554	12,293	261	35,769	32
1,343	298,821	129	11,095	287	23,813	51,921	1,480	4,968	36,873	8,600	725,069	708,709	16,360	1,547,305	33
47	14,256					40,789		5,094	35,695		37,870	35,556	1,814	129,747	34
317	91,029	735	123,742	443	40,482	35,920	4,803	3,822	27,005	290	604,027	490,265	13,762	1,023,150	35
160	52,632			1	115	18,042	1,230	4,676	12,136		60,291	20,127	46,164	228,305	36
161	28,336			2	309	6,535	580	429	807	4,719	22,774	16,723	6,051	105,929	37
2	650					509	419	40	50		3,535	3,435	100	12,100	38
306	105,132					82,685	640	3,829	28,216		1,129,402	1,126,371	2,531	1,502,373	39
21	2,400					168	150	18			2,081	891	1,190	6,612	40
302	51,894					394,108	852	1,017	392,033	206	134,631	113,203	21,428	641,948	41
39	6,930	17	2,100			16,585		413	16,172		109,695	109,195	500	224,980	42
4	1,180					668	516	72	80		1,257	1,132	125	6,110	43
8	1,235					800	350	165	200	85	6,300	6,285	15	10,610	44
11,521	2,463,915	85	4,447	195	23,727	321,048	30,329	56,906	233,813		7,743,235	7,742,378	857	14,862,593	45
1,894	465,988			45	7,651	78,377	7,142	7,547	32,178	31,610	1,801,478	1,790,216	11,232	2,892,058	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	Marble and stone work	16	\$98,967	\$29,940	\$10,240	\$28,380	\$30,407	18	15	\$5,580	865	\$38,127
48	Masonry, brick and stone	13	28,415		209	4,615	18,600	16	10	5,300	466	117,977
49	Mattresses and spring beds	21	39,023	7,800	11,650	9,190	10,383	21	2	700	51	11,257
50	Millinery, custom work	139	190,427	19,155	34,180	5,585	181,507	159	29	8,000	184	42,705
51	Mineral and soda waters	11	19,925	2,800	8,800	8,150	5,175	13			12	8,180
52	Monuments and tombstones	24	62,933	10,090	12,340	4,553	35,950	37	12	4,625	103	30,638
53	Oil, cottonseed and cake	21	1,841,856	61,831	298,044	529,248	952,733	87	87	63,416	564	133,195
54	Painting, house, sign, etc	26	10,645	700	1,100	2,010	6,835	81			92	33,542
55	Patent medicines and compounds	10	49,685			4,140	45,545	9	14	9,520	29	8,262
56	Paving and paving materials	5	38,475	16,650	1,200	16,025	4,600	5	5	2,610	170	68,578
57	Photography	55	45,987	2,170	6,985	25,415	11,367	58	1	350	27	9,431
58	Plumbing, and gas and steam fitting	33	109,486	10,600	8,600	14,740	75,546	43	8	3,292	186	88,533
59	Pottery, terra cotta, and fire-clay products.	21	82,738	10,645	21,965	17,635	32,493	24	7	4,700	138	23,836
60	Printing and publishing, book and job.	38	147,710	5,525	5,425	106,000	30,760	49	12	8,462	166	51,703
61	Printing and publishing, newspapers and periodicals.	165	645,432	35,155	52,675	366,463	191,139	170	145	87,851	658	230,941
62	Rice, cleaning and polishing	4	51,325	5,425	13,600	19,300	13,000	2	9	8,325	30	7,675
63	Roofing and roofing materials	5	15,050	6,000	3,200	1,900	3,950	4	1	600	9	4,580
64	Saddlery and harness	85	177,894	11,138	19,658	22,618	124,480	92	12	6,970	157	42,390
65	Sewing machine repairing	5	1,670		900	320	450	5			5	1,790
66	Ship and boat building, wooden	14	73,760	21,600	2,700	22,185	27,275	17	2	1,200	73	31,782
67	Shirts	3	6,700			4,200	2,500	3	4	1,500	36	5,280
68	Silk and silk goods	3	130,376	6,200	52,000	40,525	31,651	1	11	3,455	209	25,420
69	Sugar and molasses, refining	6	926	81	90	755		11	1	200	1	236
70	Tinsmithing, copersmithing, and sheet-iron working.	69	175,731	25,245	25,980	24,012	100,494	93	3	1,740	171	61,581
71	Tobacco, chewing, smoking, and snuff	80	6,874,908	238,291	640,067	648,158	5,348,392	100	469	577,048	6,403	869,170
72	Tobacco, cigars and cigarettes	16	169,980	24,740	30,375	5,405	109,460	13	22	16,830	180	37,731
73	Tobacco, stemming and rehandling	5	101,400	909	14,700	16,800	69,000	10	12	6,500	419	51,373
74	Turpentine and rosin	174	217,423	35,615	19,745	66,671	95,392	205	25	5,460	400	70,697
75	Watch, clock, and jewelry repairing	80	86,727	8,100	9,325	20,515	48,787	86			37	15,077
76	Wood, turned and carved	21	58,240	6,615	4,980	23,815	22,830	27	8	2,506	126	29,887
77	Woolen goods	16	347,830	18,355	42,400	90,754	196,321	11	17	9,065	206	39,091
78	All other industries <sup>1</sup>	49	972,443	172,661	315,720	202,801	281,261	54	29	24,739	1,215	191,612

<sup>1</sup> Embraces bags, other than paper, 1; boxes, fancy and paper, 1; carriage and wagon materials, 2; chemicals, 2; clothing, women's, factory product, 1; coffee and spice, roasting and grinding, 2; cordage and twine, 2; cutlery and edge tools, 1; electrical apparatus and supplies, 2; electrical construction and repairs, 1; electroplating, 1; emery wheels, 1; fancy articles, not elsewhere specified, 2; fish, canning and preserving, 1; glass, cutting, staining, and ornamenting, 1; grease and tallow, 1; iron and steel, 2; ironwork, architectural and ornamental, 1; lapidary work, 1; models and patterns, 1; oil, essential, 1; optical goods, 1; oysters,

TABLE 8.—MANUFACTURES IN WILMINGTON

1	All industries	124	\$1,819,333	\$109,350	\$342,980	\$656,816	\$710,187	127	103	\$81,578	1,469	\$446,413
2	Blacksmithing and wheelwrighting	9	1,175			700	475	9			11	2,830
3	Boots and shoes, custom work and repairing.	3	70			65	5	3			2	236
4	Bread and other bakery products	5	8,172	500	1,200	2,422	4,050	6	9	830	12	3,334
5	Carpentering	7	3,935	1,200	700	925	1,110	7			62	33,350
6	Clothing, men's, custom work and repairing.	10	8,550			1,075	7,475	10	2	1,100	39	8,702
7	Confectionery	3	12,050	2,500	7,500	750	1,300	4			5	1,200
8	Furniture, cabinetmaking, repairing, and upholstering.	3	250			150	100	3			3	425
9	Masonry, brick and stone	3	1,000			300	700	3	1	675	46	14,114
10	Millinery, custom work	7	14,855	1,000	2,500	155	11,200	8	4	1,100	23	6,494
11	Painting, house, sign, etc.	3						3			5	1,830
12	Photography	3	2,400			1,550	850	3			3	554
13	Printing and publishing, book and job.	6	15,970			13,450	2,520	8			17	4,001
14	Printing and publishing, newspapers and periodicals.	4	65,800	2,400	4,900	31,000	27,600	4	16	10,440	52	27,605
15	Tinsmithing, coppersmithing, and sheet-iron working.	7	5,065			1,615	4,150	9			15	5,220
16	Turpentine and rosin	8	9,150	50	450	3,150	5,500	6			16	3,430
17	Watch, clock, and jewelry repairing	8	4,750			3,350	1,500	10				
18	All other industries <sup>1</sup>	40	1,605,641	101,700	325,730	596,859	641,752	31	71	67,424	1,158	333,055

<sup>1</sup> Embraces bicycle and tricycle repairing, 2; bottling, 2; carriages and wagons, 2; cars and general shop construction and repairs by steam railroad companies, 1; chemicals, 1; clothing, men's, factory product, 1; clothing, women's, dressmaking, 2; coffee and spice, roasting and grinding, 2; cotton, compressing, 2; cotton goods, 1; dyeing and cleaning, 1; dyeing and finishing textiles, 1; fertilizers, 1; flouring and grist mill products, 1; foundry and machine shop products, 2; gas,

## 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.										
350	\$86,627			15	\$1,500	\$8,767	\$3,598	\$268	\$4,476	\$125	\$18,131	\$15,144	\$2,987	\$148,998	47
465	117,873			1	104	1,820	35	280	1,305	200	222,320	221,870	450	380,000	48
35	8,940	9	\$1,627	7	600	2,423	1,056	307	1,060		44,508	43,923	585	73,325	49
		180	42,221	4	481	20,670	18,420	1,859	5,391		235,927	235,162	765	413,648	50
11	3,048			1	132	896	524	209	163		10,326	10,251	75	26,962	51
100	30,347			3	291	3,598	1,293	382	1,423	500	49,892	49,690	202	129,631	52
563	133,065	1	100			110,161	60	7,374	102,727		2,160,996	2,106,192	51,801	2,676,871	53
91	33,438			1	104	1,796	1,291	51	449	5	17,310	17,301	9	83,386	54
17	5,720	12	2,512			8,906	1,908	236	6,762		86,335	86,335		90,602	55
170	63,678					3,607		77	3,530		10,577	5,778	4,804	116,880	56
14	6,410	8	2,641	5	380	9,016	6,162	892	1,962		24,246	23,852	394	86,684	57
185	88,513			1	70	9,713	4,071	817	3,325	1,500	200,508	199,610	898	373,816	58
122	22,611	2	300	14	975	6,687	110	414	5,663	500	26,596	16,720	9,876	88,736	59
129	50,387	16	2,667	21	1,649	8,811	5,381	1,240	2,190		86,633	83,973	2,660	211,750	60
492	219,356	41	8,580	120	12,005	78,777	15,188	4,424	49,035	5,130	166,944	147,916	9,028	827,425	61
30	7,675					3,782	500	167	3,125		200,465	198,030	2,435	238,520	62
9	4,580					405	192	133	80		10,225	10,170	55	22,475	63
129	40,110			28	2,280	12,845	7,206	1,354	4,285		166,571	165,174	1,397	300,246	64
5	1,790					270	201	1	65		1,210	1,210		5,220	65
73	34,782					2,504	1,520	464	530		21,253	20,903	350	77,528	66
2	465	33	4,690	1	125	826	700	51	75		10,319	10,074	245	21,835	67
35	8,827	119	13,331	55	3,262	5,159	2,000	86	1,873	1,200	99,403	97,021	2,382	135,354	68
1	236					29	25	4			920	765	155	4,556	69
169	61,320			2	211	13,858	6,642	1,409	5,699	108	123,288	121,991	1,297	232,736	70
2,962	492,808	1,949	272,372	1,492	103,995	6,192,103	8,352	36,563	6,139,888	7,300	4,230,049	4,177,790	52,259	13,620,816	71
60	21,252	94	13,963	26	2,519	68,309	936	936	66,387		82,053	81,283	770	229,814	72
130	24,292	219	22,316	100	4,765	11,650	4,550	1,150	5,850		635,910	632,510	3,400	769,000	73
398	70,497	1	100	1	100	8,516	2,881	1,110	4,465	60	818,139	810,933	7,206	1,055,665	74
35	14,927			2	150	9,132	6,384	821	1,924		16,250	15,871	379	85,389	75
121	29,463			5	424	2,483	829	411	1,205	38	65,143	64,463	680	141,593	76
106	25,675	91	12,755	9	664	14,527	1,443	7,934	7,934	5,150	204,961	197,952	7,009	289,506	77
541	120,958	621	65,295	53	5,479	33,494	2,723	4,121	26,046	4	727,803	659,431	68,372	1,114,033	78

canning and preserving, 1; paints, 2; paper hanging, 2; plastering and stuccowork, 1; pumps, not including steam pumps, 1; sausage, 1; show cases, 2; slaughtering, wholesale, not including meat packing, 1; soap and candles, 1; taxidermy, 1; tools, not elsewhere specified, 2; trunks and valises, 1; upholstering materials, 2; vinegar and cider, 2.

## BY SPECIFIED INDUSTRIES: 1900.

1,150	\$102,145	239	\$37,805	74	\$6,463	\$125,277	\$18,209	\$19,531	\$80,307	\$7,230	\$1,361,258	\$1,319,629	\$11,629	\$2,246,237	1
11	2,830					768	632	76	60		2,532	2,325	207	11,425	2
1	150			1	86	156	156				607	576	31	1,020	3
12	3,334					2,596	1,716	289	591		18,138	17,613	525	34,570	4
02	33,850					7,585	25	140	195	7,225	90,578	90,578		180,885	5
17	4,295	19	4,095	8	312	3,422	2,891	220	811		26,576	26,183	442	50,915	6
5	1,200					366	315	43	8		1,931	1,775	156	3,927	7
2	325	1	100			248	218	15	15		629	629		2,355	8
45	14,010			1	104	700		50	650		31,430	31,430		57,000	9
		22	6,390	1	104	3,029	1,604	381	1,041		24,731	24,581	150	42,522	10
5	1,800					5				5	1,172	1,172		4,300	11
1	240	1	250	1	64	1,648	756	110	182		941	905	36	5,500	12
10	3,360	1	172	6	472	1,335	751	203	381		6,663	6,376	287	20,150	13
47	26,775	4	755	1	75	10,314	1,175	674	8,465		17,992	16,807	1,185	86,380	14
15	5,220					856	551	70	235		8,108	8,030	78	15,725	15
16	3,480					1,641	660	196	785		66,150	65,950	200	75,800	16
907	301,766	191	26,013	60	5,246	90,257	815	60	76		804	768	36	8,350	17
						6,444	17,001	66,809			1,062,277	1,023,981	38,296	1,644,813	18

illuminating and heating, 1; glass, cutting, staining, and ornamenting, 1; ice, artificial, 2; looking-glass and picture frames, 1; lumber, planing mill products, including sash, doors, and blinds, 1; mattresses and spring beds, 2; mineral and soda waters, 1; monuments and tombstones, 1; oil, cottonseed and cake, 1; plumbing, and gas and steam fitting, 2; saddlery and harness, 1; ship and boat building, wooden, 1; shirts, 1; vinegar and cider, 1; wood, turned and carved, 1.

TABLE 9.—MANUFACTURES IN CITIES 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.
1	Total for cities and towns-----	955	\$23,449,661	\$1,453,189	\$3,217,720	\$7,287,605	\$11,486,147	949	1,227	\$1,202,569	21,675	\$1,499,000
2	Asheville-----	136	1,413,523	185,375	185,761	383,958	653,429	148	68	49,647	1,149	357,411
3	Charlotte-----	112	4,102,342	204,531	479,592	1,591,620	1,826,599	101	185	174,843	2,988	699,846
4	Concord-----	32	2,040,351	51,562	379,079	1,103,159	506,551	25	33	95,049	1,953	410,215
5	Durham-----	82	1,727,205	112,377	211,598	644,165	753,065	87	151	253,619	2,787	535,289
6	Fayetteville-----	46	446,970	33,620	67,943	203,928	141,479	39	33	17,684	461	81,424
7	Goldshoro-----	46	620,932	42,300	93,850	218,080	266,702	44	39	33,462	507	123,899
8	Greensboro-----	79	1,711,629	154,316	480,968	531,611	544,734	72	87	65,143	1,587	295,820
9	High Point-----	47	834,673	34,750	81,774	173,449	544,700	37	47	38,918	1,116	205,009
10	Newbern-----	31	1,027,885	223,923	119,640	296,925	382,397	86	45	36,680	1,162	284,952
11	Raleigh-----	135	1,611,089	96,256	258,547	732,217	524,069	136	146	97,464	1,358	411,038
12	Reidsville-----	37	851,705	28,794	102,901	157,990	562,020	45	47	40,950	888	169,545
13	Salem-----	34	1,375,661	84,184	179,878	183,231	923,363	42	68	43,930	1,506	270,027
14	Salisbury-----	42	835,275	30,550	141,950	495,067	217,708	40	26	21,280	793	163,401
15	Winston-----	46	4,800,421	170,651	434,239	562,205	3,638,326	47	247	293,945	3,420	461,214

## TOWNS 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 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.										
12,916	\$3,270,071	5,469	\$883,239	3,290	\$345,780	\$6,570,089	\$107,463	\$131,628	\$6,303,316	\$27,682	\$16,495,938	\$15,948,672	\$547,266	\$33,860,171	1
851	303,102	216	35,536	82	18,773	59,602	21,311	7,615	30,411	265	1,090,523	1,066,700	23,823	1,904,109	2
1,701	520,188	807	131,730	477	47,978	218,221	17,142	21,933	175,232	3,914	2,892,587	2,783,466	109,121	4,702,301	3
1,035	295,462	488	101,668	370	43,085	61,304	3,903	9,779	47,622		1,162,100	1,069,413	92,696	1,981,411	4
1,184	314,092	1,295	190,367	338	30,830	2,367,522	9,836	13,835	2,344,291		2,502,449	2,466,518	35,931	7,081,540	5
263	59,296	153	19,801	40	2,327	15,737	1,997	2,324	9,689	1,727	316,680	306,932	9,748	570,127	6
407	110,351	44	8,498	56	5,047	26,336	3,327	3,167	19,842		677,409	664,770	12,639	1,086,384	7
1,061	225,517	320	49,687	206	20,616	152,048	8,811	6,317	136,520	400	1,015,571	940,023	75,548	1,730,523	8
875	182,670	95	10,940	146	11,399	72,386	2,296	5,048	61,442	3,600	617,434	608,920	8,514	1,178,715	9
1,033	270,482	03	11,414	36	3,056	39,476	6,155	4,946	28,345		1,069,070	1,059,560	9,570	1,701,251	10
981	370,263	222	50,342	155	20,433	107,133	16,475	14,607	70,185	5,866	1,233,093	1,158,908	44,191	2,204,056	11
460	106,937	227	36,363	201	26,245	238,043	2,929	5,848	238,716	550	563,307	544,559	18,748	1,234,783	12
921	206,733	222	28,080	360	35,214	715,301	5,621	7,621	695,499	5,560	854,716	840,238	14,428	2,067,240	13
378	65,499	256	52,872	159	45,030	25,721	2,139	3,310	19,772	500	548,020	509,603	38,417	915,254	14
1,700	269,526	1,056	155,941	664	35,747	2,411,259	4,931	25,278	2,375,750	5,800	1,982,964	1,929,072	53,892	5,436,030	15

Twelfth Census of the United States.

# CENSUS BULLETIN.

No. 131.

WASHINGTON, D. C.

January 21, 1902.

## MANUFACTURES.

### MARYLAND.

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

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

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

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

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

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

The statistics of Maryland are presented in 9 tables: Table 1 showing comparative figures for the state at the several censuses; Table 2 showing all the industries of the state divided between hand trades and the manufactures proper, and also the statistics of a governmental establishment, eleemosynary and penal institutions, and establishments with a product of less than \$500, which three latter classes were not reported at previous censuses; Table 3 showing the statistics of the 14 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the city of Baltimore at the censuses of 1880, 1890, and 1900; Table 5 showing the urban manufactures of the state in comparison with the totals for the entire state and the state exclusive of the cities and towns withdrawn from the enumerators; Table 6 showing the statistics for the state by counties; Table 7 showing the statistics for the state by specified industries; Table 8 showing the statistics for the city of Baltimore by specified industries; and Table 9 showing the totals for all industries in each of the cities and towns withdrawn from the enumerators (exclusive of the city of Baltimore).

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

In drafting the schedules of inquiry for the census of

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

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

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

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

In some instances, the number of proprietors and firm members, shown in the accompanying tables, falls short of the number of establishments reported. This is accounted

for by the fact that no proprietors or firm members are reported for corporations or cooperative establishments.

The reports show a capital of \$163,422,260 invested in manufactures and mechanical industries in the 9,880 establishments reporting for the state of Maryland. This sum represents the value of land, buildings, machinery, tools, and implements, and the live capital utilized, but does not include the capital stock of any of the manufacturing corporations of the state. The value of the products is returned at \$242,752,990, to produce which involved an outlay of \$7,383,263 for salaries of officials, clerks, etc.; \$38,761,551 for wages; \$17,226,623 for miscellaneous expenses, including rent, taxes, etc.; and \$144,539,680 for materials used, mill supplies, freight, and fuel. It is not to be assumed, however, that the difference between the aggregate of these sums and the value of the products is, in any sense, indicative of the profits in the manufacture of the products during the census year. The census schedule takes no cognizance of the cost of selling manufactured articles, or of interest on capital invested, or of the mercantile losses incurred in the business, or of depreciation in plant. The value of the product given is the value as obtained or fixed at the shop or factory. This statement is necessary in order to avoid erroneous conclusions from the figures presented.

The value of products for the state of Maryland, \$242,752,990, is the gross value, and not the net or true value. The difference between these two should be carefully noted. The gross value is found by adding the value of products in the separate establishments. But the finished product of one establishment is often the raw material for another. In such cases the value of the former reappears in the latter, and thus the original cost of certain materials may be included several times in the gross value. The net or true value is found by subtracting from the gross value the value of all materials purchased in a partly manufactured form. In this way the duplications in the gross value are eliminated.

At the census of 1890 the schedule was so framed that it was impossible to find the net or true value. In the present census the schedule asked for the value of the materials in two classes, those purchased in the crude state and those purchased in the partly manufactured form. From the answers to these questions the net or true value of products may be computed. Thus, for Maryland, the gross value of products for 1900 was \$242,752,990. The value of materials purchased in a partly manufactured form was \$103,620,042. The difference, \$139,132,948, is the net or true value of products, and represents the increase in the value of raw materials resulting from the various processes of manufacture.

Very respectfully,

  
Chief Statistician for Manufactures.



# MARYLAND.

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

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

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

	DATE OF CENSUS.						PER CENT OF INCREASE.				
	1900	1890	1880	1870	1860	1850	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860
Number of establishments .....	9,880	7,485	6,787	5,812	3,083	3,725	32.0	10.3	16.8	88.5	117.2
Capital .....	\$163,422,260	\$119,067,316	\$58,742,884	\$36,438,729	\$23,230,608	\$14,934,450	36.6	103.7	61.2	56.9	55.6
Salaries of officials, clerks, etc., number .....	7,589	29,246	(3)	(3)	(3)	(3)	117.9				
Salaries .....	\$7,888,263	\$7,085,418	(3)	(3)	(3)	(3)	4.2				
Wage-earners, average number .....	103,361	97,808	74,945	44,860	28,408	30,212	10.8	30.5	67.1	57.9	16.0
Total wages .....	\$38,761,551	\$34,441,414	\$18,904,965	\$12,682,817	\$7,190,672	\$7,403,832	12.5	82.2	49.1	76.4	12.9
Men, 16 years and over .....	73,860	67,261	46,693	34,061	21,030	22,729	8.3	44.0	37.1	57.5	14.8
Wages .....	\$31,845,361	\$29,049,820	(3)	(3)	(3)	(3)	9.8				
Women, 16 years and over .....	29,617	26,482	21,700	3,278	6,773	7,483	12.0	21.8	162.1	22.2	19.5
Wages .....	\$6,112,187	\$5,009,548	(3)	(3)	(3)	(3)	22.0				
Children, under 16 years .....	5,884	4,115	6,547	(3)	(3)	(3)	43.0	137.1	158.7		
Wages .....	\$764,003	\$382,046	(3)	(3)	(3)	(3)	100.0				
Miscellaneous expenses .....	\$17,226,623	\$10,616,347	(4)	(4)	(4)	(4)	62.3				
Cost of materials used .....	\$144,539,680	\$92,059,390	\$66,937,846	\$46,897,032	\$25,494,007	\$17,690,836	57.0	37.5	42.7	84.0	44.1
Value of products, including custom work and repairing .....	\$242,752,990	\$171,842,593	\$106,780,563	\$76,598,613	\$41,785,157	\$33,043,892	41.3	60.9	39.4	83.5	26.3
Total population .....	1,188,044	1,042,890	934,943	780,894	687,049	583,034	14.0	11.5	19.7	13.7	17.8
Wage-earners engaged in manufactures .....	103,361	97,808	74,945	44,860	28,408	30,212	10.8	30.5	67.1	57.9	16.0
Per cent of total population .....	9.1	9.4	8.0	5.7	4.1	5.2					
Assessed value of real estate .....	\$616,719,782	\$411,900,246	\$368,442,913	\$286,910,332	\$65,341,438	\$139,026,610	49.7	11.8	28.4	339.1	153.0
Value of land and buildings invested in manufactures .....	\$45,804,854	\$31,268,516	(3)	(3)	(3)	(3)	46.5				
Per cent of assessed value .....	7.4	7.6									

<sup>1</sup> Decrease.

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

<sup>3</sup> Not reported separately.

<sup>4</sup> Not reported.

<sup>5</sup> As given in the Maryland Manual for 1900.

<sup>6</sup> Does not include value of rented property.

Although Maryland is not preeminently a manufacturing state, Table 1 shows that there has been a steady growth in its manufacturing and mechanical industries during the half century. The population during these years increased from 583,034 to 1,188,044, or 103.8 per cent, while the average number of wage-earners employed in manufacturing establishments increased from 30,212 to 103,361, or 258.7 per cent, embracing, in 1900, 9.1 per cent of the entire population, compared with 5.2 per cent in 1850. Probably the best indication of the importance of the wage-earning class is afforded by the greatest number employed at any one time during the year. In 1900

this was 149,069, or 12.5 per cent of the total population of the state. The industries of the province of Maryland were localized largely in and near the city of Baltimore, which was founded in 1729, and the same localization is shown at the present census.

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

TABLE 2.—SUMMARY FOR ALL ESTABLISHMENTS.

CLASSES.	Num-ber of estab-lish-ments.	Capital.	Propri-eters and firm mem-bers.	WAGE-EARNERS.		Miscella-neous 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	11,529	\$164,422,926	18,085	108,887	\$88,821,476	\$17,806,196	\$144,809,911	\$86,474,217	\$103,839,576	\$4,496,118	\$248,503,056
Hand trades <sup>1</sup>	4,550	9,639,941	4,920	11,518	5,221,050	2,274,333	9,951,881	101,225	9,710,988	189,218	28,054,608
Governmental establishment	1	169,100		13	4,689		8,463		7,763	700	18,652
Eleemosynary and penal institu-tions	6	280,973		270	43,402	17,142	111,131	30,152	75,273	5,706	215,293
Establishments with a product of less than \$500	1,042	550,593	1,910	243	11,884	62,431	150,637	13,963	136,498	176	521,121
All other establishments	5,330	153,782,319	6,205	96,843	33,540,501	14,952,290	131,588,299	36,328,877	93,909,104	4,350,318	219,698,382

<sup>1</sup> Includes bicycle and tricycle repairing, 71; blacksmithing and wheelwrighting, 877; boots and shoes, custom work and repairing, 719; carpentering, 393; clothing, men's, custom work and repairing, 408; clothing, women's, dressmaking, 583; dyeing and cleaning, 58; furniture, cabinetmaking, repairing, and uphol-stering, 186; lock and gun smithing, 59; masonry, brick and stone, 106; millinery, custom work, 235; painting, house, sign, etc., 308; paper hanging, 107; plastering and stuccowork, 46; plumbing, and gas and steam fitting, 245; sewing machine repairing, 11; watch, clock, and jewelry repairing, 138.

Of the 11,529 establishments of all classes, shown in this table, 6,192, or 53.7 per cent, were small shops included in the groups of "hand trades" and "establishments with a product of less than \$500." The value of the products of these establishments, consisting principally of the sums received for custom work and repairing,

amounted to \$28,575,729, or only 9.7 per cent of the total products of the state.

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

INDUSTRIES.	Number of idle estab-lishments.	Capital.	INDUSTRIES.	Number of idle estab-lishments.	Capital.
Ammunition	1	\$142,628	Lumber and timber products	10	\$8,975
Dye stuffs and extracts	1	10,965	Paper and wood pulp	2	88,000
Flouring and grist mill products	8	12,405	Pottery, terra cotta, and fire-clay products	2	135,000
Iron and steel	3	247,934	Sugar and molasses, refining	1	75,000
Leather, tanned, curried, and finished	1	8,750	Woolen goods	1	10,000
Liquors, distilled	3	110,000	All other industries	7	16,401
Liquors, malt	2	410,000			

TABLE 3.—COMPARATIVE SUMMARY OF FOURTEEN LEADING INDUSTRIES.

INDUSTRIES.	Year.	Num-ber of estab-lish-ments.	Capital.	WAGE-EARNERS.		Miscella-neous expenses.	Cost of materials used.	Value of products, including custom work and repairing.
				Average number.	Total wages.			
Total for selected industries for state	1900	1,877	\$54,099,994	37,241	\$12,522,561	\$6,882,890	\$54,428,483	\$86,343,509
	1890	1,470	41,767,867	36,110	9,548,433	3,438,593	35,732,390	57,689,323
Increase, 1890 to 1900		407	12,332,127	1,131	2,974,128	3,444,297	18,646,093	28,658,186
Per cent of increase		27.7	29.5	3.1	31.1	100.2	52.1	49.7
Per cent of total of all industries in state	1900	19.0	33.1	34.4	32.3	40.0	37.7	35.6
	1890	19.6	34.9	36.9	27.7	32.4	38.9	33.6
Fertilizers	1900	40	7,008,376	1,016	457,692	354,314	3,643,846	5,481,905
	1890	58	6,935,914	1,051	492,082	459,109	3,984,178	6,208,025
Flouring and grist mill products	1900	407	3,428,996	541	229,335	225,357	6,731,805	8,035,343
	1890	335	3,007,730	625	240,063	236,607	5,778,873	6,904,888
Foundry and machine shop products	1900	113	6,381,676	4,695	2,251,777	459,175	3,322,658	8,443,547
	1890	81	4,669,891	3,352	1,665,907	241,148	1,875,508	4,925,672
Fruits and vegetables, canning and preserving	1900	271	4,459,660	7,505	1,379,131	371,108	8,736,518	11,996,245
	1890	197	2,739,008	13,018	1,416,386	151,496	4,416,352	7,196,109
Furniture, factory product	1900	42	1,584,984	1,869	822,540	155,614	1,212,226	2,976,494
	1890	38	1,296,831	1,370	582,129	77,592	1,063,759	2,110,955
Iron and steel	1900	9	2,892,690	2,138	1,029,753	508,298	6,888,916	8,739,405
	1890	10	4,067,574	1,247	371,993	46,077	2,217,173	2,839,208
Lumber and timber products	1900	367	2,622,928	1,964	476,776	63,004	1,390,357	2,650,082
	1890	217	1,459,895	1,552	335,909	54,928	840,941	1,600,472
Lumber, planing mill products, including sash, doors, and blinds	1900	58	3,534,501	1,323	542,262	153,244	2,452,655	3,758,083
	1890	45	1,990,138	1,174	661,361	131,296	2,005,755	3,332,563
Oysters, canning and preserving	1900	16	799,005	1,444	379,591	70,100	1,771,377	2,417,331
	1890	8	953,232	2,334	559,040	43,301	1,877,353	2,834,400
Paper and wood pulp	1900	21	2,720,877	987	326,474	105,571	1,730,910	2,589,540
	1890	17	919,766	472	171,209	157,569	552,604	1,001,945

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

INDUSTRIES.	Year.	Number of establishments.	Capital.	WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.
				Average number.	Total wages.			
Shipbuilding:								
Total	1900	47	\$4,446,023	2,615	\$1,517,705	\$141,565	\$1,798,564	\$4,161,525
	1890	34	1,315,262	1,043	620,483	92,677	737,457	1,737,674
Ship and boat building, wooden	1900	43	623,435	676	331,873	30,649	301,010	862,034
	1890							
Shipbuilding, iron and steel	1900	4	3,822,588	1,939	1,185,832	110,916	1,497,554	3,299,491
	1890							
Slaughtering:								
Total	1900	82	1,548,488	597	276,413	109,017	7,109,079	8,046,359
	1890	17	993,081	389	182,568	76,159	3,903,563	4,670,690
Slaughtering and meat packing, wholesale	1900	47	1,818,917	514	242,089	99,239	5,446,717	6,209,857
	1890	14	958,521	368	171,203	75,232	3,668,147	4,311,412
Slaughtering, wholesale, not including meat packing	1900	35	229,571	83	34,324	9,778	1,662,362	1,886,502
	1890	8	34,560	21	11,360	927	301,416	359,278
Textiles:								
Total	1900	22	9,351,313	6,286	1,526,685	473,178	4,053,682	7,155,722
	1890	32	7,819,324	4,921	1,219,583	378,667	3,880,186	6,218,181
Cotton goods	1900	14	7,709,256	4,727	1,186,014	397,016	3,039,396	5,423,251
	1890	15	7,296,793	4,256	1,055,536	354,478	3,378,016	5,457,792
Hosiery and knit goods	1900	4	811,508	682	119,456	21,981	347,250	514,093
	1890	8	149,666	289	44,666	9,747	87,315	180,823
Woolen goods	1900	4	1,330,549	377	221,215	54,181	667,036	1,218,378
	1890	9	372,875	376	119,481	14,442	424,555	579,516
Tobacco:								
Total	1900	337	3,325,477	4,311	1,306,427	3,691,315	3,535,890	9,896,928
	1890	391	3,600,121	3,026	1,029,120	1,291,967	2,532,688	6,074,591
Chewing, smoking, and snuff	1900	5	1,305,611	2,002	564,272	3,238,312	2,496,107	7,054,159
	1890	6	2,203,619	1,178	335,135	928,023	1,534,205	3,216,247
Cigars and cigarettes	1900	382	1,519,866	2,309	742,155	453,003	1,039,783	2,842,769
	1890	385	1,396,602	1,848	693,985	363,944	1,048,483	2,853,344

<sup>1</sup> Not separately reported in 1890.

The 14 leading industries of the state in 1900, as shown in Table 3, embraced 1,877 establishments, or 19 per cent of the total number in the state; used a capital of \$54,099,094, or 33.1 per cent of the total; gave employment to 37,241 wage-earners, or 34.4 per cent of the total number; and paid \$12,522,561, or 32.3 per cent of the total wages. The value of their products was \$86,343,509, or 35.6 per cent of the total. In the discussion of Table 3, which follows, these industries are ranked with reference to the value of their products.

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

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

crease in the value of products during the decade was \$5,870,197, or 204.6 per cent. Iron ore was smelted in Maryland on the lower Patuxent as early as 1649, and the industry was thoroughly established by 1717, small quantities of wrought iron being exported from the colony.<sup>1</sup> Small furnaces were built along a belt of ores in Prince George, Howard, Baltimore, Harford, and Cecil counties, and produced charcoal pig iron of a high grade. One of these plants, the Principio Furnaces, manufactured cannon, cannon balls, and hardware for the United States Government during the War of 1812.<sup>2</sup> From these older works developed rolling mills, such as the one at Mt. Savage, where were rolled the first heavy rails made in the United States, and establishments for making boiler and plate iron. One of these plants, located at Canton, devoted itself almost exclusively in 1861 to the manufacture of armor plates for the Government vessels, and made the armor for Ericsson's Monitor,<sup>3</sup> while other plants, such as the one built in 1870 at Cumberland to make iron rails, bolts, rivets, and fish plates, became manufacturers of steel. With the development of the Lake Superior ore district, the iron and steel interests moved westward, and many of these plants were closed. The revival of the industry in Maryland began in 1887 with the construction of a large iron and steel plant at Sparrow Point, a short distance southeast of the city of Baltimore. Its construction marked an epoch in the manufacture of iron and steel in

<sup>1</sup> Manufactures of Maryland, Spencer, page 14.<sup>2</sup> Maryland, its Resources, Industries, and Institutions, by members of Johns Hopkins University and others, page 103.<sup>3</sup> Ibid., page 107.

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

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

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

There were 5 establishments engaged in the manufacture of chewing and smoking tobacco and snuff in 1900, with 2,002 wage-earners, and products valued at \$7,054,159. In 1890 there were 6 establishments, with 1,178 wage-earners, and products valued at \$3,216,247. The increase in the value of products during the decade was \$3,837,912, or 119.3 per cent. There were 382 establishments engaged in the manufacture of cigars and cigarettes in 1900, with 2,309 wage-earners, and products valued at \$2,842,769. In 1890 there were 385 establishments, with 1,848 wage-earners, and products valued at \$2,858,344. The decrease in the value of products during the decade was \$15,575, or one-half of 1 per cent.

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

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

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

There were 14 establishments engaged in the manufacture of cotton goods in 1900, with 4,727 wage-earners, and products valued at \$5,423,251. In 1890 there were 15 establishments, with 4,256 wage-earners, and products valued at \$5,457,792. The decrease in the value of products during the decade was \$34,541, or six-tenths of 1 per cent. Linsey-woolsey and osnaburgs were made in Maryland by household servants as early as 1649.<sup>2</sup> Cotton from the Southern states has been used for nearly eighty years in the factories of the state, and Baltimore cotton duck has become world-famous. This product was, to a certain extent, an outgrowth of Baltimore's importance as a shipbuilding center, and since 1822 it has not only overshadowed the other textile products of Maryland, but has made Baltimore the largest cotton duck manufacturing city in the United States. Woodberry is a flourishing community built up almost entirely by the cotton industry.

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

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

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

<sup>1</sup> Maryland, its Resources, Industries, and Institutions, page 345.

<sup>2</sup> Manufactures of Maryland, page 11.

<sup>3</sup> Ibid., page 12.

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

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

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

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

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

There were 16 establishments engaged in the canning and preserving of oysters in 1900, with 1,444 wage-earners, and products valued at \$2,417,831. In 1890 there were 8 establishments, 2,834 wage-earners, and products valued at \$2,834,400. The decrease in the value of products during the decade was \$417,069, or 14.7 per cent. The first oyster-packing house was established in Baltimore early in the last century,<sup>4</sup> and the industry is now also carried on at Annapolis, Cambridge, Oxford, St. Michaels, and Crisfield, the last-named city being built literally upon oyster shells.

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

#### URBAN MANUFACTURES.

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

<sup>1</sup> Manufactures of Maryland, page 29.

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

<sup>3</sup> The Manufacturers' Record, vol. 37, page 161.

<sup>4</sup> Maryland, its Resources, Industries, and Institutions, page 303.

<sup>5</sup> Manufactures of Maryland, page 25.

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

	DATE OF CENSUS.			PER CENT OF INCREASE.	
	1900	1890	1880	1890 to 1900	1880 to 1890
Number of establishments .....	6,861	5,265	3,688	20.8	43.0
Capital .....	\$117,869,175	\$92,723,677	\$38,586,773	27.1	140.3
Wage-earners, average number .....	79,084	76,489	56,338	3.4	35.8
Total wages .....	\$29,804,520	\$29,895,500	\$15,117,489	12.0	97.8
Miscellaneous expenses .....	\$14,552,897	\$8,771,869	( <sup>2</sup> )	65.9	
Cost of materials used .....	\$87,534,743	\$73,770,001	\$47,974,297	18.7	53.8
Value of products, including custom work and repairing .....	\$161,945,811	\$141,723,599	\$78,417,304	14.3	80.7

<sup>1</sup> Decrease.

<sup>2</sup> Not given.

It appears from Table 4 that there has been an increase during the past decade in the manufactures of the city of Baltimore. The number of establishments increased from 5,265 to 6,861, or 20.8 per cent; the average number of wage-earners from 76,489 to 79,084, or 3.4 per cent; and the value of products from \$141,723,599 to \$161,945,811, or 14.3 per cent. The increase in each of these particulars was smaller in Baltimore than in the state as a whole. The number of establishments, number of wage-earners,

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

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

TABLE 5.—URBAN MANUFACTURES.

	Num- ber of estab- lish- ments.	Capital.	Propri- etors and firm mem- bers.	WAGE-EARNERS.		Miscella- neous expenses.	Cost of materials used.	Value of products, including custom work and repairing.
				Average number.	Total wages.			
Total for state.....	9,880	\$163,422,260	11,125	108,361	\$38,761,551	\$17,226,623	\$144,539,680	\$212,752,990
Total for urban manufactures.....	7,032	124,848,603	7,893	85,203	31,358,676	14,975,866	93,471,877	171,907,783
Annapolis.....	91	188,195	94	244	101,603	9,797	170,043	393,086
Baltimore.....	6,861	117,869,175	7,165	79,084	29,904,520	14,552,397	87,531,743	161,945,811
Cumberland.....	140	2,938,219	145	1,963	805,775	213,340	1,999,937	3,494,622
Frederick.....	133	1,217,702	149	1,131	252,383	69,898	1,054,449	1,727,094
Hagerstown.....	203	1,376,281	223	1,873	502,307	92,802	1,454,929	2,465,507
Havre de Grace.....	38	831,464	43	674	382,348	16,491	913,676	1,372,420
Westminster.....	66	428,567	74	284	59,735	16,146	\$44,100	609,243
Total for state exclusive of urban manufactures.....	2,848	38,573,657	3,232	23,158	7,402,875	2,250,757	51,067,803	70,845,207
Per cent of urban manufactures to total for state.....	71.2	76.4	70.9	78.6	80.9	86.9	64.7	70.8

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

Table 6 shows the totals for the state by counties.

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

Table 8 shows the totals for the city of Baltimore by specified industries.

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

TABLE 6.—MANUFACTURES

	COUNTIES AND MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of estab- lish- ments.	CAPITAL.					Propri- etors and firm mem- bers.	SALARIED OF- FICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and imple- ments.	Cash and sundries.		Num- ber.	Salaries.	Total.	
											Average num- ber.	Wages.
1	The State-----	9,880	\$168,422,260	\$14,119,288	\$31,685,566	\$29,228,714	\$88,388,692	11,125	7,589	\$7,388,268	108,361	\$38,761,551
2	Allegany-----	250	6,375,175	400,701	1,410,740	1,983,479	2,580,255	257	244	239,745	4,085	1,528,949
3	Anne Arundel-----	124	3,012,756	476,160	438,053	722,811	1,377,232	120	75	79,714	1,711	596,917
4	Baltimore-----	333	16,812,468	736,439	5,275,898	8,525,568	6,974,568	884	281	374,232	6,404	3,002,891
5	Baltimore city-----	6,361	117,869,175	10,291,700	21,835,101	17,933,978	68,808,896	7,165	6,278	6,207,269	79,084	29,304,520
6	Calvert-----	35	77,721	12,445	14,975	32,775	17,526	88	2	1,100	104	28,309
7	Caroline-----	118	895,577	49,938	54,210	132,578	158,851	132	23	9,714	688	129,666
8	Carroll-----	800	1,372,197	92,366	264,840	373,914	941,077	832	54	27,251	1,118	304,173
9	Cecil-----	150	1,681,081	117,549	298,297	442,587	822,648	169	78	74,755	1,160	411,014
10	Charles-----	40	103,730	45,410	13,005	36,220	9,095	42	1	320	60	14,235
11	Dorchester-----	182	807,845	62,934	90,813	232,090	892,008	155	43	16,391	918	146,977
12	Frederick-----	353	2,336,538	276,767	664,647	511,727	983,897	386	115	67,853	1,833	478,122
13	Garrett-----	110	1,216,555	456,508	79,380	336,753	344,019	148	26	16,228	448	153,616
14	Harford-----	295	2,001,749	335,801	246,428	486,271	933,249	330	43	31,478	1,937	595,072
15	Howard-----	82	1,196,441	107,527	249,069	312,767	526,478	91	27	34,557	967	211,426
16	Kent-----	77	505,151	50,285	86,050	135,752	230,064	86	10	5,500	387	92,796
17	Montgomery-----	181	273,805	28,550	72,085	72,510	100,660	144	4	1,950	109	33,261
18	Prince George-----	57	467,471	54,705	153,324	91,825	167,617	67	12	13,180	426	94,849
19	Queen Anne-----	75	227,692	20,652	48,090	69,260	89,090	87	2	2,400	136	49,269
20	St. Mary-----	8	80,162	10,222	4,950	13,400	51,590	9	6	2,000	38	10,486
21	Somerset-----	93	475,641	67,712	60,400	129,673	217,956	125	15	7,821	819	154,161
22	Talbot-----	114	604,621	44,447	91,684	179,118	289,372	127	33	20,511	611	158,612
23	Washington-----	876	3,107,123	191,249	481,643	704,538	1,729,698	420	133	105,591	2,692	766,318
24	Wicomico-----	165	1,503,231	102,170	190,750	341,168	869,143	218	61	32,260	1,868	341,869
25	Worcester-----	101	568,255	58,056	59,934	125,557	324,708	143	28	11,943	778	161,543

TABLE 7.—MANUFACTURES BY

1	All industries	9,880	\$168,422,260	\$14,119,288	\$31,685,566	\$29,228,714	\$88,888,692	11,125	7,589	\$7,388,268	108,361	\$38,761,551
2	Artificial feathers and flowers	6	33,065	400	1,400	3,045	30,020	10	5	6,520	237	36,190
3	Awnings, tents, and sails	32	78,890	400	1,400	8,890	68,000	41	8	2,860	114	53,008
4	Bags, other than paper	7	218,553	8,150	2,300	30,610	182,493	9	8	10,820	121	31,582
5	Baking and yeast powders	7	97,068	10,300	16,400	9,725	87,943	7	48	41,931	106	33,854
6	Baskets, and rattan and willow ware	30	81,729	10,300	16,400	12,084	42,995	81	7	4,400	134	31,396
7	Bicycle and tricycle repairing	71	683,913	44,550	115,634	184,402	339,277	77	24	46,335	316	119,978
8	Blacking	3	12,501	171,987	263,700	1,417	11,034	3	6	9,794	12	2,982
9	Blacksmithing and wheelwrighting	877	919,520	171,987	263,700	139,414	344,469	949	4	8,184	711	295,621
10	Bluing	3	890	7,925	20,800	255	635	3	3	1,000	5	1,000
11	Bookbinding and blank book making	22	112,395	7,925	20,800	48,870	35,300	25	15	10,089	196	70,977
12	Boot and shoe cut stock	8	31,875	400	3,000	2,475	26,000	3	7	3,800	11	4,720
13	Boot and shoe uppers	12	28,390	3,700	4,700	2,865	12,125	12	12	12,125	15	5,295
14	Boots and shoes, custom work and repairing	719	522,867	127,681	205,845	61,620	127,721	730	7	2,900	341	126,035
15	Boots and shoes, factory product	19	499,609	12,500	26,800	167,326	292,983	26	44	50,236	896	289,194
16	Bottling	29	370,803	71,900	125,700	35,733	137,470	30	33	30,830	160	71,768
17	Boxes, cigar	10	62,352	8,200	10,040	9,265	34,847	10	3	2,232	96	30,362
18	Boxes, fancy and paper	11	135,796	8,200	10,200	46,060	71,336	13	32	16,268	356	77,699
19	Boxes, wooden packing	26	668,018	62,850	89,541	110,414	405,213	36	30	25,922	1,211	363,001
20	Brass castings and brass finishing	7	95,098	10,950	10,450	29,079	44,619	6	11	9,932	96	86,584
21	Brassware	3	60,465	475	35,213	24,777	24,777	3	11	14,066	39	10,702
22	Bread and other bakery products	468	1,944,602	277,436	645,485	655,640	366,041	479	181	118,146	1,624	604,773
23	Brick and tile	45	3,992,800	1,586,110	1,002,355	1,001,091	403,244	50	57	52,399	1,501	453,143
24	Brooms and brushes	42	338,421	14,775	48,100	58,423	217,123	53	21	18,570	435	135,899
25	Carpentering	393	1,808,663	180,651	252,723	221,680	1,158,609	425	49	45,566	2,516	1,265,961
26	Carpets, rag	21	45,450	2,058	3,600	13,720	26,066	28	4	8,000	119	30,966
27	Carriage and wagon materials	6	188,254	21,400	32,324	32,924	101,606	7	16	13,320	145	44,443
28	Carrriages and wagons	173	835,342	97,399	173,255	97,466	467,222	223	27	20,356	822	339,949
29	Cars and general shop construction and repairs by steam railroad companies	19	2,877,954	298,490	1,547,939	550,609	480,916	134	134	100,843	3,620	1,849,737
30	Cheese, butter, and condensed milk, factory product	88	235,858	13,021	48,840	118,635	55,362	95	18	7,812	113	33,998
31	Chemicals	7	1,806,272	551,000	239,182	505,465	510,625	3	33	51,424	475	246,454
32	China decorating	5	14,715	1,000	1,500	1,195	11,020	5	5	3,801	18	5,218
33	Clothing, men's, custom work and repairing	408	1,681,280	87,408	152,228	51,297	1,390,347	474	187	112,205	1,534	742,559
34	Clothing, men's, factory product	189	8,458,116	135,700	356,200	419,434	7,546,782	258	766	719,535	9,725	3,179,069
35	Clothing, men's, factory product, buttonholes	8	7,295	400	1,800	4,915	680	9	9	1,100	39	11,384
36	Clothing, women's, dressmaking	583	327,052	51,300	97,925	47,630	180,197	616	17	11,022	1,263	303,994
37	Clothing, women's, factory product	61	841,345	3,000	12,500	91,052	734,793	100	151	127,941	2,175	562,710
38	Coffee and spice, roasting and grinding	11	227,400	3,200	10,800	40,800	173,600	15	63	107,602	97	35,087
39	Confectionery	188	1,003,246	85,394	262,075	219,505	435,672	154	147	121,364	1,030	307,510
40	Cooperage	46	414,727	75,653	92,420	41,995	204,639	54	18	11,780	415	174,587
41	Corsets	4	50,630	10,000	20,000	4,620	16,010	4	14	3,328	37	8,870



## BY COUNTIES: 1900.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average num- ber.	Wages.	Average num- ber.	Wages.	Average num- ber.	Wages.										
72,800	\$31,885,361	29,617	\$6,112,187	5,884	\$764,008	\$17,226,623	\$1,857,642	\$893,085	\$11,886,141	\$2,589,755	\$144,539,680	\$141,311,724	\$3,227,956	\$242,752,990	1
3,629	1,441,538	261	57,128	145	23,283	328,587	85,000	33,229	255,058	5,305	3,964,683	3,801,720	162,963	6,909,342	2
1,020	581,120	52	9,645	39	6,152	118,389	6,607	15,060	91,542	180	2,506,838	2,437,708	69,130	3,774,649	3
6,090	2,875,993	431	89,358	283	37,540	1,348,287	29,818	68,919	1,212,870	86,680	34,636,643	33,238,643	1,398,100	43,873,365	4
51,166	23,558,985	23,810	5,165,824	4,108	579,711	14,552,897	1,654,441	683,271	9,694,343	2,520,342	87,534,743	86,300,108	1,234,635	161,945,811	5
104	28,309					1,666	196	467	503	500	51,856	50,819	1,037	104,124	6
840	91,509	295	33,859	53	4,298	15,931	2,076	2,135	11,670		511,191	503,528	7,668	822,166	7
842	267,704	206	31,206	70	5,263	80,770	11,254	6,181	62,937	398	1,406,237	1,378,765	27,472	2,194,673	8
1,072	397,428	64	10,524	24	3,062	89,747	18,612	10,818	60,316		1,240,175	1,172,826	67,349	2,156,328	9
49	14,156			1	79	1,517	467	374	676		121,977	120,283	1,694	182,378	10
405	94,902	437	47,689	71	4,386	25,931	4,418	3,571	17,912	30	543,543	539,251	9,292	956,381	11
1,294	417,400	342	39,572	197	16,150	102,286	20,384	11,796	70,006	100	1,920,724	1,836,511	84,213	3,108,929	12
436	152,454	4	665	3	497	40,896	2,138	6,415	32,273	70	564,568	562,593	1,975	974,813	13
1,183	471,267	561	107,949	193	15,856	50,594	16,716	5,859	27,719	300	2,218,545	2,192,104	26,441	3,369,295	14
404	115,850	485	85,815	78	10,261	57,812	4,757	4,881	47,674		614,207	607,975	6,232	1,154,211	15
257	79,916	81	9,580	49	3,800	16,491	2,659	1,847	11,685	850	333,144	318,931	19,213	560,160	16
102	82,822	4	524	3	415	13,268	4,532	1,566	7,123	47	362,314	356,007	6,307	539,502	17
178	47,219	166	36,000	82	11,600	24,729	486	4,719	19,524		311,973	296,170	15,303	573,289	18
86	23,755	86	24,142	14	1,372	7,790	3,664	1,130	2,846	150	134,970	132,040	2,930	284,331	19
38	10,486					5,366	135	256	4,965	10	36,984	35,069	1,915	73,848	20
432	104,198	283	41,725	104	8,238	29,992	1,785	3,623	24,319	265	456,561	446,381	10,180	739,194	21
363	117,517	203	37,899	45	8,196	42,975	4,333	2,292	33,992	2,358	500,333	484,402	15,981	910,204	22
1,721	595,672	873	161,892	98	8,754	190,087	24,864	12,089	131,950	21,184	2,832,230	2,788,815	43,415	4,543,980	23
914	281,325	808	99,294	146	10,750	66,880	2,439	9,231	54,310	400	1,077,996	1,067,785	10,261	1,894,600	24
535	134,306	165	22,397	78	4,840	20,235	5,860	3,306	9,983	1,086	652,245	648,440	3,805	1,057,417	25

## SPECIFIED INDUSTRIES: 1900.

72,860	\$31,885,361	29,617	\$6,112,187	5,884	\$764,008	\$17,226,623	\$1,857,642	\$893,085	\$11,886,141	\$2,589,755	\$144,539,680	\$141,311,724	\$3,227,956	\$242,752,990	1
12	8,800	158	24,740	67	7,650	6,063	2,490	13	3,560		26,830	26,806	24	114,520	2
83	45,576	29	7,262	2	168	7,863	6,337	222	1,304		112,471	111,838	633	227,083	3
70	11,750	90	19,712	1	120	14,216	8,286	2,379	8,551		864,581	363,834	547	454,095	4
63	25,567	53	8,287			25,772	7,102	878	17,792		219,409	215,095	4,314	345,278	5
110	23,996	22	2,000	2	400	12,249	3,131	323	1,295	7,500	76,166	76,555	611	154,719	6
308	118,872			8	1,106	54,699	9,236	1,437	43,715	811	352,530	343,830	8,700	661,154	7
3	1,270	3	750	6	962	1,087	840	58	189		15,084	14,841	243	30,682	8
698	293,680			18	1,941	54,556	35,244	6,501	11,813	1,098	372,153	350,755	21,398	1,321,263	9
4	850	1	160			406	329		77		3,227	3,219	8	7,320	10
88	48,994	94	20,233	14	1,750	12,556	6,233	829	3,394	2,200	36,282	35,218	1,066	173,876	11
10	4,600			1	120	1,370	650	320	400		71,660	71,410	250	99,500	12
15	5,295					1,608	1,259	56	193		25,247	25,117	180	40,080	13
325	123,174	8	2,880	8	481	81,062	57,008	6,055	8,211	9,788	253,076	248,436	4,640	834,112	14
597	220,030	285	67,264	14	1,900	38,480	8,168	1,351	23,961		676,359	671,038	5,321	1,129,153	15
169	71,593			1	175	52,302	3,196	2,810	46,672	624	508,306	504,784	3,522	774,747	16
38	17,140	50	12,625	8	588	1,910	290	301	1,319		57,329	56,594	735	107,864	17
79	26,431	220	43,792	57	7,476	24,975	9,155	909	13,853	1,055	126,473	124,170	2,303	296,013	18
962	327,093	33	3,405	216	32,503	64,493	11,335	4,709	43,449		1,104,752	1,102,659	2,093	1,847,528	19
95	36,344			1	240	10,042	2,630	823	6,589		140,582	135,891	4,691	243,333	20
30	9,552	2	488	7	662	4,109	1,059	70	2,980		51,321	49,861	1,400	116,547	21
1,341	557,099	220	37,684	63	9,990	152,768	49,308	18,195	85,270		2,369,846	2,288,055	81,791	4,140,692	22
1,484	450,918			17	2,225	51,366	2,763	10,692	37,911		155,934	155,934	113,833	844,335	23
362	119,345	55	18,965	18	2,589	17,762	7,609	1,439	8,714		329,976	328,168	1,808	613,973	24
2,510	1,264,906	6	1,055	6	1,055	653,406	23,926	12,182	61,284	556,014	2,687,834	2,675,579	12,255	5,527,710	25
100	27,824	18	2,986	1	156	7,424	3,639	270	3,465		81,989	80,493	1,496	164,934	26
137	41,843	5	2,000	3	600	12,545	565	1,790	10,190		103,469	101,829	1,640	199,821	27
805	337,765			17	2,184	44,896	24,296	5,627	13,301	1,672	377,296	368,598	8,698	1,085,473	28
3,616	1,848,957	4	780			55,163		8,232	46,911		2,567,486	2,539,017	28,469	4,578,229	29
109	33,205	2	602	2	191	11,242	4,218	1,097	5,897	30	559,018	549,453	9,585	695,915	30
472	245,648	3	806			108,388	4,037	8,284	91,067		781,909	691,846	90,068	1,271,410	31
6	2,690	11	2,424	1	104	1,196	828	141	227		13,251	12,809	442	35,556	32
1,176	650,757	324	87,848	34	3,954	458,526	110,410	10,831	67,302	269,933	1,839,764	1,828,642	11,122	3,354,694	33
3,929	1,921,588	5,202	1,191,837	594	65,644	1,502,530	166,588	32,465	511,617	791,860	10,241,708	10,215,252	26,456	17,327,825	34
16	6,406	21	4,782	2	196	1,687	1,134	33	520		4,374	4,478	396	26,382	35
76	43,654	1,174	258,692	13	1,648	65,923	52,846	2,766	9,999	312	806,715	299,427	7,288	1,107,219	36
392	214,974	1,742	342,937	41	4,790	162,851	46,032	2,340	78,829	35,650	1,373,980	1,366,451	7,529	2,685,576	37
59	29,082	38	6,005			22,774	7,119	600	15,055		1,000,153	993,024	7,129	1,271,787	38
637	235,900	351	60,716	42	4,894	119,145	36,249	8,586	74,310		1,330,552	1,313,777	16,775	2,323,206	39
413	174,300			2	287	29,292	6,324	3,057	18,411	1,500	879,999	878,607	1,382	694,512	40
3	1,370	34	7,600			2,936	1,940	256	740		5,217	4,800	417	23,982	41

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	Cotton goods.....	14	\$7,709,256	\$515,513	\$1,355,603	\$1,951,133	\$3,887,007	7	84	\$133,338	4,727	\$1,186,014	
43	Cutlery and edge tools.....	3	16,200	2,200	4,100	2,700	7,200	3	220	256,044	15	7,164	
44	Druggists' preparations, not including prescriptions.	11	401,775	13,000	45,000	174,775	169,000	15			441	123,574	
45	Dyeing and cleaning.....	58	162,315	32,650	68,033	35,332	26,295	61	22	8,260	146	56,406	
46	Electrical apparatus and supplies.....	6	236,710	8,000	51,125	54,717	122,868	1	26	26,925	155	54,303	
47	Electrical construction and repairs.....	25	112,891	5,500		13,166	94,225	30	13	7,154	134	63,628	
48	Electroplating.....	6	12,825			5,700	7,125	10	1	900	27	9,857	
49	Enameling and enameled goods.....	4	1,437,214	148,192	191,394	334,779	762,849	2	74	60,547	1,136	316,417	
50	Engraving and die-sinking.....	8	9,668			5,518	4,150	9	3	1,200	14	6,900	
51	Engraving, steel, including plate printing.	8	14,325			4,075	10,250	7	6	3,500	38	15,575	
52	Fancy articles, not elsewhere specified.	6	238,072	25,000	55,000	33,045	125,027	6	16	15,060	324	69,834	
53	Fertilizers.....	40	7,003,376	713,011	965,287	1,108,947	4,216,131	37	212	245,528	1,016	457,092	
54	Fish, canning and preserving.....	3	65,600	7,500	8,900	7,400	41,800	8	6	2,880	442	63,500	
55	Flavoring extracts.....	12	33,544	1,650	4,000	3,007	29,887	15	10	2,900	25	8,303	
56	Flouring and grist mill products.....	407	3,423,996	296,633	775,231	918,016	1,439,066	461	85	80,275	541	229,335	
57	Food preparations.....	17	154,610	23,450	37,850	27,950	65,860	16	11	11,260	104	33,146	
58	Foundry and machine shop products.....	113	6,331,676	618,701	957,454	1,183,532	3,616,689	124	317	349,233	4,695	2,251,777	
59	Fruits and vegetables, canning and preserving.	271	4,459,660	378,143	430,586	633,234	3,017,697	344	231	213,080	7,505	1,379,131	
60	Fur goods.....	11	67,677	3,333	6,500	1,594	56,250	14	6	3,700	43	23,500	
61	Furnishing goods, men's.....	18	625,702	2,000	5,200	63,452	555,050	26	105	90,925	2,033	492,280	
62	Furniture, cabinetmaking, repairing, and upholstering.	136	241,099	22,193	39,417	16,898	162,591	167	19	9,105	213	102,356	
63	Furniture, factory product.....	42	1,584,984	88,515	180,208	176,972	1,139,239	55	141	118,433	1,869	822,540	
64	Gas, illuminating and heating.....	11	18,554,361	1,018,185	744,980	1,824,934	14,966,262	84	84	84,757	237	136,930	
65	Glass.....	7	581,086	49,618	144,576	66,559	320,333	4	31	38,976	742	339,518	
66	Glass, cutting, staining, and ornamenting.	9	68,015	3,500	12,300	8,005	44,210	10	4	2,300	68	22,995	
67	Gloves and mittens.....	3	50,541	100	500	5,434	44,507	5	8	6,175	89	14,276	
68	Grease and tallow.....	5	48,208	4,250	4,016	8,015	31,927	7			24	11,540	
69	Hand stamps.....	4	69,156			28,650	40,506	5	6	6,300	82	31,250	
70	Hardware.....	10	107,640	15,300	22,200	12,104	58,036	13	8	2,818	65	21,161	
71	Hats and caps, not including fur hats and wool hats.	20	1,124,599	60,500	242,000	164,323	657,776	32	67	92,888	1,117	335,935	
72	Hosiery and knit goods.....	4	311,508	3,000	8,083	94,789	205,636	2	28	14,518	682	119,456	
73	Ice, artificial.....	18	649,692	93,191	100,100	421,425	84,976	6	19	14,535	138	74,633	
74	Instruments, professional and scientific	7	56,620	5,000	5,500	14,502	31,618	9	8	6,779	39	16,906	
75	Iron and steel.....	9	2,892,690	39,000	1,286,966	930,609	586,115	55	55	77,147	2,138	1,029,753	
76	Iron and steel, nails and spikes, cut and wrought, including wire nails.	3	48,500			19,500	29,000	4	5	4,800	37	17,050	
77	Ironwork, architectural and ornamental.	10	481,661	60,600	57,300	51,700	312,061	12	15	20,808	232	247,629	
78	Jewelry.....	9	170,121			11,721	158,400	9	4	2,930	76	43,254	
79	Kaolin and other earth grinding.....	8	162,075	28,650	38,700	55,075	39,650	8	6	3,800	78	26,136	
80	Kindling wood.....	3	7,750	250	750	6,250	500	3	2	909	60	10,950	
81	Leather, tanned, curried, and finished	22	1,038,725	60,980	172,720	148,295	706,730	28	18	17,429	455	156,182	
82	Lime and cement.....	38	660,006	118,824	190,809	101,465	253,908	34	27	20,414	557	162,639	
83	Liquors, distilled.....	26	2,326,272	135,035	690,024	315,310	1,135,903	19	43	74,216	186	95,172	
84	Liquors, malt.....	16	13,857,323	589,246	9,952,309	1,484,183	1,831,585	9	161	262,916	752	484,318	
85	Lithographing and engraving.....	6	490,415			197,321	293,094	16	35	22,540	281	127,801	
86	Lock and gun smithing.....	59	64,418	11,562	18,400	10,580	28,876	59	2	1,092	62	27,977	
87	Looking-glass and picture frames.....	32	316,195	56,775	53,000	20,422	176,998	37	43	39,156	300	110,383	
88	Lumber and timber products.....	367	2,622,928	838,938	147,049	787,642	849,249	474	73	38,687	1,964	476,776	
89	Lumber, planing mill products, including sash, doors, and blinds.	53	3,534,501	380,982	365,130	339,712	2,448,677	83	97	78,261	1,323	542,262	
90	Mantels, slate, marble, and marbleized.	4	31,820	6,100	3,100	620	22,100	6	2	1,200	18	11,924	
91	Marble and stone work.....	38	743,645	150,275	62,245	173,591	352,534	45	55	69,016	1,231	569,273	
92	Masonry, brick and stone.....	106	755,681	132,180	119,800	33,475	470,226	115	35	41,736	1,297	314,531	
93	Mattresses and spring beds.....	21	208,605	21,200	32,350	20,230	134,825	21	23	17,178	128	47,254	
94	Millinery and lace goods.....	11	186,790	17,400	16,600	25,700	127,190	17	23	14,802	266	81,088	
95	Millinery, custom work.....	235	630,327	98,919	151,750	14,705	414,953	280	147	45,940	648	178,100	
96	Mineral and soda waters.....	36	254,340	19,584	26,740	76,121	131,895	35	15	13,988	155	65,134	
97	Models and patterns.....	7	17,341	1,666	1,800	7,500	6,875	10			29	15,524	
98	Monuments and tombstones.....	71	351,367	54,604	57,375	28,050	210,838	80	6	6,077	249	113,884	
99	Musical instruments, organs and materials.	5	68,100	6,000	19,000	9,650	33,450	6	10	5,462	76	40,608	
100	Musical instruments, pianos and materials.	4	1,184,650	91,342	166,000	76,635	850,673	4	31	41,980	447	222,748	
101	Oil, not elsewhere specified.....	7	83,840	7,600	13,500	4,275	58,565	8	20	9,420	20	7,038	
102	Optical goods.....	9	41,569			5,725	35,844	12	16	14,080	31	16,616	
103	Oysters, canning and preserving.....	16	799,005	51,650	135,793	77,748	533,814	15	79	81,048	1,444	379,591	
104	Painting, house, sign, etc.....	303	372,128	69,177	85,293	36,140	187,518	339	27	18,016	986	435,792	
105	Paints.....	13	290,222	18,000	28,000	78,760	165,462	21	26	25,900	110	45,273	
106	Paper and wood pulp.....	21	2,720,377	127,142	715,396	1,147,920	730,419	11	35	58,793	937	326,474	
107	Paper hanging.....	107	242,896	40,115	66,250	6,513	130,018	115	20	13,408	325	151,284	
108	Paper patterns.....	3	510			50	460	4			1	300	
109	Patent medicines and compounds.....	52	1,016,822	51,200	119,150	80,484	765,988	54	119	177,759	441	136,032	
110	Paving and paving materials.....	26	444,305	38,206	57,250	165,344	183,505	25	15	25,216	478	169,762	
111	Perfumery and cosmetics.....	12	86,389	4,300	2,800	18,935	60,854	10	16	14,440	91	23,545	

## SPECIFIED INDUSTRIES: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
1,446	\$509,856	2,165	\$510,001	1,116	\$166,657	\$897,016	\$8,165	\$34,517	\$354,344		\$3,039,396	\$2,984,314	\$55,082	\$5,423,251	42
14	7,060			1	104	842	516	134	192		4,188	3,488	650	16,022	43
154	64,175	286	59,269	1	130	137,894	20,010	4,761	113,090		689,191	684,054	5,137	1,311,844	44
88	39,228	52	16,880	6	798	33,543	9,233	1,830	10,780	\$11,700	18,422	14,186	4,236	179,693	45
137	50,967	13	2,736	5	600	23,156	1,510	583	22,568	8,500	112,404	110,386	2,078	266,811	46
181	63,396			3	232	11,805	6,183	229	5,393		167,191	165,363	1,823	350,685	47
21	8,889			6	963	1,604	1,420	10	174		5,444	4,046	1,398	28,033	48
931	274,714	205	41,703			29,540	300	6,470	22,770		709,472	738,738	30,784	1,390,493	49
14	6,900					2,169	1,814	105	750		11,409	11,023	386	35,870	50
27	13,175	11	2,400			1,951	1,252	20	679		8,098	8,574	124	42,400	51
118	40,003	192	27,831	14	2,000	81,688	9,651	1,795	20,242		184,342	182,358	1,984	369,817	52
1,010	455,576	6	2,116			354,344	34,846	35,054	284,444		3,648,846	3,586,984	56,862	5,481,905	53
207	36,900	179	22,600	56	4,000	11,020		770	10,250		154,605	151,370	3,235	248,100	54
10	5,793	12	2,350	8	660	6,184	2,997	150	3,087		22,410	22,335	75	83,844	55
582	228,009	5	888	4	443	225,357	30,764	20,252	173,513	838	6,731,805	6,663,941	67,864	8,035,343	56
54	23,740	46	8,800	4	606	9,573	3,685	2,114	3,774		135,826	133,492	2,334	274,046	57
4,663	2,245,062	6	1,800	26	5,415	456,176	44,699	38,244	354,925	18,307	3,322,658	3,201,946	120,712	8,443,547	58
2,980	744,516	8,712	559,810	813	75,305	371,108	33,560	20,139	316,949	460	8,786,518	8,735,149	51,369	11,996,245	59
17	13,430	31	10,070			7,759	4,625	1,085	2,049		72,083	71,661	372	137,820	60
89	57,880	1,898	426,217	46	8,183	58,351	20,374	2,136	35,841		1,060,154	1,054,195	5,959	1,930,088	61
187	97,707	18	3,737	8	912	39,647	26,989	1,897	10,576	185	142,408	140,969	1,439	450,436	62
1,758	804,897	19	4,450	97	13,193	155,614	48,062	9,419	95,763	2,370	1,212,226	1,199,151	13,075	2,976,494	63
237	136,980					268,369	6,025	121,212	141,132		481,013	484,792	46,221	1,796,507	64
562	313,920	54	8,673	126	16,925	26,065		2,040	24,025		151,500	108,520	47,980	557,895	65
43	18,272	20	4,150	5	573	8,722	1,947	154	1,621		62,953	61,844	1,109	116,164	66
23	5,300	63	8,751	3	225	3,936	850	225	2,861		54,068	54,059	39	86,675	67
23	11,800			1	240	6,793	1,064	170	5,559		69,700	68,371	1,329	100,359	68
61	27,800	21	3,450			9,262	5,260	177	3,825		45,530	44,426	1,104	149,593	69
60	20,565	2	450	3	146	3,220	1,465	415	1,340		92,284	84,178	8,056	173,512	70
458	199,112	622	181,048	37	5,780	127,367	16,967	4,710	105,690		839,146	832,068	7,078	1,619,825	71
60	23,715	526	89,754	96	5,987	21,981	1,300	851	16,948	2,887	347,250	344,088	3,167	514,093	72
137	74,313			1	320	24,490	185	5,972	18,333		84,070	27,092	56,978	358,668	73
307	16,576	2	390			6,491	2,990	500	3,001		25,445	24,375	570	72,746	74
2,101	1,019,423	12	3,000	25	7,325	508,298	6,080	22,340	479,878		6,888,916	5,767,014	1,131,902	8,739,405	75
17	12,600	20	4,450			4,960	3,060	400	1,500		86,820	85,320	1,500	84,000	76
229	247,149			3	480	8,856	1,894	1,202	3,940	1,820	523,509	519,175	4,334	867,863	77
71	42,276	3	750	2	228	8,770	4,978	900	2,892		108,002	106,734	1,268	212,450	78
78	26,136					8,420	2,933	902	4,565		13,475	13,100	5,375	74,799	79
12	2,700	48	8,250			945	60	85	800		22,000	21,950	50	45,200	80
442	152,716	8	2,496	5	970	40,860	1,531	4,059	35,270		1,411,457	1,402,648	8,809	1,754,102	81
543	180,935			14	1,704	48,606	6,184	2,880	32,612	1,930	226,563	157,672	68,891	549,360	82
131	94,212			5	960	172,785	3,779	28,607	140,399		816,381	764,425	50,956	1,016,362	83
751	484,162			1	156	1,568,108	2,914	23,839	1,539,355		878,933	805,992	72,941	4,133,797	84
203	112,497	50	12,244	28	8,060	51,826	9,960	785	35,783	4,818	180,682	178,856	1,826	499,851	85
58	27,297	1	416	3	264	9,679	5,610	880	3,689		29,041	27,748	1,293	115,104	86
276	107,477	21	2,300	8	606	40,296	18,698	2,040	19,558		232,411	228,963	3,428	542,226	87
1,718	456,820	143	18,778	103	6,178	68,004	8,571	12,285	47,148		1,390,357	1,390,157	200	2,650,082	88
1,265	531,099			68	11,163	158,244	18,294	22,016	117,814	120	2,452,656	2,440,347	12,308	3,753,083	89
18	11,924					1,762	1,332	200	230		12,927	12,900	27	39,744	90
1,224	568,123	1	300	6	850	69,075	9,098	4,942	54,945	90	494,910	478,826	16,084	1,545,616	91
1,279	810,911			18	3,620	576,195	8,839	2,798	20,428	544,130	2,277,045	2,275,288	1,757	4,114,800	92
106	42,806	16	3,564	6	884	16,101	8,076	1,450	6,575		150,557	149,111	1,446	287,937	93
53	21,555	207	58,749	6	784	12,262	6,685	767	4,810		138,450	130,843	1,607	297,847	94
7	2,439	625	173,113	16	2,548	85,881	61,315	4,765	19,799	2	773,500	770,390	3,110	1,411,504	95
146	53,744	2	500	7	890	22,801	4,817	737	17,247		109,266	107,754	1,512	260,863	96
27	15,214			2	310	2,421	1,610		811		6,828	5,742	1,086	37,146	97
247	118,364			2	520	14,995	5,256	3,441	6,068	230	213,694	216,984	1,710	480,981	98
76	40,608					4,829	1,150	454	2,975	250	46,251	44,540	711	114,916	99
444	222,410			3	338	83,697	450	12,280	70,967		358,630	354,618	4,012	827,871	100
20	7,088					7,526	1,619	544	5,113	250	99,086	98,548	538	152,640	101
30	16,376	1	240			11,294	8,668	166	2,460		29,556	28,666	890	98,465	102
712	247,117	618	114,000	114	18,474	70,100	5,770	4,870	59,480		1,771,877	1,758,635	12,742	2,417,331	103
973	434,119			13	1,673	39,027	23,166	2,055	9,163	2,041	279,083	277,866	1,217	1,116,966	104
94	41,688	9	2,585	7	1,000	22,172	5,407	1,349	15,416		265,743	259,066	6,677	442,744	105
839	308,543	'98	17,931			105,571	1,933	9,621	91,830	2,137	1,730,910	1,602,639	128,271	2,589,540	106
310	148,330	5	1,470	10	1,484	24,808	14,607	2,234	7,462		144,334	143,950	384	455,043	107
182	86,156	1	300			566	564	2	2		102	90	12	3,185	108
477	169,547	250	48,906	9	1,020	432,415	9,856	11,857	410,692	10	481,039	476,612	5,027	1,749,966	109
31	12,435	60	11,110	1	205	25,083	4,467	1,901	10,715	8,000	157,548	154,816	3,232	487,850	110
						40,916	5,452	1,576	83,888		98,710	98,259	451	228,304	111

TABLE 7.—MANUFACTURES BY

MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
112 Photography	74	\$133,428	\$2,830	\$15,090	\$63,325	\$52,183	82	8	\$2,690	104	\$46,560
113 Pickles, preserves, and sauces	25	129,146	15,018	25,765	40,528	47,887	30	15	10,250	77	22,989
114 Plastering and stuccowork	46	91,350	23,050	16,025	3,880	48,395	49	4	3,346	187	114,981
115 Plumbers' supplies	4	1,094,095	72,111	77,000	274,722	670,262	2	71	70,794	685	240,553
116 Plumbing, and gas and steam fitting	245	795,807	113,186	158,110	82,790	446,221	204	47	33,988	820	407,845
117 Pottery, terra cotta, and fire-clay products	18	1,081,463	64,200	214,479	262,684	540,100	15	47	44,243	1,082	884,655
118 Printing and publishing, book and job	156	1,364,894	25,783	43,750	697,887	597,521	191	152	136,790	1,804	535,907
119 Printing and publishing, newspapers and periodicals	141	2,478,094	259,263	391,888	1,028,707	793,236	145	388	383,027	1,529	758,335
120 Printing materials	4	12,000			9,500	2,500	5	2	400	21	7,295
121 Pumps, not including steam pumps	6	17,780	15	100	2,075	15,690	7	1	168	11	3,836
122 Regalia and society banners and emblems	6	50,215	500	900	18,305	30,510	6	14	11,690	67	20,605
123 Roofing and roofing materials	17	401,449	234,779	13,788	38,779	114,103	14	13	7,630	203	73,054
124 Saddlery and harness	150	834,152	57,067	110,170	64,887	602,023	170	60	46,240	541	174,802
125 Sausage	5	18,966	5,566	8,850	1,900	2,650	5			13	5,832
126 Sewing machine repairing	11	23,815	4,900	7,400	4,365	7,150	7	2	3,500	22	13,242
127 Ship and boat building, wooden	43	623,435	197,750	54,525	150,994	220,166	58	25	20,320	676	331,873
128 Shipbuilding, iron and steel	4	8,822,588	103,000	250,000	945,000	2,524,588	3	70	85,122	1,939	1,185,832
129 Shirts	65	1,501,968	15,597	59,119	276,270	1,153,982	100	166	142,676	8,998	788,157
130 Silverware	5	221,386	35,000	8,000	34,400	148,936	11	15	15,710	116	67,479
131 Slaughtering and meat packing, wholesale	47	1,318,917	100,009	301,500	188,660	728,743	72	63	46,824	514	242,089
132 Slaughtering, wholesale, not including meat packing	35	229,571	63,306	101,000	30,175	35,090	36	5	1,980	83	34,324
133 Soap and candles	6	209,232	9,913	30,000	27,690	141,629	2	32	28,074	127	58,688
134 Stamped ware	3	1,354,591	70,000	150,350	129,975	1,004,266	1	29	33,740	826	220,984
135 Stencils and brands	3	8,725			5,250	3,475	3	1	600	6	2,386
136 Tinsmithing, coppersmithing, and sheet-iron working	319	3,218,696	195,265	491,431	643,820	1,888,180	363	152	102,795	2,852	1,039,605
137 Tobacco, chewing, smoking, and snuff	5	1,805,611	107,034	356,333	536,371	805,873	8	120	250,624	2,002	564,272
138 Tobacco, cigars and cigarettes	382	1,519,866	171,694	238,010	76,413	1,083,749	436	155	105,809	2,809	742,155
139 Tools, not elsewhere specified	6	51,185	1,000	6,500	7,235	36,450	6	2	800	17	9,736
140 Toys and games	3	11,505			8,505	8,000	6			98	10,786
141 Trunks and valises	13	53,593	4,333	3,000	5,010	41,250	17	7	3,300	56	22,109
142 Umbrellas and canes	11	392,732	12,000	19,000	12,750	349,042	23	84	61,110	401	109,772
143 Upholstering materials	6	673,609	14,833	50,250	21,625	586,901	12	27	24,985	698	209,860
144 Varnish	3	48,604		9,000	9,456	30,148	3	9	7,264	12	5,438
145 Vinegar and cider	16	58,522	4,855	14,848	13,855	24,904	20	2	2,436	30	14,615
146 Watch, clock, and jewelry repairing	188	267,310	38,035	69,285	43,993	115,997	193	2	1,230	131	61,383
147 Window shades	4	58,065	1,000	1,000	2,300	53,765	3	9	9,890	33	14,540
148 Wirework, including wire rope and cable	13	216,545	26,950	10,300	75,114	98,181	20	15	14,225	151	59,293
149 Wood, turned and carved	9	54,025	3,225	26,000	15,425	9,375	10	7	5,412	93	28,452
150 Woolen goods	4	1,330,549	23,630	109,177	171,693	961,079	6	25	35,625	877	221,215
151 All other industries	123	8,709,287	473,275	967,290	2,049,829	5,218,843	111	365	406,523	8,934	1,556,136

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

TABLE 8.—MANUFACTURES IN BALTIMORE

		\$117,869,175	\$10,291,700	\$21,335,101	\$17,933,978	\$38,308,396	7,165	6,278	\$6,207,269	79,084	\$29,304,520
1 All industries	6,361										
2 Artificial feathers and flowers	5	33,005			3,005	30,000	9	5	6,520	237	36,190
3 Awnings, tents, and sails	21	67,893			7,640	60,250	28	8	2,860	97	47,316
4 Bags, other than paper	6	217,603	3,000	1,900	30,610	182,093	8	8	10,820	120	81,882
5 Baking and yeast powders	7	97,668			9,725	87,943	7	43	41,984	106	83,894
6 Baskets, and rattan and willow ware	26	46,109	3,950	7,150	5,429	29,580	25	2	2,400	35	12,930
7 Bicycle and tricycle repairing	41	36,920	3,700	1,600	5,880	25,740	43	4	2,700	49	16,280
8 Blacking	3	12,501			1,417	11,084	3	6	9,794	12	2,932
9 Blacksmithing and wheelwrighting	206	283,313	91,340	92,536	82,044	72,339	231	3	2,824	352	183,142
10 Bluing	3	830			255	685	3			5	1,000
11 Bookbinding and blank book making	21	110,695	7,925	20,800	46,970	35,000	24	15	10,089	195	70,802
12 Boot and shoe cut stock	3	31,875	400	3,000	2,475	28,000	3	7	3,800	11	4,720
13 Boot and shoe uppers	12	23,390	3,700	4,700	2,865	12,125	12			15	5,295
14 Boots and shoes, custom work and repairing	612	473,714	120,201	185,270	52,407	115,836	620	7	2,900	318	118,365
15 Boots and shoes, factory product	18	468,880	12,500	26,800	153,786	275,794	25	37	45,986	346	269,950
16 Bottling	17	322,542	62,800	113,700	28,133	117,909	17	28	28,526	134	63,153
17 Boxes, cigar	6	57,062	6,850	9,200	7,565	38,447	6	3	2,232	89	27,632
18 Boxes, fancy and paper	11	135,796	8,200	10,200	46,060	71,336	13	32	16,268	356	77,699
19 Boxes, wooden packing	16	505,764	51,400	70,590	31,141	302,633	21	28	25,022	929	294,398
20 Brass castings and brass finishing	6	80,098	8,950	6,950	24,579	39,619	6	7	7,032	66	27,844
21 Bread and other bakery products	389	1,743,655	238,396	544,425	626,775	334,059	395	177	116,756	1,460	553,164

## SPECIFIED INDUSTRIES: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
79	\$40,885	23	\$5,933	2	\$242	\$28,127	\$22,572	\$466	\$4,789	\$300	\$51,768	\$60,145	\$1,623	\$236,021	112
62	19,131	13	3,094	2	164	9,675	8,796	1,113	4,766	—	204,379	201,507	2,872	297,898	113
187	114,981	—	—	—	—	7,070	8,787	391	1,512	1,400	64,058	63,833	225	251,867	114
643	226,960	35	12,164	7	1,429	35,760	1,585	9,985	24,190	—	371,693	360,536	11,057	755,236	115
794	404,177	—	—	26	3,668	58,794	29,948	5,053	22,698	1,100	816,731	810,216	6,515	1,780,507	116
842	327,958	80	31,287	160	25,410	41,580	8,199	8,590	21,980	2,811	196,365	144,042	52,323	834,831	117
1,015	478,568	214	47,268	75	10,071	201,606	61,598	3,900	82,329	53,784	839,567	817,020	22,547	2,252,490	118
1,427	735,469	43	16,488	59	6,878	319,663	52,607	14,968	210,047	72,041	573,563	547,853	25,710	2,618,799	119
17	6,620	2	400	2	275	1,335	850	60	425	—	11,175	11,050	125	28,000	120
11	8,836	—	—	—	—	2,481	1,120	45	1,310	—	9,774	9,764	10	27,650	121
19	10,000	28	7,780	20	2,825	12,842	3,000	424	9,418	—	56,251	55,590	661	122,690	122
199	72,471	—	—	4	583	8,589	2,936	619	5,034	—	87,793	83,867	3,926	229,565	123
503	165,725	26	6,950	12	2,127	53,062	19,365	6,150	27,533	14	670,801	667,374	3,427	1,156,279	124
13	5,802	—	—	—	—	1,272	—	231	1,041	—	32,078	31,190	888	45,656	125
22	13,242	—	—	—	—	1,628	1,200	126	302	—	20,959	20,672	287	53,247	126
676	331,707	—	—	1	166	30,649	5,225	7,651	16,793	980	301,010	296,944	4,066	862,034	127
1,904	1,178,297	1	482	34	7,053	110,916	27,875	12,716	67,325	3,000	1,497,554	1,459,393	38,161	3,299,491	128
768	233,517	3,114	543,577	116	11,063	312,747	47,635	3,873	144,968	116,271	2,576,692	2,561,621	15,071	4,215,220	129
112	66,729	1	400	3	360	17,789	7,150	2,026	6,613	2,000	76,828	75,229	1,599	200,172	130
502	239,945	9	1,668	8	476	99,239	12,427	7,310	78,002	1,500	5,446,717	5,400,542	46,175	6,299,857	131
82	33,874	1	450	—	—	9,778	1,880	2,820	5,628	—	1,662,362	1,657,152	5,210	1,836,502	132
92	46,303	30	6,785	5	600	19,003	1,970	1,124	15,026	883	168,623	161,906	6,722	285,623	133
525	154,432	170	42,750	131	23,752	41,705	—	3,945	37,760	—	601,569	597,400	4,169	1,059,800	134
5	2,286	—	—	1	100	1,239	1,020	12	207	—	2,591	2,518	78	11,842	135
2,416	965,014	172	38,990	264	85,601	160,901	38,366	12,662	108,939	984	4,454,682	4,409,701	44,931	6,723,505	136
584	243,979	1,232	298,489	186	21,804	3,233,312	2,836	13,629	3,216,847	—	2,496,107	2,484,988	11,124	7,054,159	137
1,658	594,253	640	134,966	111	12,936	458,003	50,199	10,793	397,011	—	1,039,783	1,035,362	4,421	2,842,769	138
17	9,786	—	—	—	—	1,894	697	118	1,079	—	10,141	9,656	485	41,491	139
24	3,666	45	4,320	29	2,800	1,819	492	—	1,827	—	10,695	10,675	20	48,507	140
44	20,399	—	—	12	1,710	9,403	7,172	401	1,830	—	28,878	28,813	565	84,952	141
110	42,416	291	67,356	—	—	20,125	6,815	982	12,123	200	747,859	746,716	1,143	1,098,161	142
525	175,100	86	17,700	87	17,000	27,579	8,583	2,416	16,625	—	682,313	674,263	8,050	1,057,550	143
11	5,251	1	234	—	—	3,994	740	197	3,057	—	84,734	84,120	614	64,521	144
28	14,147	2	468	—	—	4,532	895	472	3,653	12	36,656	35,251	1,405	80,203	145
119	63,099	—	—	12	1,259	30,294	21,519	2,090	6,260	425	73,728	71,727	2,001	319,239	146
21	10,600	10	3,680	2	260	8,092	2,894	238	4,960	—	119,132	118,922	210	193,300	147
107	51,513	10	2,100	84	5,680	19,570	3,186	1,454	12,430	2,500	85,075	82,444	2,631	190,162	148
81	28,172	—	—	12	280	1,711	—	221	688	—	44,268	40,200	4,008	103,375	149
576	173,152	204	38,011	97	10,052	54,181	7,268	5,940	48,241	—	607,039	603,838	13,198	1,218,378	150
3,280	1,427,252	517	107,879	187	21,005	657,771	47,026	77,457	389,343	43,945	29,646,886	29,416,634	230,252	36,157,885	151

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

## BY SPECIFIED INDUSTRIES: 1900.

51,166	\$23,558,985	23,810	\$5,165,824	4,108	\$579,711	\$14,552,397	\$1,654,411	\$633,271	\$9,694,343	\$2,520,342	\$87,534,743	\$86,300,108	\$1,234,635	\$161,945,811	1
12	8,800	158	24,740	67	7,650	5,863	2,430	13	3,420	—	26,725	26,701	24	114,020	2
66	39,886	29	7,262	2	168	7,039	5,755	179	1,153	—	99,403	98,842	561	198,058	3
29	11,550	90	19,712	1	120	14,210	3,286	2,873	8,551	—	363,970	363,423	547	452,970	4
53	25,567	53	8,287	—	—	25,772	7,102	878	17,732	—	219,409	215,095	4,314	345,278	5
34	12,550	—	—	1	350	11,163	3,039	207	367	7,500	49,434	49,393	101	90,802	6
44	15,506	—	—	5	774	8,652	6,787	196	1,393	276	32,065	31,631	434	86,810	7
3	1,270	3	750	6	992	1,087	940	58	189	—	15,084	14,841	243	30,682	8
340	181,809	—	—	12	1,333	28,438	19,177	3,144	5,519	598	132,442	125,867	7,075	549,294	9
4	850	1	150	—	—	406	329	—	77	—	8,227	8,219	8	7,320	10
88	48,994	93	20,058	14	1,750	12,451	6,103	829	3,319	2,200	36,026	35,005	1,021	172,126	11
10	4,600	—	—	1	120	1,370	650	320	400	—	71,660	71,410	250	99,500	12
15	5,285	—	—	—	—	1,503	1,259	56	193	—	25,247	25,117	130	40,030	13
302	115,534	8	2,380	8	481	75,174	52,369	5,698	7,439	9,668	224,800	221,039	3,761	741,303	14
568	205,064	206	63,255	12	1,640	35,823	7,268	1,280	27,280	—	635,464	630,787	4,727	1,065,507	15
133	62,978	—	—	1	175	50,032	2,856	2,203	44,349	621	424,076	420,993	3,083	639,932	16
83	15,144	48	12,200	8	588	1,740	180	279	1,281	—	54,649	53,949	700	98,764	17
79	26,431	220	43,792	57	7,476	24,976	9,165	909	13,853	1,058	126,473	124,170	2,303	296,013	18
760	265,668	9	1,305	160	27,425	57,435	10,668	4,241	42,526	—	954,440	952,611	1,829	1,559,298	19
66	27,844	—	—	—	—	6,542	2,690	323	3,589	—	121,382	118,691	2,691	203,393	20
1,200	509,194	201	34,296	59	9,674	142,776	44,582	16,230	81,964	—	2,198,091	2,123,756	74,335	3,811,524	21

TABLE 8.—MANUFACTURES IN BALTIMORE

MANUFACTURING AND MECHANICAL INDUSTRIES.			Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
				Total.	Land.	Buildings.	Machinery, tools, and imple-ments.	Cash and sundries.		Number.	Salaries.	Total.	
												Average number.	Wages.
22	Brooms and brushes	37	\$245,982	\$9,700	\$24,200	\$27,738	\$184,344	47	17	\$10,850	359	\$112,882	
23	Carpentering	319	1,666,892	164,266	227,918	201,119	1,073,529	344	46	43,353	2,227	1,159,109	
24	Carpets, rag	13	39,216	1,533	2,250	12,438	22,995	18	4	3,000	113	29,596	
25	Carriages and wagons	92	476,561	69,423	93,885	65,721	247,532	120	19	14,750	553	242,666	
26	Cars and general shop construction and repairs by steam railroad companies.	6	2,236,388	258,700	1,257,033	381,955	338,700	93	72,974	72,974	2,438	1,207,920	
27	Cheese, butter, and condensed milk, factory product.	6	25,700	3,980	3,070	5,495	13,155	6	1	600	11	3,325	
28	Chemicals	5	1,371,272	271,000	219,182	395,465	485,625	3	26	41,474	875	205,929	
29	China decorating	4	8,715	1,000	1,500	1,195	5,020	5	2	1,200	7	1,624	
30	Clothing, men's, custom work and re-paring.	350	1,542,908	80,683	133,128	42,687	1,281,410	400	176	109,305	1,287	659,918	
31	Clothing, men's, factory product	137	8,484,586	135,600	355,200	418,004	7,525,782	252	759	715,907	9,690	3,174,172	
32	Clothing, men's, factory product, but-ton holes.	8	7,295	400	1,300	4,915	680	9			39	11,384	
33	Clothing, women's, dressmaking	570	828,757	51,175	97,825	46,580	128,177	601	17	11,022	1,240	300,696	
34	Clothing, women's, factory product	58	828,630	3,000	12,500	79,452	733,668	96	150	127,641	1,879	505,475	
35	Coffee and spice, roasting and grinding	11	227,400	3,200	10,300	40,300	173,600	15	63	107,602	97	35,037	
36	Confectionery	113	936,401	79,034	238,700	205,570	413,097	123	147	121,364	991	297,055	
37	Cooperage	36	395,821	73,883	87,470	39,110	195,358	41	14	10,780	340	153,617	
38	Corsets	4	50,630	10,000	20,000	4,620	16,010	4	14	3,328	37	8,870	
39	Cutlery and edge tools	3	16,200	2,200	4,100	2,700	7,200	3			15	7,164	
40	Druggists' preparations, not including prescriptions.	10	889,275	10,000	40,000	174,275	165,000	14	214	253,380	439	122,799	
41	Dyeing and cleaning	53	125,795	22,650	58,038	19,922	25,185	55	5	2,232	115	46,010	
42	Electrical apparatus and supplies	5	149,803	3,000	23,000	33,935	89,868	1	16	15,616	64	29,603	
43	Electrical construction and repairs	25	112,891	5,500		13,166	94,225	30	13	7,154	134	63,628	
44	Electroplating	6	12,825			5,700	7,125	10	1	900	27	9,857	
45	Enameling and enameled goods	4	1,437,214	148,192	191,394	334,779	762,849	2	74	60,547	1,136	316,417	
46	Engraving and diesinking	7	9,368			5,218	4,150	8	3	1,200	14	6,900	
47	Engraving, steel, including plate print-ing.	8	14,325			4,075	10,250	7	6	3,500	38	15,575	
48	Fancy articles, not elsewhere specified	5	238,072	25,000	55,000	33,045	125,027	6	16	15,060	324	69,834	
49	Fertilizers	17	4,449,768	490,844	532,948	534,783	2,841,193	9	149	186,850	705	320,333	
50	Flavoring extracts	12	38,644	1,650	4,000	3,007	29,887	15	10	2,900	25	8,303	
51	Flouring and grist mill products	4	678,500	85,000	214,000	205,125	174,375	3	33	48,378	131	69,140	
52	Food preparations	16	154,010	23,450	37,350	27,350	65,860	15	11	11,200	101	32,546	
53	Foundry and machine shop products	74	4,971,434	427,150	732,696	877,513	2,934,075	83	237	270,711	3,375	1,805,271	
54	Fruits and vegetables, canning and pre-serving.	23	2,862,467	263,316	287,524	351,213	2,009,914	32	148	172,326	4,360	905,397	
55	Fur goods	11	67,677	3,333	6,500	1,594	56,250	14	6	3,700	43	23,500	
56	Furnishing goods, men's	16	617,002	1,500	2,700	57,762	555,050	28	103	88,625	1,891	456,052	
57	Furniture, cabinetmaking, repairing, and upholstering.	114	193,634	16,533	25,392	9,423	142,286	141	18	8,930	139	95,320	
58	Furniture, factory product	36	1,417,373	33,375	145,736	147,501	1,040,766	48	129	111,959	1,627	745,364	
59	Glass	3	218,550	32,672	80,693	11,192	94,053	4	6	4,200	266	139,384	
60	Glass, cutting, staining, and ornament-ing.	8	29,315	500	300	3,005	25,510	9	4	2,300	42	16,895	
61	Grease and tallow	4	23,637	3,000	2,500	6,900	16,237	6			21	10,022	
62	Hand stamps	3	69,000			23,500	40,500	4	6	6,300	82	31,250	
63	Hardware	9	96,518	15,000	19,500	11,932	50,036	11	2	2,468	60	19,511	
64	Hats and caps, not including fur hats and wool hats.	20	1,124,599	60,500	242,000	164,323	657,776	32	67	92,888	1,117	335,935	
65	Ice, artificial	5	342,238	66,367	53,000	214,500	7,871	2	4	4,860	63	44,191	
66	Instruments, professional and scientific.	7	56,620	5,000	5,500	14,502	31,618	9	8	6,779	39	16,966	
67	Iron and steel, nails and spikes, cut and wrought, including wire nails.	3	48,500			19,500	29,000	4	5	4,800	37	17,050	
68	Ironwork, architectural and orna-mental.	9	478,261	60,600	57,300	51,550	308,311	10	15	20,308	229	246,829	
69	Jewelry	9	170,121			11,721	158,400	9	4	2,930	76	43,254	
70	Leather, tanned, curried, and finished.	10	140,950	23,550	24,950	7,950	84,500	13	6	6,100	142	58,716	
71	Lime and cement	6	39,592	3,500	4,950	11,275	19,867	6	2	850	70	27,477	
72	Liquors, distilled	7	1,033,875	99,000	412,875	168,000	354,000	2	24	28,636	33	49,708	
73	Liquors, malt	12	9,689,087	473,246	6,930,307	1,000,629	1,284,905	7	120	186,978	533	351,062	
74	Lithographing and engraving	6	490,415			197,321	293,094	16	35	22,540	231	127,801	
75	Lock and gun smithing	57	62,268	10,962	12,400	10,330	28,576	57	2	1,092	62	27,977	
76	Looking-glass and picture frames	27	304,302	56,775	50,500	26,407	170,620	31	43	39,156	296	109,078	
77	Lumber, planing mill products, includ-ing sash, doors, and blinds.	22	2,103,584	295,113	210,909	148,019	1,449,493	39	59	48,890	739	353,206	
78	Mantels, slate, marble, and marbleized.	4	31,820	6,100	3,100	520	22,100	6	2	1,200	18	11,924	
79	Marble and stone work	29	531,813	121,000	40,100	113,200	257,513	35	40	49,715	823	437,252	
80	Masonry, brick and stone	96	740,551	130,880	115,350	31,920	462,401	106	33	39,400	1,230	782,509	
81	Mattresses and spring beds	18	194,905	20,200	28,350	19,430	126,925	17	22	16,678	112	43,928	
82	Millinery and lace goods	11	186,790	17,400	16,500	25,700	127,190	17	23	14,802	266	31,088	
83	Millinery, custom work	127	509,442	66,934	108,000	10,734	323,724	152	128	42,388	522	152,724	
84	Mineral and soda waters	24	218,449	16,524	21,500	59,675	120,750	21	15	13,988	135	48,316	
85	Models and patterns	7	17,311	1,666	1,300	7,500	6,875	10			29	15,524	
86	Monuments and tombstones	39	262,066	46,000	42,950	23,500	149,616	46	4	5,000	187	94,927	
87	Musical instruments, organs and ma-terials.	4	37,100	5,000	12,000	4,650	15,450	5	3	2,180	21	13,108	
88	Musical instruments, pianos and ma-terials.	4	1,184,650	91,342	166,000	76,635	850,673	4	31	41,980	447	222,748	
89	Oil, not elsewhere specified	7	83,840	7,500	13,500	4,275	58,565	8	20	9,420	20	7,033	
90	Optical goods	9	41,569			5,725	35,844	12	16	14,080	31	16,616	
91	Oysters, canning and preserving	15	734,271	51,650	135,048	74,649	522,924	14	77	80,248	1,416	376,591	

## BY SPECIFIED INDUSTRIES: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not 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.									
286	\$96,328	55	\$13,965	18	\$2,589	\$14,637	\$7,547	\$1,260	\$5,830		\$265,192	\$263,870	\$1,322	\$499,885
2,221	1,158,054			6	1,055	643,581	23,016	11,167	57,458	\$551,890	2,374,609	2,362,936	11,673	4,997,536
96	26,704	16	2,736	1	156	7,138	3,698	226	3,314		76,087	74,666	1,421	154,362
539	240,757			14	1,909	33,488	20,402	3,819	8,645	622	211,770	206,156	5,623	690,950
2,437	1,267,740	1	180			38,551		2,220	36,331		2,150,514	2,133,594	16,920	3,529,959
11	3,325					701	220	125	356		42,707	42,441	266	51,142
872	205,123	3	806			81,546	3,912	7,299	70,335		661,297	588,686	72,611	1,078,800
5	896	3	624	1	104	780	523	75	177		12,673	12,481	192	26,601
1,051	590,954	204	65,268	32	3,696	446,350	102,549	9,978	64,500	269,323	1,206,832	1,197,081	9,751	3,061,014
8,929	1,921,588	5,168	1,186,977	598	65,607	1,500,903	165,688	32,414	510,941	791,860	10,223,686	10,197,305	26,381	17,200,825
16	6,406	21	4,782	2	196	1,687	1,131	33	520		4,874	4,478	396	26,382
74	43,552	1,133	255,496	13	1,648	65,221	52,225	2,760	9,924	812	304,330	297,182	7,148	1,092,988
385	212,764	1,433	287,912	41	4,799	162,051	45,607	2,315	78,479	35,650	1,261,120	1,254,331	6,789	2,506,654
59	29,082	38	6,005			22,774	7,119	600	15,055		1,000,153	993,024	7,129	1,271,787
610	227,628	342	65,116	39	4,311	114,566	33,848	8,019	72,699		1,296,568	1,280,512	16,046	2,249,858
388	153,330			2	287	27,963	5,935	2,977	18,051	1,000	348,040	346,698	1,342	623,801
3	1,370	34	7,500			2,936	1,940	256	740		5,217	4,800	417	28,982
14	7,060			1	104	842	516	134	192		4,133	3,488	650	16,022
162	63,400	286	59,269	1	130	137,164	20,010	4,614	112,540		688,891	678,904	4,987	1,298,344
77	35,612	32	9,600	6	798	27,469	8,698	1,635	5,486	11,700	14,228	10,513	3,715	143,742
56	28,467	7	1,036	1	100	14,513	1,510	415	9,088	3,500	85,210	83,787	1,423	159,731
131	63,396			3	232	11,805	6,183	229	5,393		167,191	165,363	1,828	350,633
21	8,889			6	968	1,004	1,420	10	174		5,444	4,016	1,398	28,038
931	274,714	205	41,703			29,540	300	6,470	22,770		769,472	738,738	30,734	1,390,493
14	6,900					2,133	1,273	105	760		11,384	11,023	361	34,870
27	13,175	11	2,400			1,951	1,252	20	679		8,698	8,574	124	42,400
118	40,003	192	27,331	14	2,000	31,688	9,651	1,795	20,242		184,342	182,358	1,984	369,817
609	318,272	6	2,116			243,185	32,613	26,859	183,708		2,479,052	2,442,559	36,498	3,752,329
10	5,793	12	2,350	3	600	6,184	2,997	150	3,037		22,410	22,335	75	83,844
128	68,540	3	600			127,005	9,905	5,446	112,255		2,048,003	2,031,429	16,574	2,321,998
53	23,440	44	8,500	4	606	9,513	8,625	2,114	3,774		133,915	131,606	2,309	268,166
3,348	1,800,415	6	1,300	21	3,556	403,105	38,361	30,608	315,829	18,307	2,148,408	2,074,593	73,815	6,119,973
1,644	467,226	2,388	400,446	323	37,725	309,985	25,000	14,123	270,262		6,432,415	6,408,891	23,524	8,477,173
17	13,430	31	10,070			7,759	4,625	1,085	2,049		72,033	71,661	372	137,820
85	56,480	1,779	394,697	27	4,875	57,344	19,974	2,019	35,351		916,222	910,495	5,727	1,729,876
167	91,071	15	3,427	7	822	38,262	26,417	1,635	10,025	185	125,495	124,318	1,177	411,215
1,514	728,130	19	4,450	94	12,784	145,096	47,190	8,878	87,558	2,370	1,096,784	1,086,200	10,584	2,490,610
190	129,384			76	10,000	9,419		1,027	8,392		57,469	34,097	23,362	220,295
33	15,472	4	850	5	573	2,002	1,947	34	921		13,803	13,144	659	55,164
20	9,782			1	240	6,479	1,064	135	5,280		44,412	43,321	1,091	68,981
61	27,800	21	3,450			9,159	5,160	174	3,325		45,450	44,350	1,100	149,000
57	19,365			3	146	3,053	1,465	348	1,240		56,176	53,160	3,016	166,112
458	199,112	622	131,043	37	5,780	127,367	16,967	4,710	105,690		839,146	832,068	7,078	1,619,825
63	44,191					12,205	50	2,440	9,715		52,499	11,121	41,378	237,632
37	16,576	2	390			6,491	2,990	500	3,001		25,445	24,876	570	72,746
17	12,600	20	4,450			4,960	3,060	400	1,500		36,820	35,320	1,500	84,000
226	246,349			3	480	8,170	1,858	1,202	3,790	1,320	520,009	515,675	4,334	862,368
71	42,276	3	750	2	228	8,770	4,978	900	2,892		108,002	106,734	1,268	212,450
130	55,338	8	2,496	4	832	3,977	1,296	400	2,281		474,371	471,449	2,922	593,600
69	27,373			1	104	5,651	3,929	74	1,648		79,176	67,950	11,226	128,109
78	48,743			5	960	63,017	679	23,113	39,225		424,124	398,183	25,991	918,530
537	350,906			1	156	1,130,913	1,779	20,630	1,108,504		622,401	569,532	52,869	2,984,023
203	112,497	50	12,244	28	3,060	51,326	9,960	785	35,783	4,818	180,682	178,856	1,826	499,851
58	27,297	1	416	3	264	9,569	5,586	262	3,021		28,641	27,373	1,263	113,804
272	106,172	21	2,300	3	606	39,920	18,438	2,092	19,480		228,598	225,195	3,403	532,969
707	345,756			32	7,450	97,140	15,904	10,650	70,586		1,266,948	1,257,625	9,423	2,009,068
18	11,924					1,762	1,332	200	230		12,927	12,900	27	39,744
822	436,252	1	300	5	700	39,398	6,636	3,487	29,345	30	472,478	459,701	12,777	1,329,278
1,212	778,889			18	3,620	576,086	8,839	2,750	20,367	544,130	2,238,109	2,236,352	1,757	4,025,835
95	40,160	11	2,834	6	884	15,414	7,926	1,367	6,121		138,332	136,920	1,412	266,590
53	21,555	207	58,749	6	784	12,262	6,685	767	4,810		138,450	136,843	1,607	297,847
7	2,439	499	147,737	16	2,548	70,363	50,354	3,538	15,369	2	611,490	639,616	1,874	1,157,944
127	47,626	2	500	6	690	21,702	4,264	488	16,150		98,374	97,006	1,368	231,957
27	15,214			2	310	2,421	1,610		811		6,823	5,742	1,086	37,146
185	94,407			2	520	12,158	4,123	3,012	5,023		139,412	138,037	1,375	336,909
21	13,108					2,551	1,150	230	921	250	13,006	12,856	150	44,440
444	222,410			3	338	33,697	450	12,280	70,967		358,630	354,618	4,012	827,371
20	7,038					7,526	1,619	544	5,113	250	99,086	98,548	538	152,640
30	16,376	1	240			11,294	8,668	166	2,460		29,556	28,666	890	98,465
698	215,117	604	113,000	114	18,474	67,988	5,720	4,835	57,433		1,724,513	1,711,996	12,517	2,364,968



TABLE 8.—MANUFACTURES IN BALTIMORE

MANUFACTURING AND MECHANICAL INDUSTRIES AND CITIES AND TOWNS.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and implements.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
Painting, house, sign, etc.	272	\$356,170	\$61,732	\$82,508	\$32,766	\$179,144	295	27	\$18,016	909	\$411,119
Paints	12	290,177	18,030	28,000	78,730	165,447	20	26	25,900	110	45,273
Paper hanging	104	230,471	40,115	66,250	6,113	117,993	111	20	13,408	309	145,630
Paper patterns	3	510			50	460	4			1	300
Patent medicines and compounds	48	990,864	50,150	114,050	77,698	748,966	50	114	176,054	435	134,580
Paving and paving materials	21	402,165	33,166	55,900	151,244	158,855	20	15	25,216	384	139,252
Perfumery and cosmetics	10	75,714			18,710	57,004	8	16	14,440	90	23,245
Photography	47	105,348	2,220	13,500	49,525	40,103	53	7	2,058	88	41,890
Pickles, preserves, and sauces	23	125,346	14,866	24,765	87,923	47,787	28	15	10,250	74	22,669
Plastering and stuccowork	37	90,158	23,050	16,025	3,718	47,365	38	4	3,346	170	109,421
Plumbers' supplies	3	1,065,095	72,111	00,000	267,722	665,262		68	68,294	662	234,053
Plumbing, and gas and steam fitting	218	739,208	111,356	149,510	75,090	403,252	235	42	32,048	756	381,929
Pottery, terra cotta, and fire-clay products	9	422,839	36,100	149,629	62,664	173,946	8	26	25,793	501	199,177
Printing and publishing, book and job	142	1,285,980	25,733	43,600	650,209	557,438	175	148	133,600	1,178	505,903
Printing and publishing, newspapers and periodicals	40	1,885,181	258,513	330,238	691,497	624,933	32	334	354,112	1,153	625,135
Printing materials	4	12,000			9,500	2,500	5	2	400	21	7,295
Pumps, not including steam pumps	3	16,100			950	15,150	4	1	163	8	3,166
Regalia and society banners and emblems	6	50,215	500	900	18,305	30,510	6	14	11,690	67	20,605
Roofing and roofing materials	8	32,492	3,025	7,000	3,250	19,217	9	5	2,910	55	27,052
Saddlery and harness	78	706,622	47,682	30,000	54,245	524,696	93	59	46,215	481	156,942
Sausage	4	16,766	4,566	7,850	1,800	2,550	4			10	4,662
Sewing machine repairing	11	23,815	4,900	7,400	4,365	7,150	7	2	3,500	22	13,242
Ship and boat building, wooden	14	460,015	186,100	33,975	110,000	138,940	16	17	16,716	413	233,532
Shipbuilding, iron and steel	3	1,219,588	100,000	50,000	345,000	724,588	3	42	46,031	982	521,224
Shirts	34	1,173,989	4,000	8,000	164,005	997,984	56	128	125,651	2,475	523,760
Silverware	5	221,336	35,000	3,000	34,400	148,936	11	15	15,710	116	67,479
Slaughtering and meat packing, wholesale	40	1,121,507	81,909	244,100	147,950	647,548	63	54	43,424	437	204,094
Slaughtering, wholesale, not including meat packing	33	223,446	62,806	99,500	30,050	31,090	34	3	1,300	71	29,804
Soap and candles	5	207,332	9,913	30,000	26,690	140,729		32	28,074	126	58,888
Stamped ware	3	1,354,591	70,000	150,350	129,975	1,004,266	1	29	33,740	826	220,984
Stencils and brands	3	8,725			5,250	3,475	3	1	600	6	2,386
Tinsmithing, copper-smithing, and sheet-iron working	218	2,609,793	163,055	353,481	480,205	1,613,052	248	133	89,940	2,227	788,005
Tobacco, chewing, smoking, and snuff	5	1,805,611	107,034	356,333	536,371	805,873	8	120	259,621	2,002	564,272
Tobacco, cigars and cigarettes	316	1,365,496	158,694	219,540	65,570	921,692	360	150	104,141	2,023	664,578
Tools, not elsewhere specified	5	32,685	500	1,500	4,235	26,450	5	1	200	10	6,036
Trunks and valises	13	53,593	4,333	3,000	5,010	41,250	17	7	3,300	56	22,109
Umbrellas and canes	10	390,592	12,000	19,000	12,550	347,042	18	83	60,510	398	109,172
Upholstering materials	4	661,209	13,333	48,150	17,125	582,601	8	27	24,985	686	206,090
Varnish	3	48,604		9,000	9,450	30,148	3	2	7,264	12	5,488
Vinegar and cider	4	50,568	4,450	13,013	9,178	23,927	6	2	2,486	27	13,973
Watch, clock, and jewelry repairing	130	214,060	33,050	57,000	28,585	96,325	133	2	1,230	96	53,233
Window shades	4	58,065	1,000	1,000	2,300	58,765	3	9	9,890	33	14,540
Wirework, including wire rope and cable	12	216,340	26,900	16,200	75,094	98,146	20	15	14,225	150	59,180
Wood, turned and carved	7	29,950	2,500	17,000	6,325	4,125	8	4	2,512	23	8,952
All other industries	119	32,529,814	3,185,775	3,303,852	4,831,585	21,208,602	104	461	535,853	7,022	2,195,956

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

TABLE 9.—MANUFACTURES IN CITIES AND

	Total for cities and towns.....	671	\$6,970,428	\$524,918	\$1,370,888	\$1,677,957	\$3,405,665	728	406	\$269,453	6,119	\$2,054,156
2 Annapolis.....	91	188,195	23,495	51,019	77,897	35,844		91	12	7,120	244	101,608
3 Cumberland.....	140	2,638,219	263,134	724,617	643,895	1,301,573		145	174	129,785	1,963	805,775
4 Frederick.....	133	1,217,702	101,135	248,203	234,004	574,360		149	77	51,968	1,131	252,383
5 Hagerstown.....	208	1,375,281	85,604	169,439	355,304	704,824		223	96	52,279	1,873	502,307
6 Havre de Grace.....	38	331,464	17,500	111,850	215,115	486,999		43	21	17,150	674	332,348
7 Westminster.....	66	423,667	29,050	65,710	91,742	242,065		74	26	11,151	234	59,735



## BY SPECIFIED INDUSTRIES: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
896	\$409,446			13	\$1,673	\$37,729	\$24,194	\$2,593	\$8,901	\$2,041	\$258,415	\$257,414	\$1,001	\$1,046,680	92
94	41,688	9	\$2,585	7	1,000	22,148	6,395	1,349	15,404		265,238	258,566	6,672	441,744	93
294	142,576	5	1,470	10	1,484	23,010	13,671	2,177	7,162		128,490	128,171	319	427,043	94
		1	300			566	564		2		102	90	12	8,185	95
179	85,060	247	48,450	9	1,020	427,288	9,574	11,797	405,907	10	467,915	462,998	4,917	1,707,336	96
383	139,047			1	205	16,025	4,392	1,793	9,840		146,956	144,789	2,167	409,802	97
30	12,135	60	11,110			37,669	5,452	1,569	30,648		98,066	97,675	391	220,446	98
70	36,785	17	4,953	1	152	23,049	19,088	345	3,416	200	47,583	46,502	1,081	137,127	99
60	18,771	13	8,694	1	104	9,511	3,652	1,103	4,756		203,234	200,862	2,572	291,888	100
170	109,421					7,050	3,747	391	1,512	1,400	61,781	61,556	225	237,010	101
620	220,460	35	12,164	7	1,429	38,743	985	9,805	22,953		337,793	329,086	8,757	709,236	102
733	378,538			23	3,891	53,919	26,508	4,790	21,526	1,100	722,023	715,898	6,125	1,620,222	103
839	157,725	80	31,287	82	10,165	26,234	4,167	3,728	16,378	2,011	100,191	77,985	22,256	446,706	104
949	453,139	165	38,695	64	9,069	196,111	58,036	3,395	80,836	53,784	690,446	670,006	20,440	2,037,037	105
1,122	-612,646	21	10,506	15	1,983	317,436	42,178	12,298	191,084	71,876	487,181	466,449	20,682	2,160,520	106
17	6,620	2	400	2	275	1,335	850	60	425		11,175	11,050	125	28,000	107
8	3,166					2,393	1,043	35	1,310		8,981	8,975	6	25,000	108
19	10,000	28	7,780	20	2,825	12,842	3,000	424	9,418		56,251	55,590	661	122,690	109
55	27,052					1,519	494	124	901		71,487	71,392	95	137,860	110
450	143,492	21	6,450	10	2,000	45,808	14,999	5,195	25,600	14	617,736	615,334	2,402	1,024,787	111
10	4,662					817		191	626		29,548	28,680	868	40,976	112
22	13,242					1,628	1,200	126	302		20,959	20,672	287	53,247	113
413	233,532					25,445	3,990	6,987	14,468		164,437	160,926	3,511	555,852	114
982	521,224					66,907	27,875	1,471	34,561	3,000	537,486	523,986	13,500	1,468,994	115
602	181,099	1,833	344,050	40	3,601	300,666	46,528	2,872	136,828	114,438	2,362,502	2,353,314	9,138	3,686,675	116
112	66,729	1	400	3	850	17,789	7,150	2,026	6,613	2,000	76,828	75,229	1,599	200,172	117
428	202,674	6	1,044	3	476	90,767	12,352	6,558	70,367	1,500	4,655,006	4,620,631	34,375	5,308,334	118
70	29,354	1	450			8,779	1,330	2,725	4,724		1,602,552	1,597,502	5,050	1,758,127	119
91	46,003	30	6,785	5	600	18,967	1,970	1,098	15,016		165,753	159,108	6,645	279,887	120
525	154,432	170	42,750	131	23,752	41,705		3,945	37,760	883	601,569	597,400	4,169	1,059,800	121
5	2,286			1	100	1,239	1,020	12	207		2,591	2,513	78	11,842	122
1,897	678,990	130	28,890	200	30,725	141,765	32,209	10,375	98,291	590	3,618,208	3,578,981	39,227	5,420,930	123
584	243,979	1,232	298,489	186	21,804	3,233,312	2,836	13,629	3,216,847		2,496,107	2,484,933	11,124	7,054,150	124
1,327	523,042	615	130,704	81	10,832	396,133	45,869	10,216	340,048		922,724	919,221	3,503	2,522,296	125
10	6,036					1,429	697	78	654		7,126	6,753	373	23,491	126
44	20,399			12	1,710	9,403	7,172	401	1,830		28,876	28,313	565	34,952	127
110	42,416	288	66,756			20,047	6,775	982	12,090	200	745,024	743,881	1,143	1,092,761	128
513	171,360	86	17,700	87	17,000	27,294	8,523	2,391	16,375		676,000	668,800	7,200	1,044,150	129
11	6,254	1	234			3,994	740	197	3,057		34,734	34,120	614	64,521	130
25	13,505	2	468			4,392	300	440	3,652		31,619	30,440	1,179	63,321	131
87	52,265			9	968	22,829	16,775	1,585	4,269	200	54,369	53,101	1,268	246,260	132
21	10,600	10	3,680	2	260	8,092	2,894	238	4,960		119,132	118,922	210	193,300	133
106	51,400	10	2,100	34	5,680	19,566	3,186	1,450	12,430	2,500	84,755	82,124	2,631	195,649	134
22	8,322			1	130	1,296	802	101	393		16,718	15,710	1,008	42,575	135
4,140	1,588,826	1,908	454,832	974	152,798	982,610	49,295	213,404	717,089	2,822	7,785,301	7,552,979	232,322	13,877,039	136

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

## TOWNS UNDER 20,000 IN POPULATION: 1900.

4,183	\$1,737,014	1,559	\$286,485	377	\$30,637	\$123,469	\$71,504	\$35,841	\$292,519	\$23,605	\$5,937,134	\$5,818,456	\$118,678	\$9,961,972	1
212	95,569	27	5,545	5	494	9,797	5,130	2,156	2,331	180	170,043	166,298	3,745	393,086	2
1,771	766,056	153	33,687	39	6,032	218,340	20,872	17,366	175,697	4,565	1,999,937	1,947,974	51,963	3,494,622	3
654	206,988	314	34,133	163	11,262	69,893	15,904	6,937	46,952	100	1,054,449	1,035,181	19,263	1,727,094	4
929	335,135	859	159,831	85	7,341	92,802	20,689	6,663	47,130	18,320	1,454,929	1,434,049	20,880	2,465,507	5
458	283,025	144	44,545	72	4,778	16,491	5,277	1,278	9,636	300	913,676	906,688	6,988	1,372,420	6
159	50,241	62	8,744	13	750	16,146	3,632	1,441	10,873	200	344,100	323,266	15,834	509,243	7

# CENSUS BULLETIN.

No. 132.

WASHINGTON, D. C.

January 24, 1902.

## MANUFACTURES.

### NEBRASKA.

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

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

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

There were 10 cities in the state withdrawn from the enumerators and their manufacturing statistics collected by special agents, in accordance with the further provision of section 7 of the census act. Wherever the phrase "urban manufactures" is used in this bulletin, it applies only to those cities which were withdrawn from the enumerators and committed to special agents, and only to manufacturing establishments within the corporate limits of such places.

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

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

The statistics of Nebraska are presented in 9 tables: Table 1 showing comparative figures for the state at the several censuses; Table 2 showing all the industries of the state divided between hand trades and the manufactures proper, and also the statistics of educational and eleemosynary institutions, and establishments with a product of less than \$500, which two latter classes were not reported at previous censuses; Table 3 showing the statistics of the 9 leading industries of the state for 1890 and 1900; Table 4 showing the totals for the cities of Lincoln and Omaha at the censuses of 1890 and 1900; Table 5 showing the urban manufactures of the state in comparison with the totals for the entire state and the state exclusive of the cities withdrawn from the enumerators; Table 6 showing the statistics for the state by counties; Table 7 showing the statistics for the state by specified industries; Table 8 showing the statistics for the cities of Lincoln, Omaha, and South Omaha by specified industries; and Table 9 showing the totals for all industries in each of the cities withdrawn from the enumerators (exclusive of those shown in Table 8).

Table 1 shows the growth of manufactures in Nebraska for the forty years which terminate with the Twelfth Census. Owing to changes in the method of taking the census, comparisons between the earlier and later decades, represented in Table 1, should be drawn only in the most general way. Nevertheless, the rate of growth in Nebraska manufactures may be fairly inferred from the figures given.

In drafting the schedules of inquiry for the census of 1900 care was taken to preserve the basis of comparison with prior censuses. Comparison may be made safely with respect to all the items of inquiry except those relating to capital, salaried officials, clerks, etc., and their salaries, the average number of employees, and the total amount of wages paid. Live capital, that is, cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries, was first called for at the census of 1890.

No definite attempt was made, prior to the census of 1890, to secure a return of live capital invested.

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

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

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

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

The reports show a capital of \$71,982,127 invested in manufactures and mechanical industries in the 5,414 establishments reporting for the state of Nebraska. This sum represents the value of land, buildings, machinery,

tools, and implements, and the live capital utilized, but does not include the capital stock of any of the manufacturing corporations of the state. The value of the products is returned at \$143,990,102, to produce which involved an outlay of \$2,325,038 for salaries of officials, clerks, etc.; \$11,570,688 for wages; \$6,935,399 for miscellaneous expenses, including rent, taxes, etc.; and \$102,197,707 for materials used, mill supplies, freight, and fuel. It is not to be assumed, however, that the difference between the aggregate of these sums and the value of the products is, in any sense, indicative of the profits in the manufacture of the products during the census year. The census schedule takes no cognizance of the cost of selling manufactured articles, or of interest on capital invested, or of the mercantile losses incurred in the business, or of depreciation in plant. The value of the product given is the value as obtained or fixed at the shop or factory. This statement is necessary in order to avoid erroneous conclusions from the figures presented.

The value of products for the state of Nebraska, \$143,990,102, is the gross value, and not the net or true value. The difference between these two should be carefully noted. The gross value is found by adding the value of products in the separate establishments. But the finished product of one establishment is often the raw material for another. In such cases the value of the former reappears in the latter, and thus the original cost of certain materials may be included several times in the gross value. The net or true value is found by subtracting from the gross value the value of all materials purchased in a partly manufactured form. In this way the duplications in the gross value are eliminated.

At the census of 1890 the schedule was so framed that it was impossible to find the net or true value. In the present census the schedule asked for the value of the materials in two classes, those purchased in the crude state and those purchased in the partly manufactured form. From the answers to these questions the net or true value of products may be computed. Thus, for Nebraska, the gross value of products for 1900 was \$143,990,102. The value of materials purchased in a partly manufactured form was \$28,695,688. The difference, \$115,294,414, is the net or true value of products, and represents the increase in the value of raw materials resulting from the various processes of manufacture.

Very respectfully,



*Chief Statistician for Manufactures.*

# NEBRASKA.

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

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

wage-earners employed by manufacturing establishments, in comparison with the total population of the state, and the value of the land and buildings owned and reported by manufacturers as capital, in comparison with the assessed value of all real estate.

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

	DATE OF CENSUS.					PER CENT OF INCREASE.			
	1900	1890	1880	1870	1860	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870
Number of establishments	5,414	3,014	1,403	670	107	79.6	114.8	100.4	526.2
Capital	\$71,982,127	\$37,569,508	\$4,881,160	\$2,169,963	\$266,575	91.6	669.7	121.9	714.0
Salaries of officials, clerks, etc., number	2,657	1,426	(2)	(2)	(2)	322.4			
Salaries	\$2,326,085	\$2,713,098	(2)	(2)	(2)	14.3			
Wage-earners, average number	24,461	20,450	4,793	2,665	336	19.6	326.7	79.8	693.2
Total wages	\$11,570,688	\$10,271,178	\$1,742,311	\$1,429,913	\$105,332	12.7	489.5	21.8	1,257.5
Men, 16 years and over	21,059	18,263	4,464	2,558	334	15.8	309.1	74.5	666.9
Wages	\$10,749,706	\$9,807,631	(2)	(2)	(2)	9.6			
Women, 16 years and over	2,626	1,473	120	81	2	78.3	1,127.5	48.1	3,950.0
Wages	\$676,278	\$376,900	(2)	(2)	(2)	79.4			
Children, under 16 years	776	714	209	26	(2)	8.7	241.6	703.8	
Wages	\$144,704	\$86,887	(2)	(2)	(2)	66.5			
Miscellaneous expenses	\$9,985,399	\$5,395,212	(4)	(2)	(2)	28.5			
Cost of materials used	\$102,197,707	\$67,534,532	\$8,208,478	\$2,902,074	\$237,215	51.8	720.3	182.8	1,123.4
Value of products, including custom work and repairing	\$143,960,102	\$93,037,794	\$12,027,336	\$9,738,512	\$607,323	51.8	636.8	120.0	844.9
Total population	1,066,800	1,058,910	452,402	122,991	28,841	0.7	134.1	267.8	326.5
Wage-earners engaged in manufactures	24,461	20,450	4,793	2,665	336	19.6	326.7	79.8	693.2
Per cent of total population	2.3	1.9	1.1	2.2	1.2				
Assessed value of real estate	\$171,747,593	\$115,181,167	\$55,073,375	\$38,305,999	\$5,732,145	49.1	109.1	48.5	569.3
Value of land and buildings invested in manufactures <sup>a</sup>	\$22,181,411	\$12,184,376	(2)	(2)	(2)	82.8			
Per cent of assessed value	12.9	10.5							

<sup>1</sup> Includes proprietors and firm members, with their salaries: number only reported in 1900. (See Table 7.)

<sup>2</sup> Not reported separately.

<sup>3</sup> Decrease.

<sup>4</sup> Not reported.

<sup>5</sup> As given in the Biennial Report of the Auditor of Public Accounts to the Governor of the State of Nebraska, under date of November 30, 1903, page 118.

<sup>6</sup> Does not include value of rented property.

Although Nebraska is an agricultural and stock-raising state, Table 1 shows that there has been a considerable growth in its manufacturing and mechanical industries during the last forty years. The population during these years increased from 28,841 to 1,066,800, while the average number of wage-earners employed in manufacturing establishments increased from 336 to 24,461, embracing, in 1900, 2.3 per cent of the entire population, compared with 1.2 per cent in 1860. Probably the best indication of the importance of the wage-earning class is afforded by the greatest number employed at any one time during the year. In 1900 this was 33,845, or 3.2 per cent of the total population of the state. The last decade shows an increase of \$50,952,308, or 54.8 per cent, in the value of products of manufactures. This increase is especially noteworthy because it was not accompanied by any appreciable increase in the population of the state. The greatest absolute increase, \$80,410,458, in the value of products was in the decade 1880 to 1890.

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

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

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

<sup>1</sup> United States Geological Survey: Mineral Resources of the United States, 1899; Metallic Products, Coal, and Coke, pages 353, 359, and 471.

TABLE 2.—SUMMARY FOR ALL ESTABLISHMENTS.

CLASSES.	Number of establishments.	Capital.	Proprietors and firm members.	WAGE-EARNERS.		Miscellaneous expenses.	COST OF MATERIALS USED.				Value of products, including custom work and repairing.
				Average number.	Total wages.		Total.	Purchased in raw state.	Purchased in partially manufactured form.	Fuel, freight, etc.	
Total	6,775	\$72,471,976	7,891	24,611	\$11,582,599	\$6,968,097	\$102,812,958	\$70,644,943	\$28,803,660	\$2,864,355	\$144,389,432
Hand trades <sup>1</sup>	2,708	3,446,478	3,069	4,217	2,013,260	556,322	4,215,777	50,363	4,008,739	156,675	9,510,267
Educational and eleemosynary institutions	5	6,200		2	695	1,708	3,891	392	3,063	436	8,275
Establishments with a product of less than \$500	1,356	483,649	1,449	178	11,216	30,990	111,360	6,451	104,909		341,055
All other establishments	2,711	68,535,649	2,878	20,244	9,557,428	6,379,077	97,981,930	70,587,737	24,686,949	2,707,244	134,479,835

<sup>1</sup> Includes bicycle and tricycle repairing, 51; blacksmithing and wheelwrighting, 989; boots and shoes, custom work and repairing, 196; carpentering, 296; clothing, men's, custom work and repairing, 193; clothing, women's, dressmaking, 104; dyeing and cleaning, 11; furniture, cabinetmaking, repairing, and upholstering, 53; lock and gun smithing, 16; masonry, brick and stone, 79; millinery, custom work, 318; painting, house, sign, etc., 136; paper hanging, 12; plastering and stucco work, 34; plumbing, and gas and steam fitting, 81; sewing machine repairing, 8; taxidermy, 2; typewriter repairing, 3; watch, clock, and jewelry repairing, 174.

Of the 6,775 establishments of all classes, shown in this table, 4,059, or 59.9 per cent, were small shops included in the groups of "hand trades" and "establishments with a product of less than \$500." The value of the products of these establishments, consisting principally of the sums received for custom work and repairing, amounted

to \$9,851,322, or only 6.8 per cent of the total value of the products of the state.

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

INDUSTRIES.	Number of idle establishments.	Capital.	INDUSTRIES.	Number of idle establishments.	Capital.
Brick and tile	10	\$51,715	Lumber, planing mill products, including sash, doors, and blinds	1	\$18,000
Cheese, butter, and condensed milk, factory product	3	10,960	Slaughtering and meat packing, wholesale	2	100,500
Flouring and grist mill products	7	50,650	Woolen goods	1	16,237
Food preparations	1	11,000	All other industries	12	29,270

TABLE 3.—COMPARATIVE SUMMARY OF NINE LEADING INDUSTRIES.

INDUSTRIES.	Year.	Number of establishments.	Capital.	WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.
				Average number.	Total wages.			
Total for selected industries for state	1900	1,520	\$33,971,417	18,336	\$6,669,681	\$3,144,781	\$75,041,523	\$92,372,460
	1890	1,045	17,594,101	10,467	5,082,540	1,623,867	31,064,210	42,260,098
Increase, 1890 to 1900		475	16,437,316	2,919	1,637,141	1,520,914	43,977,283	50,112,367
Per cent of increase		45.5	93.7	27.9	32.5	93.7	141.6	118.6
Per cent of total of all industries in state	1900	28.1	47.2	54.7	57.6	45.3	78.4	64.2
	1890	34.7	46.7	51.2	49.0	30.1	46.1	45.4
Brick and tile	1900	106	1,275,533	855	327,544	41,334	203,247	339,815
	1890	135	2,791,774	2,586	760,386	138,257	484,918	2,173,632
Cars and general shop construction and repairs by steam railroad companies.	1900	23	3,635,267	2,458	1,421,284	92,946	1,009,830	2,621,461
	1890	9	1,245,519	2,041	1,146,206	(1)	900,825	2,067,908
Cheese, butter, and condensed milk, factory product	1900	93	952,185	333	146,522	38,823	1,854,228	2,253,893
	1890	58	339,165	423	151,126	49,563	868,839	1,183,000
Flouring and grist mill products	1900	305	4,335,334	698	363,687	171,948	6,385,719	8,100,794
	1890	185	3,586,090	690	323,308	204,134	5,031,858	6,865,492
Liquors, malt	1900	19	2,678,593	200	131,455	635,031	311,783	1,433,501
	1890	14	1,464,211	172	125,330	219,854	357,260	1,079,865
Lumber, planing mill products, including sash, doors, and blinds	1900	21	378,966	293	129,441	18,428	561,731	886,333
	1890	21	561,076	497	339,147	37,060	484,663	1,112,412
Printing and publishing:	1900	554	2,885,583	1,883	882,678	459,278	949,404	3,481,582
Total	1890	443	2,517,133	1,771	949,302	469,338	732,139	3,222,368
Printing and publishing, book and job	1900	62	633,028	549	256,076	81,612	324,932	878,531
	1890	31	373,645	316	172,083	36,799	162,219	546,185
Printing and publishing, newspapers and periodicals	1900	492	2,252,555	1,334	626,597	377,666	624,472	2,553,051
	1890	412	2,143,488	1,455	777,219	432,539	569,920	2,676,183
Saddlery and harness	1900	391	1,340,511	583	280,247	95,915	926,819	1,783,742
	1890	151	723,433	419	221,352	62,111	486,405	1,028,540
Slaughtering and meat packing, wholesale	1900	8	16,488,845	6,083	2,986,828	1,591,078	62,838,762	71,018,339
	1890	6	4,305,700	1,868	1,016,383	443,550	21,717,327	24,026,876

<sup>1</sup> Not reported.

The 9 leading industries of the state in 1900, as shown by Table 3, embraced 1,520 establishments, or 28.1 per cent of the total number in the state; used a capital of \$38,971,417, or 47.2 per cent of the total; gave employment to 13,386 wage-earners, or 54.7 per cent of the total number; and paid \$6,669,681, or 57.6 per cent of the total wages. The value of their products was \$92,372,460, or 64.2 per cent of the total. In the discussion of Table 3, which follows, these industries are ranked with reference to the value of their products. This table reveals the close relation existing between the manufactures of Nebraska and its agricultural and stock-raising interests. Four industries dependent upon agriculture and stock raising are the manufacture of cheese, butter, and condensed milk, of flouring and grist mill products, of malt liquors, and of slaughtering and meat packing. The combined value of the products of these 4 industries was \$82,806,527, or 89.6 per cent of the total value of the products of the leading industries shown in Table 3.

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

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

establishments, 698 wage-earners, and products valued at \$8,100,794. In 1890 there were 185 establishments, 690 wage-earners, and products valued at \$6,865,492. The increase in the value of products during the decade was \$1,735,302, or 27.3 per cent. The 305 mills reported in 1900 were scattered over the state in more than two hundred different localities. Many were small, the average number of wage-earners employed per establishment during the census year being less than three. Nevertheless, the wheat-flour product of Nebraska was alone valued at \$5,319,911.

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

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

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

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

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

<sup>1</sup> History of Omaha, by J. W. Savage and J. T. Bell, page 621.

<sup>2</sup> Ibid., page 595, ff.

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

<sup>4</sup> Yearbook of the Department of Agriculture, 1900, page 757.

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

<sup>6</sup> History of Omaha, page 502.

<sup>7</sup> Annual Report of the Nebraska Dairymen's Association, 1898, page 141.

\$1,079,865. The increase in the value of products during the decade was \$353,636, or 32.7 per cent. The first brewery in the state was erected at Omaha in 1859.<sup>1</sup> The industry has been favored by the large quantity of barley raised in the adjoining state of Iowa, whose production of this cereal in 1900 was second only to that of California.<sup>2</sup>

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

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

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

tion may be called to the manufacture of beet sugar, distilled liquors, and the smelting and refining of lead. Experiments in the growing of sugar beets were made in 1886. A bounty of 1 cent per pound of sugar manufactured was granted by the state legislature in 1889, and the first factory was established in 1890.<sup>3</sup> In 1900 there were 3 establishments in the state, 174 wage-earners, and products valued at \$481,593. In the city of Omaha are located one of the largest distilleries and one of the largest lead smelting and refining works in the United States, but as these are the only establishments in the state in these industries, their statistics are not shown separately.

#### URBAN MANUFACTURES.

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

<sup>1</sup> History of Omaha, page 506.

<sup>2</sup> Yearbook of the Department of Agriculture, 1900, page 784.

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

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

	Year.	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	5,414	\$71,982,127	24,461	\$11,570,688	\$6,935,399	\$102,197,707	\$143,990,102
Per cent of increase.....	1890	3,014	37,569,508	20,450	10,271,478	5,395,242	67,384,532	98,037,791
		79.6	91.6	19.6	12.6	28.5	51.8	64.8
Lincoln.....	1900	250	2,608,992	1,738	789,356	266,160	2,173,845	4,105,951
Per cent of increase.....	1890	182	2,360,454	1,640	898,003	269,742	1,534,623	3,710,138
		37.4	10.5	5.9	12.1	1.3	41.6	10.7
Omaha.....	1900	837	34,282,063	7,422	3,755,816	3,854,688	22,113,388	42,991,876
Per cent of increase.....	1890	675	18,819,594	8,223	4,863,542	3,673,516	29,200,102	42,339,321
		24.0	87.1	19.7	12.8	4.9	124.4	1.5
Total for 2 cities.....	1900	1,087	36,891,055	9,158	4,545,172	4,120,848	24,286,733	47,097,827
Per cent of increase.....	1890	857	20,680,048	9,863	5,761,545	3,943,258	30,794,725	46,049,459
		26.8	78.4	17.1	12.1	4.5	121.1	2.3
Per cent of 2 cities to total for state.....	1900	20.1	51.3	37.4	39.3	59.4	23.8	32.7
	1890	28.4	55.0	48.2	50.1	73.1	45.7	49.5

<sup>1</sup> Decrease.

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

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

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

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

Table 5 presents the totals for the manufacturing industries of the 10 cities withdrawn from the enumerators, places them in comparison with the totals for the entire state and the state exclusive of these cities, and shows their rank in population and in value of products.

TABLE 5.—URBAN MANUFACTURES.

	Number of establishments.	Capital.	Proprietors and firm members.	WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	PRODUCTS.			POPULATION.		
				Average number.	Total wages.			Value.	Rank.	Per cent of total.	Total.	Rank.	Per cent of total.
Total for state.....	5,414	\$71,982,127	5,942	24,461	\$11,570,688	\$6,935,399	\$102,197,707	\$143,990,102	-----	100.0	1,066,300	-----	100.0
Total for urban manufactures..	1,859	58,815,805	1,991	18,972	9,184,988	6,273,386	91,491,735	126,307,931	-----	87.7	216,561	-----	20.8
Beatrice .....	79	594,679	82	436	172,330	81,192	436,814	789,228	7	0.5	7,875	4	0.7
Fremont .....	86	1,096,351	98	420	203,715	92,278	475,681	956,006	5	0.7	7,241	7	0.7
Grand Island .....	104	989,396	117	465	227,656	56,409	445,681	899,195	6	0.6	7,554	5	0.7
Hastings .....	111	425,794	115	337	149,265	35,409	340,094	720,615	8	0.5	7,188	8	0.7
Kearney .....	84	379,769	91	364	120,890	22,793	248,228	498,586	10	0.3	5,634	9	0.5
Lincoln .....	250	2,608,992	269	1,736	789,356	266,160	2,173,345	4,105,951	4	2.9	40,169	2	3.8
Nebraska City .....	108	1,576,857	114	739	269,796	168,602	3,025,177	4,582,554	3	3.2	7,380	6	0.7
Omaha .....	837	34,282,063	887	7,422	3,755,816	3,854,688	22,113,388	42,991,876	2	29.9	102,555	1	9.6
Plattsmouth .....	61	390,575	68	447	227,571	25,815	356,393	682,979	9	0.5	4,964	10	0.5
South Omaha .....	139	16,471,329	150	6,606	3,268,591	1,719,920	61,277,486	70,080,941	1	48.6	25,001	3	2.4
Total for state exclusive of urban manufactures.....	3,555	13,166,322	3,951	5,489	2,385,702	602,013	10,705,972	17,682,171	-----	12.3	849,739	-----	79.7
Percent of urban manufactures to total for state .....	34.3	81.7	33.5	77.6	79.4	90.5	89.5	87.7	-----	-----	20.3	-----	-----

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

Table 6 shows the totals for the state by counties.

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

Table 8 shows the totals for the cities of Lincoln, Omaha, and South Omaha by specified industries.

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



TABLE G.—MANUFACTURES

[No manufactures reported]

COUNTIES.	Number of establishments.	CAPITAL.						Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and imple-ments.	Cash and sundries.	Number.		Salaries.	Total.		
										Average number.	Wages.	
1 The State	5,414	\$71,982,127	\$6,859,075	\$15,822,336	\$23,201,553	\$26,599,168	5,942	2,657	\$2,325,038	24,461	\$11,570,688	
2 Adams	146	461,493	20,050	73,160	143,076	225,207	155	8	6,355	358	155,295	
3 Antelope	37	181,688	4,951	31,125	42,630	52,982	39	2	2,100	62	29,447	
4 Banner	3	1,885	50	500	935	400	4			1	100	
5 Boone	14	121,160	7,850	36,781	34,644	41,882	15	8	2,550	22	10,655	
6 Boxbutte	30	134,291	5,175	62,825	30,545	35,746	32	10	9,169	101	61,319	
7 Boyd	23	32,669	4,326	8,375	11,490	8,478	32			6	1,673	
8 Brown	29	64,835	3,250	15,810	22,850	22,925	33			18	6,275	
9 Buffalo	136	573,252	25,825	181,393	215,103	200,931	153	20	13,980	406	141,265	
10 Burt	91	172,798	24,725	33,000	58,449	56,624	107	4	946	102	39,035	
11 Butler	54	164,411	7,110	32,435	63,905	60,961	64	2	440	59	27,186	
12 Cass	145	567,842	32,410	182,860	205,654	146,918	165	41	25,891	605	286,045	
13 Cedar	33	165,054	60,610	22,100	50,114	32,830	36			35	15,511	
14 Chase	11	26,225	2,600	5,000	12,245	6,380	12			3	660	
15 Cherry	21	56,118	7,205	17,040	13,195	18,678	21	1	2,500	21	8,820	
16 Cheyenne	18	57,527	1,925	10,050	25,832	19,720	17	1	750	43	24,475	
17 Clay	103	264,841	19,382	67,825	86,472	101,162	120	4	1,648	122	38,282	
18 Colfax	58	282,712	17,887	65,083	91,683	108,054	61	13	7,180	88	44,785	
19 Cuming	67	253,764	23,945	91,830	83,778	54,151	75	6	4,100	81	31,035	
20 Custer	68	175,832	14,960	35,361	79,781	45,780	74	5	4,120	45	15,994	
21 Dakota	21	64,395	4,305	13,850	27,175	19,065	24	3	2,280	24	9,450	
22 Dawes	40	122,849	11,105	23,895	39,775	48,074	46			85	48,279	
23 Dawson	43	166,867	5,165	30,345	49,630	81,227	41	8	6,600	59	27,545	
24 Deuel	4	5,825	400	650	2,675	2,100	4			2	750	
25 Dixon	53	153,952	15,625	36,265	53,930	48,132	59	4	1,450	63	22,819	
26 Dodge	157	2,259,277	122,687	484,625	943,571	708,394	181	59	49,198	519	260,798	
27 Douglas	1,013	51,459,723	4,885,107	11,406,162	15,690,738	19,477,716	1,073	1,801	1,645,296	14,172	7,092,406	
28 Fillmore	93	247,699	19,656	58,734	72,485	96,824	102	15	11,980	128	45,292	
29 Franklin	52	121,035	11,095	25,280	52,245	32,415	57	1	100	40	15,520	
30 Frontier	15	60,237	2,765	11,050	22,925	23,497	14	2	960	10	4,590	
31 Furnas	63	179,629	23,005	39,515	42,850	69,099	66	4	2,191	75	33,821	
32 Gage	168	886,447	64,775	186,708	245,135	389,829	185	57	43,092	581	240,853	
33 Garfield	14	15,950	1,570	4,180	4,050	6,150	14			9	3,050	
34 Gosper	6	6,765	1,100	1,625	1,225	2,505	6			3	310	
35 Grant	3	3,765	650	725	1,550	840	2			2	600	
36 Greeley	15	40,775	3,815	16,100	17,605	9,255	13	3	1,300	15	6,130	
37 Hall	121	1,041,065	46,870	190,210	603,024	200,961	136	33	27,930	490	237,106	
38 Hamilton	41	87,460	10,250	22,225	32,064	22,911	43	2	1,560	33	14,250	
39 Harlan	33	85,636	7,920	18,690	36,506	22,520	43	2	1,200	20	7,209	
40 Hayes	4	13,950	1,700	2,750	7,350	2,150	4			4	1,225	
41 Hitchcock	23	42,835	2,725	11,150	12,800	16,160	23	1	750	13	4,607	
42 Holt	57	122,416	6,890	30,169	49,411	35,946	57	6	3,061	30	13,047	
43 Howard	45	103,655	4,980	27,525	32,425	33,725	44	4	2,720	50	19,952	
44 Jefferson	70	149,125	11,137	27,203	54,550	56,229	80	3	1,600	63	23,428	
45 Johnson	88	120,262	6,155	20,395	35,414	58,298	99	2	1,700	78	29,840	
46 Kearney	50	72,472	2,985	12,350	22,958	34,179	59	2	1,095	63	19,462	
47 Keith	5	4,135	235	600	1,500	1,800	6			2	252	
48 Keyapaha	8	12,935	1,515	3,400	5,140	2,880	8			2	475	
49 Kimball	8	5,100	150	1,000	950	3,000	3			3	550	
50 Knox	44	122,202	12,475	27,850	49,915	31,962	49	3	1,746	35	14,350	
51 Lancaster	318	3,509,229	205,530	742,061	1,405,344	1,156,294	342	293	249,085	2,237	1,037,978	
52 Lincoln	21	102,760	2,215	26,800	47,855	25,890	22	3	2,040	249	154,540	
53 Loup	4	5,290	350	600	1,150	3,190	4			1	200	
54 Madison	111	352,718	50,733	124,475	516,819	160,691	117	29	27,667	262	111,222	
55 Merrick	39	87,886	8,505	19,850	32,170	27,361	50	4	2,020	38	18,943	
56 Nemaha	27	113,970	7,805	22,630	23,230	60,305	35	1	1,000	31	12,298	
57 Nemaha	51	167,430	13,235	34,080	60,335	59,730	53	4	2,140	68	28,556	
58 Nuckolls	71	181,251	19,450	36,925	37,680	87,206	84	8	2,317	97	36,400	
59 Otoe	159	1,669,108	84,605	317,249	389,203	378,051	173	50	53,690	781	236,063	
60 Pawnee	45	123,421	7,400	30,050	57,944	33,027	48	3	501	86	29,115	
61 Perkins	5	2,610	20	150	1,475	965	5					
62 Phelps	50	141,978	15,535	32,509	48,575	45,359	53	5	7,180	117	49,332	
63 Pierce	32	167,341	11,980	42,500	44,706	68,155	32	2	1,600	28	12,733	
64 Platte	89	554,779	82,776	128,550	126,844	217,609	99	21	17,380	281	126,339	
65 Polk	53	142,137	17,690	34,940	53,660	35,847	61	4	1,350	50	19,806	
66 Redwillow	37	163,389	8,250	30,775	33,484	40,830	42	13	10,620	137	78,084	
67 Richardson	81	284,409	23,795	57,700	97,398	100,516	103	11	6,960	121	45,560	
68 Rock	7	13,391	450	3,350	3,476	6,615	8			6	2,132	
69 Saline	97	324,739	30,220	74,105	101,028	119,346	107	9	7,680	85	33,485	
70 Sarpy	29	119,480	15,025	25,335	51,614	27,456	29	5	3,440	117	45,709	
71 Saunders	90	237,121	32,995	44,190	73,562	86,374	114	7	5,360	101	40,379	
72 Scotts Bluff	10	11,740	425	2,050	3,015	6,250	11			11	4,056	
73 Seward	83	334,863	37,110	56,582	121,354	119,817	89	5	2,670	96	41,089	
74 Sheridan	20	51,998	3,100	11,643	19,175	18,080	22			11	4,044	
75 Sherman	27	39,806	3,305	8,810	11,475	16,216	30			19	7,521	
76 Sioux	7	8,150	825	1,015	3,800	2,510	9			7	1,821	

## BY COUNTIES : 1900.

for McPherson county.]

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not 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.										
21,069	\$10,749,706	2,626	\$676,278	776	\$144,704	\$6,985,899	\$555,750	\$248,760	\$5,888,018	\$292,871	\$102,197,707	\$100,856,255	\$1,341,452	\$148,990,102	1
235	181,048	89	23,232	9	1,015	37,798	13,088	2,811	17,617	4,282	377,101	364,628	12,473	789,421	2
59	28,847	2	400	1	200	5,708	498	760	4,455		228,744	226,792	1,952	310,298	3
19	9,805	1	330	2	520	38		14	24		745	690	65	2,885	4
98	60,647	1	800	2	372	4,246	162	1,148	2,936		120,635	118,400	2,235	164,556	5
5	1,473	1	200			6,894	1,893	1,403	2,868	730	97,193	92,258	4,935	209,619	6
12	5,475	3	500	3	300	1,158	145	191	822		12,151	11,544	607	26,162	7
240	106,569	106	28,490	54	11,206	3,921	1,007	671	2,243		66,195	64,989	1,256	108,690	8
92	37,030	7	1,435	3	570	8,424	3,125	8,125	17,721	274	418,839	401,957	16,882	750,651	9
49	25,016	5	1,384	5	786	8,690	3,738	1,433	3,374	150	169,152	164,177	4,975	307,922	10
568	280,502	12	2,187	25	3,356	8,869	2,192	1,214	5,463		169,594	162,165	7,429	263,677	11
33	15,085	2	426			34,926	7,422	6,495	15,199	5,810	487,593	466,251	21,342	952,581	12
1	250	2	410			5,185	1,097	699	3,389		80,867	78,148	2,719	186,910	13
21	8,820					640	109	169	862		17,729	17,507	222	29,244	14
88	23,775	4	450	1	250	3,818	568	729	2,531		33,712	32,945	767	66,568	15
91	33,522	17	3,135	14	1,625	3,698	745	347	2,606		48,839	46,806	2,033	102,746	16
81	42,949	6	1,602	1	234	15,846	2,714	1,499	11,127	506	282,601	275,467	7,134	433,137	17
75	29,895	2	520	4	620	12,889	1,860	1,308	9,721		408,746	399,243	9,503	550,141	18
36	14,582	1	181	8	1,231	20,560	2,165	1,654	16,726	15	170,477	164,092	6,385	292,174	19
19	8,716			5	734	9,331	1,710	2,041	5,563	17	143,250	140,432	2,818	281,980	20
74	45,789	10	2,310	1	200	1,292	199	363	668	62	41,364	40,184	1,180	82,635	21
50	26,054	5	820	4	671	4,563	1,450	1,002	2,111		109,042	104,991	4,051	207,779	22
2	750					10,607	1,593	698	8,271	45	195,983	190,850	5,118	292,014	23
55	21,464	4	825	4	560	125	25	12	88		856	786	120	5,050	24
456	245,564	53	14,129	10	1,105	7,568	1,841	1,149	4,428	650	231,110	225,606	5,504	316,236	25
12,279	6,003,095	1,470	398,247	423	91,064	115,497	13,712	5,452	96,323	10	659,519	628,339	31,180	1,253,437	26
109	40,609	11	3,745	8	937	5,591,247	302,878	131,850	4,961,114	195,405	88,569,109	82,732,678	836,431	118,400,929	27
35	14,707	1	356	4	457	16,174	3,958	1,560	10,086	570	442,414	431,921	10,493	608,122	28
8	4,240			2	350	4,151	621	570	2,340	500	141,298	139,213	2,080	224,583	29
68	31,752	8	1,564	4	505	1,547	325	338	884		70,157	69,792	365	99,424	30
508	225,566	54	13,574	19	1,713	7,443	2,086	1,339	8,918	100	166,289	163,019	3,270	293,432	31
7	2,750			2	300	40,451	11,104	5,330	22,833	1,184	620,217	607,441	12,776	1,138,711	32
1	400			2	200	1,683	861	167	660		28,643	27,656	987	47,110	33
18	5,902	1	200	1	78	898	55	65	278		2,297	2,080	217	5,600	34
396	210,679	77	23,349	17	3,073	60,267	11,551	6,854	32,262	9,600	463,746	449,399	14,347	949,770	37
28	13,480	3	700	2	120	3,252	1,253	531	1,440	28	72,813	70,987	1,826	132,117	38
16	6,332	4	937			3,017	1,743	397	877		64,800	62,753	1,547	90,803	39
8	1,025			1	200	642	60	256	326		12,769	12,649	120	19,810	40
9	8,817	3	600	1	250	2,547	723	505	1,319		24,990	23,940	1,050	47,024	41
25	11,895	2	506	3	646	5,970	1,793	831	2,746	600	162,150	160,098	2,052	245,161	42
45	13,102	5	1,250			5,732	1,479	664	3,459	100	153,795	148,932	4,863	225,635	43
48	21,060	8	2,064	2	304	8,038	3,228	1,252	3,556		128,072	119,881	3,191	232,268	44
65	27,795	12	1,965	1	80	9,131	4,766	661	3,514	200	140,380	138,283	2,097	245,331	45
48	18,502	3	591	2	359	7,590	2,697	430	1,488	3,025	102,162	97,414	4,748	164,374	46
1		1	200	1	52	172	72	44	56		1,870	1,628	242	5,646	47
2	275			1	200	298	10	108	185		10,325	10,131	194	14,660	48
32	13,630	2	500	1	50	40	25	14	10		2,108	1,868	140	5,060	49
1,952	956,222	264	68,941	21	2,810	4,670	1,001	623	3,046	50,437	194,215	190,857	3,358	271,922	50
246	153,990	1	300	2	250	302,403	57,356	21,712	172,958		2,526,560	2,453,878	72,682	4,874,185	51
1	200					19,013	1,474	1,359	16,180		82,913	79,227	3,686	272,182	52
223	102,929	21	4,308	18	3,985	60,983	6,189	3,350	51,374	70	2,192	1,990	202	4,407	53
36	18,381	2	562			4,223	1,441	652	1,980	150	550,696	521,016	29,680	879,037	54
29	11,978			2	320	7,775	1,232	742	3,301	2,500	116,329	113,311	3,018	179,753	55
61	26,909	6	1,517	1	130	12,365	1,417	857	4,091	0,000	144,251	139,781	4,470	241,360	57
51	33,072	15	3,330	1	88	14,162	5,046	949	7,327	840	218,552	213,998	4,554	343,249	58
017	258,334	161	20,079	13	1,050	172,194	10,473	5,297	152,941	3,478	3,766,299	3,716,829	49,470	4,811,961	59
77	27,470	6	1,100	4	545	6,991	3,724	558	2,709		58,932	45,439	13,493	133,047	60
						152	96	6	50		602	507	45	3,544	61
101	43,012	14	5,820	2	500	6,566	2,320	976	2,770		164,438	156,496	7,942	280,747	62
28	12,783					9,173	797	582	7,799		169,047	165,000	4,047	225,035	63
260	121,538	18	4,413	3	383	30,582	4,066	3,844	22,872	100	504,980	488,329	16,651	796,398	64
42	15,462	6	1,109	2	235	6,112	1,685	303	3,003	16	107,681	103,423	4,268	181,035	65
129	71,708	4	1,090	4	286	5,405	2,259	683	2,463		151,084	145,076	6,008	274,988	66
102	41,281	15	3,517	4	762	21,594	5,605	1,603	13,361	1,025	316,448	310,253	6,195	487,919	67
6	2,132					637	171	65	451		12,727	12,336	341	19,249	68
69	30,072	8	2,340	3	1,073	21,880	4,066	2,548	14,833	400	270,682	267,094	3,588	424,024	69
114	45,004	2	430	1	245	5,042	1,050	569	3,423		79,508	78,324	5,676	192,524	70
88	37,164	12	2,905	1	250	15,022	4,135	1,430	8,757	700	221,017	215,638	5,379	379,096	71
9	3,496	2	560			1,340	823	52	465		21,824	21,057	767	37,385	72
79	37,006	11	3,080	6	1,023	10,534	3,111	1,816	5,325	282	358,679	353,691	4,988	511,753	73
6	3,220			4	674	1,768	393	378	992		37,737	36,462	1,305	63,114	74
15	6,377	4	647			1,761	470	382	900		27,073	25,459	1,614	63,375	75
2	890	2	356	3	475	197	10	112	75		3,647	3,535	112	8,149	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	Stanton	8	\$17,485	\$700	\$2,600	\$10,925	\$3,260	8	2	\$325	11	\$4,296
78	Thayer	80	156,243	23,075	58,075	46,730	47,363	92	7	2,608	80	30,355
79	Thurston	24	37,920	1,425	8,650	19,070	8,775	25	1	60	17	5,753
80	Valley	46	91,101	5,520	28,600	23,771	27,210	51	3	1,140	53	19,955
81	Washington	40	183,207	15,375	40,075	50,939	76,318	89	15	10,697	117	37,536
82	Wayne	47	114,735	8,950	22,925	44,660	33,200	58	1	600	72	\$2,055
83	Webster	60	144,302	8,425	20,200	35,043	30,634	68	4	3,440	83	31,465
84	York	84	308,674	23,845	47,975	109,436	127,413	91	11	8,850	162	57,771
85	All other counties <sup>1</sup>	9	20,181	263	11,915	4,700	3,253	9	1	1,080	8	8,563

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

TABLE 7.—MANUFACTURES BY

		5,414	\$71,982,127	\$6,359,075	\$15,822,336	\$23,201,553	\$26,599,163	5,942	2,657	\$2,325,038	24,461	\$11,570,538
1	All industries											
2	Agricultural implements	9	184,051	4,100	10,950	79,163	89,868	9	11	6,705	87	41,128
3	Awnings, tents, and sails	5	54,226			4,555	49,671	7	6	7,360	57	15,880
4	Bicycle and tricycle repairing	51	47,301	2,130	2,170	13,075	24,320	55	4	398	53	21,187
5	Blacksmithing and wheelwrighting	939	1,088,701	154,821	279,173	276,047	378,660	1,064	4	2,056	462	213,437
6	Boots and shoes, custom work and repairing	196	84,559	14,165	22,210	21,649	26,535	206			42	17,657
7	Boots and shoes, factory product	3	43,500	1,000	9,000	8,700	24,800	6	6	3,300	55	17,302
8	Bottling	5	24,150	200	1,050	5,275	17,625	5	1	500	14	7,890
9	Boxes, wooden packing	3	20,275	3,000	5,000	6,075	5,200	2	2	2,500	43	17,930
10	Bread and other bakery products	91	550,804	55,650	133,490	208,930	143,534	102	44	30,689	332	139,233
11	Brick and tile	106	1,275,533	172,050	355,005	230,125	517,353	194	40	26,446	855	327,544
12	Bridges	3	80,300	2,000	3,000	6,000	22,000	3	6	4,300	86	46,415
13	Brooms and brushes	37	62,358	9,285	9,530	10,720	32,823	44	22	19,220	68	23,236
14	Carpentering	296	337,339	22,508	50,365	74,236	240,280	345	8	8,778	837	450,947
15	Carpets, rug	18	7,500	1,335	1,515	2,175	2,535	18			12	4,545
16	Carriage and wagon materials	5	11,775			1,475	10,300	3	4	3,124	19	8,668
17	Carrriages and wagons	45	151,919	18,490	22,923	34,071	76,435	59	9	7,618	135	72,143
18	Cars and general shop construction and repairs by steam railroad companies	23	3,635,267	1,947,600	704,550	593,118	389,969		114	100,401	2,458	1,421,234
19	Cheese, butter, and condensed milk, factory product	93	952,185	29,891	318,572	312,816	290,906	47	66	40,569	333	146,522
20	China decorating	4	11,010	8,000	2,000	300	710	4			6	1,000
21	Clothing, men's, custom work and repairing	103	328,452	17,950	84,950	32,317	243,235	210	36	23,223	487	274,178
22	Clothing, women's, dressmaking	104	65,320	2,480	5,000	9,633	48,157	114	6	2,829	329	82,524
23	Confectionery	28	170,368	870	2,070	38,143	123,285	40	63	26,520	212	63,621
24	Cooperage	16	133,870	7,375	23,730	32,800	69,965	18	7	8,263	147	72,813
25	Dyeing and cleaning	11	7,145			5,285	1,860	12	2	936	16	5,666
26	Electrical apparatus and supplies	3	19,265			8,400	10,865	2	2	1,872	12	8,707
27	Electrical construction and repairs	9	6,805			1,770	5,035	10	4	382	13	11,676
28	Flouring and grist mill products	305	4,335,934	358,470	934,903	1,639,576	1,257,985	365	138	101,721	698	363,637
29	Food preparations	8	294,103	20,250	56,000	139,818	139,818	4	42	36,600	28	12,948
30	Foundry and machine shop products	38	320,326	23,030	38,359	138,402	115,035	44	19	13,580	209	107,535
31	Fruits and vegetables, canning and preserving	5	123,623	6,800	35,000	41,325	40,498	6	9	6,400	161	21,686
32	Fur goods	6	97,020	29,000	6,000	2,570	59,450	9	4	1,118	57	19,158
33	Furniture, cabinetmaking, repairing, and upholstering	55	95,515	9,080	14,775	16,250	55,410	66			54	26,191
34	Furniture, factory product	5	70,400	100	4,800	5,800	59,700	5	10	10,000	132	45,344
35	Gas, illuminating and heating	9	6,956,168	315,200	499,184	5,984,512	137,272	39	39	36,885	290	79,352
36	Gas machines and meters	3	6,550			2,050	4,500	4	1	1,200	6	2,620
37	Grease and tallow	3	33,979	2,000	10,000	18,300	3,679		4	2,290	7	5,820
38	Hardware	3	35,000	1,000	3,000	6,800	24,200	2	3	1,000	12	3,700
39	Ironwork, architectural and ornamental	4	248,221	60,000	48,000	30,770	109,451	3	14	15,320	183	76,610
40	Leather goods	3	4,100	100	400	950	2,650	2			4	895
41	Liquors, malt	19	2,078,593	223,023	775,735	784,723	890,107	14	45	94,215	200	131,455
42	Liquors, vinous	3	2,880	120	950	580	1,250	3			2	350
43	Lock and gun smithing	16	15,884	1,900	2,700	6,550	4,234	17	1	250	12	3,854
44	Looking-glass and picture frames	11	43,828			2,720	41,108	10	64	31,580	37	18,906
45	Lumber and timber products	23	117,360	70,805	5,270	27,825	13,460	30			31	10,727
46	Lumber, planing mill products, including sash, doors, and blinds	21	378,966	56,100	61,619	62,523	208,724	19	32	27,525	294	129,441
47	Marble and stone work	8	54,050	3,775	1,625	22,350	26,300	10	3	2,040	57	34,000
48	Masonry, brick and stone	79	166,945	7,625	8,070	30,675	120,545	96	3	3,120	618	314,097
49	Mattresses and spring beds	5	113,289	4,500	13,500	12,000	83,239	4	8	7,500	81	24,127
50	Millinery, custom work	318	441,809	26,715	65,725	15,256	334,113	375	66	29,073	393	100,022
51	Mineral and soda waters	35	131,215	11,885	15,275	17,850	32,205	37	12	11,580	53	25,135
52	Monuments and tombstones	47	199,465	26,750	33,355	8,058	131,302	52	20	15,620	120	61,908
53	Optical goods	3	12,100			2,600	9,500	4	2	1,220	11	5,549
54	Painting, house, sign, etc	186	123,692	11,765	15,180	17,144	79,513	160	14	10,494	818	161,786
55	Paints	3	891,657	60,000	356,000	98,500	367,157	41	41	58,456	93	53,020
56	Paper hanging	12	31,425	800	300	2,040	28,285	14	6	3,300	59	33,107

## BY COUNTIES: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Aver- age num- ber.	Wages.	Aver- age num- ber.	Wages.	Aver- age num- ber.	Wages.										
8	\$3,811	3	\$485			\$1,217	\$912	\$81	\$224		\$31,534	\$30,264	\$1,270	\$13,410	77
78	29,087	3	686	4	\$582	7,340	1,596	954	4,090	\$700	192,169	189,076	3,093	267,712	78
16	5,328	2	425			1,963	1,080	216	667		17,276	16,939	337	38,351	79
44	18,430	6	1,245	3	280	4,469	1,838	687	2,274	175	105,641	102,674	2,367	169,685	80
94	84,809	17	2,402	6	825	17,773	1,451	1,025	15,297		185,344	129,061	6,283	270,990	81
59	28,505	10	8,200	3	350	8,089	2,319	557	5,168		89,209	84,715	4,494	190,140	82
78	30,370	8	820	2	275	7,438	2,568	685	4,150	85	165,844	162,422	3,422	279,384	83
133	52,078	18	4,805	1	288	19,093	3,881	2,138	10,979	2,100	262,213	255,560	6,553	445,593	84
6	8,238	1	256	1	72	571	165	213	198		8,208	7,788	420	18,042	85

## SPECIFIED INDUSTRIES: 1900.

21,059	\$10,749,706	2,626	\$676,278	776	\$144,704	\$6,935,399	\$555,750	\$248,760	\$5,838,018	\$292,871	\$102,197,707	\$100,856,255	\$1,841,452	\$143,990,102	1
88	40,728			4	400	4,646	817	874	3,455		82,856	80,449	2,407	176,446	2
14	7,844	43	7,986			6,712	2,907	165	3,640		62,520	61,930	590	124,470	3
51	20,821			2	366	7,745	4,867	180	2,648	50	35,065	33,879	1,186	93,983	4
458	212,789			4	643	50,544	21,554	7,889	19,256	1,545	451,024	411,076	39,948	1,395,024	5
39	17,162	1	310	2	185	14,600	11,298	642	2,160	500	57,495	54,942	2,553	180,786	6
18	8,812	37	8,490			2,000	250	205	1,545		47,005	46,208	797	73,210	7
12	6,940			2	450	567	422	65	80		28,999	28,794	205	49,410	8
43	17,930					1,157	220	205	732		53,888	53,248	600	78,640	9
248	121,345	79	15,883	10	2,005	65,588	20,145	2,824	42,619		505,056	483,672	21,384	1,061,567	10
837	824,256	18	3,288	18	3,288	41,334	6,436	5,008	29,895		203,247	43,689	169,558	839,815	11
86	46,415			1	94	8,821	924	50	3,271		297,015	296,875	140	373,185	12
62	23,142			3	788	16,923	7,207	1,822	16,575	13,803	118,502	117,969	533	224,009	13
584	450,164					153,071	7,207	1,822	16,575	127,467	1,105,091	1,192,861	2,159,789	2,159,789	14
8	3,744	4	801	1	156	1,408	927	75	406		15,560	15,217	343	24,867	15
16	7,720	2	792	1	156	2,962	1,750	57	1,155		23,510	23,420	90	52,400	16
134	72,013			1	130	14,386	7,691	1,230	4,165	1,800	82,755	79,372	3,383	248,182	17
2,458	1,421,284					92,946		24,324	68,122		1,009,830	963,196	46,634	2,624,461	18
324	144,676	8	1,726	1	120	38,823	4,976	4,212	29,583	102	1,854,223	1,806,789	47,439	2,258,893	19
433	254,261	6	1,000			448	818	125	5		2,571	2,471	100	6,860	20
		48	18,671	6	1,226	56,291	33,103	2,225	19,648	1,315	321,504	316,453	5,051	920,126	21
10	5,680	318	76,684	1	160	17,472	11,481	214	5,802	25	89,497	87,816	1,681	284,488	22
108	43,646	103	19,757	1	118	43,794	21,417	687	21,630		256,831	251,038	5,793	499,245	23
138	70,190			9	2,623	13,523	1,607	483	11,844		301,433	299,418	2,020	433,370	24
5	2,784	10	2,732	1	150	8,240	1,570	29	1,841		4,813	3,453	860	26,575	25
12	8,797					1,632	530	72	1,030		24,395	23,470	925	44,950	26
18	11,676					2,599	1,316	35	1,248		21,384	21,301	83	48,112	27
650	355,060	37	7,886	5	791	171,948	14,109	27,221	180,102	516	6,385,719	6,292,710	92,949	8,100,794	28
27	12,598	1	350			42,753	457	1,050	41,046	200	98,151	94,845	3,306	253,015	29
205	106,763	1	300	3	472	16,043	5,131	2,306	8,556	50	219,423	211,108	8,315	446,504	30
81	18,200	50	6,000	80	2,486	10,325		500	9,825		130,573	128,608	1,965	210,688	31
11	5,916	46	13,242			6,252	2,940	650	2,662		70,795	70,540	255	120,409	32
52	25,955			2	286	6,510	4,851	603	1,556		70,227	68,930	1,297	153,922	33
119	40,184	12	4,960	1	200	3,674	1,280	456	1,810	128	123,726	122,470	1,256	211,750	34
290	79,852					185,182	1,250	29,411	104,521		134,352	114,539	19,813	624,852	35
8	2,620					1,032	564	22	446		3,524	3,464	60	14,250	36
7	6,820					2,905	850	95	1,960		24,966	22,454	2,512	57,610	37
9	3,400			3	300	2,120	295	60	1,765		7,272	6,957	315	26,640	38
183	76,610					12,760	1,560	1,125	10,075		201,334	192,607	8,727	314,000	39
2	710			2	185	124	55	9	60		1,440	1,350	90	4,150	40
197	130,495	8	960			635,031	3,130	14,694	617,157		311,783	276,095	35,688	1,433,501	41
2	350					6		6			1,077	1,012	65	2,981	42
11	3,630	1	224			2,741	1,703	96	942		6,535	6,136	399	24,760	43
37	18,906					10,014	6,106	307	3,601		51,680	51,494	186	118,799	44
28	10,196	1	156	2	375	830	15	335	480		27,123	27,123		51,773	45
235	128,541			8	900	18,428	4,636	2,294	11,498		561,731	555,356	6,375	886,333	46
57	34,000					4,993	2,028	95	2,870		30,165	28,485	1,680	100,545	47
618	314,097					81,927	1,217	604	8,517	71,589	650,772	650,095	677	1,286,885	48
67	20,092	18	3,935	1	100	6,324	1,244	396	4,684		108,675	107,200	1,475	174,641	49
6	1,050	388	98,472	4	500	74,574	52,091	3,496	18,737	250	535,862	530,816	5,046	1,051,938	50
49	24,650	1	800	3	285	10,145	5,595	773	3,777		44,615	41,281	3,334	155,639	51
120	61,908					10,139	2,587	782	6,820		189,128	188,384	744	387,060	52
11	5,549					3,002	2,550	52	1,000		9,892	9,610	282	28,000	53
314	161,292			4	494	20,337	10,967	844	7,276	1,250	164,584	163,861	693	505,269	54
82	49,590	11	8,430			70,405	480	2,147	67,778		584,256	521,297	12,959	838,151	55
59	33,107					4,004	2,453	153	1,398		44,670	44,590	80	111,418	56

TABLE 7.—MANUFACTURES BY

	MANUFACTURING AND MECHANICAL INDUSTRIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
57	Patent medicines and compounds.....	23	\$81,741	\$14,310	\$11,590	\$7,947	\$47,894	20	30	\$24,137	41	\$18,981
58	Paving and paving materials.....	16	300,838	57,539	22,060	30,216	141,023	15	14	13,128	369	149,388
59	Photography.....	142	163,339	16,595	28,945	68,440	49,359	150	7	5,560	91	37,456
60	Plastering and stuccowork.....	34	63,492	1,280	29,843	25,894	6,475	37	2	1,420	79	37,822
61	Plumbing, and gas and steam fitting.....	81	277,952	3,775	10,025	40,010	224,142	97	34	20,892	352	215,415
62	Printing and publishing, book and job.....	62	633,028	8,720	13,440	376,937	233,931	57	72	65,061	549	256,076
63	Printing and publishing, newspapers and periodicals.....	492	2,252,555	62,770	154,865	1,118,389	916,531	506	277	242,814	1,334	623,597
64	Roofing and roofing materials.....	13	51,586	725	4,700	17,330	23,831	11	8	7,310	54	29,448
65	Saddlery and harness.....	391	1,340,511	97,646	193,112	99,185	950,568	429	69	58,915	533	280,247
66	Sewing machine repairing.....	3	1,395			155	1,240	3	1	72	1	290
67	Shirts.....	5	12,700			950	11,750	5	6	2,652	30	9,660
68	Slaughtering and meat packing, whole- sale.....	8	16,488,845	823,209	4,060,054	1,827,895	10,277,687	1	721	684,240	6,083	2,986,823
69	Slaughtering, wholesale, not includ- ing meat packing.....	4	36,050	4,550	4,400	2,600	24,500	6			7	4,035
70	Soap and candles.....	3	234,216	29,498	36,190	31,044	137,484		36	31,820	78	35,543
71	Sugar and molasses, beet.....	8	1,967,242	36,000	360,000	1,431,000	140,242		35	44,897	174	102,231
72	Sugar and molasses, refining.....	6	168,397	1,880	460	15,507	150,550	5	21	36,600	34	15,046
73	Tinsmithing, copper-smithing, and sheet-iron working.....	224	404,448	38,310	66,185	38,550	216,403	268	37	17,535	298	156,502
74	Tobacco, cigars and cigarettes.....	141	264,873	17,625	20,250	9,515	217,483	158	9	6,536	399	171,109
75	Trunks and valises.....	3	14,020			1,350	12,670	3	2	1,170	9	5,336
76	Typewriter repairing.....	3	400			300	100				7	3,880
77	Vinegar and cider.....	4	136,869	22,000	20,800	26,824	67,245	8	3	2,500	51	21,325
78	Watch, clock, and jewelry repairing.....	174	217,792	40,960	43,165	58,005	75,662	195	2	234	97	51,140
79	Windmills.....	4	282,299	9,000	46,961	37,171	189,167	4	30	23,660	194	81,758
80	Wirework, including wire rope and cable.....	10	72,810	925	1,475	18,285	52,125	12	9	5,870	32	12,654
81	All other industries <sup>1</sup> .....	83	19,146,389	1,260,075	5,689,038	7,179,797	5,017,479	78	165	177,059	2,125	875,418

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

TABLE 8.—MANUFACTURES IN CITIES

## LINCOLN.

		250	\$2,608,992	\$157,800	\$381,515	\$1,078,850	\$990,827	269	244	\$207,544	1,736	\$789,356
1	All industries.....											
2	Bicycle and tricycle repairing.....	6	5,015			1,560	3,455	8			4	1,250
3	Blacksmithing and wheelwrighting.....	24	21,475	4,450	4,250	4,855	7,920	27			38	18,930
4	Boots and shoes, custom work and repairing.....	10	1,135		165	610	860	10			2	760
5	Bread and other bakery products.....	4	9,650	800	1,600	2,750	4,500	5			25	8,035
6	Brooms and brushes.....	3	16,400	1,500	2,200	4,700	8,000	4	15	16,700	16	5,000
7	Carpentering.....	10	19,200	1,800	4,125	4,240	9,035	11			48	27,910
8	Carrriages and wagons.....	4	4,625	1,500	500	800	1,725	5			8	4,000
9	Clothing, men's, custom work and repairing.....	12	32,335			2,435	29,900	14	14	12,555	115	73,786
10	Clothing, women's, dressmaking.....	7	4,751			755	3,996	8	3	1,593	47	11,420
11	Confectionery.....	9	22,113	350	1,800	5,328	14,685	14	6	3,980	53	18,450
12	Dyeing and cleaning.....	3	1,100			900	200	3			4	925
13	Foundry and machine shop products.....	8	53,775	14,100	4,600	22,200	12,875	11	1	400	37	18,750
14	Lock and gun smithing.....	3	2,400			1,050	1,350	3			4	1,050
15	Lumber, planing mill products, including sash, doors, and blinds.....	3	78,990	7,650	24,700	12,400	34,240	3	14	11,400	80	31,641
16	Masonry, brick and stone.....	4	23,165	100	100	2,415	20,550	6			42	19,000
17	Millinery, custom work.....	7	32,200			800	31,900	7	16	6,000	27	5,300
18	Monuments and tombstones.....	4	45,750	10,000	16,200	1,050	18,500	6	7	7,500	21	16,400
19	Painting, house, sign, etc.....	8	11,650	300	800	1,605	8,945	13	5	2,016	48	24,241
20	Photography.....	10	14,900		100	9,950	4,850	11	1	520	19	7,000
21	Plumbing, and gas and steam fitting.....	10	30,575			2,575	28,000	8	6	4,760	65	35,025
22	Printing and publishing, book and job.....	10	94,270	6,400	7,000	63,553	17,317	9	10	7,610	109	42,935
23	Printing and publishing, newspapers and periodicals.....	18	418,124	23,500	43,500	156,775	194,349	15	49	44,194	239	120,432
24	Saddlery and harness.....	6	99,675			8,575	91,100	7	5	5,100	76	28,900
25	Tinsmithing, copper-smithing, and sheet-iron working.....	11	40,675	1,500	500	6,800	31,875	9	13	6,200	37	20,880
26	Tobacco, cigars and cigarettes.....	8	10,518	150	150	1,067	9,151	9	1	200	23	12,530
27	Watch, clock, and jewelry repairing.....	7	9,100			5,875	3,225	7			9	4,872
28	All other industries <sup>1</sup> .....	41	1,505,526	83,700	269,225	753,727	393,874	36	78	76,816	540	227,731

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

## SPECIFIED INDUSTRIES: 1900—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.	
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including mill supplies and freight.	Fuel and rent of power and heat.		
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.										
30	\$15,806	11	\$3,175			\$38,340	\$8,209	\$507	\$34,624		\$65,268	\$64,498	\$770	\$189,948	57
369	149,388					12,857	1,605	931	9,601	\$720	130,686	126,877	8,809	353,574	58
54	26,113	35	11,193	2	\$150	34,323	14,438	974	18,503	408	100,615	97,594	3,021	320,756	59
79	37,322					1,816	924	35	356	500	59,459	58,934	525	138,437	60
351	215,165	1	250			32,732	14,679	1,201	14,837	2,015	456,774	453,201	3,573	988,818	61
440	226,865	98	26,200	16	3,011	81,612	25,021	3,382	46,351	6,853	324,982	311,970	12,962	\$78,531	62
947	542,826	212	58,721	175	25,050	377,666	60,354	9,719	248,578	59,015	624,472	593,035	31,437	2,553,051	63
54	29,448					9,503	1,690	187	7,626		86,335	85,823	512	165,795	64
581	279,997			2	250	95,915	33,352	8,440	53,973	150	925,819	916,524	10,295	1,783,742	65
1	290					402	262	23	117		903	858	45	2,747	66
3	2,840	27	6,810			2,511	1,276	60	1,175		13,391	12,996	395	38,595	67
5,596	2,858,466	173	57,425	314	70,937	1,591,078	18,708	43,862	1,523,508		62,833,762	62,484,267	354,495	71,018,339	68
6	3,975			1	60	438		73	365		209,424	208,710	714	262,027	69
48	25,727	25	9,006	5	810	118,093	300	710	117,083		376,787	368,503	8,284	998,959	70
163	98,878			11	3,353	57,382		8,726	53,656		317,644	289,012	28,602	481,593	71
81	14,496	3	550			11,853	3,384	269	3,200		144,571	142,385	2,186	268,050	72
290	154,642	3	840	5	1,020	31,937	17,133	3,359	11,180	205	288,965	283,063	5,902	693,066	73
279	135,816	84	29,640	36	5,658	99,690	15,123	1,708	82,839	25	285,561	282,740	2,821	702,037	74
9	5,336					3,153	2,520	83	550		6,141	6,080	61	22,000	75
6	8,680			1	200	780	780				2,278	2,242	86	4,240	76
20	14,825	25	6,500			8,325	310	1,040	6,975		101,612	99,102	2,510	154,506	77
95	50,740			2	400	27,138	17,254	1,826	7,918	140	59,924	57,830	2,094	261,178	78
194	81,768					11,677	100	1,102	10,475		139,466	137,487	1,979	274,566	79
32	12,654					4,332	1,192	268	2,872		65,342	64,167	1,175	136,332	80
1,339	690,868	715	170,971	71	13,584	2,259,040	28,419	20,659	2,207,277	2,085	16,672,352	16,366,819	305,533	29,758,611	81

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

## BY SPECIFIED INDUSTRIES: 1900.

## LINCOLN.

1,485	\$723,579	233	\$63,307	18	\$2,470	\$266,160	\$55,918	\$15,178	\$144,677	\$50,337	\$2,178,345	\$2,119,929	\$53,416	\$4,105,951	1
4	1,250					798	693	13	92		2,570	2,543	22	8,000	2
88	18,930					8,537	2,427	160	940		23,448	22,621	927	64,588	3
2	760					900	877	8	75		3,005	2,990	15	10,165	4
21	7,450	8	420	1	165	1,825	915	50	860		19,565	18,790	775	41,020	5
16	5,000					14,903	18	105	977	13,803	66,801	66,801		115,945	6
48	27,910					27,209	723	106	375	26,000	57,580	57,377	183	127,500	7
8	4,000					565	370	85	110		4,200	4,145	55	11,650	8
95	64,476	20	9,260			7,546	4,260	334	2,952		60,460	60,170	290	194,420	9
		47	11,420			1,355	1,046	14	295		4,770	4,770		29,510	10
31	9,360	22	4,090			4,873	3,404	280	1,139		55,669	54,430	1,239	114,130	11
		3	775	1	150	613	288		325		745	555	190	4,900	12
36	18,450			1	300	3,391	1,020	693	1,673		20,750	18,815	1,935	58,975	13
4	1,650					1,168	875	28	265		1,785	1,755	30	6,000	14
72	30,741			8	900	8,809		844	2,905		128,805	128,225	580	207,500	15
42	19,000					550			550		48,830	48,770	60	107,800	16
		27	5,300			5,780	4,400	205	1,175		60,700	60,700		94,400	17
21	16,400					1,515	860	66	1,039		44,106	44,070	36	90,000	18
48	24,244					2,943	1,560	103	1,275		22,550	22,485	65	74,665	19
13	5,524	6	2,076			6,317	2,512	100	3,705		11,790	11,415	375	37,300	20
64	34,775	1	250			4,616	2,380	211	2,025		101,556	100,886	670	167,430	21
88	38,700	21	4,235			11,197	4,606	1,069	5,522		58,833	56,458	2,425	143,820	22
200	115,287	36	10,855	3	340	73,513	2,686	1,942	58,301	10,584	196,170	192,685	3,491	480,073	23
76	28,900					6,898	3,970	532	2,396		87,710	87,295	415	154,090	24
36	20,480	1	400			5,815	3,695	480	1,640		38,080	32,265	815	93,050	25
21	12,080	1	250	1	200	8,093	2,289	59	5,745		18,412	18,412		46,970	26
9	4,872					2,715	2,090	80	545		3,365	3,365		17,073	27
492	213,340	45	13,976	3	415	63,656	8,449	7,611	47,596		1,036,054	997,231	38,823	1,597,472	28

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

TABLE 8.—MANUFACTURES IN CITIES

## OMAHA.

MANUFACTURING AND MECHANICAL INDUSTRIES.		Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
			Total.	Land.	Buildings.	Machinery, tools, and imple- ments.	Cash and sundries.		Number.	Salaries.	Total.	
											Average number.	Wages.
1	All industries .....	837	\$34,282,063	\$3,940,965	\$7,232,340	\$14,197,820	\$8,910,938	887	1,015	\$895,415	7,422	\$3,755,816
2	Agricultural implements .....	8	52,000	2,000	4,775	18,725	26,500	5	5	2,825	38	22,400
3	Bicycle and tricycle repairing .....	12	6,800			3,450	8,350	15	3	198	26	10,890
4	Blacksmithing and wheelwrighting .....	53	42,955	4,150	8,900	9,405	20,500	63	4	2,056	70	54,008
5	Boots and shoes, custom work and re- pairing.	44	8,403	500	500	4,885	2,520	46			14	6,416
6	Bottling .....	3	20,175		600	2,075	17,500	3	1	500	12	6,610
7	Bread and other bakery products .....	43	348,437	36,850	95,500	125,600	90,487	45	34	21,743	197	88,019
8	Brick and tile .....	9	109,750	11,300	27,700	17,950	52,800	8	12	7,280	177	64,490
9	Brooms and brushes .....	4	14,600	3,000	1,750	2,000	7,850	5			11	5,300
10	Carpentering .....	42	89,173	1,030	3,830	9,015	75,298	47	3	2,140	202	125,171
11	Carriage and wagon materials .....	6	11,775			1,475	10,300	3	4	3,124	19	8,668
12	Carriages and wagons .....	10	49,750		3,300	12,400	34,050	16	5	4,570	71	42,636
13	Clothing, men's, custom work and re- pairing.	49	157,895	5,000	10,000	14,645	127,750	56	21	15,628	199	119,218
14	Clothing, women's, dressmaking .....	31	41,060	480	400	3,920	36,260	34	3	1,236	164	45,651
15	Confectionery .....	11	139,960	420		30,540	109,000	17	57	22,540	154	49,394
16	Dyeing and cleaning .....	5	5,210			3,730	1,480	6	2	936	11	4,273
17	Electrical construction and repairs .....	4	4,805			1,120	3,685	4	4	382	13	9,901
18	Flouring and grist mill products .....	4	95,200	25,250	18,600	19,500	31,850	4	6	4,660	14	7,940
19	Food preparations .....	3	154,435	16,000	25,000	4,775	109,660	2	39	35,400	20	8,900
20	Foundry and machine shop products .....	7	72,850	3,000	1,000	33,650	35,200	8	7	4,740	81	42,590
21	Fur goods .....	4	87,920	29,000	6,000	1,770	51,150	7	4	1,118	48	16,208
22	Furniture, cabinetmaking, repairing, and upholstering.	14	12,570	1,400	1,300	4,025	5,845	15			26	13,692
23	Furniture, factory product .....	3	37,200		4,500	3,000	29,700	3	7	6,000	63	24,744
24	Liquors, malt .....	6	1,735,824	146,301	523,385	579,314	482,824	2	30	79,755	118	82,091
25	Lock and gun smithing .....	6	3,525			1,800	1,725	7	1	250	3	1,004
26	Looking-glass and picture frames .....	5	40,150			2,050	38,100	3	64	31,580	31	16,984
27	Lumber, planing mill products, includ- ing sash, doors, and blinds.	6	259,176	46,000	30,719	23,123	159,334	4	18	16,125	172	76,890
28	Masonry, brick and stone .....	23	107,245	6,000	4,020	19,160	78,065	30	3	3,120	427	222,484
29	Millinery, custom work .....	18	72,725			2,820	69,905	22	40	19,542	108	36,069
30	Mineral and soda waters .....	4	35,950			27,000	8,350	1	8	9,720	21	12,142
31	Monuments and tombstones .....	7	32,685	9,200	4,950	2,135	16,400	7	1	1,200	14	8,904
32	Optical goods .....	3	12,100			2,600	9,500	4	2	1,220	11	5,549
33	Painting, house, sign, etc. ....	36	63,900	8,400	8,900	5,270	41,330	40	8	8,228	117	71,926
34	Paper hanging .....	11	31,225	800	300	1,990	28,135	13	6	3,300	58	32,363
35	Patent medicines and compounds .....	11	46,200	1,600	4,000	4,250	36,350	8	14	11,840	26	13,860
36	Paving and paving materials .....	6	240,438	46,839	14,310	49,266	130,023	2	11	10,428	159	65,645
37	Photography .....	13	32,570		1,200	12,900	18,470	14	4	3,780	25	14,641
38	Plastering and stucco work .....	4	1,960			800	1,160	4			9	6,438
39	Plumbing, and gas and steam fitting .....	32	150,395		100	16,045	134,250	37	23	13,932	184	124,336
40	Printing and publishing, book and job .....	38	459,714			279,809	179,905	32	59	55,737	395	196,739
41	Printing and publishing, newspapers and periodicals.	37	681,589	2,360		296,298	382,981	30	180	163,901	244	212,908
42	Roofing and roofing materials .....	6	42,800		4,100	14,850	23,850	5	8	7,310	44	25,641
43	Saddlery and harness .....	17	233,142	16,350	9,400	10,816	196,576	25	37	30,233	150	83,226
44	Shirts .....	4	12,100			750	11,350	4	6	2,632	23	8,160
45	Tinsmithing, coppersmithing, and sheet-iron working.	34	98,434	7,000	7,835	17,009	66,590	38	18	5,715	94	58,990
46	Tobacco, cigars and cigarettes .....	28	53,102	3,000	3,200	1,185	45,717	30	3	2,176	100	48,386
47	Typewriter repairing .....	3	400			300	100				7	3,880
48	Watch, clock, and jewelry repairing .....	24	42,146	14,000	4,500	10,150	13,495	29	2	231	39	24,430
49	All other industries <sup>1</sup> .....	92	28,229,144	3,494,735	6,392,766	12,487,875	5,853,768	84	248	276,811	3,213	1,529,407

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

## SOUTH OMAHA.

1	All industries	139	\$16,471,329	\$359,382	\$4,040,087	\$1,400,639	\$10,171,221	150	774	\$738,429	6,606	\$3,268,591
2	Blacksmithing and wheelwrighting	13	9,145	575	3,750	1,810	3,010	14			14	9,340
3	Boots and shoes, custom work and repairing.	5	870			265	105	5			2	1,175
4	Bread and other bakery products	7	9,270		200	2,370	6,700	8	1	400	25	11,406
5	Brick and tile	3	57,200		16,500	23,200	17,500	4	4	3,300	43	17,460
6	Carpentering	22	14,251	2,550	3,800	4,310	3,591	26			89	52,204
7	Clothing, men's, custom work and repairing.	5	4,955			830	4,625	5			21	13,100
8	Flouring and grist mill products	3	15,550	1,750	3,800	4,500	6,000	5			2	900
9	Masonry, brick and stone	3	5,545		50	2,025	3,470	11			61	28,634
10	Millinery, custom work	5	11,450	2,500	3,000	275	5,675	7			15	2,440
11	Painting, house, sign, etc	9	6,147	500	500	1,172	3,975	12			15	9,642



## BY SPECIFIED INDUSTRIES: 1900—Continued.

## OMAHA.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not 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.									
6,094	\$3,415,884	1,238	\$324,128	90	\$15,804	\$3,854,688	\$263,847	\$84,115	\$3,823,702	\$188,024	\$22,113,888	\$21,682,669	\$480,719	\$12,991,876
38	22,400					1,767	750	72	945		44,494	43,218	1,276	89,356
25	10,730			1	160	2,836	1,509	28	1,254	50	11,300	10,975	825	35,080
67	54,200			3	408	9,172	7,558	242	1,172	200	33,890	33,890	2,857	169,188
14	6,416					4,917	4,682	46	239		14,653	14,133	520	47,460
10	6,160			2	450	347	322	22	3		25,049	24,849	200	42,100
148	78,049	42	8,540	7	1,430	85,018	11,613	1,720	21,685		330,059	316,455	13,604	680,187
174	64,010			3	480	6,395	1,900	870	3,625		35,443	2,467	32,976	149,875
11	5,300					729	232	97	350		15,948	15,688	260	32,020
200	124,771			2	400	75,819	1,802	232	4,157	69,628	264,403	264,316	87	546,400
16	7,720	2	792	1	156	2,962	1,760	57	1,155		23,510	23,420	90	52,400
70	42,506			1	130	9,072	6,057	315	2,000	700	37,930	36,587	1,393	180,930
185	113,958	9	4,138	5	1,122	81,832	18,980	804	11,578	20	133,662	132,567	1,095	396,466
10	5,680	153	39,811	1	160	10,369	5,723	83	4,563		55,655	55,273	332	160,480
76	34,022	79	15,372			37,557	17,176	864	20,017		196,123	192,099	4,024	371,535
4	2,816	7	1,957			2,409	1,084	24	1,301		2,981	2,431	550	18,575
13	9,901					1,862	886	30	996		13,584	13,501	83	32,002
14	7,940					2,960	75	595	2,290		174,312	171,974	2,338	211,938
20	8,900					35,512	386	600	35,376	200	79,084	77,038	2,046	211,534
79	42,418			2	172	6,066	3,244	429	2,333	50	116,599	114,307	2,292	204,634
9	4,916	89	11,292			4,490	2,088	590	1,312		64,335	64,080	255	102,509
25	13,556			1	136	2,228	1,728	43	457		12,932	12,509	423	41,185
54	21,984	9	2,760			2,673	780	305	1,460	128	76,896	75,740	656	130,600
116	81,731	2	360			490,768	180	11,968	478,620		216,792	195,779	21,013	1,029,500
2	840	1	224			1,200	708	10	482		2,030	1,918	112	9,420
31	16,984					9,495	5,775	255	3,405		48,450	48,310	140	112,750
172	70,890					12,075	3,300	1,225	7,550		891,811	388,357	3,454	599,000
427	222,434					85,252	528	430	7,080	57,214	439,585	439,120	465	852,062
20	11,842	106	35,719	2	850	28,650	21,000	707	7,893		152,844	152,759	85	344,920
14	8,904	1	300			6,315	4,440	125	1,750		16,491	14,276	2,215	57,507
						1,022	410	77	535		30,916	30,795	121	61,650
11	5,549					3,602	2,550	52	1,000		9,892	9,610	282	28,090
117	71,926					10,973	5,219	438	4,171	1,150	57,419	57,169	250	211,084
58	32,363					8,880	2,357	158	1,386		43,615	43,540	75	108,613
17	11,020	9	2,840			24,588	2,071	138	22,379		35,989	35,447	542	107,434
159	65,645					9,693	650	538	7,730	720	89,180	88,000	1,180	196,731
20	12,271	5	2,870			15,664	4,931	80	10,653		33,941	33,526	415	102,612
9	6,438					261	204	57	87		6,842	6,817	25	19,165
184	124,386					20,381	7,708	465	10,308	1,900	202,126	200,331	1,796	457,870
319	174,518	62	19,385	14	2,836	65,326	18,502	1,784	38,707	6,338	228,717	219,585	9,132	608,567
215	204,804	17	6,127	12	1,972	215,733	26,826	1,425	143,376	44,106	175,640	166,832	9,308	916,901
44	25,641					8,697	1,205	120	7,372		69,058	68,646	407	139,300
148	82,976			2	250	39,554	7,260	1,316	30,738		303,764	302,512	1,252	557,080
3	2,840	20	5,810			1,909	1,180	54	675		10,886	10,491	395	31,595
89	57,809	2	440	3	750	10,272	4,588	341	5,248	100	88,010	86,845	1,166	231,170
78	35,945	20	7,235	2	156	22,718	4,387	218	17,913		77,675	77,080	565	180,984
6	3,680			1	200	780	780				2,278	2,242	36	4,240
38	24,180	1	250			6,024	3,313	78	1,993	140	17,948	17,716	232	80,576
2,536	1,366,465	653	159,106	24	3,886	2,491,365	42,795	54,562	2,393,623	385	17,596,295	17,287,999	308,296	32,026,636

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

## SOUTH OMAHA.

6,045	\$3,120,052	231	\$73,779	880	\$74,760	\$1,719,920	\$38,107	\$46,273	\$1,623,159	\$12,881	\$61,277,486	\$30,899,442	\$378,044	\$70,080,941	1
18	9,100			1	240	1,686	894	117	218	312	3,381	7,455	926	38,515	2
2	1,175					512	502	4	6		1,246	1,181	65	5,100	3
16	9,572	9	1,884			3,620	2,974	123	523		30,322	29,187	1,135	61,944	4
43	17,460					1,155	550	230	375		11,442	957	10,485	46,150	5
89	52,204					8,241	439	96	212	7,494	106,316	106,271	45	194,108	6
20	12,900	1	200			1,825	1,162	40	73	50	10,544	10,385	159	29,700	7
2	900					510		160	350		33,746	33,364	382	44,190	8
61	28,634					4,877	72	280	280	4,025	47,798	47,798		103,506	9
15	9,642	15	2,440			1,254	895	113	245		10,005	9,776	230	19,425	10
						948	532	20	396		13,222	13,217	5	32,395	11



TABLE 8.—MANUFACTURES IN CITIES

## SOUTH OMAHA—Continued.

MANUFACTURING AND MECHANICAL INDUSTRIES, AND CITIES.	Number of establishments.	CAPITAL.					Proprietors and firm members.	SALARIED OFFICIALS, CLERKS, ETC.		AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES.	
		Total.	Land.	Buildings.	Machinery, tools, and imple-ments.	Cash and sundries.		Number.	Salaries.	Total.	
										Average number.	Wages.
12 Photography	3	\$2,300			\$1,700	\$800	3			2	\$1,080
13 Plastering and stuccowork	4	1,830		\$200	1,330	300	5			17	9,331
14 Printing and publishing, newspapers and periodicals.	4	41,833		6,000	19,300	16,033	2	7	\$9,515	36	21,689
15 Saddlery and harness	3	4,355			255	4,100	3			3	1,700
16 Slaughtering and meat packing, whole-sale.	5	15,635,418	\$774,209	3,839,028	1,225,869	9,796,312		712	677,256	5,938	2,914,217
17 Tinsmithing, coppersmithing, and sheet-iron working.	5	10,475	3,000	3,000	1,925	2,550	7			7	4,370
18 Tobacco, cigars and cigarettes	6	3,455			180	3,275	7			8	3,400
19 Watch, clock, and jewelry repairing	5	6,950	3,000	1,000	1,100	1,850	5			7	2,710
20 All other industries <sup>1</sup>	24	631,330	71,298	159,759	108,723	291,550	21	50	47,958	301	163,793

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

TABLE 9.—MANUFACTURES IN CITIES

1	Total for cities	633	\$5,453,421	\$292,722	\$1,006,155	\$1,786,981	\$2,367,563	685	230	\$185,358	3,208	\$1,371,223
2	Beatrice	79	594,679	41,350	82,045	163,848	307,936	82	45	31,819	436	172,330
3	Fremont	86	1,096,351	89,397	171,095	242,037	593,822	98	45	30,338	420	203,715
4	Grand Island	104	989,396	45,600	172,430	586,499	184,867	117	31	26,440	465	227,656
5	Hastings	111	425,794	17,500	66,005	132,751	209,533	115	6	5,280	337	149,265
6	Kearney	84	379,769	6,050	78,673	158,915	136,131	91	18	12,260	364	120,890
7	Nebraska City	103	1,576,857	76,775	295,802	358,212	846,063	114	48	54,840	739	269,796
8	Plattsmouth	61	390,575	16,050	140,105	145,219	89,201	68	37	24,381	447	227,571

## BY SPECIFIED INDUSTRIES: 1900—Continued.

## SOUTH OMAHA—Continued.

AVERAGE NUMBER OF WAGE-EARNERS AND TOTAL WAGES—continued.						MISCELLANEOUS EXPENSES.					COST OF MATERIALS USED.			Value of products, including custom work and repairing.
Men, 16 years and over.		Women, 16 years and over.		Children, under 16 years.		Total.	Rent of works.	Taxes, not in- cluding internal revenue.	Rent of offices, interest, etc.	Contract work.	Total.	Principal materials, including, mill supplies and freight.	Fuel and rent of power and heat.	
Average number.	Wages.	Average number.	Wages.	Average number.	Wages.									
1	\$720	1	\$360			\$1,162	\$960	\$8	\$194		\$1,970	\$1,825	\$145	\$8,000
17	9,331					863	260	3	100	\$500	22,707	22,707		39,463
88	20,446	3	1,243			7,219	2,140	156	4,923		10,997	10,049	948	73,736
3	1,700					1,124	860	50	214		2,555	2,505	50	8,100
5,451	2,785,855	173	57,425	314	\$70,937	1,475,728	18,708	42,180	1,414,890		60,021,201	59,682,808	338,893	67,716,724
7	4,370					1,504	1,056	205	243		4,918	4,743	175	17,005
7	8,200	1	200			3,180	685	43	2,402		6,361	6,226	135	17,098
6	2,560			1	150	1,336	1,100	101	135		1,570	1,450	120	9,850
259	150,283	28	10,077	14	3,433	204,376	4,317	2,674	197,385		932,185	908,089	24,146	1,616,432

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

## UNDER 20,000 IN POPULATION: 1900.

2,572	\$1,230,333	513	\$121,032	123	\$19,358	\$192,618	\$60,886	\$29,323	\$317,899	\$24,510	\$5,927,516	\$5,808,356	\$119,160	\$9,129,163	1
374	159,338	46	11,444	17	1,548	31,192	7,668	3,169	19,171	1,184	436,314	430,481	5,833	789,228	2
866	189,789	47	13,276	7	650	92,278	10,600	4,657	77,021		475,634	458,701	16,933	850,006	3
372	201,504	77	23,349	16	2,803	56,469	11,042	6,584	23,243	9,600	446,681	437,066	8,538	899,195	4
243	125,514	87	22,932	7	819	35,409	12,207	2,627	16,293	4,282	340,094	328,678	11,416	720,615	5
209	87,047	105	23,295	50	10,548	22,793	5,953	2,133	14,423	274	243,223	234,899	13,324	495,580	6
585	243,912	143	25,084	11	600	103,602	9,294	4,774	151,224	3,870	3,625,177	3,577,826	47,351	4,582,554	7
423	223,729	9	1,652	15	2,190	26,315	4,117	5,379	10,519	5,300	356,393	340,678	16,716	682,979	8

Twelfth Census of the United States.

# CENSUS BULLETIN.

No. 133.

WASHINGTON, D. C.

January 25, 1902.

## AGRICULTURE.

### NEW JERSEY.

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

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

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

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

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

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

bulletin, has reference to the value of all crops and animal products, including the value of animals sold or slaughtered on farms. This valuation for 1899 was \$43,657,529, of which amount \$15,740,688, or 36.1 per cent, represents the value of products of the live-stock industry, and \$27,916,841, or 63.9 per cent, the value of crops, including forest products. The value of farm products in 1899 was \$14,660,180 greater than that reported for 1889, showing an increase of 50.6 per cent. A large part of this increase is doubtless due to a more detailed enumeration in 1900 than in 1890.

The value of "net farm products," or the "gross farm income," is obtained by deducting from the total value of farm products the value of the products fed to live stock on the farms of the producers. In 1899 the reported value of products fed was \$8,604,920, leaving \$35,052,609 as the gross farm income. The percentage which this amount is of the "total value of farm property" is referred to in the text of the bulletin as the "percentage of income upon investment." For New Jersey in 1899 it was 18.5 per cent.

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

Very respectfully,

*L. G. Fowers.*

*Chief Statistician for Agriculture.*

# AGRICULTURE IN NEW JERSEY.

## GENERAL STATISTICS.

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

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

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

### NUMBER AND SIZE OF FARMS.

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

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

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Im-proved.	Unim-proved.	Average.	
1900.....	34,650	2,840,966	1,977,042	863,924	82.0	69.6
1890.....	30,828	2,662,009	1,999,117	662,892	80.4	75.1
1880.....	34,307	2,929,773	2,090,297	839,476	85.4	71.6
1870.....	30,652	2,889,611	1,976,474	1,013,037	97.6	66.1
1860.....	27,046	2,983,626	1,944,441	1,039,084	107.9	65.2
1850.....	23,906	2,762,946	1,767,991	984,955	115.2	64.2

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

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

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

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

### FARM PROPERTY AND PRODUCTS.

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

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

YEAR.	Total value of farm property.	Land, im-provements, and build-ings.	Implements and machinery.	Live stock.	Farm products. <sup>1</sup>
1900.....	\$189,533,660	\$162,591,010	\$9,830,030	\$17,612,620	\$43,657,529
1890.....	182,452,914	159,262,840	7,878,644	15,811,430	28,997,849
1880.....	212,678,230	190,895,833	6,921,085	14,861,412	29,650,766
1870.....	236,854,830	257,623,376	7,887,991	21,443,463	42,726,193
1860.....	292,131,598	180,250,838	5,746,667	16,184,693	-----
1850.....	185,342,805	120,287,511	4,426,603	10,679,291	-----

<sup>1</sup> For year preceding that designated.

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

<sup>3</sup> Includes betterments and additions to live stock.

Since 1850 the total value of farm property has increased \$54,191,355, and in the last decade, \$7,080,746. Of the latter amount, \$3,328,170, or 47.0 per cent, represents the increase in the value of farms; \$1,951,386, or 27.6 per cent, in that of implements and machinery; and \$1,801,190, or 25.4 per cent, in that of live stock. The value of farm products in 1899 was 50.6 per cent greater than in 1889. A portion of this increase, and of that noted in the case of implements and machinery, is doubtless the result of a more detailed enumeration in 1900 than heretofore.

### COUNTY STATISTICS.

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

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

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUE OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With build-ings.	Total.	Im-proved.	Land and improve-ments (except buildings).	Buildings.	Imple-ments and ma-chinery.	Live stock.		Labor.	Fertilizers.
The State -----	34,650	34,027	2,840,966	1,977,042	\$93,360,930	\$69,230,080	\$9,330,030	\$17,612,620	\$35,052,609	\$5,720,080	\$2,165,320
Atlantic -----	1,295	1,259	64,419	32,954	1,011,560	1,124,220	144,270	211,215	767,869	119,800	58,570
Bergen -----	1,716	1,683	75,760	46,776	8,243,180	4,838,960	524,380	682,267	1,665,810	378,720	118,990
Burlington -----	2,549	2,605	848,096	190,871	6,474,010	5,845,790	899,120	1,863,961	8,336,901	858,430	257,260
Camden -----	1,133	1,109	76,585	55,870	3,873,320	2,258,700	332,920	613,482	1,487,394	274,370	130,170
Cape May -----	601	596	54,366	24,887	784,450	631,520	92,800	183,087	438,702	57,000	30,310
Cumberland -----	2,223	2,197	148,994	101,880	3,864,940	2,798,520	381,280	745,804	1,699,454	238,360	120,770
Essex -----	1,008	981	31,169	18,975	6,978,660	2,678,460	288,150	501,804	1,550,976	319,440	48,190
Gloucester -----	2,225	2,185	148,590	117,554	4,429,080	3,449,850	565,360	901,566	2,329,114	440,050	278,300
Hudson -----	358	335	2,820	1,928	2,901,700	915,250	175,550	158,783	1,018,170	294,230	23,440
Hunterdon -----	2,930	2,894	248,733	208,986	4,313,850	4,908,570	757,990	1,749,002	2,438,376	865,080	127,350
Mercer -----	1,578	1,531	132,726	108,747	4,518,210	3,641,700	582,070	1,044,667	1,775,184	379,430	152,680
Middlesex -----	1,750	1,719	129,317	96,782	4,631,230	3,519,430	511,910	750,229	1,385,804	284,520	123,480
Monmouth -----	2,772	2,720	197,481	155,716	8,608,590	6,101,810	851,050	1,449,793	3,013,361	623,630	221,730
Morris -----	2,805	2,281	206,798	118,212	7,477,170	6,483,820	631,020	987,558	1,974,241	401,080	82,000
Ocean -----	984	954	84,856	40,141	1,501,760	1,189,980	139,880	266,882	420,661	76,700	23,670
Passaic -----	916	892	69,820	28,721	2,976,860	1,908,610	180,160	361,578	817,903	148,350	33,290
Salem -----	2,072	2,022	175,202	135,727	4,636,570	3,509,700	501,780	1,216,613	2,401,474	356,230	104,570
Somerset -----	1,958	1,906	167,663	140,436	5,108,230	5,073,840	644,880	1,259,840	1,430,448	353,430	95,000
Sussex -----	1,792	1,784	256,896	173,431	3,061,480	3,172,640	333,010	1,406,100	1,984,744	264,700	14,940
Union -----	700	693	29,076	20,433	3,179,870	1,904,850	266,880	812,932	998,978	206,500	22,860
Warren -----	1,795	1,781	201,633	154,015	3,686,210	3,273,860	466,570	1,046,967	1,562,045	231,320	34,790

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

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

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

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

The value of implements and machinery has increased

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

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

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

For fertilizers the average expenditure per farm in 1899 varied from \$8 in Sussex county to \$125 in Gloucester county, while the average for the state was \$62. In 1889 the state average was \$60 per farm, and the county averages ranged from \$2 in Sussex to \$175 in Hudson.

#### FARM TENURE.

Table 4 gives a comparative exhibit of farm tenure for 1880, 1890, and 1900. In Table 5 the tenure of farms in 1900 is given by race of farmer, and "farms operated by owners" are subdivided into groups, designated as "owners," "part owners," "owners and tenants," and "managers." These terms denote, respectively: (1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other, or others, owning no part, but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

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

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners. <sup>1</sup>	Cash tenants.	Share tenants.	Own-ers. <sup>1</sup>	Cash tenants.	Share tenants.
1900	84,650	24,285	5,299	5,056	70.1	15.3	14.6
1890	80,828	22,442	3,449	4,937	72.8	11.2	16.0
1880	84,307	25,869	3,608	4,830	75.4	10.5	14.1

<sup>1</sup> Including "part owners," "owners and tenants," and "managers."

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

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.

RACE.	Total number of farms.	Own-ers.	Part own-ers.	Owners and tenants.	Man-agers.	Cash tenants.	Share tenants.
The State	84,650	22,281	996	207	861	5,299	5,056
White	84,180	21,936	961	207	842	5,282	4,952
Colored <sup>1</sup>	470	245	35		19	67	104

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

The State	100.0	64.1	2.9	0.6	2.5	15.3	14.6
White	100.0	64.3	2.8	0.6	2.5	15.3	14.5
Colored <sup>1</sup>	100.0	52.1	7.5		4.0	14.8	22.1

<sup>1</sup> Including 1 Chinese owner.

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

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

OWNERSHIP OF RENTED FARMS.

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

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

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

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

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

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

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

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

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

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	84,650	82.0	2,840,966	100.0	\$189,533,660	100.0
White farmers	84,180	82.6	2,821,755	99.8	188,485,172	99.4
Colored farmers <sup>1</sup>	470	40.9	19,211	0.7	1,048,488	0.6
Owners <sup>1</sup>	22,231	68.7	1,526,739	53.7	106,929,738	56.4
Part owners	996	78.5	78,210	2.8	6,967,558	3.7
Owners and tenants	207	95.7	19,817	0.7	1,435,195	0.7
Managers	861	290.7	250,292	8.8	13,381,347	7.1
Cash tenants	5,299	77.7	411,815	14.5	30,757,756	16.2
Share tenants	5,056	109.6	554,093	19.5	30,062,071	15.9

<sup>1</sup> Including 1 Chinese.

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

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and im- provements (except build- ings).	Build- ings.	Imple- ments and machin- ery.	Live stock.		
The State-----	\$2,695	\$1,998	\$269	\$508	\$1,012	18.5
White farmers-----	2,716	2,015	271	512	1,020	18.5
Colored farmers <sup>1</sup> -----	1,128	788	114	206	424	19.0
Owners <sup>1</sup> -----	2,207	1,901	250	452	911	19.0
Part owners-----	4,045	2,032	331	588	1,502	21.5
Owners and tenants-----	3,600	2,438	341	554	1,289	18.6
Managers-----	7,949	6,162	586	844	1,571	10.1
Cash tenants-----	3,372	1,057	251	524	1,023	17.6
Share tenants-----	2,930	2,050	303	663	1,236	20.8

<sup>1</sup> Including 1 Chinese.

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

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

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

#### FARMS CLASSIFIED BY AREA.

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

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

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	84,650	82.0	2,840,966	100.0	\$189,533,660	100.0
Under 3 acres.....	771	1.7	1,338	( <sup>1</sup> )	3,223,861	1.7
3 to 9 acres.....	2,770	6.0	16,700	0.6	8,195,574	4.3
10 to 19 acres.....	4,044	13.9	56,294	2.0	11,704,753	6.2
20 to 49 acres.....	7,632	32.6	249,077	8.8	29,756,249	15.7
50 to 99 acres.....	8,882	71.9	638,281	22.5	46,018,404	24.3
100 to 174 acres.....	7,855	126.3	991,720	34.9	56,267,337	29.7
175 to 259 acres.....	1,862	203.6	379,022	13.3	18,717,282	9.9
260 to 499 acres.....	651	324.8	211,431	7.4	9,393,989	4.9
500 to 999 acres.....	110	617.8	67,968	2.4	3,716,581	2.0
1,000 acres and over.....	78	3,188.9	229,140	8.1	2,549,630	1.3

<sup>1</sup> Less than one-tenth of 1 per cent.

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

AREA.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except build-ings).	Build-ings.	Imple-ments and machin-ery.	Live stock.		
The State -----	\$2, 695	\$1, 998	\$269	\$508	\$1, 012	18.5
Under 3 acres -----	1, 708	2, 145	156	172	1, 339	82.0
3 to 9 acres -----	1, 358	1, 306	132	163	537	13.2
10 to 19 acres -----	1, 467	1, 124	124	179	481	18.6
20 to 49 acres -----	2, 020	1, 432	179	268	688	17.7
50 to 99 acres -----	2, 584	1, 833	275	489	984	19.0
100 to 174 acres -----	3, 371	2, 586	384	821	1, 411	19.7
175 to 259 acres -----	5, 045	3, 378	464	1, 165	1, 871	18.6
260 to 499 acres -----	7, 410	4, 973	590	1, 457	2, 146	14.9
500 to 999 acres -----	15, 486	14, 870	1, 581	1, 850	3, 894	11.5
1,000 acres and over -----	21, 690	10, 028	1, 227	2, 011	2, 795	8.0

The group of medium-sized farms, containing from 100 to 174 acres each, comprises the largest percentage of the total farm acreage, and also the largest percentage of the total value of farm property.

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

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

#### FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

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

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

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	34,650	82.0	2,840,966	100.0	\$189,533,660	100.0
Hay and grain.....	2,717	111.2	302,247	10.6	17,491,678	9.2
Vegetables.....	7,019	57.4	403,156	14.2	37,464,056	19.8
Fruit.....	2,715	71.4	193,870	6.8	11,180,577	5.9
Live stock.....	9,531	68.9	656,673	23.1	38,643,499	20.4
Dairy produce.....	5,959	102.7	611,933	21.6	45,790,712	24.2
Flowers and plants.....	494	6.2	3,061	0.1	4,825,416	2.5
Nursery products.....	54	54.3	2,932	0.1	635,221	0.4
Miscellaneous <sup>1</sup> .....	6,161	108.3	667,094	23.6	33,452,476	17.6

<sup>1</sup> Including 1 tobacco farm.

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

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implementments and machinery.	Live stock.		
The State.....	\$2,695	\$1,998	\$269	\$508	\$1,012	18.5
Hay and grain.....	3,454	2,239	268	477	812	12.6
Vegetables.....	2,981	1,725	278	359	1,136	21.3
Fruit.....	2,058	1,578	206	276	990	24.0
Live stock.....	1,689	1,665	219	482	621	15.3
Dairy produce.....	3,825	2,623	355	881	1,412	18.4
Flowers and plants.....	4,402	4,976	317	73	8,969	40.6
Nursery products.....	8,167	8,805	447	270	6,395	50.4
Miscellaneous <sup>1</sup> .....	2,559	2,044	283	514	899	16.6

<sup>1</sup> Including 1 tobacco farm.

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

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

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

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

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

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

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

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	34,650	82.0	2,840,966	100.0	\$189,533,660	100.0
\$0.....	259	44.9	11,625	0.4	824,980	0.4
\$1 to \$49.....	630	29.8	18,743	0.7	1,768,940	0.9
\$50 to \$99.....	1,192	29.5	35,165	1.3	2,750,540	1.5
\$100 to \$249.....	4,953	34.9	172,890	6.1	12,915,220	6.8
\$250 to \$499.....	7,120	54.4	387,171	13.6	24,372,280	12.9
\$500 to \$999.....	8,865	80.1	710,398	25.0	42,467,010	22.4
\$1,000 to \$2,499.....	9,009	114.0	1,026,632	36.1	65,351,520	34.5
\$2,500 and over.....	2,622	182.4	478,342	16.8	39,083,190	20.6

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

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and im- prove- ments (except build- ings).	Build- ings.	Imple- ments and machin- ery.	Live stock.		
The State-----	\$2,695	\$1,998	\$269	\$508	\$1,012	18.5
\$0-----	1,726	1,215	83	161	88	1.3
\$1 to \$49-----	1,451	1,009	84	264	38	3.2
\$50 to \$99-----	1,188	938	70	112	75	6.8
\$100 to \$249-----	1,286	1,068	99	155	176	6.8
\$250 to \$499-----	1,676	1,847	148	252	371	10.8
\$500 to \$999-----	2,296	1,802	241	451	724	15.1
\$1,000 to \$2,499-----	3,502	2,572	395	785	1,541	21.2
\$2,500 and over-----	7,769	5,011	788	1,888	4,242	28.5



There are 259 farms, ranging in area from 3 to 1,000 acres, which report no income. The comparatively high average value of the land and buildings of these farms indicates that many of them are summer homes or country estates held for pleasure and not for the profit to be derived from operation. A considerable number of the farms with reported incomes of less than \$50 doubtless belong to the same class. Some, however, are farms that were partially abandoned in 1899, while others had changed owners or tenants, and the persons in charge, June 1, 1900, were unable to give definite information concerning the products of the preceding year. To this extent the reports fall short of giving a complete exhibit of farm income in 1899.

#### LIVE STOCK.

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

Table 14 presents a summary of live-stock statistics.

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

LIVE STOCK.	Age in years.	ON FARMS.			Not on farms.
		Number.	Value.	Average value.	
Calves	Under 1	39,685	\$349,937	\$8.82	Number.
Steers	1 and under 2	1,519	25,951	17.03	1,238
Steers	2 and under 3	928	27,329	29.45	173
Steers	3 and over	588	23,818	40.51	3,958
Bulls	1 and over	8,271	226,177	27.35	386
Heifers	1 and under 2	23,069	470,484	19.93	742
Cows kept for milk	2 and over	157,407	5,840,228	37.10	10,932
Cows not kept for milk	2 and over	7,977	285,183	35.75	414
Colts	Under 1	7,826	158,251	20.22	107
Horses	1 and over	5,054	240,380	47.56	155
Horses	1 and under 2	89,144	7,188,643	80.64	82,929
Mule colts	Under 1	67	2,844	42.45	1
Mules	1 and under 2	322	20,823	64.67	11
Mules	2 and over	4,499	930,370	73.43	1,111
Asses and burros	All ages	43	2,455	57.09	78
Lambs	Under 1	21,367	83,566	3.91	129
Sheep (ewes)	1 and over	24,744	109,540	4.43	9,408
Sheep (rams and wethers)	1 and over	1,619	9,384	5.80	764
Swine	All ages	175,387	926,179	5.28	25,954
Goats	All ages	699	3,006	4.30	1,760
Fowls: 1					
Chickens 2		1,993,594			
Turkeys		32,378			
Geese		10,518	1,300,853		
Ducks		40,024			
Bees (swarms of)		14,118	39,219	2.78	
Unclassified			8,000		
Value of all live stock.			17,612,620		

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

<sup>2</sup> Including Guinea fowls.

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

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

No report was secured of the value of live stock not on farms, but it is probable that such animals have higher average values than those on farms. Allowing the same averages, the total value of all live stock in the state, exclusive of poultry and bees not on farms, is approximately \$25,199,000.

#### CHANGES IN LIVE STOCK KEPT ON FARMS.

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

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

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep. <sup>1</sup>	Swine.
1900	157,407	82,577	94,024	4,931	26,363	175,387
1890	181,576	50,486	86,925	8,227	55,409	224,388
1880	152,078	71,808	86,940	9,267	117,020	219,069
1870	133,831	64,157	79,708	8,553	120,067	142,563
1860	138,818	99,976	79,707	6,302	135,228	236,089
1850	118,736	92,525	65,955	4,089	160,488	250,370

<sup>1</sup> Lambs not included.

The number of dairy cows is 4,169 less than that reported in 1890. The number reported in 1900, however, is exclusive of 7,977 "cows not kept for milk" (see Table 14), many of which were doubtless milch cows dry at the time of enumeration. The 39,685 calves reported in 1900 are included, in the above table, with "other neat cattle." It is uncertain whether calves were included under this head in the reports for previous census years. If not, they should be deducted from the total given for 1900 in making comparisons with previous reports. A nearly continuous decrease since 1860 would then be shown in the number of "other neat cattle."

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

In comparing the poultry report for 1900 (see Table 14) with that for 1890, it should be borne in mind that in 1900 the enumerators were instructed not to report fowls less than 3 months old, while in 1890 no such limitation was made. This fact explains, to a great extent, the decrease shown in the number of fowls of all kinds. Com-

pared with the figures for 1890, the present census shows decreases in the number of fowls as follows: Chickens, 33.3 per cent; geese, 48.4 per cent; ducks, 64.8 per cent; and turkeys, 80.0 per cent.

#### ANIMAL PRODUCTS.

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

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

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool.....	Pounds.....	146,628	\$31,266
Milk.....	Gallons.....	177,714,055 <sup>1</sup>	
Butter.....	Pounds.....	5,894,363	8,436,869
Cheese.....	Pounds.....	24,377	
Eggs.....	Dozens.....	11,942,550	1,938,304
Poultry.....			2,265,816
Honey.....	Pounds.....	174,250	
Wax.....	Pounds.....	7,640	23,479
Animals sold.....			1,638,767
Animals slaughtered.....			1,406,187
Total.....			15,740,688

<sup>1</sup> Includes all milk produced.

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

#### DAIRY PRODUCE.

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

Of the \$8,436,869 given in Table 16 as the value of all dairy products in 1899, \$1,265,980, or 15.0 per cent, represents the value of such products consumed on farms, and \$7,170,889, or 85.0 per cent, the amount realized from sales. Of the latter sum, \$6,318,568 was derived from the sale of 50,726,011 gallons of milk; \$818,624, from 3,748,489 pounds of butter; \$81,508, from 35,986 gallons of cream; and \$2,189, from 20,909 pounds of cheese.

In 1879, 9,513,835 pounds of butter were made on farms; in 1889, 8,367,218 pounds; and in 1899, but 5,894,363

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

#### POULTRY AND EGGS.

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

#### WOOL.

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

#### HONEY AND WAX.

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

#### HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS.

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

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

CLASSES.	HORSES.			DAIRY COWS.		
	Farms reporting.	Number.	Average per farm.	Farms reporting.	Number.	Average per farm.
Total.....	30,838	94,024	3.0	27,177	157,407	5.8
White farmers.....	30,441	93,218	3.1	26,960	156,784	5.8
Colored farmers.....	397	806	2.0	217	623	2.9
Owners <sup>1</sup> .....	20,621	58,500	2.8	18,123	92,403	5.1
Managers.....	728	3,501	4.8	644	5,386	8.4
Cash tenants.....	4,693	13,729	2.9	3,832	25,689	6.6
Share tenants.....	4,796	18,294	3.8	4,628	33,924	7.6
Under 20 acres.....	5,657	8,797	1.6	3,787	9,270	2.5
20 to 99 acres.....	15,112	39,048	2.6	13,653	52,906	3.9
100 to 174 acres.....	7,520	31,687	4.2	7,354	62,207	8.6
175 to 259 acres.....	1,789	9,139	5.1	1,707	21,569	12.6
260 acres and over.....	760	5,353	7.0	726	11,455	15.8
Hay and grain.....	2,115	8,175	3.9	1,815	8,975	4.9
Vegetable.....	6,448	17,439	2.7	4,858	14,494	3.0
Fruit.....	2,260	5,344	2.4	1,546	4,376	2.8
Live stock.....	8,589	24,411	2.8	7,533	31,103	4.1
Dairy.....	5,597	20,243	3.6	5,959	72,241	12.1
Miscellaneous <sup>2</sup> .....	5,829	18,412	3.2	5,466	26,218	4.8

<sup>1</sup> Including "part owners" and "owners and tenants."

<sup>2</sup> Including florists' establishments, nurseries, and 1 tobacco farm.

## CROPS.

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

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

CROPS.	Acres.	Unit of measure.	Quantity.	Value.
Corn.....	295,258	Bushels.....	10,978,800	\$4,533,478
Wheat.....	182,571	Bushels.....	1,902,590	1,347,650
Oats.....	75,959	Bushels.....	1,601,610	492,341
Barley.....	336	Bushels.....	4,790	2,301
Rye.....	68,967	Bushels.....	881,410	442,446
Buckwheat.....	15,762	Bushels.....	234,275	120,479
Kafir corn.....	4	Bushels.....	100	50
Clover seed.....		Bushels.....	181	977
Grass seed.....		Bushels.....	5,006	1,818
Hay and forage.....	444,610	Tons.....	542,796	5,544,970
Miscellaneous.....				88,595
Tobacco.....	2	Pounds.....	720	83
Dry beans.....	201	Bushels.....	2,888	5,886
Dry pease.....	46	Bushels.....	806	368
Potatoes.....	52,396	Bushels.....	4,542,816	2,192,456
Sweet potatoes.....	20,588	Bushels.....	2,418,641	1,213,010
Onions.....	882	Bushels.....	168,728	105,827
Miscellaneous vegetables.....	76,897			4,914,803
Sorghum cane.....	6	Tons.....	11	3
Sorghum sirup.....		Gallons.....	450	160
Small fruits.....	25,371			1,406,049
Grapes.....	2,400	Centals.....	42,350	81,758
Orchard fruits.....	20,684	Bushels.....	6,168,480	42,594,981
Flowers and plants.....	614			1,953,290
Seeds.....	112			43,191
Nursery products.....	1,732			339,923
Broom corn.....	11	Pounds.....	4,810	266
Hops.....	1	Pounds.....	75	9
Peanuts.....	(b)	Bushels.....	7	10
Nuts.....				20,660
Forest products.....				469,005
Total.....	1,235,909			27,916,841

<sup>1</sup> Sold as cane.

<sup>2</sup> Estimated from number of trees or vines.

<sup>3</sup> Including value of raisins, wine, etc.

<sup>4</sup> Including value of cider, vinegar, etc.

<sup>5</sup> Less than 1 acre.

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

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

## CEREALS.

The following table is an exhibit of the changes in cereal production since 1849.

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

## PART 1.—ACREAGE.

YEAR. <sup>1</sup>	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899.....	336	15,762	295,258	75,959	68,967	182,571
1889.....	47	13,520	267,648	121,827	77,245	121,570
1879.....	240	35,373	844,555	137,422	106,025	149,760

## PART 2.—BUSHELS PRODUCED.

1899.....	4,790	234,275	10,978,800	1,601,610	881,410	1,902,590
1889.....	1,043	114,625	8,637,011	2,837,293	874,049	1,823,382
1879.....	4,091	466,414	11,150,705	3,710,573	949,064	1,901,739
1869.....	8,288	853,983	8,745,384	4,009,830	566,775	2,301,455
1859.....	24,915	877,386	9,728,336	4,539,132	1,439,497	1,763,218
1849.....	6,492	878,934	8,759,704	3,378,063	1,255,573	1,601,190

<sup>1</sup> No statistics of acreage were secured prior to 1879.

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

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

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

## ORCHARD FRUITS.

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

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

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900	1890	1899	1889
Apples.....	1,810,793	1,310,705	4,640,896	603,890
Apricots.....	368	533	201	2
Cherries.....	88,906	35,452	82,005	6,762
Peaches.....	2,746,607	4,413,583	620,928	776,078
Pears.....	926,117	274,015	790,818	80,664
Plums and prunes.....	73,820	7,946	24,685	617

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

The most noteworthy changes between 1890 and 1900 are an increase of 88.2 per cent in the number of apple trees and a decrease of 37.8 per cent in the number of peach trees. In 1890, 21.7 per cent of all fruit trees in the state were apple trees and 73.0 per cent were peach trees, while in 1900 the corresponding percentages are 32.1 and 48.6, respectively. The number of apple trees increased in every county except Cumberland, the largest relative increases being in Ocean, Union, and Salem counties.

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

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

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

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

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

#### GRAPES.

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

#### VEGETABLES AND SMALL FRUITS.

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

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

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

#### FLORICULTURE.

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

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

## NURSERIES.

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

## LABOR AND FERTILIZERS.

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

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

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

## IRRIGATION.

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

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